THE NSW ALCOHOL AND DRUG RESIDENTIAL REHABILITATION COSTING STUDY

A PROJECT FUNDED BY THE NSW CENTRE FOR DRUG AND ALCOHOL, NSW DEPARTMENT OF HEALTH

PREPARED BY HEALTH POLICY ANALYSIS PTY LTD

2005

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EXECUTIVE SUMMARY

Residential drug and alcohol rehabilitation services are a vital component in the spectrum of services required to address drug and alcohol problems across the NSW community. The Centre for Drug and Alcohol at the NSW Department of Health engaged Health Policy Analysis Pty Ltd in May 2004 to undertake a costing study of alcohol and drug residential rehabilitation services in NSW. This document reports on the outcomes of this study.

Thirty one services were identified as being in scope for this study. The study focused on costs for the 2003-04 period. Cost and descriptive data returns were received from 29 services. These services have 692 residential places, and reported expenses totaling $25 million. The average level of total expenses per service was $869,000 (median $748,000). Employee related expenses accounted for 65.3 per cent of total expenses, food and household consumables 6.3 per cent and property related costs 5.3 per cent.

On average services received 71.3 per cent of revenue from Government funding sources and 17.5 per cent from client contributions. NSW Health Department sources accounted for 33.0 per cent of total revenue. Two services receive significant revenue from donations and fund raising, and when these are excluded, the average income from government sources is 77.7 per cent, from client contributions 18.1 per cent and other sources 4.2 per cent.

Client data were obtained 28 services. During 2003-04 these services reported 3,278 active client (residential) episodes, with 197,457 residential days. Services reported 2,715 completed episodes. The average length of residential episodes is 60 days. Clients with alcohol as the principal drug of concern accounted for 30 per cent of active episodes and 35 per cent of days. Heroin was principal drug of concern for 26 per cent of active episodes and 24 per cent of days

Cost and client data were combined to estimate unit costs, with 23 services included in this component of the study. The mean expenditure per client day was $117 (median $107). Excluding outlier and the mean cost per closed episode was $6,995 (median $7,206). On average services received $83 in government funding per day (median $101) and $4,960 per closed episode (median $4,442).

There is considerable variation around these averages, some of which can be explained by various factors, but largely reflecting the historical circumstances of the different services. The analysis of costs and funding yielded a range of insights into the systematic issues that need to be considered in a funding model. These include:

- The nature of the program offered has a significant impact on lengths of stay which in turn is a significant driver of differences in cost per episode.

- On average female clients are more expensive that male clients (an additional $6 per day and $966 per completed episode), and attract more funding (an additional $13 per day and $796 per completed episode).

- There is some weak evidence that clients aged under 18 years are more costly (an additional $185 per day, $9,844 per episode, after controlling for other factors), although on average funding is lower for these clients. This discrepancy is partially accounted for through significant non-government sources for one service catering for younger clients, and the fact that these relationships are very weak, statistically speaking. On the whole these services specifically targeted to young clients tend to have fewer places, so economies of scale may also be a factor that is important.

- Indigenous clients appear to be more costly (an additional $19 per day and $589 per

completed episode), and attract higher levels of funding (an additional $15 per day and $901 per client).

- Services that take children into residence are more expensive than other services (by $45 per day, $4632 per episode, after controlling for other factors) and attract more funding (of $20 per day, $2192 per episode).

- There is equivocal evidence that services that accept clients who are on methadone maintenance are more expensive, particularly once other factors are controlled. Funding however appears to be higher for clients in these services (an additional $13 per day and $230 per client).

- There is some evidence services located in Sydney are more expensive (an additional $9 per day and $2,155 per completed episode) and attract more funding (an additional $6 per day and $2,271 per completed episode).

The report sets out options for establishing a more consistent funding model for residential rehabilitation services in NSW. If a process is to be established to reform funding of residential rehabilitation services, it is recommended that in the first instance the funding model be based on a benchmark rates set to reflect an average level of funding for a residential rehabilitation day. The model would include adjustments to the benchmark rate to reflect relevant client and service characteristics including those discussed above. Funding rates should also be adjusted to reflect variation in property costs faced by services.

To facilitate the operation of this funding model, the Centre for Drug and Alcohol, NSW Health, should also consider: reviewing the source of potential problems with the NSW minimum dataset, identified in this project, and establishing a regular cost data return from services.

Finally it is recommended that expansion of residential rehabilitation be funded at $83 per client day or $4,960 per closed episode (plus indexation for 2004-05).

CONTENTS

CHAPTER 1 – BACKGROUND

Residential drug and alcohol rehabilitation services are a vital component in the spectrum of services required to address drug and alcohol problems across the NSW community. These services have developed since the 1970s, initially as a result of the action of leaders within the community. In more recent years Government's have provided funding support to services. An outcome of the 1999 Drug Summit was the provision of funding to expand residential rehabilitation services. Unfortunately reliable information on the costs of residential rehabilitation has not been readily available, and this has impeded aspects of the development of these services. This project is intended to address this gap in information.

The Centre for Drug and Alcohol at the NSW Department of Health engaged Health Policy Analysis Pty Ltd in May 2004 to undertake a costing study of alcohol and drug residential rehabilitation services in NSW. Health Policy Analysis Pty Ltd is a consulting firm that focuses on health policy analysis, analysis of health data for decision making, performance indicators and health economics. The consultants who worked on this study were Jim Pearse and Tom Pearse. This report describes the costing study and its results.

Residential rehabilitation services in NSW are predominantly provided by the non-Government sector. This project is supported by the Network of Alcohol and Drug Agencies (NADA), the peak body representing non-Government services in NSW. The project has been directed by a Steering Committee involving NSW Health, NADA and representatives from residential rehabilitation services. Members of the committee include:

Chris Shipway, Center for Drug and Alcohol, NSW Health
Joe Barry, Center for Drug and Alcohol, NSW Health
Nick Miles, Center for Drug and Alcohol, NSW Health
Larry Pierce, NADA
Kate Hewett, Kamira Farm / Garth Popple, WHOS
James Pitts, Odyssey House
Peter Ryan, Lyndon Community

The study has focused on estimating costs of residential rehabilitation services provided during the 2003-04 financial year. The scope for the study is all alcohol and drug residential rehabilitation services receiving grants or supported by funding from NSW Health or the NSW government.

The project has several aims. These include:

- Specifying a clearly defined hierarchy of services provided in the residential rehabilitation field;
- Estimating the breakdown of fixed and variable costs involved in the provision of residential rehabilitation treatment;
- Estimating the unit costs for closed episodes of residential rehabilitation treatment, taking account variations in intensity of treatment provided and the range of services offered;
- Estimating the per diem cost of provision of a residential rehabilitation bed, taking account variations in intensity of treatment provided and the range of services offered; and
- Clarifying the revenue sources that are used for support residential rehabilitation services.

The deliverables for the project include:

- Analysis and discussion of the issues outlined above;
- Analysis and presentation of the quantitative data relating to the provision of residential rehabilitation beds in NSW; and
- A report which includes a discussion of the cost of the current residential rehabilitation bed capacity in NSW and recommendations for future expenditure.

This report represents the main deliverable for this project. The outputs for the study will help inform NSW Government policy and strategies for the residential rehabilitation sector.

This Report is structured as follows. Chapter 2 provides a broad background to the drug and alcohol residential rehabilitation services and current government policies and strategies. Chapter 3 describes the methods adopted for this project.

Chapter 4 is a review of published literature concerning the cost and cost effectiveness of residential rehabilitation services. Chapter 5 describes the issues impacting on costs of residential rehabilitation services, identified in consultation with service providers, other stakeholders and researchers. Empirical results for the data collected through this project are presented in Chapters 6.

Chapter 7 draws conclusions from the analyses presented in the previous chapter, and makes recommendations on future approaches to costing and funding residential rehabilitation in NSW. Chapter 8 summarises the recommendations from this project.

CHAPTER 2 – RESIDENTIAL REHABILITATION IN NSW AND AUSTRALIA

Severe drug and alcohol dependency are disabling conditions that can have consequences for individuals their families and the broader community. Since the establishment of a National Drug Strategy in 1985, there has been recognition of the need for comprehensive strategies across levels of government and various government agencies, strategies that target demand, supply, and ensure treatment options are readily available.

Treatment services are a central component of responses to drug problems. Treatment services "can offer a pathway out of drug dependence, prevent, reduce or mitigate ill health and other harms associated with use, reduce demand, and have flow-on effects on the health and well-being of users' families, others in the community with drug problems, and the next generation through improved parenting of recovering and recovered drug dependent people" (Ministerial Council on Drugs 2001). There is a broad body of evidence that demonstrates treatment services can effectively reduce harmful drug use, hospital costs, drug-related harm, violence and welfare costs (for example Gerstein & Harwood 1990; Mattick & Hall 1993).

Residential rehabilitation services are recognised as one of the important components of treatment strategies (NSW Health Department 2000). Residential rehabilitation services complement other treatment options including methadone maintenance and other pharmacotherapies, withdrawal services, and non-residential treatment. A diverse range of treatment options "enables selection of the approach that suits the needs and circumstances of the individual at the time of intervention. Changes in need and circumstance over time mean that different options may be appropriate for a particular individual as they progress in treatment" (Gowing et al. 2002: 30).

A wide variety of residential rehabilitation models exist. Typically these models aim to assist clients in moving to a stage in which they are drug- or alcohol-free, through addressing underlying issues in the clients' lives. Most residential services require clients to be drug-free throughout their stay, although a small number of services are now accepting clients treated with methadone maintenance.

Residential rehabilitation services can be loosely classified into Therapeutic Communities (TCs) and other residential services. Gowing et al. (2002) offer an extensive discussion of the characteristics of the TCs. Whilst warning of the risk of over-simplification, they conclude that consistent features of TCs are:

" 1. Residents participate in the management and operation of the community.
2. The community, through self-help and mutual support, is the principal means for promoting behavioural change.
3. There is a focus on social, psychological and behavioural dimensions of substance use, with the use of the community to heal individuals emotionally, and support the development of behaviours, attitudes and values of healthy living." (Gowing et al. 2002: 10)

They add that "a primary reason for the residential nature of TCs is to ensure a safe, secure environment. The residential setting, removed from the wider community, provides the means to keep TCs drug-free, enabling residents to address the issues underlying drug use without the distractions of drug use and associated problems. The focus on social, psychological and behavioural dimensions means that TCs are frequently addressing highly emotive aspects of life. The secure and supportive nature of residential TCs is important for the emotional dimensions to be managed." (Gowing et al. 2002: 10)

Residential rehabilitation services mostly self-identify themselves as a Therapeutic

Community. However, services that do not identify as Therapeutic Community share many of the same characteristics.

The therapeutic community model originated in 1958 with Synanon community in California (Bale et al. 1984; Glaser 1981; Gowing et al. 2002). This community adopted the principles of Alcoholics Anonymous (AA), although with a shift from a theological to a secular philosophy. The program was residential with former addicts working within the community as lay therapists (Glaser 1981). Sometime later, and independently, therapeutic communities evolved in the United Kingdom, although the UK model had stronger links to psychiatry, for example employing professional staff (Gowing et al. 2002: 39-40).

In Australia, the first therapeutic community was WHOS (We Help Ourselves) which started in 1974 in Goulburn, NSW. This community initially developed as entirely a self-help model, with no government funding. Other residential rehabilitation services had similar origins outside government, but with a variety of models. Gowing et al. suggest that it "seems likely, although not documented, that the evolution of TCs in Australia has been influenced by both USA and UK models" (2002:40).

Initially many of these services were entirely self-supporting, operating through client contributions and donations. Some operated on properties donated or made available by private individuals. Over time Governments have become more involved in the financial support of residential rehabilitation services. For many existing services this support was originally conceived of as a supplement to partially assist with the operational expenses. The NSW Health Department began to provide support to services in the early 1980s, although other government Departments, such as the Department of Community Services, have providing funding support to some services over many year. During the 1980s, particularly with the initiation of the National Drug Strategy in 1985, funding to services increased, and in some instances new services were established as a result of direct government action. Many services operate on land or in premises that are owned by the Department of Housing or the Area Health Services in NSW.

Since the late 1990s, a range of other Government funding sources have emerged. As a result of the NSW Drug Summit in 1999, a total of 62 additional residential rehabilitation beds were made available within the funding provided through the NSW Department of Health. Unlike existing funding arrangements for non-government organisations, the additional beds represented a defined level of funding for each bed to be operated ($23,725 per bed).

In 1997 The National Illicit Drug Strategy (NIDS) was launched. Under the strategy funding became available to services directly from the Commonwealth Government for the first time under the Non-Government Organisation Treatment Grants Programme. This program has funded 140 projects across Australia since 1998, including a large number of residential rehabilitation projects in NSW. The funding under this program aims to strengthen the capacity of NGOs to achieve improved service outcomes and to increase the number of treatment places available. In NSW seventeen residential rehabilitation services are now supported by funding under this program. While the funds were provided under the NIDS were provided to support a range of activities such as expanding the number of available beds, provision of detoxification services or the employment of child development personnel to work with clients and their children.

Under NIDS, funding was also provided for an Illicit Drug Diversion Initiative. In NSW this funding has been used to implement the Magistrates Early Referral Into Treatment or MERIT program, which is administered by the NSW Attorney General's Department. The program was piloted at Lismore in 2000. It later expanded to Illawarra and South West Sydney in 2001 and rolled out further in 2002. The program targets adult defendants appearing at participating Local Courts who have a demonstrable drug problem. They also need to be eligible and suitable for release on bail and be motivated to engage in treatment and rehabilitation for their illicit drug problems. Under the program, fourteen residential rehabilitation facilities have

been contracted to make available an agreed number of MERIT beds. A total of 69 beds are funded under the program. Funding attracted a standard level of funding of $65 per day (or $23,725 per annum).

In 2001 the Alcohol Education and Rehabilitation Foundation was established. This foundation is supported by a grant from the Commonwealth Department of Health and Ageing. It provided grants to a range of prevention, treatment, rehabilitation and research projects that address the misuse of alcohol as well as paint, petrol and glue sniffing. In 2003-04 eight residential rehabilitation services in NSW received grants from the foundation for a variety of once-off purposes.

The origins of many residential rehabilitation services, and the variety of funding sources that have emerged have resulted in a diverse system of services, almost exclusively located in the non-government sector. Commenting on drug treatment services generally, NSW Health Department observed in 2000 that "the establishment of drug treatment services has been ad hoc and unplanned at a state-wide level. This has resulted in a mix of services, which does not always match demand with supply. Differing population growth rates in various areas, coupled with global trends of increasing drug use has consequently led to an inadequate and inequitable distribution of services across the state, particularly between rural and metropolitan areas" (NSW Health 2000). Nevertheless, partly as a result of initiatives arising out of the NSW Drug Summit in 1999, and also reflecting additional funding coming into the sector, in recent years there have been a range of improvements in the quality of services, their processes of management, and linkages with the broader health and welfare systems.

CHAPTER 3 – STUDY METHODS

The primary objective of this study was to conduct an empirical study of the costs of rehabilitation services in NSW in order to estimate:

- fixed and variable costs involved in the provision of residential rehabilitation treatment;
- unit costs for closed episodes of residential rehabilitation treatment, taking into account variations in intensity of treatment provided and the range of services offered;
- per diem cost of provision of a residential rehabilitation bed, taking into account variations in intensity of treatment provided and the range of services offered; and
- revenue sources that are used for support residential rehabilitation services.

The study also collected data on the nature of residential rehabilitation services, which has enable services to be classified into a hierarchy of services. The study has also investigated the potential for developing a client casemix classification scheme, which groups client episodes to reflect the relative costliness of clients. The study has focused on costs for the 2003-04 financial year, but factors impacting on costs in future years have also been identified.

The study has progressed through the following stages:

A. Preliminary consultations and collation of available information. Consultations were held with officers in the NSW Centre for Drug and Alcohol, the Network of Alcohol and Drug Agencies (NADA), and four service agencies clarify issues concerning the scope the study, the major issues relevant to costing services, charts of accounts, funding provided to services by NSW Health, the nature of client data available annually at NSW Health and NADA. These issues were also raised with the Steering Committee for the project, and through a presentation to the NADA Board. In discussion with the Steering Committee it was agreed that the study did not require a submission for research ethics approval from the NSW Department of Health Ethics Committee (DoHEC).

B. Literature Review. A literature review was conducted, which examined approaches to the costing and cost effectiveness studies of residential rehabilitation services. The literature review attempted to include government reports from various Australian Governments.

C. Identification of the sampling frame for the study. Through discussion with the Steering Committee, the scope of residential rehabilitation services of interest was defined to be all residential rehabilitation services that receive some form of funding from or through NSW Health or the Area Health Services. Overall X services were identified that meet this criterion. These exclude a small number of services that receive no funding from or through NSW Health. It was decided to include all services within this sampling frame in the study, with the exception two public sector residential rehabilitation services. Contacts details for each service were provided by NADA.

D. Development of data collection instruments for cost and service characteristic data. Data collection instruments and specifications were developed, together with a data collection manual. These were discussed with the Steering Committee and at a session of the NADA annual conference held in September 2004. The data collection instruments are provided in Appendix A. They included:

Return A - Service Description – This return provided general descriptive information related to the service and additional information important to properly interpreting costing data.

Return B - Annual Financial Statement for 2003-04 – This return asked for a simple replication of the service's annual financial statement, including the Statement of Financial Performance. Alternatively a standard report derived from the service's accounting system was provided.

Return C - Mapping of Service Specific Accounts to Cost Study Standard Accounts – Accounts for different services are set up in different ways. The data provided in this return allowed revenue and expense data to be mapped to a common set of accounts used for the study.

Return D - Staff Profile – This return provided details of staff positions and their role.

E. Collection of cost and service description data. Thirty one services were identified as being in scope for this study (Appendix A). All services within the scope of the study were invited to participate in the study. The invitation was forwarded in both paper form and by email on 1 October 2004, with a request to submit returns by 22 October 2004. Services were invited to submit returns either electronically or in hardcopy. A return for each discrete service was requested, for example, organisations that operated several facilities were asked to submit a return for each facility.

39 per cent of services responded to the data request by 22 October and, after follow-up, 29 services (94 per cent) of services submitted valid returns. Returns were not always complete, with several services not submitting staffing profiles.

Data from the returns was entered into or appended to a series of databases which were used for analysis. Data items were examined in detail to identify problems with quality, and outstanding issues were followed up with the service concerned. Costs associated with large once-off items were identified.

F. Client data. Client data was obtained from the NSW Minimum Dataset for Drug Treatment Services held by NSW Health (10 services) and the NADA database (18 services). After an initial extract of data from both these sources, it became evident that data was incomplete or problematic. Where problems were evident, services were approached individually and asked to correct data. A further extract was obtained from NADA in March 2004, which appeared to resolve most of the issues.

Services that accept children into residence were asked to provide details of children in residence in 2003-04 through a separate supplementary return.

G. Analysis of information. For one service client data was obtained , but no financial data return was received. Once financial and client data were combined, it was evident either the financial or client data was problematic for a further four services. The costing analysis presented in sections 6.6, 6.7 and 6.9 of this report was based on the remaining 23 services. Analysis was undertaken in Excel.

H. Report Preparation. Following analysis a draft report was prepared, and feedback was obtained from the Steering Committee for this report, before finalisation.

CHAPTER 4 – LITERATURE REVIEW

Economic studies of health issues and health care interventions can be grouped into studies of:

- The burden of disease – which attempt to assign economic valuations to the full range of impacts of a disease or health issue;

- The costs of service delivery, which focus solely on the direct focus of delivering services, and may considered the factors that impact relatively costliness of different client groups; and

- Economic evaluations, which are used to assess alternative interventions and taken into account or control for the outcomes of interventions. Economic evaluations (Drummond et al. 1997, Gold et al. 1996, World Health Organisation 2003) include:

    - *Cost minimization studies* in which there is evidence the outcomes of alternative interventions are equivalent and therefore interventions that are least costly are considered the best use of resources;

    - *Cost effectiveness* studies in which both costs and outcomes are assessed for alternative interventions. Effectiveness may be assessed across a single or range of dimensions. While some interventions may dominate other interventions (less costly and better outcomes), in many cost effectiveness studies, some interventions may produce better outcomes but at an increased cost. In these cases cost effectiveness studies provide evidence concerning the marginal cost of producing increased effects, and this evidence can be used by decision makers in determining investments;

    - *Cost utility* studies which are cost effectiveness studies in which outcomes, which might be multi-dimensional, are assessed using a single measure of "utility", reflecting community or patients' valuations of different health states; and

    - *Cost benefit* studies in which outcomes of alternative interventions are valued in monetary terms, for example reflecting patients' willingness to pay for improved health.

Burden of disease studies have been undertaken in a number of countries. The main Australian burden of disease study (Mathers et al. 1999) estimated the total burden of disease and injury related to illicit drugs in Australia. However, as with most of these studies, this study used highly aggregated estimates of costs of services, and impacts of these health issues on mortality and disability. A range of US studies have estimated the burden of illicit drug use (e.g. Mark et al. 2001) and costs of medical care for drug users (e.g. French et al. 2000). The general nature of these studies provides little of relevance to a discussion of the costs of residential rehabilitation.

A limited number of studies of the costs and cost effectiveness of drug and alcohol residential rehabilitation have been identified from the literature. These include a range of studies associated with several international cohort studies (such as the Drug Abuse Report Program (DARP), Treatment Outcome Prospective Study (TOPS), Drug Abuse Treatment Outcome Study (DATOS) and National Treatment Outcome Research Study (NTORS)).

Cartwright (2000) undertook a literature review of "cost-benefit" studies for drug treatment services. He identified 18 studies of which 10 involved residential rehabilitation services. In many of these studies, residential rehabilitation and other interventions are implicitly

compared to a "do-nothing" option. Effectiveness of interventions, is often modeled, based on observational (cohort) studies, or a set of assumptions, rather high-level evidence of effectiveness of interventions. There are various practical reasons as to why randomised, controlled trials of drug treatment interventions are rare, but the evidence that is available provides a strong case for concluding interventions are effective (McLellan et al. 1996).

Most of the studies were based on relatively crude estimates of treatment costs. Cartwright comments that: "Asking programs for data on the treatment costs of an episode has been frequently used. Others have adjusted costs to make comparisons fair across treatment programs. There has been no effort to do unit costing of services in any of the reviewed literature." (Cartwright 2000: 21). The studies included assessment of the costs of various types of benefits of drug treatments including increased employment following rehabilitation, savings associated with reduction in crime-related costs, reduction in medical resources, although the method for assessing these benefits and associated costs are varied. Until recently studies have not tended to include estimates of the benefits of treatment to the individual clients in terms of their improved quality of life.

In most studies a Benefit-to-Cost ratio has been estimated, often for alternative treatment approaches. Table 4.1 summarises some of the features of the studies that included residential rehabilitation as one of the comparative interventions.

Table 4.1 Review of Cost Benefit Studies of Drug Treatment Services (Cartwright 2000) – Features of studies including residential rehabilitation services

Study	*Benefit/Cost Ratio*	*Costs – Per Client*	*Benefit/Cost Ratios for Comparators*
Leslie 1971	6.5		Range of interventions including: Methadone Maintenance - 7.9 Detoxification - 20.5
Maidlow & Berman 1972	14.5	$US14,704	Methadone Maintenance – 18.7
McGlothlin et al. 1972	4.73	$US2,500	Range of interventions including: Methadone Maintenance dispensing – 14.55-6.61 Methadone Maintenance strict control – 10.36-3.52
Rufener et al. 1977 (based on DARP)	2.23	$US27,451	Range of interventions including: Methadone Maintenance – 4.39 Outpatient Drug Free – 12.82
Griffin 1983	9.02 / 6.55		None
Tabbush 1986	26.3-Heroin 5.6-Cocaine	$US2,851 $US2,543	Methadone Maintenance – 13.8 (Heroin) Outpatient Drug Free – 124.7 (Heroin)
Harwood et al. 1988 (based on TOPS)	2.01	$US2,942	Methadone Maintenance – 0.92 Outpatient Drug Free – 4.28
Gerstein et al. 1994 (CALDATA)	2.44	$4,405	Methadone Maintenance – 4.66 Methadone Detoxification - 2.98 Outpatient Drug Free – 2.88 Social Model – 2.40
Harwood et al. 1998 (CALDATA)	2.4-Women 6.2-Men	$4,405 (W) $4,391 (M)	Methadone Maintenance – 5.3 (W) 5.5 (M) Methadone Detoxification – 2.7(W) 17.9(M) Outpatient Drug Free – 7.4(W) 13.9(M) Social Model – 4.0(W) 4.5 (M)
Flynn et al. 1999 Cocaine only (DATOS)	1.94	$US11,016	Outpatient Drug Free –1.56

Note: (W) refers to women clients ; (M) refers to male clients

Estimates of costs per client for residential rehabilitation also vary considerably. The extent of variation suggests that very different models of residential rehabilitation are being evaluated in the different studies, although some level of variation is to be expected given the time period over which the studies occurred.

The studies yield a wide range of estimates of Benefit-to-Cost ratios. All are strongly "positive", implying investment in treatment yields benefits worth several times the original investment. There is no consistent pattern when residential rehabilitation is compared with other interventions. Benefit-to-cost ratios for residential rehabilitation services are higher for some studies and lower for others. In most studies there is no attempt to control for differences in the mix of clients treated in residential rehabilitation compared to other interventions.

One of the more recent of the studies reviewed by Cartwright was Flynn et al. (1999). This study used data from the Drug Abuse Treatment Outcome Study (DATOS). They estimated costs of treatment at $US11,016 per client, with average treatment episodes involving 153 days and average cost of $US72 per day. This was higher that the comparator, outpatient drug-free treatment, where costs per episode were estimated to be $US9,158 .They found that long-term residential treatment programs treated more seriously impaired clients who require more resources and generate more costs related to crime.

More recent studies (Gossop et al. 1998; Godfrey et al. 2004; McGeary et al. 2000, and Shanahan et al. 2004) have reinforced these broad conclusions. McGeary et al. (2000) studies costs of treatment for a modified therapeutic community program. They estimated costs for clients who had completed a therapeutic community program of one year duration ("completers") and compared these to participants who left treatment earlier and frequently against staff advice ("separaters"). The costs of the therapeutic community programs was estimated to be $US28,801 per client per year, or $US79 per day. These estimates included physical facility costs. Completers had an average length of stay of 349 days, whilst average length of stay for separaters was 126 days. The study found that when costs of using other health services over a period of a year were included, for completers, separaters and clients receiving standard treatment (not residential rehabilitation), total health costs were marginally lower for completers.

Godfrey et al. (2004) analysed data from the UK National Treatment Outcome Research Study (NTOR). They estimated a benefit-to-cost ratio of 18:1 for drug treatment as a whole, but did not present estimates for the interventions considered (inpatient, residential rehabilitation and methadone). The study estimated costs for treatment episodes over a two year period to be an average of £6478 for residential rehabilitation (with average length of stay of 71.3 days), £2,770 for inpatient treatment and £2,841 for methadone maintenance. In this study, as within many of the US studies, the majority of benefits relate to reductions in criminal behaviour following treatment.

Shanahan et al. 2004, recently published a study of health system use and treatment costs for heroin users in Australia, based on the Australian Treatment Outcomes Study (ATOS). ATOS is the first large-scale longitudinal study of heroin dependence conducted in Australia. The study has recruited heroin users who entered into one of three treatment modalities (methadone/buprenorphine, detoxification or residential rehabilitation) from February 2001, and a comparison group of heroin users who were not in treatment when recruited to the study. Study participants have been interviewed on entry to treatment, exit from treatment and will be followed up in several following years. Shanahan et al. examined costs of treatment and also client use of other health services in the period prior to and during the first year following entry to treatment.

Cost per day for residential rehabilitation was estimated based on financial data provided

by two large facilities, supplement with some additional information. In the two facilities where data was obtained, the total cost of providing care also included personal costs (client payments). Costs were estimated as $77.91 per day for women, plus $24.60 in personal costs; and $70.98 for men, plus $22.41. Table 4.2 shows the treatment costs per person after the first twelve months.

Tables 4.2, 4.3 and 4.4 shows the key results from this analysis. Table 4.2 provides an analysis of the costs of the index treatment, that is the treatment that the client was in the process of commencing at entry to the study. The Residential Rehabilitation group has the highest mean cost of index treatment ($7,500) reflecting a high cost per day ($98) and a mean length of time in treatment of 77 days. Table 4.3 shows costs of the index treatment plus any subsequent treatment regime the client entered during the first year. Clients with an index treatment of residential rehabilitation had an average total treatment cost of $13,364 in the first year following entry to the study, which is the highest of all the groups compared.

Table 4.4 shows estimates costs of health care utilisation (excluding the drug treatment analysed in Table 4.2 and 4.3). These estimates were based on self-reported use of services. Costs were estimated at the baseline – i.e. for the period prior to entry to treatment, and during the first year following entry to treatment. At baseline the Residential Rehabilitation group had much higher rates of use of health care services and associated costs ($777 vs $390), but during the first year of treatment these dropped to $473, which was only slightly higher than the average across groups ($460).

An examination of health status at entry to the study found that the group entering residential rehabilitation had significantly higher rates of mental health problems, higher rates of drug overdose in the previous 12 months, and a lower mean age at which the subject was first intoxicated. These observations suggest there are significant differences in the casemix of the clients entering residential rehabilitation in comparison with the other treatment modalities, and this conclusion is consistent with the higher use of health services prior to entry to treatment.

Table 4.2: ATOS- Index treatment at 12 months – costs and days in treatment (from Shanahan et al. 2004)

	Total (N=649)	MT (N=225)	DTX (N=235)	RR** (N=136)	NT (N=53)
Cost per person - mean	$2,920	$2,459	$1,339	$7,550	$0
- SD	$4,337	$1,667	$330	$7,472	$0
- median	$1,446	$2,491	$1,446	$4,080	$0
Days - mean	83.1	224.7	6.6	76.7	0
Cost per day in treatment - mean	$35	$11	$203	$98	$0

*** does not include an estimated total expenditure of $149,508 (mean $1,124) for required detoxification prior to entering RR*

Table 4.3: ATOS Total treatment – costs, days and episodes in treatment at 12 months (index and non-index treatment) (from Shanahan et al. 2004)

	Total (N=649)	MT (N=225)	DTX (N=235)	RR** (N=136)	NT (N=53)
Cost per person - mean	$6,187	$3,790	$5,238	$13,364	$2,153
- SD	$6,618	$2,389	$4,736	$9,371	$3,485
- median	$3,920	$3,920	$4,168	$10,998	$1,470
Days - mean	179.5	295.8	108.2	147.4	84.8
Episodes - mean	2.6	1.9	3.3	2.8	1.4

*** does not include an estimated total expenditure of $149,508 for required detoxification prior to entering RR (mean of $1,124).*

Table 4.4: Health Service Utilisation costs and percent expenditure by group (from Shanahan et al 2004)

	Total (N=649)		MT (N=225)		DTX (N=235)		RR (N=136)		NT (N=53)	
	BL	12 mth	BL	12 mth	BL	12 mth	BL	12 mth	BL	12 mth
Mean expenditure	$390	$460	$235	$355	$350	$507	$777	$473	$229	$670
% expenditure:										
Hosp/ambulance	57.8	63.6	44.9	63.0	54.3	65.0	67.1	56.4	56.9	73.4
GP/specialist	10.7	7.6	16.0	7.3	11.9	7.9	7.2	8.4	9.9	6.2
Medications	14.8	8.2	17.2	7.0	18.1	8.0	11.1	9.8	13.6	8.4
Other*	16.7	20.5	21.9	22.7	15.7	19.1	14.6	25.3	19.6	12.0

** Other includes: dentists, psychologist, counselling, diagnostics and social work.*

Studies of the costs of drug and alcohol treatment services have been sponsored by various Governments, although these studies are not readily available to the public. Over the last decade and more, the Victorian Department of Human Services has place emphasis on funding arrangements that have very clear specifications of outputs expected from various funded organisations and standardised benchmarks on which costing is based. The Department describes funding arrangements for drug treatment services in the following terms:

> "The Victorian Government provides the community with drug treatment services through a purchaser-provider model. This means that, rather than providing services itself, the Government purchases these services from independent agencies on behalf of the community.The Drug Treatment Services Program identifies a range of services, which cover the needs of clients experiencing substance abuse issues. The range of services purchased is detailed in the Rural and Regional Health and Aged Care (RRHACS) Policy and Funding Plan. Each of these services has key service requirements that define the service.
>
> "Activity descriptions and performance measures associated with Drug Treatment services are also outlined in the RRHACS Policy and Funding Plan. The major services under the Drug Treatment Output are Counseling, Consultancy and Continuing Care; Outpatient Withdrawal; Home-Based Withdrawal; Residential Withdrawal; Rural Withdrawal; Residential Rehabilitation; Peer Support; Youth Outreach; Specialist Methadone Service; Koori Community Alcohol and Drug Worker and Koori Community Alcohol and Drug Resource Services.
>
> "In the case of the Drug Treatment Services Program, the key output being purchased is an episode of care. An episode is defined as: *A completed course of treatment undertaken by a client under the care of an Alcohol and Drug worker which achieves significant agreed treatment goals.* As each service type provides clients with a different mix of clinical skills and practices, the cost of an episode of care varies across services. Most Drug treatment activities have a unit price based on the input costs required to deliver a particular episode of care. This provides for a consistent funding model across funded agencies." (Victorian Department of Human Services 2004).

As at February 2004, the Departmental prices set for residential rehabilitation services were $9,859.98 per completed episode. This is based on the assumption that there are 2.85 completed episodes per bed/place. This equates to an average length of stay for each completed episode of 128 days assuming 100 per cent occupancy, equivalent to $77 per day. With an assumption of 90 per cent occupancy rate the daily rate would be $86.

The Department indicates that residential services are actually costed on a bed day basis.

The Department emphasises that costs relate to "total resources needed to operate a service" whereas the prices paid "refers to the grant given by DTSU/DHS to an agency for the operation of a service. The difference will generally be met by client contribution." (Victorian Department of Human Services 2004).

CHAPTER 5 – ISSUES IMPACTING ON COSTS IDENTIFIED IN CONSULTATION WITH STAKEHOLDERS

A broad range of stakeholders were consulted during this study. Through these consultations a range of issues were identified as relevant to understanding costs of residential rehabilitation and funding requirements for services. In this chapter the results of these consultations are presented.

Three broad groups of issues were identified during stakeholder consultation: (1) factors related to the nature of clients services have targeted; (2) factors related to the characteristics of services; and (3) policies and issues that impact on revenue sources for services.

5.1 FACTORS RELATED TO CHARACTERISTICS OF CLIENTS

The various residential rehabilitation services in NSW target quite different client groups. The variations in the client mix, often referred to in the health services research literature as variation in "casemix", could potentially have a significant impact on costs of service delivery. An important focus of stakeholder consultations was to identify client characteristics that were considered to have a significant impact on costs, and assess how these could be brought into the analysis. Four characteristics were identified by most informants as being important and these are set out in Table 5.1.1. There were different views over the relative importance of these characteristics.

Table 5.1.1 Client Characteristics having an impact on costs of residential rehabilitation episodes

1. Client is a parent with children in residence, or the parent has regular contact with the child during the period in residence
2. Client has been referred to the service following or in conjunction with a court or correction related matter
3. Client has a concurrent mental health or other significant health related issues
4. Client is concurrently receiving Pharmacotherapy treatment

Clients with Children

The presence of children in residence results in a range of increased costs. Additional physical resources are required (beds, cots, linen, toys and educational materials), additional costs will be incurred in food, personal consumables and other operational costs, child care will be required to allow parents to participate in the rehabilitation programs, specific activities involving parents and children will need to be arranged, and just as importantly, the service has duty of care responsibilities for children in care, which translates into additional staffing requirements. Some children will have specific health needs which have resource implications. For example, morphine dependent babies are regularly taken to specialised clinics with their mothers. Parenting and mothercraft skills also need to be built into programs. There are six services within the scope of this study that allow clients to have their children live with them at the residential services (Phoebe House, Kathleen York House, Jarrah House, Guthrie House, Kamira Farm, and Odyssey House). Odyssey House provides a family residential program, but all other services cater only for mothers and children. Services cater for children of different ages, for example Phoebe House specifically targets mothers with new born infants, whilst other services are reluctant to cater for babies. These services employ types of workers that are required specifically because there are children in residence: childcare workers, early childhood teachers and/or parenting counselors.

Four other services (all of the WHOS) allow occasional family weekend stay-overs if a

halfway house is available.

Many clients in residential care have children, who are living elsewhere, but have regular contact with the parent. Sometimes contact with children has to be supervised because of court orders. Many parents are involved with legal processes related to their children such as family court matters and also child protection matters. Several people consulted pointed out that there are increased costs for clients in these circumstances.

Unfortunately children in residence are not considered in scope for the NSW or National Minimum datasets for drug and alcohol treatment services.

Clients referred following or in conjunction with a court or correction related matter

The level of involvement of clients in the criminal justice system can impact on costs to the services. Fourteen services participate in the MERIT scheme under which they have contractual obligations to have a certain number of places available for MERIT clients. In addition many other clients have some involvement with the justice system, either with court matters that are currently proceeding or pending, or through corrections.

A range of costs arise for these clients including:

- Staff time preparing reports for courts or corrections;
- Assisting clients with legal services - some services arrange pro bono legal services for clients, some others pay for legal services while others make arrangements for legal services on behalf of clients but require clients to pay for the services.
- Transport to court and other attendance requirements. In some services volunteers help out with transport. In at least one service, a charge is levied to cover the costs of providing transport.

Some services maintain a closer relationship with courts in that they serve as an alternative to jail for drug-related offenders, or as an adjunct to jail sentences. This can raise issues for services due to the effect of non-voluntary attendance.

Mental health and other significant health related issue

Mental health is a pervasive issue for alcohol and drug rehabilitation services. There is general agreement from the stakeholders consulted that clients' mental health problems have a direct relationship to the amount of staff time devoted to clients.

Services interviewed often suggested that drug and alcohol abuse is often self-medication for mental health problems. When clients withdraw from drugs and/or alcohol the underlying mental health issues start to manifest in other behaviours. These behaviours can, out of necessity, attract a high level of staff time.

Services have a range of policies concerning treatment and medication for mental health issues. One of the services interviewed has as its primary target group male and female adults with a mental illness. The fact that 95 per cent of their clients also have a substance abuse problem demonstrates the extent of the correlation between these two issues in clients. Other services try to ensure that potential clients have been treated for any underlying mental health issues and are no longer on psychiatric medication prior to their admittance to the service.

Clients can also have other significant health issues. Hepatitis C is highly prevalent for clients who have previously been drug injecting users.

Pharmacotherapy

Most residential rehabilitation services aim to achieve a drug free environment in which underlying issues can be addressed. This often requires clients to undergo a detoxification process prior to admission. However five services accept clients who are managing their situation through pharmacotherapy, mainly methadone maintenance. In one these services clients taken through a withdrawal process as part of the program, leading to a drug-free component of the program. In other services there is no explicit objective to help client withdraw from methadone. At least one service offers onsite dosing, which has associated costs. Other services utilise external pharmacotherapy services.

Other Issues

A range of other client characteristics issues were discussed with stakeholders, but on the whole, the issues discussed were generally not considered to be significant factors contributing to costs. For example:

- In general informants did not suggest that there were significant difference in costs for clients with different alcohol or drug problems.

- Most informants did not suggest indigenous clients were more costly than other clients. There are a number of services that specifically target indigenous clients.

- Most informants did not identify significant additional costs associated with clients from non-English speaking backgrounds, although numbers of these clients were low in many services.

5.2 SERVICE CHARACTERISTICS INFLUENCING COSTS

Informants were also asked about a range of characteristics of services that influences costs of service delivery. Services vary significantly across a range of dimensions that have some quite profound impacts on costs.

Nature of the program

At a very basic level different services offer programs that have different lengths of stay. Many services offer a program of around 3 months, but some offer shorter programs whilst others offer programs of up to 12 months. In practice clients may leave before completing a program and in some instances stay much longer than the original program. Different lengths of stay will impact significantly on average cost per completed episode, and to a lesser extent on average cost per day.

How rehabilitation programs are organised and operated will also impact on costs. The majority of services operate a self-help, mutual support-style program based on the therapeutic communities model. These services generally provide individual and group counselling, a living skills program and assistance with welfare. A few services operate a more "medicalised" model where the emphasis is on clinical psychological treatment. These services tend to require a shorter stay but have higher daily costs. A few other services are based on therapeutic communities but incorporate high levels of activities and training, including in-house TAFE-level training.

One factor that varies across the range of services is the degree to which clients access external community services while a resident of the alcohol and drug rehabilitation service. Some services discourage or tightly control client contacts with outside services, limiting outside services accessed by clients to medical and psychiatric treatment. This occurs in the therapeutic community-style services where the emphasis is on creating a safe environment away from the distractions of the every-day world. It also occurs in the more medicalised services that

take a more clinical approach to helping clients withdraw from drugs and alcohol.

On the other hand a few services operate with a high degree of integration with other services in the surrounding community. For example, clients of one service spend much of their time away from the facility, using services appropriate to their needs. In this service even the drug and alcohol counseling services are provided off-site by a third party. The service itself provides accommodation, a living skills program and case management of welfare issues. Another service accommodates clients in the community – after an initial 28 day stay at an induction residence – where they are encouraged to access services they need. In this case the service runs an in-house drug and alcohol counseling program, as well as welfare case management and a living skills program.

From a cost perspective, facilities providing fewer on-site services but facilitating access third party providers will be less costly.

Staffing Costs

Informants commented that increases in award payments over recent years had a significant impact on costs of service delivery, although these impacts were much the same across different services. The development of salary packaging options was also a factor, although again, these impacts are similar across services.

Facility in which service operates

There is wide variation in costs borne by services in relation to the buildings and their maintenance. Quite a few organisations own their buildings. Usually these were donated or bequeathed to the service, but there are a few instances where the services have bought properties at commercial prices and have or are paying off loans.

Many of the other services are occupying properties owned by the State Government or an umbrella community organisation and are paying peppercorn rents. In two other cases services are paying commercial-level rents for the properties owned by the state.

Other services are paying significant commercial rents to private landlords.

While ownership of the property brings lower rent it also means that the services are responsible for the upkeep of and improvements to the buildings and grounds. For those services that rent, it is usually the case that general maintenance and upkeep of the property is the responsibility of the service whilst structural improvements and repairs are the responsibility of the owners.

A number of services operate in rural areas and have large grounds that require significant resources to maintain.

Management and administrative overheads

One cost factor identified by informants is the extent to which individual services operate within a larger network of services or organisation, and thereby the extent to which economies of scale can be achieved with management and administrative overheads. Services operating within larger organisations often pay an administrative charge, reflecting costs met by the organisation's head office, for example the costs associated with administration of payroll.

Insurances

Over recent years insurance premiums have increased significantly and insurance has become a much more significant component of costs. The level of insurance costs vary between

organisations. Services that are part of a larger organisations or network of services, can have advantages in respect of insurance costs. Larger organisations are often able to negotiate better premium prices.

Accreditation and risk management

At the encouragement of funders and in order to better manage risks, all services have at least initiated accreditation against the Quality Improvement Council Australian Health and Community Service Standards. Typically, the process has or is requiring the dedication of significant resources to gaining accreditation. In some organisations a project officer has been specifically employed for this purpose. In other organisations costs have been absorbed within current staffing levels.

History of funding

Possibly the greatest influence on the per unit costs of the different services is the value of government funding they received in the past. The different styles of drug and alcohol programs offered by services tend to reflect the overall philosophy of the service. However, the history of funding and demand for services has often led to pragmatic changes to the way services are designed and delivered. For example, where the real value of funding grants have fallen over time, services have had to find different, less expensive ways of providing services. As discussed in the previous chapter, funding of residential rehabilitation service has moved from an arrangement in which funding has been considered a contribution to costs, to more recent funding allocations in which funding is related to a benchmark rate. Overall funding received by services has no particular "rationale" or and does not reflect equitable allocations between services.

5.3 REVENUE ISSUES

Informants were also asked about issues impacting on revenue.

Variety of government funding sources

Residential rehabilitation services receive funding under various programs operated at the Commonwealth and State levels. It is rare for services to have a single source of government funding.

Client contributions

Client contributions, particularly for board, are important in every service. A client contribution of 48%-80% of Centrelink payments is standard across most services. A few services have set fees ranging from $60 to $160 per week. Quite a few services will not evict clients on the basis on non-payment and therefore do not always receive the amount they expect. Around two-thirds of services receive clients' Centrelink payments directly into the services' bank accounts and deduct board payments from these accounts. These services then either hand over the remainder to clients or keep it in trust for clients. These services usually act as the Centrelink liaison for their clients. Some services have a bond payment on entry to the program, or for particular items such as linen.

Many services have settled on a particular arrangement for client contributions in order to ensure that on discharge clients have some savings that can be used to re-establish themselves in the community.

Degree of reliance on donations

Donations in cash and in kind are important to many services. One service has

fostered a strong relationship with a major donor and with professional networks that donate their services. Most other services seek and receive modest levels of donations. A few services see themselves as providing a public service, provided substantially with public funding, and have made a deliberate choice not to solicit donations.

CHAPTER 6 – RESULTS

6.1 OVERVIEW

Thirty one services were identified as being in scope for this study (Appendix A). Data requests were forwarded by email and post to each service, and were followed up by a personal visit or telephone. After follow-up, data returns were received from 29 services.

Client data was obtained from the NSW Minimum Dataset for Drug Treatment Services and the NADA database. Client data was obtained for 28 services. Section 6.5 presents analyses for all the 28 services.

For one service client data was received but no financial data return was received. Once financial and client data were combined, it was evident either the financial or client data was problematic for a further four services. The costing analysis presented in sections 6.6, 6.7 and 6.9 was based on the remaining 23 services.

6.2 DATA QUALITY CHECKS

Several data quality checks were implemented for both the service description/cost data and the client data. The service description/cost data was checked for completeness of returns. Issues requiring clarification were followed up with identified contacts. Revenue and expense information were checked and remapped to different categories where this was appropriate. Large expense items that appear to be once-off expenditures were flagged and discussed with services where appropriate.

As mentioned above, client datasets were received from both NSW Health, based on an extract from the NSW Minimum Dataset for Drug and Alcohol Treatment Services, and also (for a more limited number of services) from the NADA database. These data extracts were checked for a range of problems including the following:

- Client episodes were grouped into "residential" and "non-residential" using the data items of Setting, Main Service Type and Other Treatment type and length of episode. Episodes that started and ended on the same day were all grouped to Non Residential.

- Duplicate records were flagged by identifying residential and non-residential episodes with the same Agency Identifier, Client ID, and Commencement date. These records were further investigated to confirm that they were in fact duplicates. Confirmed duplicate records were then excluded from further analysis.

- Episodes that had lengths of stay that were significantly longer than the program length identified by the service, mostly lengths of stay of over 200 days, were also flagged and checked with the services concerned. Where the status of the episode could not be confirmed, these episodes were truncated to either 90 days or 120 days depending on the nature of the program offered by the service.

- The average number of clients in residence on each day was calculated. This was compared to available beds to calculate an average occupancy rate. Services with occupancy rates of over 100 per cent were further investigated.

- It became evident that the assignment of Service Setting, Main Treatment Type and Other Treatment Types are not consistently interpreted between services. For a few services where there were confirmed problems, "non-residential" episodes were reassigned to "residential" episodes.

After an initial analysis of the NSW Minimum Dataset it became evident there were a

number of problems with the data. In particular, the dataset included a number of very long episodes that were "open", that is they did not have episode cessation dates. These were checked against the NADA database, where this was available, and also with the services concerned. These checks confirmed that the NSW Minimum Dataset includes episodes that have actually ceased, but there is no cessation date recorded.

NADA also provided a supplementary database in December 2004. When this database was checked, it was found it excluded a number of episodes. The problem was identified and a further extract, including the missing episodes, was provided in March 2005. Unfortunately NADA includes only client data for only 17 of the in-scope services.

In addition, services were requested to complete a supplementary return for children in residence during 2003-04. These returns were provided by three of the services.

6.3 SERVICE CHARACTERISTICS

Twenty nine services submitted data returns. This section presents descriptive information concerning these services. These services reported having 692 residential places, not including half-way houses. The services reported total expenses of just over $25 million.

Tables 6.3.1 and 6.3.2 show the targets groups for these services, by age, sex and the capacity to take children into residence. Target age groups are defined in a variety of ways with different age cuts offs for various services. Four services are exclusively targeted at adolescents. A further five services are targeted at both adolescents and adults. Twenty services target adult clients.

Table 6.3.1 Residential Rehabilitation Services – Target Groups by Age Group

Target Groups by Age:	*Services*	*Beds*	*Expenses*
Adolescents	4	28	3,996,367
Adolescents and adults 15+	1	13	654,545
Adolescents and young adults 16-21 years	1	18	1,352,486
Adolescents and adults 17+	2	26	1,316,243
Adolescent and adult	1	22	811,997
Adult - 18 years +	19	557	16,166,715
Adult - 20 years +	1	28	892,556
Total	**29**	**692**	**25,190,909**

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

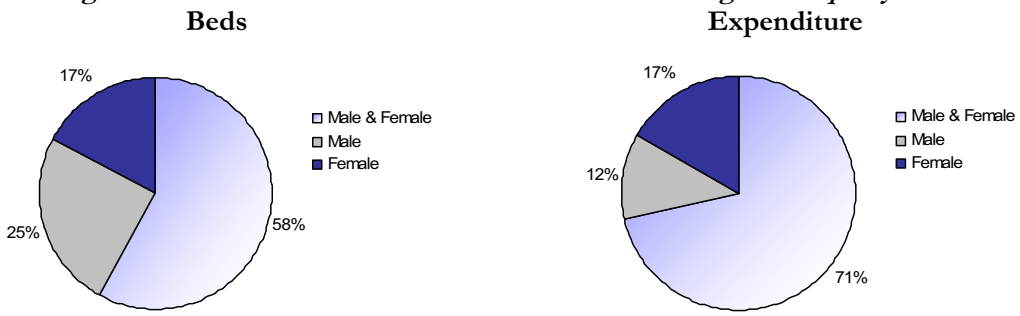
In Table 6.3.2 services have been grouped into targeting adolescents, adolescents and adults and adults only. Fifty-eight per cent of beds and 71 per cent of expenditures relate to services that cater for both male and female clients. Twenty five per cent of beds and 17 per cent of expenditures relate to services catering only for male clients. (Figure 6.3.1). There are five services that allow children to stay in residence with their parents. In one of these services, family accommodation is only a component of the service with places for children representing slightly over 15 per cent of the places available.

Table 6.3.2 Residential Rehabilitation Services – Target Groups by Sex, Age Group and Capacity to take Children into residence

	No Children in Residence			Children in residence		
	Male & Female	Male	Female	Female and Children	Males, Females and	Total
Services						
Adolescents	4	-	-	-	-	4
Adolescents and adults	5	-	-	-	-	5
Adults only	8	4	3	4	1	20
Total	*17*	*4*	*3*	*4*	*1*	*29*
Beds						
Adolescents	28	-	-	-	-	28
Adolescents and adults	79	-	-	-	-	79
Adults only	189	172	66	53	105	585
Total	*296*	*172*	*66*	*53*	*105*	*692*
Expenses						
Adolescents	3,996,367	-	-	-	-	3,996,367
Adolescents and adults	4,135,271	-	-	-	-	4,135,271
Adults only	5,610,302	2,969,613	1,828,496	2,386,791	4,264,069	17,059,271
Total	*13,741,940*	*2,969,613*	*1,828,496*	*2,386,791*	*4,264,069*	*25,190,909*

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Figure 6.3.1 Residential Rehabilitation Services – Target Groups by Sex



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Services had a variety of other criteria that also defined their target groups. These included:

- Clients with concurrent mental health issues
- Clients involved with the criminal justices system
- Women on methadone maintenance and their dependent children
- An emphasis on indigenous clients;
- In a few limited cases services focus on clients with problems with particular drugs, but most services accepted clients with a range of drug and alcohol problems.

Services were also asked to provide a general description of the services provided. Responses varied in detail, and are provided in Appendix D. A small number of services described themselves as therapeutic communities.

Services were asked to identify how long clients typically stay in the residential component of their program. Services vary significantly in the typical length of stay (Table 6.3.3). Three services offer relatively short programs of less than three months. Twelve services offer programs

that are three months in length. Five services offer programs of 3 to 6 months, and these five services account for 31 per cent of beds in the sector. Nine services offer programs of 6 to 12 months, accounting for 34 per cent of beds in the sector. Actual lengths of stay (for episodes active in 2003-04) were compared with the responses to this question (Table 6.3.3). Average lengths of stay were lower that the stated program length, largely due to clients who leave the program prior to completion. However, in general, actual lengths of stay increased in line with the responses identified by services.

Table 6.3.3 Residential Rehabilitation Services – Typical Length of Program

	Services		Beds		Average Length of
	n	%	*n*	%	Stay in 2003-04 (Days)
Less Than 3 Months	3	10%	47	7%	30
Three months	12	41%	193	28%	52
Three to Six Months	5	17%	214	31%	70
Six to Twelve months	9	31%	238	34%	90
Total	***29***		***692***		**59**

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Service locations were grouped into Sydney, regional (Wollongong, Central Coast, Newcastle regions) and rural. Table 6.3.4 shows this analysis. Forty five per cent of services are located in Sydney and these account for 40 per cent of residential rehabilitation places and 48 per cent of expenses.

Table 6.3.4 Residential Rehabilitation Services – Location of Services

	Sydney	Regional	Rural	Total
Services	13	8	8	29
	45%	28%	28%	100%
Residential Places	278	273	141	692
	40%	39%	20%	100%
Expenses $m	12.2	6.6	6.4	25.2
	48%	26%	25%	100%

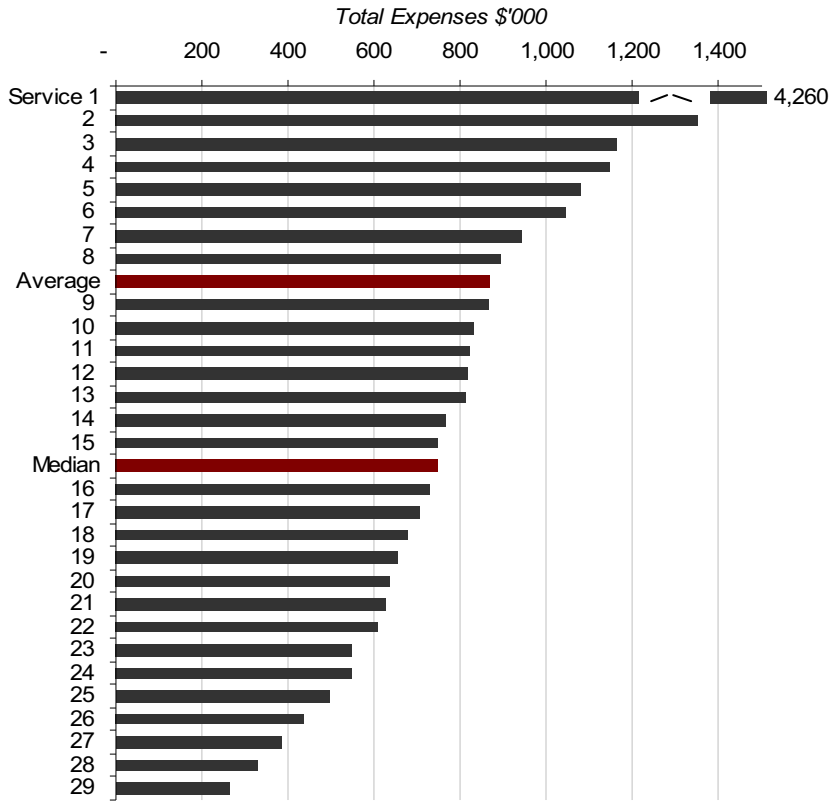
Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

6.4 ANALYSIS OF COST CATEGORIES FOR RESIDENTIAL REHABILITATION SERVICES

Services were requested to submit detailed of expenses for the 2003-04 financial year, along with a copy of their audited financial statements. This section presents descriptive analyses of the expenses reported by the 29 services.

Service vary considerably in size, and this is reflected in the level of expenses reported. Across the 29 services, average total expenses were $869,000 for 2003-04, and the median was $748,000. (Figure 6.4.1) The largest service reported expenses of $4.26 million for the year. This was considerably more than the next largest service which reported expenses of $1.35 million. The smallest service in expenditure terms reported expenses of $263,000 for the year.

Figure 6.4.1 Residential Rehabilitation Services – Total Expenses 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Note: Service numbers in this chart do not refer to the same services in other charts and tables

Services were asked to report on expenditures by a standard set of cost categories. Table 6.4.1 shows the split total expenditures across categories. In Table 6.4.2 expenditures are grouped into the broader categories. An un-weighted average proportion of expenditures across the broad categories is presented, along with the median proportion, lowest and highest values. Figure 6.4.2 is a graphical presentation of expenditures across the broad categories.

As is to be expected, employee related expenses make up the most significant component of costs – representing 65.3 per cent of expenses. Employee related costs are explored in more detail later in this section. Food and household consumables (6.5 per cent of expenses) is the next largest expenditure area, followed by property related costs (5.3 per cent), central management/administrative charges (3.2 per cent) and motor vehicle costs (2.9 per cent).

Table 6.4.1 Residential Rehabilitation Services – Expenses by Category of Expense 2003-04

	Per cent to Total Expenses
2.01 Employee Related	65.3%
2.02 Accounting and audit fees:	0.7%
2.03 Administration:	1.5%
2.03.1 Administration - Central Management Charge	3.2%
2.04 Advertising:	0.3%
2.05 Bank and government charges:	0.4%
2.06 Clinical services:	0.6%
2.07 Computing:	0.2%
2.08 Equipment (excluding capital equipment purchases)	0.5%
2.09 Food and household consumables:	6.3%
2.10 Insurance - Workers' compensation:	1.3%
2.11 Insurance - Public Liability:	0.6%
2.12 Insurance - Directors and Professional Liability:	0.3%
2.13 Insurance - Other:	0.8%
2.14 Legal expenses:	0.5%
2.15 Motor vehicle expenses:	1.8%
2.16 Rent:	2.0%
2.17 Staff training:	0.8%
2.18 Telephone and Communications	1.5%
2.20 Travel:	0.5%
2.21 Utilities:	1.5%
2.22 Other expenses:	4.1%
2.23 Repairs and maintenance:	2.1%
2.24 Depreciation - Buildings:	1.1%
2.25 Depreciation - Vehicles:	1.2%
2.26 Depreciation - Other capital assets:	0.9%

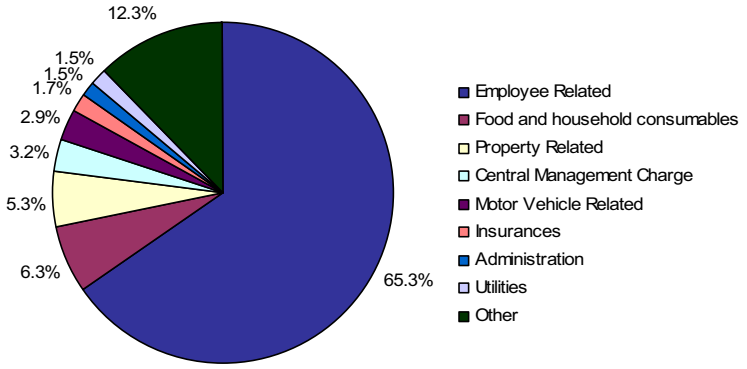
Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Table 6.4.2 Residential Rehabilitation Services – Broad Category of Expense 2003-04

	All Services	Unweighted Mean	Median	Range - Low	Range - High
Employee Related	65.3%	64.3%	64.8%	38.1%	84.2%
Administration	1.5%	1.7%	1.0%	0.0%	7.9%
Administration - Central Management Charge	3.2%	2.7%	0.0%	0.0%	21.4%
Insurances	1.7%	1.9%	1.6%	0.0%	4.7%
Food and household consumables:	6.3%	7.2%	5.4%	0.6%	18.5%
Property Related:					
Rent	2.0%	2.2%	0.8%	0.0%	13.6%
Depreciation - Buildings	1.1%	0.8%	0.0%	0.0%	5.7%
Repairs and Maintenance	2.1%	2.3%	1.6%	0.0%	13.8%
Total Property Related	*5.3%*	*5.3%*	*3.9%*	*0.2%*	*19.5%*
Utilities	1.5%	1.7%	1.2%	0.1%	4.6%
Motor Vehicle Related					
Motor Vehicle	1.8%	1.8%	1.2%	0.0%	6.1%
Depreciation - Vehicles	1.2%	1.3%	0.5%	0.0%	5.9%
Total Motor Vehicle Related	*2.9%*	*3.0%*	*1.9%*	*0.0%*	*9.8%*
Other	12.3%	12.2%	10.5%	2.8%	24.7%

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

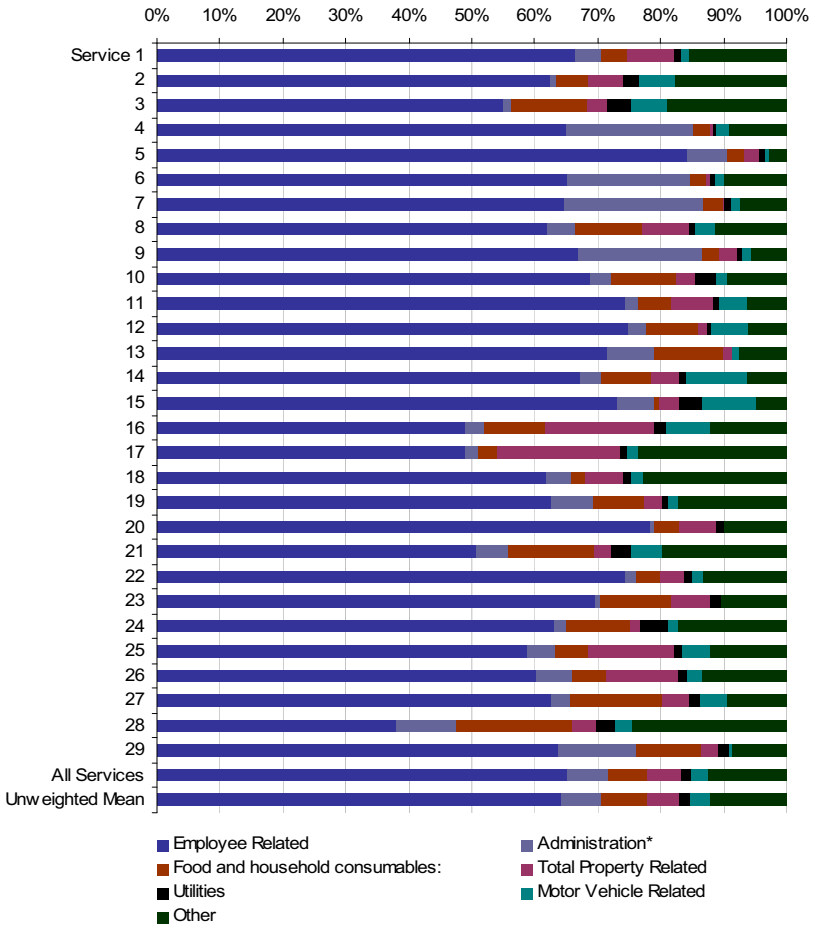
Figure 6.4.2 Residential Rehabilitation Services – Broad Category of Expense 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Figure 6.4.3 is a graphic representation of how the major components of costs vary across services. Whilst employee related expenses consistently account for the highest proportion of costs, for some services employee related expenses are less that 50 per cent of total expenses.

Figure 6.4.3 Residential Rehabilitation Services – Broad Category of Expense at the Service Level 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

For some services Administration includes a management and administration payment to an umbrella organization.

Note: Service numbers in this chart do not refer to the same services in other charts and tables

Clearly staffing is the major cost driver for residential rehabilitation services. Table 6.4.3 presents employee related expenditure reported by the 29 services. Salaries and wages account for 86 per cent of employee related expenses, with employer contributions to superannuation making up 7.0 per cent of employee related expenses.

Table 6.4.3 Residential Rehabilitation Services – Employee Related Expenses 2003-04

	Expenses reported	Per cent
Wages and salaries:	14,146,926	86.0%
Annual leave provisions:	169,898	1.0%
Long service leave provisions:	86,957	0.5%
Superannuation (employer contributions):	1,148,400	7.0%
Salary packaging benefits:	768,363	4.7%
Fringe Benefits Tax:	136,533	0.8%
Total	***16,457,077***	***100.0%***

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Services were asked to provide details of their staff profile, describing the roles of various positions. Twenty three services provided these details. These 23 services reported that they directly employed 237.9 full time equivalent staff. (This did not include the largest residential rehabilitation service which did not provide a staffing return.) A number of services pay an administration charge to a head office, and in these circumstance staff employed by the head office were not included in these returns.

On average the 23 service submitting a staff profile employed 10.3 full time equivalent staff, with the median number of staff being 9.7. Across services the average of employee related costs per FTE staff was $49,259 and the median was $46,884. Staff were employed across a range of awards and arrangements. Table 6.4.4 sets of staff grouped in major categories of employees.

Table 6.4.4 Residential Rehabilitation Services – Staffing 2003-04

Staff Category	FTE
Director/Manager	23.0
Drug & Alcohol Worker	138.3
Residential Care Worker	24.9
Childcare Worker	2.0
Clinicians (nurses, psychologists)	4.3
Vocation Educators	6.7
Office Staff	28.7
Cleaner, kitchen staff, mainteance	6.5
Farm managers/workers	2.5
Other	1.1
Total	***237.9***

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study – 23 services

There was some variation between services in the identification of staff as either "Drug and Alcohol" workers or "Residential" workers – some services separated these categories out whilst other grouped them together. On average services employed 6.9 full time equivalent drug and alcohol/residential staff, with the median being 7.3 staff. Average salaries per full time equivalent workers were reported as $40,200. This does not include other employee related costs such a superannuation and the value of benefits included in salary packaging.

All services employed a director, manager or chief executive officer. The average salary

component for these positions was reported as $52,333. Most services employed administrative staff, with an average of 1.2 full time equivalents per service and an average salary of $31,636.

6.5 CLIENT CHARACTERISTICS

This section presents basic descriptive statistics of clients receiving residential rehabilitation services. Non-residential services are important for some services, but these have not been analysed in detail.

Table 6.5.1 sets out basic statistics for both episodes that were active in 2003-04 (included episodes that were not completed in that year) and episodes that were completed in 2003-04. Completed episodes are a subset of all active episodes. Because the study focused on the 2003-04 year it was important to get an accurate estimate of the number of days clients were in residence within that year. This required that all active episodes were considered and days related to stays that commenced before 1 July 2003 and after 30 June 2004 were excluded. The second column shows the results of this calculation.

Table 6.5.1 Residential Rehabilitation Services – Residential Episodes, Lengths of Stay and Average Lengths of Stay, 2003-04

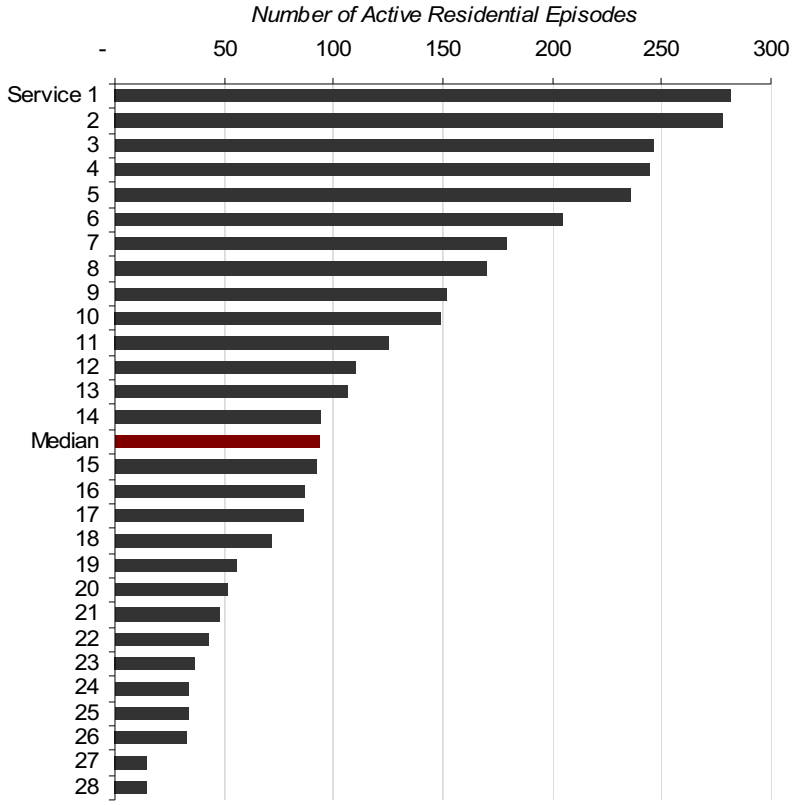
	Episodes Active During 2003-04			Episodes that were completed in 2003-04		
	Episodes	Days in 2003-04	Average days in 2003-04 per Episode	Episodes	Total Days	Average Length of Stay
Service 1	282	22,419	80	218	20,682	95
Service 2	278	5,239	19	264	5,285	20
Service 3	246	8,847	36	221	9,059	41
Service 4	244	5,565	23	227	5,396	24
Service 5	236	10,713	45	205	11,138	54
Service 6	205	10,944	53	185	8,152	44
Service 7	179	10,389	58	145	8,471	58
Service 8	170	10,606	62	136	9,903	73
Service 9	152	3,162	21	142	2,443	17
Service 10	149	11,408	77	112	11,170	100
Service 11	125	10,920	87	93	12,728	137
Service 12	110	18,596	169	61	7,039	115
Service 13	106	3,913	37	95	4,778	50
Service 14	94	4,481	48	76	2,909	38
Service 15	92	8,533	93	69	7,966	115
Service 16	87	10,856	125	55	7,325	133
Service 17	86	6,162	72	71	6,222	88
Service 18	71	4,307	61	58	4,355	75
Service 19	56	2,697	48	50	2,769	55
Service 20	51	2,022	40	48	2,044	43
Service 21	48	2,417	50	36	1,946	54
Service 22	43	2,408	56	41	1,819	44
Service 23	37	3,113	84	29	3,744	129
Service 24	34	1,607	47	31	922	30
Service 25	34	2,725	80	25	1,954	78
Service 26	33	3,370	102	21	1,812	86
Service 27	15	5,475	365			
Service 28	15	4,563	304	1	216	216
Total	**3,278**	**197,457**	**60**	**2,715**	**162,247**	**60**
Median	**93**	**5,357**	**59**	**71**	**5,285**	**58**

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Note: Service numbers in this chart refer to the same services as in Figures 6.5.1 and 6.5.2 but no other charts and tables.

The number of active episodes for each service are shown graphically in Figure 6.5.1. The median number of active episodes for services is 93. Services with the most number of episodes had around 280 active episodes, but this ranges down to services with 15 active episodes.

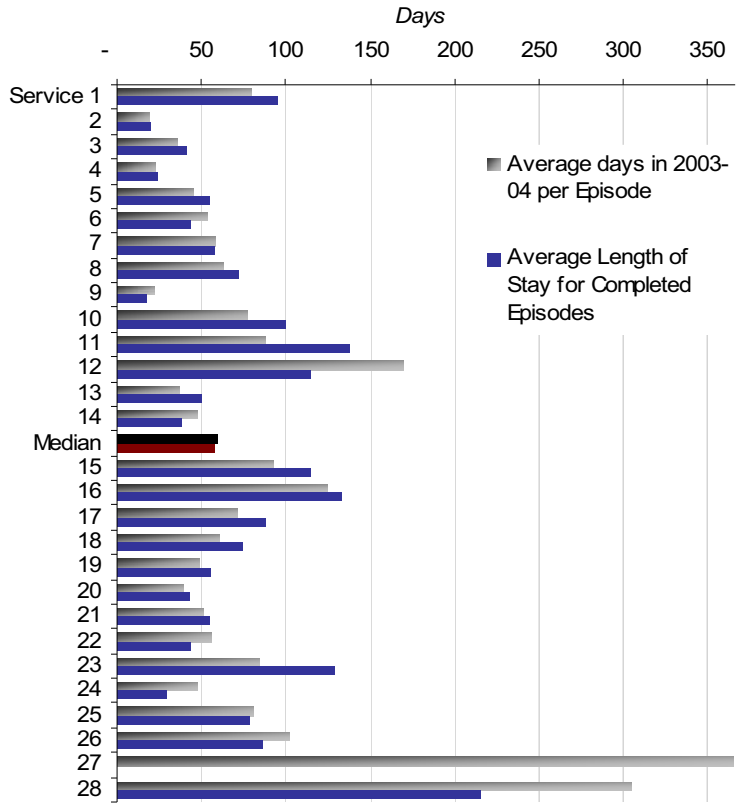
Figure 6.5.1 Residential Rehabilitation Services – Number of Active Client Episodes During 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study
Note: Service numbers in this chart refer o the same services as in Table 6.5.1 and Figure 6.5.2 but no other charts and tables.

Lengths of stay vary considerably and are shown in Figure 6.5.2 which includes average days per active episode in 2003-04, along with the average length of stay for completed episodes in 2003-04. The median service has an average length of stay of around 59 days, but there is significant variation around this average. Services with the smallest number of active episodes tended to have the longest lengths of stay (up to 365 days in one case). The shortest average length of stay is 21 days. Otherwise there is no clear relationship between length of stay and the number of episodes.

Figure 6.5.2 Residential Rehabilitation Services – Number of Active Client Episodes During 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study
Note: Service numbers in this chart refer to the same services as in Table 6.5.1 and Figure 6.5.1 but no other charts and tables.

Table 6.5.2 shows active episodes and days in 2003-04 by the sex and age of the client. Sixty five per cent of episodes are for males and 35 per cent for females, with a similar split for days. Persons aged under 18 years (the youngest client was 14 years), make up 4 per cent of episodes. Persons aged 25-34 make up 41 per cent of episodes.

Rates per 100,000 people have been estimated and presented in Figure 6.5.3. Overall there are an estimated 49 episodes per 100,000 people and 2,937 days per 100,000 people per year. Rates peak for the 18-24 and 25-34 year age groups, where they are around 2.5 times the overall average. Age specific patterns are constant across episodes and days.

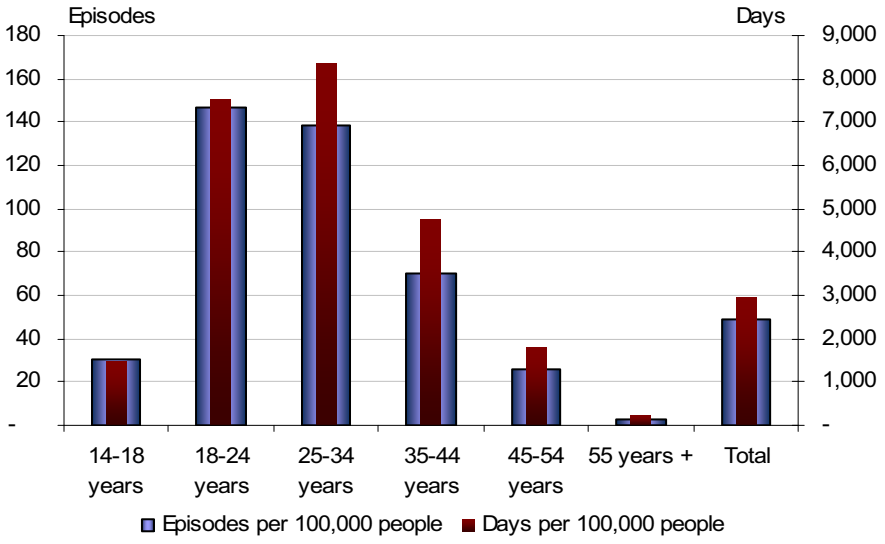
Table 6.5.2 Residential Rehabilitation Services – Active Episodes and Days by Age Group and Sex, 2003-04

Age Group	Male	Female	Not stated/ inadequately described	Total	Per cent
Episodes Active in 2003-04					
14-18 years	95	45		140	4%
18-24 years	535	263	1	799	24%
25-34 years	849	502	1	1,352	41%
35-44 years	458	247	1	706	22%
45-54 years	154	81		235	7%
55 years +	28	16		44	1%
Not recorded/Invalid	2			2	0%
Total	***2,121***	***1,154***	***3***	***3,278***	***100%***
	65%	35%	0%	100%	
Days in 2003-04					
14-18 years	5,008	1,741		6,749	3%
18-24 years	29,361	11,571	59	40,991	21%
25-34 years	52,428	29,048	5	81,481	41%
35-44 years	31,456	16,388	117	47,961	24%
45-54 years	12,108	4,290		16,398	8%
55 years +	2,306	1,360		3,666	2%
Not recorded/Invalid	211			211	0%
Total	***132,878***	***64,398***	***181***	***197,457***	***100%***
	67%	33%	0%	100%	

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Note: Service numbers in this chart do not refer to the same services as the numbers used in Figures 6.4.1 and 6.4.3

Figure 6.5.3 Residential Rehabilitation Services – Active Client Episodes During 2003-04 – Rates per 100,000 people



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Table 6.5.3 presents data on indigenous status. Indigenous people account for 13 per cent of episodes and 11 per cent of days, which is significantly higher than their proportion of the total population (slightly over 2 per cent of the NSW population).

Table 6.5.3 Residential Rehabilitation Services – Active Episodes and Days by Indigenous Status, 2003-04

Indigenous Status	*Episodes Active in 2003-04*	*Per cent*	*Days in 2003-04*	*Per cent*
Indigenous	416	13%	22,267	11%
Not Indigenous	2,798	85%	171,173	87%
Not Stated	64	2%	4,017	2%
Total	***3,278***	***100%***	***197,457***	***100%***

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Table 6.5.4 is an analysis of the principal drug of concern for clients. Alcohol is the most common principal drug of concern, accounting for 30 per cent of active episodes, and 35 per cent of days. Heroin is the principal drug of concern for 26 per cent of episodes and 24 per cent of days, although a further 3 per cent of episodes and days involve clients being treated with pharmacotherapy interventions. Other common principal drugs of concern are amphetamines (20 per cent of episodes) and cannabis (16 per cent of episodes).

Table 6.5.4 Residential Rehabilitation Services – Active Episodes and Days by Principal Drug of Concern, 2003-04

Principal Drug of Concern	*Episodes Active in 2003-04*	*Per cent*	*Days in 2003-04*	*Per cent*
Alcohol	998	30%	69,146	35%
Amphetamines	659	20%	39,304	20%
Analgesics	14	0%	624	0%
Organic Opiate Analgesics	28	1%	2,142	1%
Benzodiazepines	46	1%	2,805	1%
Cannabis	526	16%	27,950	14%
Cocaine	15	0%	968	0%
Ecstasy	16	0%	835	0%
Heroin	839	26%	46,929	24%
Methadone/Buprenorphine	99	3%	5,440	3%
Sedatives and hypnotics	11	0%	373	0%
Other	27	1%	941	0%
Total	***3,278***	***100%***	***197,457***	***100%***

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

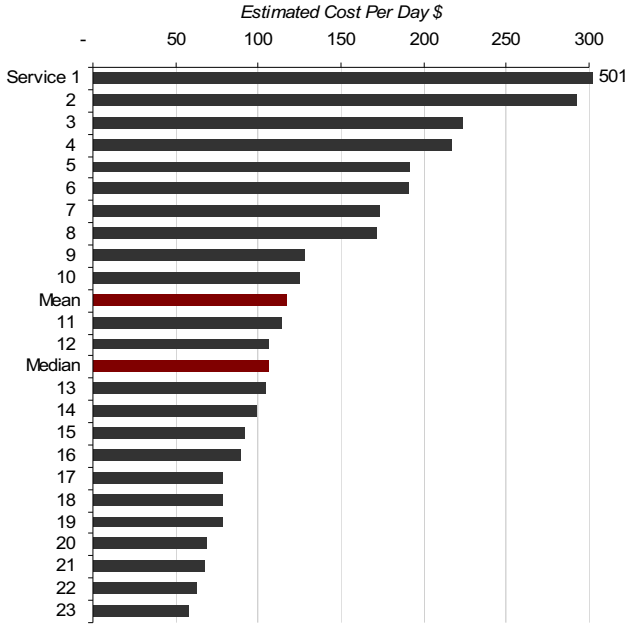
Note: Service numbers in this chart do not refer to the same services as the numbers used in Figures 6.4.1 and 6.4.3

6.6 PER DIEM AND PER EPISODE COSTS

Data of reported expenses were combined with data on client episodes to produce estimates of costs per diem (per day) and costs per episode. In bringing these data together it became evident that data sources for some services were problematic. These services were flagged and excluded from further analysis. Ultimately 23 services were included in the analysis representing 3,017 active episodes and 171,987 days in 2003-04. This section describes the main results from this analysis.

Average expenditures per day were calculated. Across service the average expenditure per day was $117, and the median $107. Note that this is total expenditure, not government funding per day. There is wide variation between services. For one service, costs per day were estimated at $501, (although these costs were almost all supported by non-government funding sources). The average cost per day is $111 excluding the very high cost service. Eight services had costs in excess of $150 per day. For 15 services costs were estimated to be between $60 per day and $127 per day.

Figure 6.6.1 Residential Rehabilitation Services – Estimated Cost per Day 2003-04

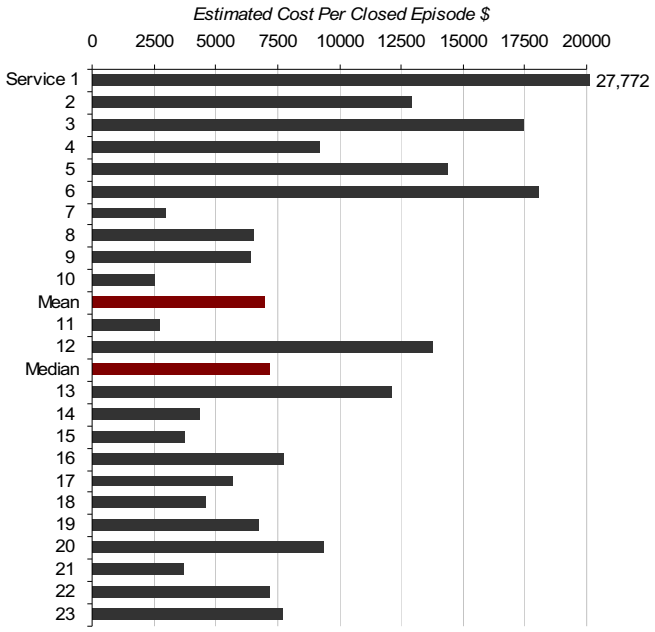


Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study
Note: Service numbers in this chart refer to the same services as in Figure 6.6.2 but no other charts and tables.

Cost per day were used to estimate costs per closed episodes, taking the average length of stay for episodes that were closed in 2003-04. Figure 6.6.2 presents these results (the services in this chart are in the same order as in Figure 6.6.3, that is by cost per day.) The average cost per closed episode is estimated to be $6,995, and the median cost per closed episode is estimated to be $7,206. Average costs per closed episode vary significantly, reflecting both variations in cost per day and average length of stay. The highest cost per closed episode was estimated to be $27,772 and the lowest $2,715. Excluding the highest cost service, the mean cost per closed episode is $6,483.

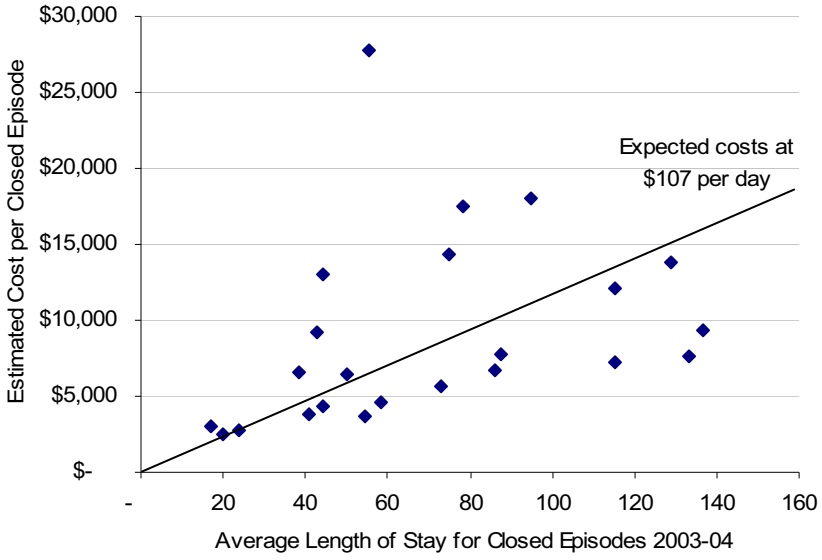
Figure 6.6.3 plots average cost per episode against average length of stay. The chart suggests that length of stay is the major driver of costs per episode, but other variations in cost per day play a significant role.

Figure 6.6.2 Residential Rehabilitation Services – Estimated Cost per Episode 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study
Note: Service numbers in this chart refer to the same services as in Figure 6.6.1 but no other charts and tables.

Figure 6.6.3 Residential Rehabilitation Services – Estimated cost per closed episode and average length of stay 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

6.7 FACTORS IMPACTING ON COSTS

As discussed is chapter 5, a range of factors potentially impact on costs, including characteristics of services and characteristics of clients. Table 6.7.1 shows the impact of three service characteristics that have been discussed elsewhere. On average costs per day for services that accepts children as residents are 37 per cent higher than the state average, and costs

per closed episode 64 per cent higher. Services that target indigenous clients have lower costs per day, but higher costs per closed episodes (reflecting longer lengths of stay than average). Services that accept clients on methadone maintenance have per day costs that are 19 per cent higher and closed episode costs that are 10 per cent higher than average. Finally there is some evidence that on average services located in Sydney have higher costs.

Table 6.7.1 Residential Rehabilitation Services – Service Characteristics that may impact on costs, 2003-04

Service Characteristics that may impact on costs	Cost Per Day		Cost per closed episode	
	$	*% of average*	*$*	*% of average*
Children in residence	160	137%	11,177	164%
No children in residence	103	88%	5,745	84%
Total	*117*	*100%*	*6,833*	*100%*
Indigenous Targeted Services	98	84%	9,100	133%
Other Services	119	102%	6,651	97%
Total	*117*	*100%*	*6,833*	*100%*
Accept methadone maint. clients	140	119%	7,535	110%
Other Services	114	98%	6,739	99%
Total	*117*	*100%*	*6,833*	*100%*
Sydney Location	146	124%	9,695	142%
Regional Location	95	81%	5,547	81%
Rural Location	110	94%	5,300	78%
Total	*117*	*100%*	*6,833*	*100%*

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

A limitation of the analysis presented in Table 6.7.1 is that the factors discussed interact, and the more relevant issue is to consider the combined impact of these factors and other client characteristics. Typically this requires a regression analysis, but unfortunately the potential for such analysis is limited because there are a relatively small number of services included in the study. To attempt to gain some insights into the combined impact of a range of factors, average costs at the service level were attributed back to individual episodes, and several simple regression models tested using the resulting data. This approach doesn't strictly comply with the requirements for regression modeling, a multi-level model would be the most appropriate specification for this type of analysis. However, the results do provide additional information related to the impact of various factors on costs.

Table 6.7.2 presents the results of a model specified to explain average costs per day. Table 6.7.3 shows the results of a model that that was specified to explain variations in the average cost of completed episodes. The coefficient estimates presented in Table 6.7.2 can be interpreted as the dollar impact on the cost of per day, and for Table 6.7.2 the coefficient estimates represent the effect on costs per completed episode of a particular variable. Length of stay was brought into the model, as this is the single most important factor in explain variation in episode costs (explaining around 70 per cent of variation). The coefficient estimate of 108.3 can be interpreted as an average cost per day, and is close to the average and median estimates presented in section 6.6. Services that accept children into residence have increased average costs for completed episodes of $4,632. Interestingly the model suggests that once the other factors are taken into account, services that accept clients on methadone have lower average costs. The model suggests services located in Sydney have higher costs, but male clients in general have lower costs. The model suggests clients aged between 14 and 17 years have substantially higher costs, although the statistical evidence for this factor is weak. Indigenous clients also have higher costs.

Table 6.7.2 Residential Rehabilitation Services – Regression Model – Factors that explain average cost per day 2003-04

	Intercept	Service Accepts Children	Service Accepts Clients on Methadone	Service is located in Sydney	Client is Male	Client is aged 14-17 years	Client is Indigenous
Coefficient estimate	112.5	45.5	-26.6	9.0	-6.4	184.6	18.5
Standard Error	2.4	3.8	4.6	3.1	2.6	7.9	3.5
R^2	0.21						

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Table 6.7.3 Residential Rehabilitation Services – Regression Model – Factors that explain average cost per completed episode 2003-04

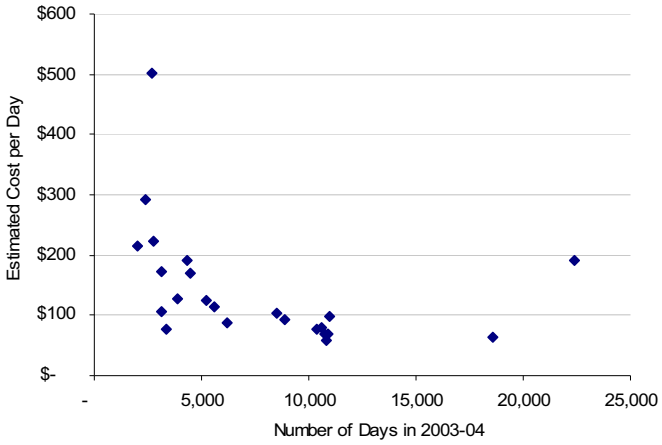
	Length of Stay (Days)	Service Accepts Children	Service Accepts Clients on Methadone	Service is located in Sydney	Client is Male	Client if aged 14-17 years	Client is Indigenous
Coefficient estimate	108.3	4,632.8	-3,644.9	2,154.5	-965.6	9,844.7	589.4
Standard Error	1.4	434.9	520.4	349.6	208.7	897.8	386.1
R^2	0.79						

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Another issue considered by this study is the impact of scale on costs. Figure 6.7.1 shows the relationship between the average cost per day and the number of client days in 2003-04. A relationship appears to exist, although it is relatively weak. A simple linear regression model was used to estimate the effect of scale (more client days/places) on average cost per day. The number of client days for a service explained around 16 per cent of the variation in cost per day. The model suggested that average costs per day decrease by around $2.75 for each additional residential place in a service. As can be seen from Figure 6.7.1 there is one observation, with a large number of days, but also relative high costs.

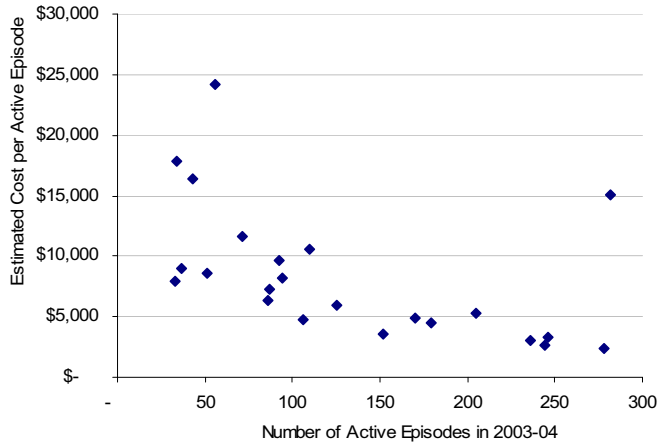
The relationship between total number of active episodes and average cost per active episode was also explored (Figure 6.7.2). Statistically this relationship is stronger, with the number of active episodes in the year explaining 32 per cent of variation in average cost per episode. The regression model suggests that costs per episode decrease by $44 for each additional episode that a service is able to accept.

Figure 6.7.1 Residential Rehabilitation Services – Relationship between total number of client days per service and average cost per day 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Figure 6.7.1 Residential Rehabilitation Services – Relationship between total number of active episodes and average cost per active episode 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

6.8 FIXED AND VARIABLE COST ESTIMATES

Fixed costs represent those costs that will not change over time as volumes of activity change, whilst variable costs are those that increase and decrease with changes in activity. Fixed and variable costs are concepts that can't always be easily applied in the real world. For this study a number of assumptions were applied to estimating fixed and variable components. These were:

- The majority of employee related costs associated with directors and managers were assumed to be fixed costs. From the staffing return, these staff were estimated to account for 13 per cent of total employee-related costs;

- Fifty per cent of the employee related costs of office staff were assumed to be fixed.

This is estimated to be 5 per cent of total employee-related costs;

- All employee related costs for other staffing categories were assumed to be variable. Whilst small changes in activity volumes are unlikely to have immediate impact of the numbers of drug and alcohol, residential and other workers employed, services will ultimately need to adjust staff ratios to reflect activity.

- Eighty per cent of facility related expenses were assumed to be fixed costs. Some components of facility costs will vary with volume changes;

- Twenty per cent of administration and other expenses were assumed to be fixed costs.

These estimates yield an estimate that 19 per cent of costs are fixed costs. This yields the estimates present in Table 6.8.1.

Table 6.8.1 Residential Rehabilitation Services – Estimated of Fixed and Variable Costs 2003-04

	Fixed	*Variable*	*Total*
Cost Per Day			
Average across services	22	95	117
Median across services	20	87	107
Cost Per Closed Episode			
Average across services	1,333	5,662	6,995
Median across services	1,373	5,833	7,206

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

6.9 IMPACT OF OCCUPANCY RATES

Based on client data and reported places, average occupancy rates were calculated for the 2003-04 year. Across services, average occupancy rates were estimated to be 76% with the median rate 83%. The relationship between occupancy rates and average costs per bed were relatively weak – explaining around 14% of variation in average cost per place.

6.10 COST ISSUES FOR FUTURE YEARS

In preparing returns, services were asked to identify categories of costs where it was known there would be significant increases in the 2004-05 financial year. Services identified the following issues:

- Award increases will apply. In some instances these are not fully recognised by some funding sources

- Increments related to staff moving up a salary scale. With greater stability in employment within the sector, many staff are moving to the top of the appropriate salary scale.

- Workers compensation premium increases were noted by many services. At the time residential rehabilitation services had been reclassified leading to a significant increase in premiums. Actual increases appear to vary between services. Workers compensation premiums are estimated to be 1.3 per cent of total costs in 2003-04.

- Increase indemnity insurance premiums were also noted by some services.

6.11 REVENUE SOURCES

As discussed previously, residential rehabilitation services receive revenue from a wide variety of sources. Table 6.10.1 describing the major sources. Government funding accounts for 71.3 per cent of revenue. Client contributions make up 17.5 per cent of other revenue sources. Donations and fund raising account for 7.7 per cent. This is slightly misleading as one service, with a large non-government donor, accounts for 39 per cent of donations and funding raising revenue, and another service accounts for 32 per cent. For other services the average income from government sources is 77.7 per cent, from client contributions 18.1 per cent and other sources 4.2 per cent.

Table 6.10.1 Residential Rehabilitation Services – Revenue Sources 2003-04

	Mean	Excluding two services with significant donations
1.1.1 Grants - NSW Health Department:	28.4%	32.6%
1.1.2 Grants - NSW Health Department - Drug Summit	4.8%	6.3%
1.1.3 Grants - Australian Government - NIDS - MERIT	6.0%	7.1%
1.1.4 Grants - Australian Government - NIDS - Other	12.6%	12.5%
1.1.5 Grants - Drug Court:	1.8%	2.2%
1.1.6 Grants - Other	17.7%	17.0%
Subtotal - Grants	71.3%	77.7%
1.2 Client contributions, rent, board, other	17.5%	18.1%
1.3 Donations and other fundraising:	7.7%	0.9%
1.4 Member subscriptions and contributions:	0.1%	0.1%
1.5 Interest and dividends:	0.6%	0.5%
1.6 Other income:	2.8%	2.7%
Subtotal - Other Income	28.7%	22.3%
Total	100.0%	100.0%

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

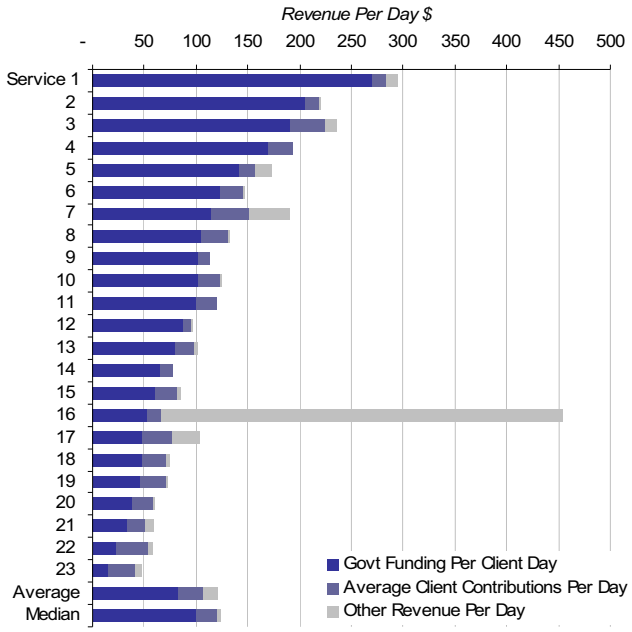
Figure 6.10.1 shows there is considerable variation in the level of government funding provided by client day. On average, services received $83 in government funding per day, with the median level of funding being $101. Average client fees per day do not vary significantly, with an average of $23 per day and median of $20 per day. As mentioned other revenue sources are very significant for one service, but the average across services is $14 per day with a median of $3 per day.

Figure 6.10.2 shows revenue sources per client episode. On average, services received $4,960 in government funding per episode, with the median level of funding being $4,442 per episode. Variations will reflect variation in length of stay and in government funding per day.

Tables 6.10.2 and 6.10.3 shows the results of applying a regression model to funding per funding per day and funding per completed episode. The results are similar for costs, except services accepting clients on methadone maintenance receive higher levels of funding (whereas the cost regression showed lower overall costs). Table 6.10.2 can be interpreted as follows: Funding for a non-indigenous female client aged 18 years and over in a service that does not accept children in residence, does not accept clients on methadone, located outside Sydney is $85 a day on average. As these variables change, funding changes as follows:

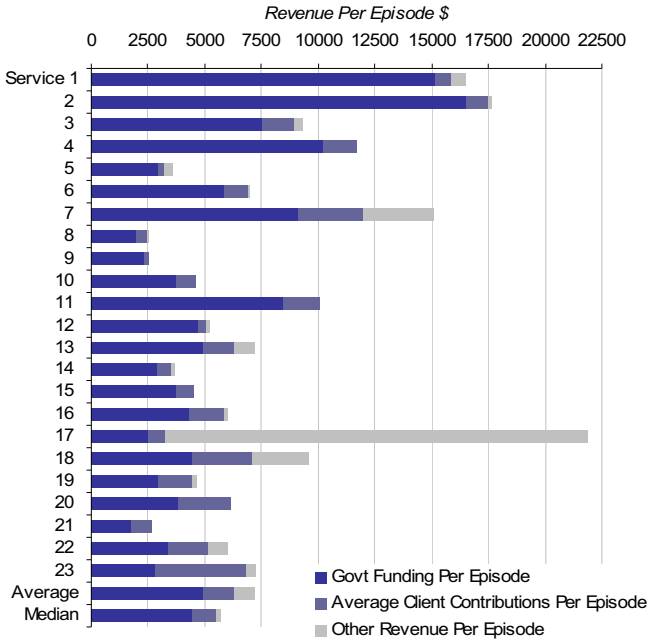
- Funding is $13 lower ($72 a day) for male clients;
- Funding is $9 lower ($76 a day) for clients aged less than 18 years;
- Funding is $15 higher ($76 a day) for indigenous clients;
- Funding for services accepting children in residence is $20 higher ($105 a day);
- Funding for services accepting client on methadone is $13 higher ($98 a day);
- Funding for services located in Sydney is $6 higher ($91 a day).

Figure 6.10.1 Residential Rehabilitation Services – Revenue Sources per Day 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study
Note: Service numbers in this chart refer to the same services as in Figure 6.10.2 but no other charts and tables.

Figure 6.10.1 Residential Rehabilitation Services – Revenue Sources per Episode 2003-04



Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study
Note: Service numbers in this chart refer to the same services as in Figure 6.10.1 but no other charts and tables.

Table 6.10.2 Residential Rehabilitation Services – Regression Model – Factors that explain average funding per day 2003-04

	Intercept	Service Accepts Children	Service Accepts Clients on Methadone	Service is located in Sydney	Client is Male	Client is aged 14-17 years	Client is Indigenous
Coefficient estimate	86.6	19.7	13.0	5.5	-13.3	-8.8	15.4
Standard Error	1.6	2.6	3.1	2.1	1.8	5.4	2.4
R^2	0.12						

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

Table 6.10.3 Residential Rehabilitation Services – Regression Model – Factors that explain average funding per completed episode 2003-04

	Length of Stay (Days)	Service Accepts Children	Service Accepts Clients on Methadone	Service is located in Sydney	Client is Male	Client if aged 14-17 years	Client is Indigenous
Coefficient estimate	64.9	2,191.8	229.6	2,371.3	-796.0	238.4	901.6
Standard Error	1.1	352.5	421.8	283.4	169.2	727.7	313.0
R^2	0.68						

Source: Analysis of Data Returns for the NSW Residential Rehabilitation Costing Study

CHAPTER 7 – CONCLUSIONS AND IMPLICATIONS FOR FUTURE DIRECTIONS

7.1 FACTORS RELEVANT TO FUNDING CONSIDERATIONS

The analysis presented in Chapter 6 has a number of implications for funding of residential rehabilitation services. There is considerable variation in cost and funding between services. This partially reflects the historical circumstances of services. This significant variation presents a number of challenges for government funders. Ideally funding could be brought onto a single consistent basis so that services are treated equitably. This is the path that the Victorian Government has taken (see chapter 4), although as discussed below, the basis for their funding model (closed clinic episodes) could be problematic.

For NSW there are major challenges in transitioning to a consistent model for funding residential rehabilitation services. Implementation of consistent funding principles will result in swings and roundabouts for the different services, and these require thoughtful transition processes. One major issue is that NSW Health is only one of many funders of residential rehabilitation, accounting for 33 per cent of public sector funding received by services in NSW. Changes to funding arrangements would be best coordinated across all government agencies, although this would be difficult to achieve. NSW Health needs to be aware that changes to its own funding arrangements may have unintended consequences in relation to other agencies.

This study found that for NSW residential rehabilitation services the average expenditure per day was $117 (median $107) and the average cost per closed episode was $6,995 (median $7,206). On average services received $83 in government funding per day (median $101) and $4,960 per closed episode (median $4,442).

On average services received 71.3 per cent of revenue from Government funding sources and 17.5 per cent from client contributions. NSW Health Department sources accounted for 33.0 per cent of total revenue. Two services receive significant revenue from donations and fund raising, and when these are excluded, the average income from government sources is 77.7 per cent, from client contributions 18.1 per cent and other sources 4.2 per cent.

The analysis of costs and funding yields a range of insights into the systematic issues that need for be considered in a funding model. These include:

- The nature of the program offered by a service has a significant impact on lengths of stay which in turn is a significant driver of differences in cost per episode. A change to a funding arrangement based solely on cost per completed episode (such as applies in Victoria) would have significant implications for services, and would inevitably lead to changes in the programs offered by different services. The Centre for Drug and Alcohol needs be carefully consider whether these changes in nature of programs provided would be a desired outcome.

- On average, female clients are more expensive that male clients (an additional $6 per day and $966 per completed episode), and attract more funding (an additional $13 per day and $796 per completed episode).

- There is some weak evidence that clients aged under 18 years are more costly (an additional $185 per day, $9,844 per episode, after controlling for other factors), although on average funding is lower for these clients. This discrepancy is partially accounted for through significant non-government sources for one service catering for younger clients, and the fact that these relationships are very weak, statistically speaking. On the whole these services specifically targeted to young clients tend to have fewer places, so

economies of scale may also be a factor that is important.

- Indigenous clients appear to be more costly (an additional $19 per day and $589 per completed episode), and attract higher levels of funding (an additional $15 per day and $901 per client).

- Services that take children into residence are more expensive than other services (an additional $45 per day, $4632 per episode, after controlling for other factors) and attract more funding (an additional $20 per day, $2192 per episode). The additional funding these services require should be recognised in a funding model. These services typically perform a broader role than the rehabilitation of the client. These services offer an environment in which babies and children can be safe, where health and psychological issues for the children addressed, and parents strengthened in their parenting skills whilst they undergo rehabilitation. The current minimum dataset does not include children within the scope of the collection, and does not include data items that would allow clients with children in residence to be flagged. This is a major limitation and would need to be rectified if the funding model were to be based on actual children in residence.

- There is equivocal evidence that services that accept clients who are on methadone maintenance are more expensive, particularly once other factors are controlled. Funding however appears to be higher for clients in these services (an additional $13 per day and $230 per client).

- There is some evidence services located in Sydney are more expensive (an additional $9 per day and $2,155 per completed episode) and attract more funding (an additional $6 per day and $2,271 per completed episode).

Whether these factor are to be brought into a funding model need to be discussed. Some of these factors may not be considered legitimate sources of variation in costs.

Other factors are important for consideration in a funding model. Facility related costs vary considerably between services. Many services are assisted by subsidised or peppercorn rents paid for buildings owned by the public sector, or located on land owned by the public sector. Other services have benefited from buildings that have been donated. Other services pay commercial rents. A fair funding model needs to respond to the individual circumstances of services, and include an allowance that reflects these significant variations in property costs.

There is some evidence that there are economies of scale in the operation of residential rehabilitation services. Across services, costs per day decrease by around $2.75 for each additional place, implying marginal costs are around 97 per cent of average costs. However there may be a variety of factors that limit the scale of service operations that is appropriate for certain client groups. In addition, for some services, scale economies can only be achieved with a significant injection of capital in order to reconfigure or relocate. A related issue is that variable costs are estimated to be 81 per cent of costs. However this does not imply that all services can expand the scale of their operations with funding at this rate. Services are at different stages of development. As mentioned in relation to the previous point, some services can not expand from their current base without a significant injection of capital in order to reconfigure or relocate their services. Given these factors, it appears inappropriate to set funding rates at anything other than estimates of average costs or average funding contributions (per day or per completed episode).

Funding for services needs to be appropriately indexed. Arrangements for indexation of grants are established by NSW Treasury. This study identified a number of areas in which costs will increase substantially in 2004-05, particular workers compensation premiums.

7.2 RECOMMENDATIONS FOR FUTURE FUNDING MODELS

There are three basic funding models that could be considered for NSW. These are:

A: Funding Residential Rehabilitation Places. Under this model a benchmark rate would be set, and adjusted for appropriate factors reflecting the nature of clients treated by the service. Funding would be supplied whether or not a residential care place is occupied. Lengths of episodes would not be a relevant consideration, and therefore there is little incentive to bring episodes to closure. This approach provides certainty in funding levels, but creates few incentive for maintain levels of activity.

B: Funding Residential Rehabilitation Days. This model would be based on a benchmark rates set for residential rehabilitation days. Adjustments to the benchmark rate would be made to reflect relevant client and service characteristics, such as those discussed earlier in this Chapter. Target funding rates would be set to reflect current levels of activity, or planned expansion in activity. Actual activity would be monitored using client data returns for the NMDS, with client days within a given period. Funding could then be adjusted to reflect actual levels of activity. Actual funding adjustments might be marginal in the current period, but would flow on into the setting of targets and funding for the next year. An advantage of this model over Model A is that funding will reflect actual level of activity, so there is a clear incentive to maintain or increase levels of activity. A disadvantage (shared with Option A) is that lengths of episodes would not be a relevant consideration, and therefore there is little incentive to bring episodes to closure. Option B also introduces some uncertainty for services in levels of funding.

C: Funding Residential Rehabilitation Completed Client Episodes. This model would be based on a benchmark rates set for residential rehabilitation closed episodes. Adjustments to the benchmark rate would be made to reflect relevant client and service characteristics. Target funding rates would be set to reflect current levels of activity, or planned expansion in activity. Actual activity would be monitored using client data returns for the NMDS, with completed client episodes within a given period. Funding could then be adjusted to reflect actual levels of activity. Actual funding adjustments might be marginal in the current period, but would flow on into the setting of targets and funding for the next year. An advantage of Model C over Model A is that funding will reflect actual level of activity, so there is a clear incentive to maintain or increase levels of activity. Model C also provides strong incentives for services to bring episodes to closure. As with Option B, Option C also introduces some uncertainty for services in levels of funding, but these risks are considerably exacerbated. Option C also introduces a range of other complexities that need to be considered. Without significant modification, this option is not sensitive to the variations in length of episodes reflecting different service programs and philosophies. Inevitably the approach would encourage shorter episode lengths, which may not always be consistent with what is appropriate for individual patients. Other complexities surround the definition of completed episodes. For example all services have clients who withdraw from programs prior to completion. It would be inappropriate to consider these as "completed" episodes, but funding needs to reflect the reality that withdrawals do occur.

Models B and C also share reliance on the quality of client episode data reported through the NSW NMDS for Drug Treatment Services. This study found significant problems with client data held in the NMDS – mainly to do with duplicates and episodes that were not recorded as being closed. These issues would need to be rectified prior to the establishment of a new funding model.

Embarking on these approaches also has implications for ensuring costing information is regularly updated. Public sector hospitals now undertake annual costing studies which in part are used for updating funding models. Establishing a cost data collection based on a cut down

version of the returns submitted for this study could be considered, (specifically Return C set out in Appendix B.

Should NSW Health decide to embark on a process to reform funding of residential rehabilitation services, it recommended that the first step should be Model B. This option provides an opportunity to establish the processes and infrastructure required for a new funding model, to resolve issues concerning client data, and developed a better understanding of the factors impacting on costs. The option could be modified to create some incentives at the margin for services to bring closure to very long episodes. (For example a step down rate might be paid after a certain length of stay.)

As discussed, the introduction of any new model needs to be accompanied by appropriate transitional arrangements. In funding models for other health services, these typically involve transitional grants that allow services to adjust to funding reflecting the benchmarks. Transitional arrangements often require injections of additional funds, as funding for services below benchmarks is brought up to a more appropriate level, but transitional grants are paid to services that will loose funding.

7.3 FUNDING EXPANSION OF THE SECTOR

A further issue for consideration is the appropriate benchmark to use for funding an expansion of the residential rehabilitation sector. In this context, the discussion in the previous section on fixed and variable costs and economies of scale is relevant. The broad conclusion is that funding should be provided at an appropriate benchmark rate, reflecting the average costs (per bed or episode), rather than attempting to adjust costs to reflect marginal costs (which are estimated to be 97 per cent of average costs). As discussed, services face a range of circumstances which will impact on costs of increasing activity. In some instances service require additional capital injections before expansion would be appropriate.

This implies funding expansion of residential rehabilitation at $83 per client day or $4,960 per closed episode (plus indexation for 2004-05).

CHAPTER 8 – SUMMARY OF RECOMMENDATIONS

1. The Centre for Drug and Alcohol, NSW Health, consider options for establishing a consistent funding model for residential rehabilitation services in NSW.

2. Should Centre for Drug and Alcohol, NSW Health, decide to embark on a process to reform funding of residential rehabilitation services, it recommended that in the first instance the model be based on a benchmark rates set to reflect an average level of funding a residential rehabilitation day. The model would include adjustments to the benchmark rate to reflect relevant client and service characteristics include: sex of client, indigenous status, clients aged less than 18 years, services that accept children into residence, services that accept clients on methadone maintenance, and services located in Sydney. The funding rates should also be adjusted to reflect variation in property costs faced by services.

3. To facilitate the operation of this funding model, Centre for Drug and Alcohol, NSW Health, should consider: reviewing the source of potential problems with the NSW minimum dataset, identified in this project, and establishing a regular cost data return from services based on Return C set out in Appendix B.

4. Expansion of residential rehabilitation be funded at $83 per client day or $4,960 per closed episode (plus indexation for 2004-05).

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APPENDICES

APPENDIX A

List of Services in Scope for Study

The Buttery Therapeutic Community
Cyrenian House
Freeman House
GROW
Guthrie House
Jarrah House
Kamira Farm
Kathleen York House
Kedesh Rehabilitation Services
Lyndon Therapeutic Community
O'Connor House
Odyssey House Treatment Facility
Oolong House
Phoebe House
Salvation Army
PALM (Program for Adult Life Management) Coffs Harbour , Ted Noffs Foundation
PALM Dubbo , Ted Noffs Foundation
PALM East , Ted Noffs Foundation
PALM West , Ted Noffs Foundation
Wayback Committee
Weigelli Residential Rehabilitation Services
WHOS (We Help Ourselves) Hunter
WHOS Metro
WHOS New Beginnings
Wollongong Crisis Centre
The Glen Centre
Triple Care Farm, Mission Australia
Lake Macquarie Recovery Services Centre, Salvation Army
Central Coast Recovery Services Selah, Salvation Army
William Booth House, Salvation Army
Catherine Booth House, Salvation Army

NSW Alcohol and Drug Residential Rehabilitation Costing Study 2004

Data Request – Financial and Related Information

Due Date for submission of data:
Friday 22 October 2004

Data returns should be forwarded by Email to:
j.pearse@bigpond.net.au

Or by fax to:
02 8905-9151

Or by post to:
Health Policy Analysis Pty Ltd
NSW Residential Rehabilitation Costing Study
8 Ness Avenue
Dulwich Hill NSW 2203

Contacts for questions and clarification:
Tom Pearse 0438-092-268 or tjpearse@optusnet.com.au
Jim Pearse 0401-999-737 or j.pearse@bigpond.net.au

1. Background to Costing Study

The Centre for Drug and Alcohol at the NSW Department of Health has engaged Health Policy Analysis Pty Ltd to undertake a costing study of alcohol and drug residential rehabilitation services in NSW. This document describes the background to this study and specifies the financial and related data to be provided by organisations for this study.

Residential rehabilitation services in NSW are predominantly provided by the non-Government sector. This project is supported by the Network of Alcohol and Drug Agencies (NADA), the peak body representing non-Government services in NSW. The project is overseen by a Steering Committee involving NSW Health, NADA and representatives from residential rehabilitation services.

Health Policy Analysis Pty Ltd is consulting firm that focuses on health policy analysis, analysis of health data for decision making, performance indicators and health economics. The principal consultant for the project is Jim Pearse who is Director of the company. Jim Pearse also holds a fractional appointment as Associate Professor at the Centre for Health Service Development, University of Wollongong. Jim is a health economist, who has had 18 years industry experience, largely in the public sector. Jim is assisted by Tom Pearse, who is an economist with experience in performance auditing.

The study is focusing on estimating costs of residential rehabilitation services provided during the 2003-04 financial year. The scope for the study is all alcohol and drug residential rehabilitation services receiving grants or supported by funding from NSW Health or the NSW government.

The project has several aims. These include relating the costs of service delivery to the mix of clients treated, estimating costs per day and per closed client episodes, taking into account the relative intensity of service delivery and estimating fixed and variable costs. The study will also clarify revenue sources. The outputs for the study will help inform NSW Government policy and strategies for the residential rehabilitation sector.

This data request relates to the financial and related data for the project. Client data is to be collected through analysis of the NSW Minimum Dataset for Drug and Alcohol Services. Services will be asked to provide some additional data related to clients resident in the 2003-04 year, although steps are being considered to minimise the efforts associated with collecting this additional data.

The data collection phase for the financial and related data will be from Friday 1 October 2004 to **Friday 22 October 2004**. A one-hour workshop on the study will be held at the NADA Conference on Friday 24 September. During the data collection phase the consultants can be contacted at anytime. The consultants will endeavor to meet with services during this time to work through any issues encountered in meeting the requirements of the data collection.

Data collected through this study will be used to prepare a final report describing the costs of services in NSW. **Data on individual services or organisations will be not be included in the final report, and will remain confidential.**

2. Summary of Requirements

To assist with the conduct of the costing study, organisations will need to submit four returns for each residential rehabilitation facility. These are:

A. **Service Description** – This return will provide general descriptive information related to the service and additional information important to properly interpreting costing data.
B. **Annual Financial Statement for 2003-04 –** This return should be a simple replication of the service's annual financial statement, including the Statement of Financial Performance. Alternatively a standard report derived from the service's accounting system could be provided.
C. **Mapping of Service Specific Accounts to Cost Study Standard Accounts** – Accounts for different services are set up in different ways. The data provided in this returns will allow revenue and expense data to be mapped to a common set of accounts to be used for the study.
D. **Staff Profile -** This return will provided details of staff positions and their role.

Returns, other than return B, should be supplied using the Template Excel spreadsheet that will be distributed together with this document. Return B can be provided electronically (which is preferred) or as a paper version.

Organisations managing several facilities

Some organisations operate several separate residential rehabilitation facilities. Separate returns should be submitted for each facility. In submitting the statement of financial performance, expenses related to a central management/administration unit should be apportioned across the facilities in an appropriate manner. Please contact the study coordinators if there are difficulties in apportioning costs.

Data returns should be forwarded by Email to:
j.pearse@bigpond.net.au

Or by fax to:
02 8905-9151

Or by post to:
Health Policy Analysis Pty Ltd
NSW Residential Rehabilitation Costing Study
8 Ness Avenue
Dulwich Hill NSW 2203

Or by post to:
Health Policy Analysis Pty Ltd
NSW Residential Rehabilitation Costing Study
8 Ness Avenue
Dulwich Hill NSW 2203

To complete the study, a second set of data may need to provided related to characteristics of clients that are not identified in the NSW Minimum Dataset. The consultants will analyse the NSW Minimum Dataset data retained by NADA. A report will be provided to each organisation. In some instances additional information may need to provided for each client.

3. Return A - Service Description

Return A - Service Description collects general descriptive information related to the service and additional information important to properly interpreting costing data. The types of data collected through this return include:

- Contact person details (for follow up);
- Description of the rehabilitation service and program including details of client target groups, nature of services provided, length of a typical rehabilitation episode;
- Nature of services related to the facility including pre-admission programs, half way houses and follow-up programs following discharge from the facility;
- Role of volunteers;
- Details of client financial contributions for board/rent;
- Details of the arrangements for physical facility within which the service is located;
- Accreditation arrangements.

The full details of Return A are as follows:

PART A - Service Description

A.	Service Description	
A.1	Name of Facility:	
A.2	Name of Organisation:	
A.3	Name of Contact Person for follow-up question on the data returns:	
A.4	Email of contact person	
A.5	Telephone of contact person	

A.4	Rehabilitation Program:	
A.4.1	What are the target client groups for this service:	
A.4.2	General description of services provided:	
A.4.3	How many clients in residence (excluding children of clients) can the facility manage at any one time? In other words how many beds/client places does the service operate?	
A.4.4	If clients can have children/babies in residence with them, how many children/babies can the facility manage at any one time?	
A.4.5	If clients can have children/babies in residence with them, does the facility have a staff position for a child care worker, or a staff member with a specific role in catering for the needs of babies/children? Please provide details.	
A.4.6	How long do clients typically stay in residential component of the program (months)?	months
A.4.7	Describe the nature of the program typically offered to clients:	
A.4.8	Describe any ongoing arrangements for service providers external to the organisation to provide services for residents of the facility:	

A.5	Related Services	
A.5.1	Describe any arrangements for staff at this facility to be involved in providing services/assistance to clients prior to their formal admission to the facility. How significant is the amount of staff time involved in pre-admission programs/services?	
A.5.2	Does the organisation sponsor a half way house or series of half ways houses associated with this facility	

A.5.3	Do staff at the facility spend time assisting people who have moved onto the half way house. How significant is this time?	
A.5.4	Do staff at the facility spend time assisting people through a post-discharge/follow up program? How significant is this time?	
A.5.5	Do volunteers plays a role in the operation of this facility? Please describe the types of roles played by volunteers.	
A.5	**Client Contribution details:**	
A.5.1	Describe the basis on which client contributions for board/rent are determined:	
A.5.1	Are there arrangements with Centrelink for benefit payments to be paid directly to your organisition?	
A.5.3	One average what is the level of rent/board paid per client per week?	
A.5.3	One average what is the level of rent/board paid per week **for a child of the client who is staying in residence?**	
A.5.4	Do clients make other financial contributions, for example, paying a bond? Please describe.	
A.6	**Facility Details:**	
A.6.1	Who owns the facility from which the service if operated?	
A.6.2	Who owns the land on which the facility is located?	
A.6.3	Does your organisation pay rent for this facility? Is so how much per year?	
A.6.4	Who is responsible for repairs and maintenance to the facility?	
A.6.5	Who is responsible for upkeep of the land on which the facility is located?	
A.7	**Other Details**	
A.7.1	Is this facility accredited? If so how much time is spent by staff, or expenditure on consultants, on accreditation issues for this particular facility (please express in Full Time Equivalent terms for staff, dollars for consultants)? Does you organisation employ someone specifically to manage issues associated with accreditation?	
A.7.2	The current study will focus on costs during the 2003-04 financial year. Are there some expenditure areas which are likely to be impacted by major cost increases in 2003-04? Please provide details, eg what percentage increase is expected for that category of costs.	

4. Revenue and Expense Details for 2003-04

Financial data is being collected using a three step process:

Return B - Provide a copy of the Annual Financial Statement or Audited Statement for 2003-04 for this facility/service. This should include *at least* the Statement of Financial Performance showing revenue and expenses during 2003-04. However we also wish to obtain details of

Property Plant and Equipment which shows current assessed value and associated depreciation for physical assets associated with the facility.

Please provide at least a printed copy of the statement. If possible, please provide the statement in an electronic form compatible with Microsoft Excel.

Return C – Return C attempts to collect revenue and expense data in standard format across all facilities. The return should show how the accounts appearing Statement of Financial Performance map to the standard accounts being used for the costing study. It may be necessary to split some of the account categories used in the Statement of Financial Performance. In addition we have asked for details of the number of beds/resident places associated with the various funding sources.

Note – In certain circumstances you may judge that the allocation of expenses across a number of facilities operated by the one organisation as shown in the Annual Financial Statement does not properly represent the appropriate allocation of costs. In these cases you may wish to provide details in Return C that vary from those stated in Return B. If so please provide an explanation in the notes section of Return C.

Return C - Mapping of Local Accounts to Study Standard Accounts 2003-04 Financial Year

Note - This return may provides a more detailed break-up of the information provided in Return B, and clarify treatment of certain accounts.

Standard Accounts	Local Accounts (Insert rows as required)	Amount	Notes	Associated Beds/ Resident places
REVENUE GRANTS AND SUBSIDIES				
Grants - NSW Health Department:				
Grants - NSW Health Department - Drug Summit				
Grants - Australian Government - NIDS - MERIT				
Grants - Australian Government - NIDS - Other				
Grants - Drug Court:				
Grants - Other: - Provide details of source and purpose of grants				
CLIENT CONTRIBUTIONS				
Client contributions, rent and board:				
OTHER INCOME				
Donations and other fundraising:				
Member subscriptions and contributions:				
Interest and dividends:				
Other income:				
TOTAL INCOME				

Return C Continued

Standard Accounts	Local Accounts (Insert rows as required)	Amount	Notes
EXPENSES			
EMPLOYMENT RELATED EXPENSES			
Wages and salaries:			
Annual leave provisions:			
Long service leave provisions:			
Superannuation (Employer contributions):			
Salary packaging benefits:			
Fringe Benefits Tax:			
GOODS AND SERVICES			
Accounting and audit fees:			
Administration: Includes: - Postage - Printing & stationery - Books & subscriptions			
Advertising: - Includes marketing			
Bank and government charges: - Includes interest, fees and government transaction taxes			
Clinical services: - Any contracted medical and therapeutic services			
Computing:			
Equipment (excluding capital equipment purchases) - Generally less than $5000 - Provide an explanation if your organisation uses a different threshold for defining capital purchases			
Food and household consumables: - Food provided to clients - Consumables required in the provision of food - Client consumables - Cleaning consumables			

Return C Continued

Standard Accounts	Local Accounts (Insert rows as required)	Amount	Notes
EXPENSES			
Insurance - Workers' compensation: - Include premiums and excess payments			
Insurance - Public Liability: - Include premiums and excess payments			
Insurance - Directors and Professional Liability: - Include premiums and excess payments			
Insurance - Other:			
Legal expenses:			
Motor vehicle expenses: - non-capital vehicle expenses			
Rent:			
Staff training:			
Telephone and Communications Include internet accounts			
Travel:			
Utilities:			
Other expenses:			
REPAIRS AND MAINTENANCE			
Repairs and maintenance: - Includes refurbishment			
DEPRECIATION			
Depreciation - Buildings:			
Depreciation - Vehicles:			
Depreciation - Other capital assets:			
TOTAL EXPENSES			

Return D - Staffing Details

Return D, relates to staff employed by your organisation who are engaged in running this facility or assisting (eg through administration) in the running of the service during 2003-04. The return is structured as follows:

RETURN D - Staff Profile

Position Title	Position Role - Describe role of position in provision of the residential rehabilitation service.	Award Classification	Full-time Equivalent Fraction[1]	Gross Annual Salary Level[2]

1. Full time = 1.0; Show part-time as the fraction of the hours employed as a fraction of hours for a full-time employee under that award. For example if a full time position involved a 36 hour week, and the position is 14.4 hours per week, show 14.4/36 = 0.4
Note: For management, administrative or other positions that cover responsibilities for this and other services, estimate the fraction of time related to this particular service. For example, for a CEO for an organisation that involves 3 residential rehabilitation facility and 1 detox centre, it might be estimated that s/he allocates 25% of time to each facility. For the return for this facility, the Full time equivalent fraction would be .25.

2. Show the gross annual salary/wage level (which will include the value of salary packaging component.) For a part time position this should be equal to the annual salary for a full time position times the Full-time equivalent fraction for the position.

- For the Full Time Equivalent Fraction, show all full time positions as 1.0. Show part-time as the fraction of the hours employed as a fraction of hours for a full-time employee under that award. For example if a full time position involved a 36 hour week, and the position is 14.4 hours per week, show 14.4/36 = 0.4

- For management, administrative or other positions that cover responsibilities for this and other services, estimate the fraction of time related to this particular service. For example, for a CEO for an organisation that involves 3 residential rehabilitation facility and 1 detox centre, it might be estimated that s/he allocates 25 per cent of time to each facility. For the return for this facility, the Full time equivalent fraction would be .25.

- For the annual equivalent salary show the amount to be paid over the year for that position. For a part time position this should be equal to the annual salary for a full time position times the Full-time equivalent fraction for the position.

APPENDIX C

Description of Client Data

Client data were obtained from two sources. The NSW Department of Health Provided and extract from its holdings of the NSW Minimum Data Set for Drug Treatment Services. All episodes that were active during the 2003-04 financial year were extracted. A similar extract from the NADA database were obtained. NADA assists services in collecting collating and submitting data for the NSW Minimum Dataset. However not all services participate in this process.

Technically the two datasets should be identical for services that submit through NADA. However we found a range of problems with the NSW data, largely related to episodes from earlier years that had not been closed. Services were approached investigated and resolve these issues.

Data Items Collected from these collections included the following:

Agency ID
Client code
Client Age at commencement of episode
Client Sex
Client Country of Birth
Client Indigenous Status
Principal Drug of Concern
Service Setting
Service Type
Episode Commencement Date
Episode Cessation Date

APPENDIX D

General Description of Service Programs

Typical Length of Program	***Description Provided in Data Returns***
Less Than 3 Months	Acute medicated detox and short-term rehabilitation
	We offer Assessment, Referral, withdrawal management (medicated if necessary) and a 21 day intensive residential rehabilitation, working within the NSW Health Guidelines. Referral to Home Detoxification Service if appropriate. 24hr coverage by qualified staff (Registered Nurses and AODW) and GP's. Provision of a safe working environment for both clients and staff with implemented security measures, and security staff doing nightly checks. Provision of a structured program that is cognisant of and responsive to a clients individual needs. Program components include group therapy, individual counseling, journaling, video discussion, education groups on health and lifestyle issues, relaxation/meditation sessions, use of complimentary therapies, introduction to the 12 step philosophy, attendance at AA N/A meetings, clients attend and participate in Living Sober activities. Support and assistance in returning to the community by addressing their offending behaviour and associated drug use, by exploring the impact this has on their families and community. Knowledge of referral / support services available thus assisting with appropriate referrals. Support in crisis situation for ex-clients by offering a Day Program, counseling by phone for those who are not local. Support and assistance to clients immediate family by provision of some counseling and or referral to appropriate services.
	A seven-day medicated and non-medicated residential detoxification service a four-week motivational rehabilitation treatment service & assessment and referral. The aim is to promote health and healthy life-style choices and to prevent and minimise further harm to drug dependent persons and the community.
Three months	Residential transitional support.
	Residential & non residential day programs.
	The service uses a holistic approach provided within a model of social care. It incorporates social, educational and vocational support and provides both individual and family counseling, free legal service as required and a variety of sport and recreational activities. The program is based on research conducted in partnership with the National Drug and Alcohol Research Centre (NDARC). This research resulted in the publication of Monograph 26 (The nature and treatment of adolescent substance abuse) and Monograph 40 (The nature of adolescent substance abuse: Supplement to Monograph 26). The Adolescent Family Counselor is responsible for case management, individual and group counseling and family work.

APPENDIX D (CONT)

General Description of Service Programs

	The service uses a holistic approach provided within a model of social care. It incorporates social, educational and vocational support and provides both individual and family counseling, free legal service as required and a variety of sport and recreational activities. The Adolescent Family Counsellor is responsible for case management, individual and group counseling and family work. The program is based on research conducted in partnership with the National Drug and Alcohol Research Centre (NDARC). This research resulted in the publication of Monograph 26 (The nature and treatment of adolescent substance abuse) and Monograph 40 (The nature of adolescent substance abuse: Supplement to Monograph 26).
	Residential rehabilitation with group work, individual counseling, occupational therapy and health & fitness.
	Residential living skills program, case management, counseling, education and training, sport and recreation, placement and aftercare
	Residential rehabilitation. Group therapies. One-to-one counseling/case work. Outreach/aftercare.
	Group work, individual counseling, peer support/education, referral and liaison, active learning within the therapeutic setting, social and community living skills training, health & stress management activities, gender and culturally sensitive focused activities and a "whole of service" focus on Harm Minimisation.
Three to Six Months	Residential drug and alcohol service, with an outreach programme - based on the 12 Step AA programme (total abstinence based programme)
	Vocational services, educational services, psychiatric services, detoxification, legal services, therapeutic services, psychological services, ready to work services, child development, after care, community counseling
	Eight month residential program divided into an assessment phase of three months (Program1) a treatment phase (Program 2) and a Transition Phase. Access to a half way house for a three month stay is available. Basic living skills program overlaid with individual case management during the length of stay.
	Residential rehabilitation, Education and Group therapy, individual counseling.
	Group work, individual counseling, peer support/education, referral and liaison, active learning within the therapeutic setting, social and community living skills training, health & stress management activities, gender and culturally sensitive focused activities and a "whole of service" focus on Harm Minimisation.
Six to Twelve months	Intensive case management
	Therapeutic community, residential care, 6 -12 months plus child care program

APPENDIX D (CONT)

General Description of Service Programs

	A large range of services that include the following: - Homelessness, application for Department of Housing accommodation and to other supported housing; - Medical and dental issues are addressed; - Child protection issues including attendance at Children's Court, provision of feedback and reports, attendance at case review meetings; - Support with legal issues-reporting, court support, reports; - Group program addressing Alcohol and Other Drug issues; - Parenting program involving theoretical and practical parenting skills; - Referral to external counseling; - Case management including goal setting, budgeting, addressing appointments and any outstanding business; - Escort to any of the above where required, if appropriate; - Early Childhood Nurse and Women's Health Nurse provide support at Phoebe House; - Morphine dependent babies are escorted to the relevant 'Drugs in Pregnancy' outpatient services as required; - Toddlers may be linked in with a local day care centre
	Residential rehabilitation activities comprising: 1-1 support, group work, 12-Step meetings, work therapy, chapel services, social fellowship, therapeutic community.
	One on one counseling, work therapy, group work, craft and activities, trauma counseling, medical treatment
	A voluntary residential program of six to twelve months duration (longer if needed). A daily schedule of work, exercise and recreation in a semi-rural setting, together with regular group meetings and special study groups for rehabilitation and personal growth. The last stage of the program is one of transition and re-entry into society.
	The service offers brief and early interventions (assessment, referral) and provides support and supervision 24 hours a day to ensure safety and well-being of community members and staff. The two phases include P1 (6 weeks) and P2 (4 ½ months). Program components include: case management, crisis intervention, counseling, group work, health education and health promotion activities, healthy lifestyle focus, relaxation, meditation, complimentary natural therapies, therapeutic journaling, counseling, Establishment of social support networks (introduction 12 step meetings – Narcotics Anonymous and Alcoholics Anonymous), community links (referrals housing, education, employment, specialist treatment and support agencies). Aftercare support provided during transition into the wider community to address offending or relapse behaviours. Staff are trained to provide appropriate treatment and referrals.
	Counseling; accommodation; welfare assistance; GP & psychiatry consultations; referral to other agencies if needed.