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# Evaluation of the value for money of residential rehabilitation compared to the model for the delivery for community-based alcohol and other drug (AOD) interventions for young people

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## Introduction

Coordinare commissioned Lives Lived Well to develop and explore a model for the implementation and delivery of (AOD) interventions suitable for young people in community settings and to compare the costs of this model against residential programs. This document complements and draws on the information from '*Model for the delivery for community-based alcohol and other drug (AOD) interventions for young people'*.

## Outcomes

Information on youth AOD treatment outcomes is scarce. There is no current research identified that compared the outcomes of different youth AOD treatments and have consistently identified one treatment method as more effective than another (NSW Department of Health 2007). There is limited data available that examines the success rates of youth AOD services in general. A recent overview of reviews examined research findings on youth AOD treatments since 1995 and found poor methodological quality limited confidence in recommendations for any specific method (Snowdon et al 2019 in press). The age, complexity, and severity of substance use of the young people who engage in different types of treatments differs significantly making it challenging to make any comparisons of effectiveness.

In the older treatment population, several factors have been identified that can influence the outcomes of AOD treatment (Lubman et al. 2017, p. 64-65):

- Dependence severity
- Mental health history
- Social stability, e.g. homelessness
- Treatment duration
- AOD treatment history
- Therapeutic alliance
- Continuity of care - different treatment streams occurring sequentially

Additionally, achieving abstinence is not an effective outcome to look at when assessing the success rate for young people in AOD treatment as post-treatment relapse rates are between 35% and 85% (NSW Department of Health 2007).

In assessing the effectiveness of a residential AOD program it is important to look at more than just achieving abstinence. Other factors need to be used to assess treatment including, "time in treatment, client retention and continuing care services" (NSW Department of Health 2007, p. 21). Triple Care Farm youth residential rehabilitation service address "the medical, psychological and behavioural issues associated with mental illness and addiction" (Mission Australia 2011, p. 12). As a result, they include a range of different outcomes in addition to AOD use, including engagement in education, employment, and accommodation (Mission Australia 2011).

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## Characteristics of treatment

The *Alcohol and Other Drug Treatment Services in Australia 2016–17* identifies some of the information about closed episodes for different types of AOD treatments. It does not break down the specific information by age group.

The report shows that for all counselling episodes in NSW in 2016-2017, 57.5% were closed because of expected cessation[1] and 26.5% were closed because of unexpected cessation[2]. In contrast, the reports show that that for all residential episode in NSW in the same period, 34.73% were closed because expected cessation and 52.51% were closed because of unexpected cessation (AIHW 2018). This indicates that in NSW a majority of counselling episodes end when expected, e.g. when it was completed, whereas a majority of residential episodes had unpredicted ends, e.g. client ceases participating against advice.

It was also found that 40% of closed episodes for counselling for all clients in NSW lasted between 1 day and 29 days and 30% lasted between 30 days and 90 days (AIHW 2018). Closed episodes for rehabilitation for all clients in NSW included 38% that lasted between 1 day and 29 days and 38% that lasted between 30 days and 90 days (AIHW 2018). This demonstrates that episodes of community-based counselling and residential rehabilitation take approximately the same amount of time.

These statistics are not specifically youth related and treatment times for young people are likely to be quite different than those for adults. One study identified that for young people aged between13 - 19 years, 4 was the median number of outpatient treatment sessions and the median residential stay was 2.7 months (Schroder et al. 2008). This suggests that young people remain in treatment for a shorter time than older people. However, there is likely to be wide variability across individuals.

## Costings

There are very few cost-benefit analyses looking at AOD treatment options that have attempted to quantify the benefits of the interventions (Mission Australia 2010).

Compared to other AOD treatments, residential rehabilitation is for people with intense, complex needs, particularly those who "have not succeeded or are not likely to succeed in less intensive treatment settings such as outpatient counselling or day programs" (NSW Ministry of Health 2017, p. 16). An additional challenge is that

[1] expected cessation: Includes episodes where the treatment was completed, or where the client ceased to participate at expiation or by mutual agreement (AIHM 2018)

[2] unexpected cessation: Includes episodes where the client ceased to participate against advice, without notice or due to non-compliance (AIHW 2018).

compared to community-based interventions, like psychosocial counselling, residential rehabilitation is expensive (NSW Department of Health 2007, p.33).

In comparison to residential treatment, group treatment strategies are generally cost effective (NSW Department of Health 2007). However, group participation will not suit everyone, and groups may not be feasible in rural and remote areas due to dispersion of clients. The NSW Ministry of Health's *Drug and Alcohol Service Planning Model for Australia (2018)* states that It is clear, from a substantial body of research from Australia and abroad, that non-residential AOD interventions are by far the most cost-effective overall.

While there is debate about the cost effectiveness of residential treatment, there is evidence that it is effective and cost effective for some including (NSW Ministry of Health 2013, p. 287):

- Those who have failed to respond to out-patient treatment,
- people who are poly-substance users (e.g. alcohol and/or benzodiazepines, or chaotic stimulant use),
- people that have no social support, and
- those who have co-morbid psychiatric or medical illness.

As a result of the costliness and complexity of the residential treatment for young people, at present there are limited intensive residential treatments available (Mission Australia 2010, p,10).

There are a range of service characteristics that can influence costs (NSW Health 2005):

- Nature of the program
- Staffing costs
- Management and administration overheads
- Insurances
- Accreditation and risk management
- History of funding

Facility costs is another factor that often complicates that costings for residential AOD treatment as there is a wide variation in the costs different services pay. The variation can occur because some services rent premises, some service have purchased buildings at market cost and are paying them off or have paid them off, and some services have had their buildings donated or bequeathed (NSW Health 2005; NSW Health 2012). However, staffing will always be the most significant cost in any treatment program.

## Cost of residential services

There are a number of reports that outline costs of residential services and specific costs associated with youth residential AOD treatment.

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## NSW alcohol and drug residential rehabilitation costing

In the 2005 report *The NSW Alcohol and Drug Residential Rehabilitation Costing Study: A Project Funded by The NSW Centre For Drug and Alcohol, NSW Department of Health*, reports on the outcome costings. It gives the following key information about residential services in 2003/2004 (Health Policy Analysis Pty Ltd 2005).

It was identified that the average cost per closed episode in 2004/2005 was $6,995 (median $7,206), this works out to an average cost per day of $117 (median $107). The average length of stay in residential rehabilitation 59, however there is a lot of variation around this average (Health Policy Analysis Pty Ltd 2005). If these costs are crudely adjusted by inflation figures to 2017/2018[3], the cost per episode would be $9,835.49 (median $10,132.17), this works out to an average cost per day of $164.15 (median ($150.45). However, it is important to note that the original 2004/-5 figures are not validated but estimated.

It identified that the average amount of spending on employee related costs were 65.4% (median 64.8%) of total budget, with the average number of staff per service at 6.9 FTE (median 7.3 FTE).

The lengths of stay for each service are significantly different, ranging from 3 months to 12 months. The length of the program has a significant impact on the daily costs of the program (Health Policy Analysis Pty Ltd 2005). The costs below look generally at residential treatment services in NSW and does not specifically look at the costs for youth residential AOD treatment.

## NADA Submission to the Ministry of Health

NADA made a submission to the NSW Ministry of Health outlining the optimal costs for residential AOD services. The costs outlined in the report were from a 2016 Victorian report *Identifying and benchmarking optimal operating models for public AOD residential services* (NADA 2019):

**Table 2 – NADA Submission to the Ministry of Health for optimal funding for residential AOD services**

| Item | No. of beds | Cost per bed per day | Cost per bed per annum |
|---|---|---|---|
| **Adult residential rehabilitation service** | 30 | $310.81 | $113,446 |
| **Adult residential rehabilitation service** | 70 | $224.95 | $82,106 |
| **Youth residential rehabilitation service** | 12 | $675.36 | $246,505 |
| **Adult residential withdrawal service** | 15 | $613.50 | $223,929 |
| **Youth residential** | 8 | $820.64 | $299,532 |

[3] Cost calculated for 2017/2018 by author using Reserve Bank of Australia's Inflation Calculator: https://www.rba.gov.au/calculator/



| | | | |
|---|---|---|---|
| **withdrawal service** | | | |

It is noted that the Victorian study has several limitations, particularly the small sample size (NADA 2019). NADA acknowledges that these costings would be a significant increase on the current funding for residential beds in NSW (NADA 2019).

### Triple Care Farm

Triple Care Farm is an 18-bed residential service that provides treatment and support for young people aged 16 – 24 year with co-morbid conditions of drug dependence and mental illness (Mission Australia 2011). In a 2009/2010 report they outlined the operation's costs:

**Table 3 – Triple Care Farm 2009/2010 Rehabilitation Costings**

| Item | Quantity 2009/ 2010 | Adjusted 2017/2018[4] |
|---|---|---|
| **Expenditure per client per day** | $232 (Over the course of the three-month program) | $273.52 |
| **No of residential clients in 2009/2010** | 90 | |
| **No. of aftercare clients in 2009/2010** | 120 | |
| **Cost per closed episode** | $21,345 | $25,165.33 |
| **Client contribution per closed episode (fees)** | $1,048 | $1,235.57 |
| **Average length of stay** | 16 days | |
| **Staffing costs - 61%** | $1,338,877 | $1,578,509.51 |
| **Overall operating cost** | $2,181,223 | $2,571,618.79 |

In addition to funding support Triple Care Farm identified that they receive approximately 9% of investment from in-kind support including volunteers, land and goods (SVA Consulting 2015). Triple Care Farm identify that of the young people who engage with their service approximately 20% of young people who participate in the program are returning students (SVA Consulting 2015).

In a report by Social Ventures Australia (SVA) Consulting (2015), it was identified that for every dollar invested during FY09 -13 there was approximately $3 of social value. It is identified that the main saving would be in the justice system through young people being diverted from detention (SVA Consulting 2015).

[4] Cost calculated for 2017/2018 by author using Reserve Bank of Australia's Inflation Calculator: https://www.rba.gov.au/calculator/

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## Cost of the model for the delivery for community-based alcohol and other drug (AOD) interventions for young people

To identify the potential costs for community based AOD treatment for young people. There are a range of factors that need to be considered, including the need for AOD intervention, the demand for services, and the available supply of treatment.

### Need

It is challenging to identify the potential need for youth AOD services in a particular area. There are several key statistics and demographic data that can assist to indicate the potential need for a service.

The total population of young people aged 10 - 24 in the South Eastern NSW PHN region was 111,492 in 2016. This includes 34,615 young people in the Southern NSW Local Health District (SNSWLHD) which includes Goulburn, Queanbeyan, and Bega; and 76,877 in the Illawarra Shoalhaven Local Health District (ISLHD), which includes Wollongong, Shoalhaven, and Ulladulla[5]

**Table 4 – Population of Young People aged 10 – 24 in SNSWLHD and ISLHD**

| Southern NSW LHD | Persons (2016) |
|---|---|
| **10-14 years** | 12,431 |
| **15-19 years** | 11,867 |
| **20-24 years** | 10,317 |
| **Illawarra Shoalhaven LHD** | **Persons (2016)** |
| **10-14 years** | 23,950 |
| **15-19 years** | 25,355 |
| **20-24 years** | 27,572 |
| TOTAL | **111,492** |

It was identified in the 'Young Australians: their health and wellbeing. Canberra: Australian Institute of Health and Welfare' that 13% of young people aged 16 – 24 years of age reportedly had a substance use disorder (AIHW 2011).

In the literature, a consistent picture has emerged that substance use begins in adolescence and then goes on to peak at 20 – 24 years of age (Degenhardt et al. 2016). The information from National Drug Strategy Household Survey (AIHW 2016) indicates that substance use (e.g. illicit substance use, lifetime risk of alcohol etc.) is low for young people aged 12 – 17 years of age. *The Victorian Youth Needs Census: Report on the Needs and Characteristics of Young People in the Youth Alcohol and Other Drug System in 2016- 2017* identified that11.8% of young people who engaged in the AOD system were 8 – 15 years of age, 18.8% were 16 – 17 years of age, and 69.4% were 18 – 27 years of age.

[5] Information obtained from: http://www.healthstats.nsw.gov.au/indicator/dem_pop_lhnmap



## Demand

Demand looks at how many people engage with the service. Like need, it is challenging to identify what the potential demands for a service in a specific area for a specific population group, especially young people.

There are several steps that services can take to increase demand. An independent evaluation of headspace centres identified that a majority of young people who engage with headspace services live within 10 kilometres of the centre (Hilferty 2015). A similar experience is likely to be applicable to other services for young people, such as youth AOD treatment. Services need to find ways to improve access and demand outside of this range, such as having outreach elements of their service. It has also been found that parents play an important role in assisting young people to access services, particularly for those who live more than 10 kilometres from a service, so it is important to build recognition of the service among parents (Hilferty 2015).

Another key factor that can assist in raising awareness of services and increase demand is to offer a range of services or co-locate with a range of other services such as housing, mental health and employment support (Hilferty 2015).

## Supply

There was no literature that could be located that outlined a specific number of individual client sessions that a worker should provide over any period or the number of cancellations they incur.

In the *Drug and Alcohol Service Planning Model for Australia Population-based planning for Drug and Alcohol Service Development* (NSW Ministry of Health 2013) it identifies the approximate amount of time that an AOD clinician should spend on different activities. The model reports that a an AOD clinician who works for 38 hours for 46 weeks per year (52 weeks minus an average of 6 weeks leave per year) would have 1,755.60 Productive Hours per year, one third of these (584.61 hours) would be Overhead Hours and 1,171 Reportable Client Related Hours (NSW Ministry of Health 2013). Overhead hours include training, travel, and clinical supervision, but would also consist of:

- Service administration meetings and service development activities
- Writing case notes
- Reporting stats
- Promoting access to treatment
- Monitoring and evaluation
- Research

Reportable Client Related Hours is the "time spent working with OR for a client" (NSW Ministry of Health 2013, p. 102). This include assessment, counselling, support, and case management, but also includes:

- Case conferences

- Clinician travel time
- Letters and phone call
- Referrals to other programs or services
- Transporting clients

This information complements the information from the experience of the Lives Lived Well Outreach service in Orange who have provided services to young people (via headspace centres) and to adults for nearly 20 years. In a 38-hour work week, it was assumed that a clinician would have approximately 16 appointments and approximately 40% of those would be no shows and cancellations[6]. It was identified that the worker would also facilitate two groups. It is assumed that the worker will provide these over a 46-week period, allowing for four weeks annual leave per year, and two weeks of other leave, e.g. public holidays, sick leave etc. This calculation also makes an assumption that the worker is not travelling extensively to provide sessions.

**Table 5 – Cost of delivery of community-based youth AOD model**

| Item | Amount |
|---|---|
| **Drug and Alcohol Clinician – Level 5 (Plus 17% for on costs, e.g. super workers comp)** | $1670.48 pw - $1746.11pw |
| **Team Leader- Level 6 (plus 17%)** | $1818.25pw – $1898.78pw |
| **Manager - Level 7 (plus 17%)** | $1961.98pw - $2,043.94pw |
| **Training/ professional development** | 4% of salaries |
| **Clinical supervision – per session, one session per month** | 12 x $200 |
| **Client expenses** | Minimal - $230 per client |
| **Car** | Lease $680 per month plus fuel |
| **Evaluation and outcomes data collection** | 5% of above |
| **Additional % - IT, rent, payroll, HR, phone etc.** | 15% of above |
| **Total costs for one level 5 AOD worker at the lowest banding** | $130,288.72 |

So, the assumption that one Drug and Alcohol Clinician at the lowest banding of level 5 (with a car) would cost approximately $130,288.72 per year, if you assume that a worker could schedule 16 sessions a week and two groups (over a 46-week period) it would work out to **$156.97** per individual session/group. Assuming the 5 sessions/groups per episode is the average episode would cost **$784.87**.

[6] No literature could be identified that identified that common number of no shows and cancellations for youth AOD community-based treatment.

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## Conclusion

As expected this report identifies that the cost of delivering community-based counselling and group AOD treatments for young people would be significantly more cost effective than the provision of residential youth AOD treatment. If possible, the client would be offered less intensive treatment prior to engaging in residential treatment, however as it is known that key groups benefit more from residential treatment than community-based treatment.

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