



# Is headspace making a difference to young people's lives?

Final report of the independent evaluation of the headspace program

Never Stand Still

Arts & Social Sciences

Social Policy Research Centre



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The economic evaluation (Chapter 6) was conducted by researchers at Curtin University. The centre expansion and national coverage analyses (Appendix B and G) were conducted by researchers at the University of Western Australia.

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# Contents

<b>Executive Summary</b>	<b>1</b>
<b>1. Introduction</b>	<b>8</b>
1.1 headspace background	8
1.2 Evaluation background	9
1.3 Report structure	10
<b>2. Evaluation Methodology</b>	<b>11</b>
2.1 Aims of the evaluation	11
2.2 Evaluation data sources	11
2.3 Evaluation methods	12
2.4 Statistical analysis techniques	14
2.5 Evaluation limitations	16
2.6 Evaluation ethics	17
<b>3. Access and Engagement with Centres</b>	<b>18</b>
3.1 What is the current demand for headspace services?	18
3.2 What is the profile of young people accessing headspace services? Which groups are over/ under-represented?	19
3.3 What facilitates and hinders young people's engagement with headspace services?	29
3.4 How do parents/carers facilitate or hinder young people's access to and engagement with headspace services?	35
3.5 How are headspace services provided to young people in remote or regional areas? What facilitates and hinders the provision of extended services?	38
3.6 How does headspace increase awareness of mental health literacy among young people? To what extent have the number and type of young people accessing mental health services changed?	39
<b>4. Outcomes of headspace Clients</b>	<b>41</b>
4.1 How do young people's outcomes change after using headspace services?	42
4.2 How do the outcomes of young people using headspace services differ from the outcomes of young people not using headspace services?	59
4.3 According to clients, service providers and parents/carers, how and why has headspace contributed to/not contributed to changes in client outcomes (across four outcomes areas)?	66
4.4 Summary	72

<b>5. Service Delivery Model</b>	<b>73</b>
5.1 What aspects of the headspace model are most and least effective in assisting headspace to meet its objectives?	73
5.2 To what extent is model fidelity important?	76
5.3 What are the risk and protective factors for headspace sustainability?	77
5.4 How could the headspace service model be improved to better meet the needs of young people?	79
5.5 How could the headspace service model be improved to better meet the needs of parents/carers in supporting young people?	80
5.6 How and to what extent are additional components of headspace (such as eheadspace, headspace National Office and Centre of Excellence) perceived as supporting headspace to meet its objectives?	83
5.7 To what extent are headspace services linked with other government funded programs?	88
5.8 To what extent are there referrals between headspace services and the broader service system?	89
5.9 How effective is the service model in providing an entry point into and connection to other services within the broader system?	92
5.10 What perceived impact has headspace had on the skill and confidence of GPs regarding the provision of youth mental health care? To what extent do they report changes to practices as a result?	93
5.11 How do service providers transition young people using headspace to adult services where appropriate? To what extent are young people supported in the transition process?	97
5.12 Summary	99
<b>6. The Costs of headspace</b>	<b>101</b>
6.1 What are the overall costs of headspace?	101
6.2 Summary	109
<b>7. Conclusion</b>	<b>111</b>
<b>Appendices</b>	
Appendix A Evaluation scope and research questions	116
Appendix B Centre expansion analysis and proposals for national coverage	118
Appendix C Evaluation methodology: supplementary information	168
Appendix D Centre listing rounds 1-4	186
Appendix E Additional tables for Chapter 3: Access and Engagement with Centres	188
Appendix F Supplementary analyses for Chapter 4: Outcomes of headspace Clients	192
Appendix G Supplementary material for national expansion analysis	205
<b>References</b>	<b>251</b>

# List of Tables

Table 2.1	Summary of evaluation data sources	11
Table 2.2	Summary of evaluation methods	12
Table 2.3	Description of outcomes variables used for DID analysis	15
Table 3.1	Demographic characteristics of headspace clients, 2013/14 financial year	20
Table 3.2	headspace clients by age group, 2013/14 financial year	21
Table 3.3	Types of relationship problems headspace clients report having	28
Table 3.4	Wait times for headspace clients, 2013-14 financial year	33
Table 3.5	Proportion of clients who felt that they had waited too long for an appointment	34
Table 3.6	Actions taken by parents/carers to encourage their young person to attend headspace	37
Table 4.1	K10 changes for all young people and by first and last K10 recorded	42
Table 4.2	K10 changes by demographic characteristics	44
Table 4.3	Changes in K10 score between first and last headspace treatment: by age and gender	46
Table 4.4	Social and Occupational Functional Assessment Scale scoring	55
Table 4.5	Transition in SOFAS classification bands from the first (row) to the third occasion of service (column) (%)	57
Table 4.6	Transition in SOFAS classification bands from the first (row) to the sixth occasion of service (column) (%)	57
Table 4.7	Changes in outcomes, 'headspace treatment' group and matched 'no treatment' group	61
Table 4.8	Changes in outcomes, 'headspace treatment' and matched 'other treatment' groups	64
Table 5.1	Source of formal referral into headspace	90
Table 5.2	Proportion of future care decisions for clients after specific occasions of service (OoS)	91
Table 5.3	Proportion of main service type at headspace	93

Table 6.1	Main service type provided by primary issue the young person presents with at each visit, 2013/14 financial year	103
Table 6.2	Primary issue by secondary issue young person presents with at each visit, 2013/14 financial year	104
Table 6.3	Revenue, expenditure, average costs by centre round, headspace grant 2013/14 financial year	106
Table 6.4	Average MBS benefit by service provider, 12-25 year olds, 2013/14 financial year	108
Table 6.5	Estimated MBS benefits for headspace clients, by service provider, 2013/14 financial year	108
Table 6.6	Funding source, 2013/14 financial year	110

# List of Figures

Figure 3.1	Number of clients by centre round, 2013/14	19
Figure 3.2	Number of headspace clients per 1,000 population by age, 2013/14	21
Figure 3.3	Average K10 score at presentation by age, sex-and sexuality, headspace clients 2013/14	24
Figure 3.4	Average SOFAS scores at presentation by age and gender, headspace clients 2013/14	25
Figure 3.5	Average SOFAS scores at presentation by age and gender-sexuality group, headspace clients 2013/14	26
Figure 3.6	Average SOFAS scores at presentation by age and Indigenous status, headspace clients 2013/14	26
Figure 3.7	Client reported main reason for first visit to headspace, 2013/14	27
Figure 3.8	Main problem with how clients feel at the first visit, 2013/14	27
Figure 3.9	Primary presenting issue of clients as assessed by service providers at the first visit, 2013/14	29
Figure 3.10	Distribution of headspace clients by travel distance to headspace centre	32
Figure 3.11	Where parents/carers sought further information about headspace	36
Figure 4.1	K10 changes by commencing K10 group (%)	43
Figure 4.2	Cumulative average change in K10 scores - by the primary issue the young person presented with at initial consultation and total number of visits	44
Figure 4.3	Changes in K10 score between first and last headspace treatment: FEMALE clients, by age	46
Figure 4.4	Changes in K10 score between first and last headspace treatment: MALE clients, by age	47
Figure 4.5	Average K10 score by visit number and total number of occasions of service	48
Figure 4.6	Proportion of headspace clients showing clinically (CS) or reliably (RS) significant improvement in K10, by age and occasion of service (OoS) interval	49
Figure 4.7	Percentage of headspace clients who considered suicide in the last year, by K10 change and intervention survey wave	50
Figure 4.8	Change in prevalence of suicidal thoughts between waves, by gender and K10 change	51



Figure 4.9	Percentage of headspace clients who self-harmed in between waves, by K10 change and intervention survey wave	51
Figure 4.10	Prevalence of self-harm in the last year across grouped K10 changes: by intervention survey wave and gender	52
Figure 4.11	Number of days lost in last four weeks due to psychological distress, by K10 change and OoS interval	52
Figure 4.12	Number of days in last four weeks cut down due to psychological distress, by K10 change and OoS interval	53
Figure 4.13	Social inclusion indicators among headspace clients, by gender and intervention survey wave	54
Figure 4.14	Cumulative average of individual SOFAS changes by gender and total number of visits	55
Figure 4.15	Cumulative average of individual SOFAS differences by gender-sexuality and total number of visits	55
Figure 4.16	Cumulative average of change in individual SOFAS scores - by the primary issue at initial consultation and total number of visits	56
Figure 4.17	Proportion of young people who transitioned in SOFAS classification bands from first to last occasion of service by gender-sexuality	58
Figure 4.18	Proportion of young people who transitioned in SOFAS classification bands from first to last occasion of service by total number of visits	58
Figure 5.1	Access to supports/services for parents/carers at headspace	82
Figure 5.2	Proportion of headspace clients that received support from eheadspace, 2013/14	84
Figure 5.3	Usefulness of range of headspace components (n=29)	88
Figure 5.4	Direct funding source for headspace occasions of service	89
Figure 5.5	headspace clients with a formal referral at first visit, 2013/14	90
Figure 5.6	Proportion of headspace clients with formal referral at the first visit by state, 2013/14	91
Figure 5.7	GP referral of young patients to services within the last 12 months (n=43)	94
Figure 5.8	GP referral of young patients to services within the last 12 months (respondent numbers)	96
Figure 5.9	Strategies implemented to transition clients from headspace to adult service	98
Figure 5.10	Level of satisfaction with liaison and collaboration to transition client	98
Figure 5.11	Extent to which young person was supported by headspace during transition	99
Figure 6.1	Main type of service provided at each visit, 2013/14 financial year	102
Figure 6.2	Direct funding source for headspace occasions of service, 2013/14 financial year	105

# Abbreviations

<b>AHMS</b>	Adult Mental Health Services
<b>ATAPS</b>	Access to Allied Psychological Services
<b>CALD</b>	Culturally and Linguistically Diverse
<b>CAMHS</b>	Child and Adolescent Mental Health Services
<b>CATI</b>	Computer Assisted Telephone Interview
<b>CSC</b>	Clinically Significant Change
<b>DID</b>	Difference-in-difference
<b>DoH</b>	Australian Government Department of Health
<b>GP</b>	General Practitioner
<b>hCSA</b>	headspace Centres Services Application
<b>hCFA</b>	headspace Centres Finance Application
<b>hNO</b>	headspace National Office
<b>K10</b>	Kessler 10 (Kessler Psychological Distress Scale)
<b>LGBTI</b>	Lesbian, Gay, Bisexual, Transgender and Intersex
<b>MBS</b>	Medicare Benefits Schedule
<b>MHNIP</b>	Mental Health Nurse Incentive Program
<b>NSW</b>	New South Wales
<b>OoS</b>	Occasions of service
<b>RC</b>	Reliable change
<b>RCT</b>	Randomised control trial
<b>RFQ</b>	Request for Quotation
<b>RPHS</b>	Rural Primary Health Services
<b>SEIFA</b>	Socio-Economic Indexes for Areas
<b>SOFAS</b>	Social and Occupational Functioning Assessment Score
<b>SPRC</b>	Social Policy Research Centre
<b>UNSW</b>	University of New South Wales
<b>YMM</b>	Young Minds Matter

# Executive Summary

headspace<sup>1</sup> aims to improve the mental health and social and emotional wellbeing of young people in Australia through the provision of evidence-based, integrated, youth-centred and holistic services. In January 2013, the Australian Government Department of Health (DoH) commissioned a consortium of researchers from the Social Policy Research Centre and the Centre for Social Impact, UNSW Australia; Bankwest Curtin Economics Centre, Curtin University; and the Telethon Kids Institute, University of Western Australia to evaluate the effectiveness of headspace.

The evaluation aimed to:

- **examine young people's access to and engagement with the centre-based program** including the demand for services at centres and barriers and facilitators to service use
- **assess the outcomes of young people** who have received services from headspace to determine the effectiveness of the treatment
- **assess the centre-based program's service delivery model** including aspects of the model that are most and least effective in assisting headspace to meet its objectives, and
- **conduct a cost effectiveness analysis** of the program as it currently operates, as well as an expanded version of the program that seeks national coverage.

This report presents the evaluation findings.

## Evaluation Method

The evaluation used qualitative and quantitative methods to answer the evaluation questions. The main methods and data sources included:

- program datasets (including the headspace Centres Service Application and the headspace Centres Finance Application): these datasets contain information relating to over 45,000 young people who received almost 200,000 occasions of service across operational headspace centres
- the 2011 Census of Population and Housing
- interviews with key program stakeholders including headspace clients (n=50), centre managers and staff (n=25), and parents and carers of young people with mental health concerns (n=38)
- surveys of 1,515 young people attending headspace and 4,774 young people<sup>2</sup> who were not attending headspace to compare the outcomes of headspace clients with those who have not used headspace or have received alternative forms of mental health care
- surveys conducted with various stakeholder groups, including 226 parents and carers of

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<sup>1</sup> headspace is not capitalised throughout this report to align with headspace branding.

<sup>2</sup> These figures relate to wave 1 of each survey.

young people with mental health concerns; 207 headspace centre managers, professionals affiliated with headspace and/or the mental health care service system; and 29 centre managers

- a cost effectiveness analysis including estimates of government investment directed towards treating young people and estimates of the effectiveness of headspace centres
- an analysis of centre expansion under the current headspace allocation model, an evaluation of the effectiveness of the current centre allocation model to provide access to headspace services, and a discussion of alternative methods of achieving national coverage for headspace services.

The findings presented in this report are subject to the limitations and assumptions of the underpinning modelling as well as the limitations of the data. The evaluators have sought to identify and minimise, to the greatest extent possible, these limitations. While the analysis is firmly based on best practice and has been subjected to rigorous quality assurance procedures, the use of different datasets coupled with ongoing developments and improvements in data may potentially produce different results in different components of the analysis.

The outcomes analysis reports the progress of young people over the course of their engagement with headspace. One key issue for the evaluation is the existence of two datasets which were used to examine the outcomes of headspace clients. The evaluation was originally designed to measure outcomes using a single source of data: a survey of headspace clients and a comparison group of young people. However, the implementation of a new administrative dataset (hCSA) at the beginning of the evaluation (January 2013) presented an opportunity to examine client outcomes using a comprehensive administrative data source. In using these two datasets the evaluation employed two complementary approaches to examine the effectiveness of headspace in relation to client outcomes:

- a difference-in-difference (DID) approach, and
- the clinically significant change (CSC) method.

The CSC method utilises the administrative data collection (hCSA) and focuses on changes in psychological distress for different groups of headspace clients over the course of headspace treatment, comparing the progress of headspace clients with benchmarks derived from functional populations.

The DID approach analyses survey data collected from a sample of headspace clients and a comparison group of young people. The analysis compares the progress of young people in the 'headspace treatment' group with those in two comparison groups – an 'other treatment' group comprising those in the general population who have sought mental health treatment outside the headspace program, and a 'no treatment' group comprising those in the general population who have sought no mental health treatment.

The results of these distinct analyses align; both show headspace has a small program effect. The key findings related to client outcomes and the other evaluation scope areas are presented below.

## Key Findings

A selection of key findings related to the scope areas are presented below.

### Access and Engagement

The evaluation indicates that headspace is an accessible program. During the 2013/14 financial year, 67 headspace centres provided 194,968 occasions of service to 45,195 young people with mental health or other issues (approximately 9,000-12,000 clients per month).

Findings show that the centre-based program is being accessed by a diverse group of young people whose need for mental health care is evidenced by high levels of psychological distress. Almost three-quarters of young people who sought help at centres during the 2013/14 financial year had high

or very high levels of psychological distress<sup>3</sup> at first assessment (74.2%).

headspace has been successful in attracting some young people from marginalised and at-risk groups, as well as young people traditionally disadvantaged in their access to mental health care. Most notably, headspace is being accessed by significantly higher proportions of Indigenous young people and those living in regional areas than the proportions of these groups in the general population.

The strategic placement of centres in regional areas has been effective in facilitating access to community based mental health for young people living outside of major cities. While this group represents 26.2% of young people nationally, 39% of headspace clients lived in regional areas (inner and outer regional).

Indigenous young people are also over-represented as headspace clients. Approximately 7.4% of clients identified as Aboriginal or Torres Strait Islander, which is double their representation in the general population (3.7%). This is another significant finding as research indicates that Indigenous people have higher rates of mental health and substance misuse conditions than the general population, but are more reluctant to seek help (Jorm et al, 2012). The proportion of Indigenous clients varies greatly according to the geographic location of centres and qualitative data indicates that some centres could do more to make their services more culturally appropriate for Indigenous clients.

headspace is being accessed by a higher proportion of female young people (62.8%) than males (37.2%). This finding is consistent with results from the National Survey of Mental Health and Wellbeing, which reports higher rates of mental disorders in women (ABS, 2007), as well as the higher overall usage of health services by women in general (ABS, 2010).

One in five headspace clients (20.2%) identify as lesbian, gay, bi-sexual, transgender or inter-sex (LGBTI). While no age-specific comparison data is available, the Second Australian Study of Health and Relationships reports that of the adult population, only 3% of men and 4% of women identify as LGBTI (Richters et al., 2014).

Other groups of vulnerable young people over-represented at headspace are young people disengaged from work or study (20.2% of clients compared to only 10.7% of the general youth population); and young people who are homeless or living in insecure housing, such as couch surfing or sleeping rough. This group represented one in 10 clients (11.7% of 12-25 year olds; 7% of 12-17 year olds; and 16.7% of 18-25 year olds). The latter group was far less likely to return to headspace after their first visit than all other clients, indicating that sustained engagement with mobile young people is challenging.

These findings indicate that headspace has achieved much in initially engaging a significant proportion of vulnerable young people and disadvantaged groups. However, CALD young people are under-represented as headspace clients. Almost all young people attending headspace were born in Australia (92.8%), compared to 82% of all young people across Australia. Of the 7.2% of clients that were born overseas, only 6.6% speak a language other than English at home (compared to 19.3% of Australian young people). This finding suggests that centres may need to target CALD young people in promotion activities and connect more with local CALD services to facilitate integrated service provision for this group of young people.

Stakeholders (clients, staff and parents) generally identified headspace to be an accessible and engaging service. The youth-friendly environment and innovative engagement approaches; the friendly, non-judgemental and relatable staff; the free or low cost service; wide-range of services provided; and practical assistance (such as transportation) were all commonly mentioned as important factors that helped young people access and stay engaged with headspace. Despite the high value that many young people and their parents placed on these program features, a number of barriers to service access were raised by stakeholders. These included the stigma of mental illness, practical barriers (such as standard opening hours and lack of transportation), centre waiting lists, and concerns around the cultural appropriateness of services provided in some centres.

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<sup>3</sup> As measured by the Kessler Psychological Distress Scale (K10) which categorises distress levels into four groups: low, moderate, high and very high.

Parents played a critically important role in getting young people to attend headspace services through the provision of practical support (e.g. transport, contacting services), emotional support, discussion and encouragement. Surveyed parents encouraged their young person to attend headspace because they believed they needed professional help, they would not get well without it and/or they were concerned about their young person's safety.

While surveyed parents played an important role once young people started attending headspace, 62% (58 of 93 parents who responded to survey question) had not heard of headspace or did not know what headspace did before their young person started attending. A number of parents received information about headspace from a health or community service worker (33 of 93 parents/carers who responded to question).

## Young People's Outcomes

One of the primary research questions guiding the evaluation was whether treatment at a headspace centre resulted in improved outcomes for young people. The evaluation findings from the two different analytical techniques employed align well and show a pattern of small program effect.

Changes in levels of psychological distress were measured using the Kessler 10 (K10)<sup>4</sup>. The mean average reduction in K10 scores for young people who received headspace services in the 2013/14 financial year was 2.3 points – from 28.8 at assessment to 26.5<sup>5</sup> at last recorded K10<sup>6</sup>. This general finding, however, masks significant differences evident in young peoples' experiences with headspace.

Overall, the psychological distress of almost half of headspace clients decreased (47%, n=12,233): 13.3% experienced a clinically significant reduction in psychological distress, 9.4% a reliable reduction and 24.3% an insignificant reduction. Almost 29% of young people experienced no change in their psychological distress level and psychological distress increased for almost one in four young people (24.3%). Of this group, 4.5% experienced a clinically significant increase in psychological distress, 4.9% a reliable increase and 14.9% an insignificant increase in their level of psychological distress. Young people identifying as Aboriginal or Torres Strait Islander were over-represented in the groups whose psychological distress increased clinically. In summary, the level of psychological distress reduced significantly (clinically or reliably) for more than double the number of young people than those whose psychological distress increased (5,908 compared to 2,457).

Suicidal ideation and prevalence of self-harm were analysed to further examine young peoples' mental health outcomes. Suicidal ideation reduced significantly even among the group of young people who recorded an insignificant reduction or no reduction in psychological distress (i.e. suicidal ideation fell for this latter group by more than 16 percentage points; from 64% to 47.8%). Self-harm also decreased for all groups, except those who experienced a significant increase in psychological distress. The greatest reduction in prevalence of self-harm was for those who improved clinically significantly (down 24.7 percentage points), and those who recorded a reliably significant improvement (down 18.3 percentage points). These findings highlight the potential protective role that headspace may have against extreme adverse mental health outcomes.

Young people treated by headspace and whose mental health improved also benefited from a range of positive economic and social outcomes. The number of days that headspace clients were unable to work or study dropped significantly by 4.5 days per month for those who showed significant reductions in psychological distress, from 7.6 days at the start of headspace treatment, to 3.1 days at the last occasion of service<sup>7</sup>. There was also a strong reduction in the number of days cut back

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<sup>4</sup> The K10 is a self-complete questionnaire designed to measure psychological distress based on questions about how frequently people have experienced negative emotional states in the past 30 days. A full description of this validated scale, including the score categorisations used for analysis, can be found in Chapter 2. Reduction in K10 scores means that the level of psychological distress has gone down.

<sup>5</sup> As indicated in Table 2.3, K10 scores of 22-29 indicate high levels of psychological distress.

<sup>6</sup> Young people are asked to complete the K10 scale at various times throughout their treatment (first, 3rd, 6th, 10th and 15th occasion of service). The last recorded K10 is not always an exit score and will include young people who are still receiving treatment.

<sup>7</sup> The last occasion of service refers to the last recorded occasion of service within the hCSA data. A proportion of young people may still be receiving services from headspace.

through mental health issues among headspace clients that improved clinically, from 9.4 days per month at presentation to headspace on average down to 3.1 at the final observed visit.

Responses to the number of headspace treatments varied by both age and gender. Young females entered headspace with a higher level of psychological distress than males, and typically received more occasions of service over a longer period of time. Females 23 years and over showed a high level of clinically and reliably significant improvement over time: the combined rates of clinical and reliable improvements rose from 16% by the third visit to nearly 29% by the tenth visit. The trajectory of clinically and reliably significant improvement in psychological distress was relatively flat for males by age, but the rate of clinical improvement in mental health functioning also increased as the number of headspace visits rose.

Young people who only had 2-3 occasions of service were over-represented in the group who did not experience any change or had an insignificant change. This finding is not surprising as the initial occasion of service is generally an intake assessment rather than treatment and so this group of young people would have received a very low dose intervention. Young people who had 7-10 occasions of service were highly represented among those who had clinically significant reductions in psychological distress, while young people with 10 or more occasions of service were over-represented in terms of their reliably and clinically significant reductions in psychological distress.

Evaluation findings show a small positive improvement in outcomes for young people that sought headspace services relative to similar young people and a functional population. Specifically, the 'headspace treatment' group recorded a greater reduction in psychological distress when compared with both the 'other treatment' and 'no treatment' matched groups over time. Both results are statistically significant. The effect size for this outcome indicator is -0.11 for the difference-in-differences between the 'headspace treatment' and 'no treatment' group. Comparisons between the 'headspace treatment' and 'other treatment' group show an effect size of -0.16.

## Service Delivery Model

The headspace delivery service model ensures that young people with a range of problems can access different practitioner types in the one location. There is a low rate of formal referrals to other services for headspace clients. Informal referrals to other services are not recorded in the hCSA; however, other qualitative data indicates that young people frequently receive informal referrals. There is variability in the connections centres have with local services, with some working effectively with local providers and tensions being evident in others.

The evaluation indicates that one of the best ways that the service model could be enhanced to better meet the needs of young people and their parents and carers is to increase the capacity of centres to provide family therapy for some young people. The majority of staff interviewed and managers surveyed (n=22/29) identified family-based treatment as the main service gap. The increased provision of outreach services was the second most clearly identified strategy for enhancing headspace services.

eheadspace was used by about 30% of clients that had accessed headspace services. eheadspace was viewed by staff working within centres as an effective additional component of headspace that can provide young people with information about headspace including what to expect at centres. Some staff commented on the value of eheadspace in holding young people steady while they were waiting to access services; however, assessing the effectiveness of eheadspace was beyond the scope of the evaluation.

The evaluation produced mixed results about the role of headspace National Office. The overwhelming majority of centre managers (n=23/29) rated hNO as useful or very useful to the work of their centre; however, open-ended survey data indicates that some tensions exist around perceptions of the centralisation of control by hNO.

Workforce issues present a challenge for many centres and impact on the provision of seamless service provision. Almost half of the centre managers surveyed (n=14/29) stated that they were operating with a staffing vacancy. In particular, there was an identified need to expand the amount of time that GPs operated in centres as well as the range of GP services offered.

Finally, the evaluation indicates that headspace has been relatively effective in building brand

awareness and promoting mental health and help seeking among young people. Awareness of headspace varies among stakeholder groups, with surveyed GPs in particular showing generally low levels of awareness about what headspace does, and a clear reluctance among some GPs to refer young people with an emerging mental health problem to headspace. Further research may be needed to better understand and improve GP engagement levels and referrals.

## Costs of headspace

Government investment into headspace is facilitated through a number of funding streams. These include the headspace grant, the Medicare Benefits Scheme (MBS), the Access to Allied Psychological Services (ATAPS), the Mental Health Nurse Incentive Program (MHNIP) and Rural Primary Health Services (RPHS). Together, the headspace grant and the MBS fund more than 81% of services provided within headspace centres. The cost analysis presented in Chapter 6 does not include the value of some minor funding streams as these were not able to be estimated with the available data.

Findings in relation to government investment show that the average cost of a headspace occasion of service is \$339 (2013/14 financial year)<sup>8</sup>. However, there is considerable variation in average costs per occasion of service at the centre level. Costs can range from \$136 to over \$1,000 taking into account the headspace grant only. High unit costs could indicate inefficiency; however, to draw firm conclusions about this requires further investigation at the centre level. Substantial surpluses also existed in terms of the headspace grant within the 2013/14 financial year. It is recognised that legitimate impediments may reduce the ability of some centres to realise operational efficiencies, particularly in certain areas throughout Australia. However, it is recommended that centre level operational inefficiencies are identified, assessed and resolved in order to make effective use of finite resources. This could involve a number of measures, including:

- review of funding grant allocation relative to historical and predicted need at the local area level
- targeted assistance to particular centres to ensure operational efficiencies are optimised
- performance indicators and targets linked to grant funding.

Each of these initiatives would need to be carefully considered and implemented to protect against unintended consequences for the headspace program, and to ensure that headspace can continue to reach its objectives in improving the social, emotional and mental health of young Australians.

## Conclusions

headspace is a highly accessible, complex program, serving a diverse range of vulnerable young people with high levels of psychological distress and a range of social, emotional and health problems. While some evaluation findings are mixed, results show that there are small improvements in the mental health of headspace clients relative to two matched control groups. As expected, changes in outcomes varied for different groups of young people.

Economic and social benefits from improved mental health functioning are delivered through a number of positive outcomes, and to the extent that these can be attributed to headspace treatment, add value to the headspace investment. The strongest economic benefits arise from a significant reduction in the number of days lost due to illness, the number of days cut down<sup>9</sup>, and the reduction in suicide ideation and self-harm. These findings provide some indication of the economic and social

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<sup>8</sup> There is no similar program with which to directly compare and benchmark headspace program cost; however, this occasion of service cost compares closely to ambulatory services which nationally averaged \$303 per treatment day in the 2012-13 financial year (excluding Victoria). Ambulatory care services (a form of community based mental health services) are provided by outpatient clinics (hospital or clinic based), mobile assessment and treatment teams, day programs and other services dedicated to assessment, treatment, rehabilitation and mental health care (SCRGSP, 2015).

<sup>9</sup> At each occasion of service young people were asked to indicate the number of days in the last two weeks when they were totally unable to carry out usual activities at school and work; and the number of days when they had to cut down their usual activities. See Table 2.3 for further information.



value to society of the improvements in mental health functioning being delivered through headspace.

The value of headspace cannot be restricted to its impact on individual clients. The mental health promotion and community awareness work of headspace is valued by staff and clients, and appears to be having a positive impact in reducing the stigma of mental illness and encouraging help seeking among young people.

# 1. Introduction

This is the final report of the second headspace evaluation. The Australian Government Department of Health (DoH) commissioned a consortium of researchers, led by the Social Policy Research Centre (SPRC) and Centre for Social Impact (University of New South Wales), to conduct the evaluation. Other members of the consortium include researchers from the Bankwest Curtin Economics Centre at Curtin University and the Telethon Kids Institute at the University of Western Australia.

The two and a half year evaluation began in January 2013. The evaluation assesses the extent to which the centre-based headspace program is achieving its objectives, with a specific focus on:

- young people's access and engagement with headspace centres
- the centre-based service delivery model
- the outcomes of young people who have received services, and
- the cost effectiveness of headspace centre services.

A diverse range of methods were used to evaluate the headspace program. Methods included:

- fieldwork at five headspace centres including interviews with 25 staff and 50 young people
- analysis of program client, service provider and financial data across 56 fully operational headspace centres opened during rounds 1-4 (see Appendix D for centre listing)
- surveys of 1,515 clients<sup>10</sup> using headspace services and 4,774<sup>11</sup> comparative young people
- surveys of 207 managers at headspace centres, centre staff and affiliated stakeholders
- a survey of 226 parents of young people with mental health concerns and interviews with 38 parents/carers.

This report brings together analysis from each methodological component of the evaluation, and draws on the expertise and experience of multiple stakeholder groups.

The methodology used to evaluate headspace is summarised in Chapter 2, with further details provided in Appendix C.

## 1.1 headspace background

headspace is the National Youth Mental Health Foundation. Since its establishment in 2006, headspace has attempted to reduce the high prevalence of mental health problems, the low uptake in service use, and poor outcomes among young Australians with mental illness (Patulny et al, 2013). The Foundation's overarching goal is to improve the mental, social and emotional wellbeing of young

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<sup>10</sup> 1,515 clients were surveyed at wave 1 but only 1,364 clients completed surveys at wave 2.

<sup>11</sup> 4,774 young people were surveyed at wave 1 but only 2,622 completed surveys at wave 2.

people in Australia (headspace, 2012).

headspace receives funding from the Australian Government Department of Health (DoH), under the Youth Mental Health Initiative Program, to deliver four clinical programs. These comprise:

1. a growing national network of headspace centres that operate in metropolitan, regional and rural locations around Australia (formerly known as Communities of Youth Services)
2. a national online and telephone support service staffed by youth mental health professionals (ehespace)
3. headspace School Support, which provides assistance to secondary school communities impacted by the suicide of a student
4. headspace Youth Early Psychosis Program (hYEPP): a specialist support service delivered through headspace centres to young people experiencing, or at risk of developing, their first episode of psychosis.

This evaluation focuses on only the first program: the effectiveness of the headspace centres. However, it should be noted that headspace administers and coordinates a number of programs and complementary activities that may have influenced some of the evaluation findings (e.g. community awareness campaigns that seek to encourage early help-seeking and improve the outcomes of young people with mental health concerns).

headspace centres are a network of enhanced primary care services where young people (12-25 years) with mild to moderate mental health problems are able to access a broad range of in-house services or be connected to complementary services within the community. This age range is targeted because the onset of mental illness is most likely to occur in adolescence and early adulthood (de Girolamo et al, 2012). It is a time when young people need continuity in support and services, rather than the interruption manifested in the traditional service delivery division between adolescent and adult mental health care (Rickwood et al., 2014).

Unlike traditional mental health service options, headspace centres also provide integrated care across four key domains: mental health, physical health, drug and alcohol use, and social and vocational participation. The holistic care of young people is facilitated by the centre model that draws on the expertise of a lead agency and a number of local partner organisations, each with expertise in different areas (such as primary health care, mental health care and vocational training).

In recognition of the increased need for mental health services for young people in Australia, the program continues to expand and has bi-partisan Federal Government support. headspace centres have been opened in progressive rounds since 2006. Approximately 80 centres are currently fully operational nationally; however, more are due to open each year until 2016. Most recently, the federal government announced additional funding to expand the centre total to 100 by the end of 2016.

## 1.2 Evaluation background

headspace was first evaluated by researchers at the Social Policy Research Centre in 2008/2009<sup>12</sup>. This independent evaluation adopted a longitudinal, mixed methods approach to examine the achievements, limitations and future directions of the program, with a focus on the original 30 headspace centres (formerly known as Communities of Youth Services). The evaluation found that headspace had made significant progress towards improving availability, appropriateness and accessibility of mental health support for young people (Muir et al, 2009).

Limited outcomes data were available at the time of the first evaluation; however, the analysis conducted suggested that headspace promoted and facilitated improvements in young people's mental health, social wellbeing and participation in education, training and employment (Muir et al, 2009).

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<sup>12</sup> The evaluations have had continuity in leadership, with Ilan Katz and Kristy Muir leading both evaluations. This has ensured that the second evaluation has built on the processes, methods and knowledge gained through the first evaluation.

There have been many changes to the program since the first evaluation, including:

- the introduction of a new administrative dataset from January 2013 that collects data from both clients and service providers at each occasion of service (hCSA)
- the introduction of a new financial dataset (hCFA)
- an increase in government funding and number of headspace centres (from 30 to approximately 80 currently operational, with a further 20 funded to open by December 2016), and
- the implementation of a new governance structure with headspace established as a company limited by guarantee with a Board of Directors.

The second evaluation of headspace was conducted to determine if the program is meeting its funded objectives and to ensure that program enhancements as well as future funding and expansion decisions are evidence-based.

### 1.3 Report Structure

This report is structured according to the four evaluation scope areas: access and engagement, client outcomes, the service delivery model, and the economic evaluation. Each scope area is designated a chapter within the report and findings are presented according to the specified research questions (refer Appendix A).

The document comprises six chapters. Chapter 1 provides some background to the evaluation and the headspace program. Chapter 2 outlines the methodology used to evaluate headspace, with further and more technical information provided in Appendix C. Chapter 3 presents findings related to young people's access and engagement with headspace. This chapter includes a comprehensive profiling of headspace clients. Chapter 4 presents findings related to young people's outcomes in multiple areas following headspace treatment. Chapter 5 presents findings related to the headspace service delivery model. Chapter 6 presents the costs of headspace; and Chapter 7 summarises the key messages of the evaluation.

As part of the evaluation an analysis was conducted to consider the costs of national expansion. This analysis is presented in Appendix B.

# 2. Evaluation Methodology

## 2.1 Aims of the evaluation

The independent evaluation of headspace aimed to assess the extent to which the program is achieving its objectives, with a specific focus on:

1. the processes of program access and engagement for young people and how these can be enhanced
2. the effectiveness of the headspace program in achieving improved outcomes for clients across multiple areas (mental health, physical health, drug and alcohol use, and social and vocational participation)
3. the efficiency of the service delivery model, and
4. the costs and effectiveness of headspace.

These four areas comprise the scope of the evaluation as specified in the Department's original Request for Quotation. The evaluation methodology was designed to align with departmental requirements that highlight two evaluation purposes: to assess program effect, and to identify ways to enhance the program. Further, the evaluation was designed to answer key research questions that were developed from departmental specifications (provided in Appendix A).

The multi-purpose evaluation and key research questions have informed the evaluation design which is multi-method and longitudinal (2013-2015). This report presents findings by key research questions where possible.

## 2.2 Evaluation data sources

The evaluation draws upon both quantitative and qualitative data. Some of these data are drawn from sources which existed prior to the evaluation and others are primary data collected for the evaluation. Table 2.1 provides a summary of evaluation data sources.

**Table 2.1 Summary of evaluation data sources**

Name	Source type/description	Dates
headspace Centres Services Application (hCSA)	Administrative data collected by headspace from clients and service providers	2013/14 financial year is evaluation reference period
headspace Centres Finance Application (hCFA)	Existing administrative data source	2013/14 financial year is evaluation reference period
Census of Population and Housing	Secondary data source	2011

Name	Source type/description	Dates
<b>Survey of young people</b>	The evaluation drew upon data collected as part of the National Child and Adolescent Survey of Mental Health and Wellbeing. A sample of this data comprises the W1 12-17 years comparison group data. Wave 2 12-17 years comparison group data; all 18-25 years comparison group data; and headspace treatment group data collected for evaluation	Wave 1 YMM data collection period: Jun 2013 to Mar 2014. Wave 2 data collection period: May 2014 to Nov 2014  Wave 1 18-25 years comparison group data collection period: Dec 2013. Wave 2 data collection period: Sep 2014 to Oct 2014  Wave 1 intervention group data collection period: Dec 2013 to Jun 2014. Wave 2 data collection period: Aug 2014 to Jan 2015
<b>Interviews with headspace staff</b>	Primary data collected for evaluation	Fieldwork conducted Apr to Jun 2013
<b>Interviews with headspace clients</b>	Primary data collected for evaluation	Fieldwork conducted Apr to Jun 2013
<b>Interviews with parents and carers</b>	Primary data collected for evaluation	Fieldwork conducted Aug to Oct 2014
<b>Survey of parents and carers</b>	Primary data collected for evaluation	Online survey open Jun to Sep 2014
<b>Survey of centre managers</b>	Primary data collected for evaluation	Survey open Jun to Aug 2013
<b>Professional stakeholders survey</b>	Primary data collected for evaluation	Online survey open Sep to Nov 2014

## 2.3 Evaluation methods

The multiple evaluation methods enable a comprehensive assessment of headspace effectiveness and efficiency. Where possible, the different methods were triangulated to strengthen the findings and to provide more depth to the analysis. The evaluation methods are summarised in Table 2.2 below. Further information on each method including sampling, recruitment and analysis techniques is provided in Appendix C.

**Table 2.2 Summary of evaluation methods**

Evaluation method	Description of method
<b>Analysis of program data: headspace Centres Services Application (hCSA)</b>	Analysis of the data contained in the headspace Centres Services Application (hCSA) for the 2013/14 financial year. This dataset contains information collected from both headspace clients and service providers. The hCSA data has been operationalised to collect information about young people's access and engagement with headspace, aspects of the headspace service delivery model, patterns of client outcomes, government investment in headspace, and the extent of clinically significant change in headspace clients. Descriptive analysis was undertaken to profile headspace clients in comparison to the overall youth population. The hCSA data was also used to provide further information about the headspace survey intervention group.
<b>Analysis of secondary data: (Census)</b>	The evaluation was informed by the analysis of secondary data: the 2011 Census of Population and Housing. This secondary dataset was used to inform comparative analysis of the demographic characteristics of headspace clients and young people across the general population.
<b>Surveys of young people</b>	<p>Three surveys were conducted to assess young people's outcomes for the headspace evaluation. The surveys were conducted in two waves, approximately 9 months apart. However, this timeframe varied considerably.</p> <p>The three surveys undertaken were: the 'headspace treatment' group (n = 1,364 at wave 2), a comparison group of 12-17 year olds (via the Young Minds Matter survey; n=1,686 at wave 2), and a comparison group of 18-25 year olds (sourced through a national online panel; n=936 at wave 2).</p> <p>The survey questions were largely drawn from the Young Minds Matter survey.</p> <p>Issues with survey timing and comparability are addressed in the analysis where possible and further information is provided in Appendix C.</p> <p>The three surveys were used to compare outcomes in young people that had sought services from headspace to those that had not sought any treatment and those that had sought other treatment from another mental health provider. A difference-in-difference approach was used to assess the impact of the program using survey cohorts. Propensity score matching was conducted to align the intervention and comparison groups.</p>

Evaluation method	Description of method
<b>Fieldwork at sites</b>	<p>Fieldwork was undertaken at 5 headspace sites around Australia between April and June 2013. Across these sites, a sample of 50 young people attending centres, 5 centre managers and 20 staff members were interviewed.</p> <p>Interviews were semi-structured and conducted face-to-face. All interviews were recorded with the permission of participants. Interviews were then transcribed and imported into QSR NVivo10, a qualitative data analysis software package to assist coding and thematic analysis. Transcripts were coded using pre-determined coding frameworks (one for headspace staff and another for headspace clients). Following coding, analytic memos were written to summarise each node (or code) used and queries were run to identify frequencies and relationships across nodes.</p>
<b>Survey of centre managers</b>	<p>An online survey was distributed to centre managers at 40 operational centres (that is, centres established during rounds 1-3). The survey collected data in June 2013 and valid responses were provided by a total of 29 managers.</p> <p>The survey collected data on the headspace service delivery model and program implementation from a sample of respondents.</p>
<b>Survey of professional stakeholders</b>	<p>This survey was conducted to examine specific features of the headspace service model as well as aspects of access and engagement that other data sources do not provide sufficient information on.</p> <p>In particular, the survey examined the perceptions of professionals affiliated with youth mental health care, or providers connected to the broader service system with regard to how headspace is collaborating with local services, and the impact of any collaboration.</p> <p>Representatives from headspace consortium organisations were invited to participate in the survey. In addition, a survey link and advertisement was posted on a number of forums including AIFS' Child Family Community Australia news section, and the RACGP Friday Facts newsletter.</p> <p>The survey was distributed online through direct email invitation and advertisements with an embedded URL. The survey was open for approximately 4 weeks from early October to early November 2014. A total of 207 professionals participated in the survey. The KeySurvey system that hosted the survey has an automatic report function that provides basic analysis (descriptive results). Further analysis was conducted by exporting the data file into excel. Text provided in open-ended questions was thematically coded.</p>
<b>Parents and carers study</b>	<p>This study explored the views of parents and carers of young people with mental health problems about their own mental health needs, their experiences with headspace services, and how headspace compares to other services.</p> <p>The study comprised two components: an online survey of parents and carers; and 6 focus groups and 3 individual interviews with parents/carers. Study participants were recruited through posters that were located in headspace centre reception areas, advertisements posted on the Facebook pages of <i>beyondblue</i> and the Butterfly Foundation, and through an advertisement and survey link that was posted on the parents and carers section of the headspace website.</p> <p>A total of 226 valid survey responses were received between 1 June and 30 September 2014. An additional 38 parents/carers participated in interviews that were held between August and October 2014. All interviews were transcribed and uploaded to NVivo, a qualitative data analysis software. Transcripts were coded using a pre-determined framework. The survey data was analysed using KeySurvey, a software system that enables analysis through an automatic report function. The analysis report provides basic descriptions of data collected. Further analysis of the survey was conducted following export of survey data into excel. Text provided in open-ended questions was thematically coded.</p>
<b>Cost effectiveness analysis</b>	<p>The cost effectiveness analysis of the headspace program examines the government's investment in headspace and compares costs with the outcomes of young people in comparison to a functional population and to other similar young people that did not receive treatment at headspace. The analysis was undertaken by economists at the Bankwest Curtin Economics Centre at Curtin University and is based upon both the difference-in-difference methodology and the clinically significant change method.</p>
<b>Additional economic analysis</b>	<p>This component of the evaluation builds on the cost effectiveness analysis to consider different methodologies for increasing the efficiency and economy for the potential expansion of headspace.</p> <p>This analysis was undertaken by the Telethon Kids Institute at the University of Western Australia. It is presented in Appendix B.</p>

## 2.4 Statistical analysis techniques

The outcomes analysis draws upon data contained within the hCSA and the young people surveys. The analysis has been conducted using two distinct approaches. These are:

- Difference-in-difference (DID) approach, and
- Clinically significant change (CSC) method.

Further information on how these methods have been specifically applied is contained in Appendix C; however, summarised information is also provided here.

### 2.4.1 The Difference-in-difference Method

The young people survey data has been analysed using a difference-in-difference (DID) approach. This non-experimental method is commonly used to evaluate the impact of programs or interventions. The simplest design for a DID analysis calculates the effect of a treatment (headspace) on an outcome (for example psychological distress). This is done through a comparison of the average change over time in the outcome variable for the treatment group to the average change over time for the comparison group.

The specific objective of the DID method for the evaluation is to assess the changes in young people's mental health, physical health, drug and alcohol use and social inclusion outcomes after using headspace services relative to other comparable young people that did not receive treatment at a headspace centre. A scoping analysis of the survey data demonstrated differences in the profiles of the 'headspace treatment' group compared to those captured within the comparison surveys, illustrating that the headspace survey clients were quite different to the general population. To address this limitation, the evaluators sought to match the groups through propensity score matching – a statistical matching technique that aims to better align intervention and comparison cohorts. Two groups were extracted from the comparison surveys to match the 'headspace treatment' group, those that received some other mental health treatment (the 'other treatment' group) and those that received no treatment (the 'no treatment' group). A number of variables were tested to align the groups, with four key variables - K10 score, age, gender, and days out of role - confirmed as benchmarks for the matching technique. The propensity score matching has resulted in a smaller sample but closer alignment between the groups of interest. Further information on the treatment groups and propensity score matching, including the age and sex distributions of matched groups is available in Appendix C.

The results of the DID analyses are presented in Chapter 4 below. Difference-in-difference estimates are defined as the difference in the average outcome in the 'headspace treatment' group at two points in time, that is at wave 1 and wave 2 data collection, minus the difference in the average outcome in the matched comparison groups ('other treatment' and 'no treatment' groups). Six key outcomes variables contained within the survey data are used to assess changes in mental and physical health, social and vocational participation, and alcohol and drug use (see description in Table 2.3 below).

Chapter 4 also reports on whether the differences in outcomes between the matched groups are statistically significant (determined by using an orthodox t-test). Finally, effect sizes are also reported. Effect sizes can be expressed in a number of ways, with Cohen's d commonly reported as a standard indicator in clinical evaluation. The Cohen effect size measure presents a standardised difference in means across the course of an intervention (that is, the ratio of mean difference to a pooled standard deviation measure).



**Table 2.3 Description of outcomes variables used for DID analysis**

Outcome variable	Description
<b>Psychological distress</b>	One of the evaluation's central outcomes of interest is the mental health of clients. Psychological distress is widely used as an indicator of mental health. For this evaluation, psychological distress is measured using the Kessler Psychological Distress Scale (K10). The K10 is a 10-item questionnaire that asks respondents how frequently they have experienced symptoms of psychological distress during the past 4 weeks. For each question, there is a five-level response scale based on how frequently the respondent has experienced particular feelings (from 'none of the time' to 'all of the time'). Each of the items are scored from 1 (none of the time) to 5 (all of the time). Scores for the 10 items are then added with total scores ranging between 10 and 50. Low scores indicate low levels of psychological distress and high scores indicate high levels of psychological distress. There are a number of cut offs developed for analysis of K10 scores. For the analysis conducted for the evaluation we draw on the categorisations used in the Australian Bureau of Statistics health surveys. The cut offs used in this analysis are: low (10-15), moderate (16-21), high (22-29) and very high (30-50).
<b>Incapacity</b>	The number of days incapacitated because of psychological distress was gauged based on two questions: 'in the last 4 weeks, how many days were you totally unable to work, study, or manage your day-to-day activities because of these feelings' and 'aside from those days in the last 4 weeks, how many days were you able to work or study or manage your day to day activities, but had to cut down on what you did because of these feelings'. Responses to these questions are analysed and are referred to as days out of role (DOR) and days cut back (DCB), respectively.
<b>Social Inclusion</b>	Individuals' feelings of being socially supported, or included, was gauged using the question 'do you feel like there are people who are there for you?' with responses recorded on a 5-point scale from 'never' to 'all of the time'. The proportion of young people that responded they felt like people were there for them 'all of the time' or 'most of the time' were assessed across waves.
<b>Physical health</b>	Measure assesses the frequency in which physical health problems have been the primary cause of psychological distress in the last four weeks. This measurement was based on responses to the question 'In the last four weeks, how often have physical health problems been the main cause of these feelings?' and was rated on a 5-point scale from 'none of the time' to 'all of the time'.
<b>Binge drinking</b>	Binge drinking is classified as excessive consumption of alcohol on a single occasion. Binge drinking was gauged using responses to 'During the last 30 days, on how many days did you have 4 or more standard drinks of alcohol in a row, that is, within a couple of hours?'. Responses were recorded on a scale from '0 days' to '20 or more days' and a midpoint mean calculation was derived. This question was answered only by those young people who respond that they have had a drink of alcohol in the last 30 days.
<b>Cannabis use</b>	Cannabis consumption relates to whether or not the young person has used cannabis during the last 30 days. This question was only answered by young people who responded that they have ever tried cannabis/marijuana.

## 2.4.2 The Clinically Significant Change Method

The evaluation was originally designed to assess young people's outcomes only through the analysis of survey data as the administrative dataset included in the first evaluation contained very limited outcomes data. However, the new dataset launched at the beginning of the evaluation contains robust outcomes data. The evaluators employed the Clinically Significant Change (CSC) method to analyse these data. This method has been used to assess meaningful clinical changes in psychological distress as measured by the Kessler 10 scale (K10) for all headspace clients captured in the hCSA in order to examine the factors related to improvement and deterioration following treatment. The CSC method also utilises the comparison surveys as a source to derive a functional population, from which to compare changes in functioning of the 'headspace treatment' group over time (Jacobson & Truax, 1991; Bauer et al, 2004; Atkins et al, 2005).

The CSC method groups the changes in K10 scores for all young people on a seven-point scale that indicates improvement or deterioration in mental health functioning (clinically significant improvement, reliably significantly improvement, insignificant improvement, no change, insignificant decline, reliably significant decline, and clinically significant decline). Two measures of change are the most important: – a reliable change and a clinically significant change. A reliable change (RC) in K10 scores between two occasions of service is one that represents a statistically significant improvement (if the change corresponds to a reduction in K10) or deterioration (if the change is an increase in K10) relative to an

initial K10 score. For this category, significance is measured at the 5% level. A clinically significant change occurs when the change in K10 is both reliably significant and also moves the headspace client below or above the threshold K10 that represents a benchmark for the general population. A clinically significant improvement can be regarded as a change sufficient to revert the client to a level of psychological functioning that is consistent with that of a functional population.

Thresholds for clinical significance require information on the distribution of K10 scores for a general population as a comparison. The CSC analysis presented in this report derives threshold K10 scores from information in the comparison surveys. The analysis presented in Table 4.1 shows the mean change in K10 scores for each category of change. This analysis shows for example that those young people in the clinically significant improvement category had a mean reduction between first and last recorded K10 of 14.6 points; those in the insignificant improvement category had a mean reduction of 4.8 K10 points; and those in the clinically significant decline category had a mean increase in psychological distress as measured by the K10 of 14.1 points. Results of these methods of analyses (DID and CSC) are reported in Chapter 4.

## 2.5 Evaluation Limitations

Like all evaluations of complex human service programs, a number of unanticipated challenges were encountered during the course of the evaluation. It is important to consider these challenges and limitations when interpreting the findings presented throughout this report. This section provides a summary of the issues that were of particular significance for the evaluation.

### Attribution

Attribution is a challenge in any evaluation, particularly those without an experimental design such as a fully specified Randomised Control Trial (RCT). Due to the diversity of the headspace treatment, clients, and service providers, it is neither feasible nor reasonable for an RCT to be conducted to assess the overall impact of headspace services on young people accessing headspace centres across Australia. Given this, one approach to attribution is to exploit the existence of a 'natural experiment'. This method seeks to compare the relative progress of a 'comparison' group of young people who can be considered similar in their economic and social circumstances, and with similar presenting conditions, to the headspace treatment group. To achieve a closer degree of alignment between treatment and comparison groups, the evaluation team matched the two samples on a set of observed characteristics using propensity score methods (see Appendix C for further information). This can provide some degree of identification of effectiveness in principal, although there are limitations with this approach relative to full RCT methods.

### Comparison groups

As outlined above, the young people surveys were completed by a sample of headspace clients and two comparison groups: a sample of 12-17 year olds who participated in Young Minds Matter, a national survey of children's health and wellbeing; and a sample of 18-25 year olds sourced through a national online panel. For purposes of the evaluation, the comparison group was separated into a 'no treatment' group of young people from the general population who had not accessed headspace or any other treatment for a mental health or drug and alcohol condition, and an 'other treatment' group who received alternative forms of mental health care between the two waves of data collection. Due to data limitations, the evaluators are not able to assess the type, intensity or duration of the alternative treatment received by young people in the 'other treatment' group.

In order to attribute changes in the intervention group to headspace, the comparison group should be as representative as possible of the headspace population in terms of demography and wave 1 levels of psychological distress. Comparative analysis of demographic data showed that the 18-25 year old comparison group was somewhat different to the headspace population. To address this issue, the evaluators undertook propensity score matching of survey groups. This method allows for a closer comparison between the 'headspace treatment' and comparison cohorts but it is not a perfect comparison. The evaluators were unable to match on more than four variables without significant differences in distributions, and the method does not account for unobserved differences between the treatment and comparison cohorts.

## Representativeness of participants in stakeholder surveys

Although strenuous attempts were made to distribute the Survey of Professional Stakeholders, to a wide range of service providers, the response rate was lower than anticipated. In particular the number of GPs who completed the survey was low (n=45). It is not possible to assess the representativeness of stakeholders as there is no definition of the population. Nevertheless, the analysis provides some important insights into the strengths and weaknesses of the headspace model and how it works within the broader health and mental health service context.

Similarly, the surveys and focus groups with parents and carers were only conducted with a relatively small number of parents who were self-selected. Again, this component of the evaluation provided important insights into the strengths and weaknesses of headspace's engagement with parents and carers.

## Reliance on the K10

The Kessler 10 Psychological Distress Scale (K10) was selected to assess the effectiveness of headspace in relation to the mental health outcomes of clients. This instrument is designed to measure psychological distress based on 10 questions about negative emotional states experienced in the past 30 days. Young people are asked to complete the K10 at various times throughout their treatment (first, 3rd, 6th, 10th, and 15th occasion of service), and in addition, the evaluators collected K10 data at two different time points from a sample of headspace clients and a comparison group via the young people survey. While the K10 has demonstrated efficacy in identifying mental health outcomes, it does not provide an unequivocal means of gauging the social, emotional and physical wellbeing of young people accessing headspace. This is important to consider as the program effect reported using the Clinically Significant Change method only measures changes in K10 scores.

Because headspace is a holistic program that aims to improve young people's wellbeing across multiple domains, the evaluators also examined change across other outcome variables. The difference-in-difference approach draws upon survey data to assess changes in young people's mental health, physical health, drug and alcohol use, and social inclusion.

These limitations, and the methods chosen to address them, are outlined to assist in the interpretation of evaluation findings. A number of the analyses in this evaluation indicate that the headspace model is highly variable and there are very significant variations between headspace centres in the level of service provided, their collaboration with other mental health services, and their engagement with the communities in which they are situated. This evaluation does not report on individual centres and, therefore, the findings represent the whole of the headspace program rather than the performance of particular centres.

## 2.6 Evaluation ethics

Researchers sought and received approval to conduct evaluation activities from UNSW's Human Research Ethics Committee (HREC) (approval reference number HREC 13024). Approval to conduct this project was sought in two separate stages. This was done to align with the staged evaluation activities specified by the Department, and to ensure that approval processes did not delay milestone reporting.

The application for ethics approval for stage 1 of the evaluation was submitted in February 2013. Following a request for additional information, the HREC granted approval for stage 1 on the 21st of March 2013. The application for ethics approval for stage 2 of the evaluation was submitted to the HREC in April 2013. Again, following a request for additional information and some modifications, approval was given in May 2013.

# 3. Access and Engagement with Centres

One of the main aims of headspace is to reduce the impact of mental health problems on young people by enabling earlier access to and engagement with high quality and integrated services (Rickwood et al., 2014). The evaluation examined young people's access to and engagement with the centre-based program as a priority focus by drawing on five data sources, including:

- hCSA (n=45,195 headspace clients)
- Centre Managers Survey (n=29)
- Professional Stakeholders Survey (n=207)
- interviews conducted with headspace staff (n=25) and clients (n=50)
- the Parents and Carers Study (interviews=38; survey = 226).

The findings show that headspace is being accessed by a large and diverse group of young people. The socio-demographic analysis highlights centres have had mixed results in reaching different targeted groups. Young people seeking treatment at headspace have significantly higher levels of psychological distress than those in the general population. Centres have been successful in engaging young people from some marginalised groups including those who identify as LGBTI, those who are homeless, and those who are disengaged from work and study. The proportion of Aboriginal or Torres Strait Islander clients is double their representation in the general population, and young people from regional areas are also over-represented as headspace clients. This finding suggests that headspace is increasing service access for young people who have traditionally been disadvantaged in service options. In contrast, young people from CALD backgrounds are starkly under-represented as clients.

A number of factors were found to promote service access and engagement. These included the youth friendly nature of centres, friendly and non-judgemental staff, free or low cost services, the wide range of services, and innovative modes of engagement. Many parents and carers support young people's engagement with headspace in practical ways such as driving them to a centre, but as awareness of headspace is low among this stakeholder group, they are less likely to encourage initial access. Other barriers to service engagement that emerged in the evaluation included standard opening hours, the stigma of mental illness, waiting times, culturally insensitive service provision and the distance of a young person's home to a headspace centre.

## 3.1 What is the current demand for headspace services?

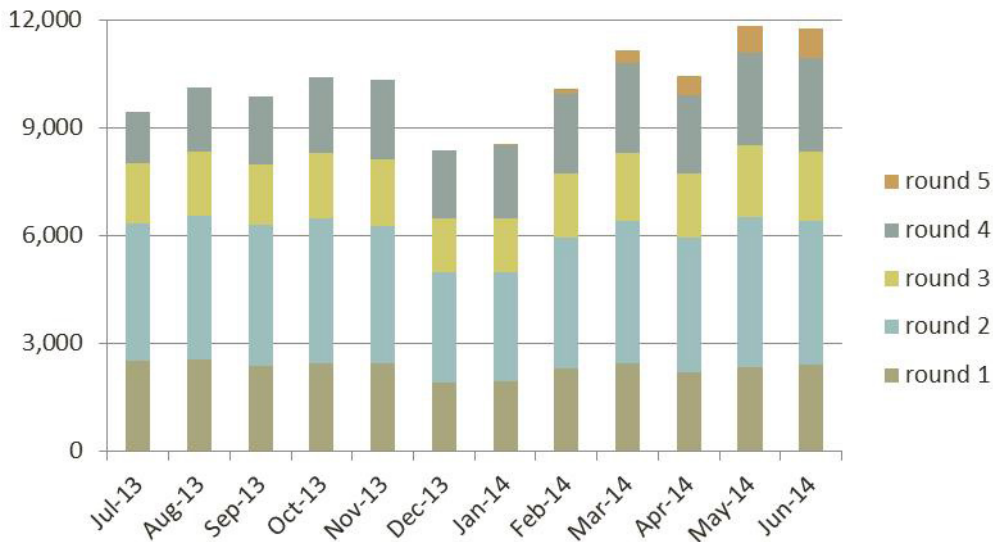
Number of young people attending headspace in a year

During the 2013/14 financial year, 67 headspace centres provided 194,968 occasions of service to 45,195 young people with mental health or other issues. The number of young people accessing services through headspace centres has increased substantially since headspace began in 2006.

This is largely due to program expansion and the opening of new centres<sup>13</sup>. Of the 67 centres, all were established in rounds 1-5 and were operating by the end of the 2013/14 financial year; however, 14 of these were opened during the year and so not all were operating at maximum capacity.

As shown in Figure 3.1, headspace centres generally saw between 9,000 and 12,000 clients each month. The number of clients decreased in December and January, which may indicate lower service availability and less service demand because many people, including young people, are on holidays.

**Figure 3.1 Number of clients by centre round, 2013/14**



Note: Population are those young people that received a headspace service within the 2013/14 financial year.  
Source: Authors calculations from hCSA data.

### 3.2 What is the profile of young people accessing headspace services? Which groups are over/ under-represented?

This section profiles the young people attending headspace centres and compares them to 12-25-year olds across the population and to 16-24 year olds with identified mental health disorders. This comparative analysis draws on hCSA data, the 2011 Census of Population and Housing and evaluation survey data.

The socio-demographic characteristics of headspace clients compared to young people in the population are reported in Table 3.1 and described below. The same analysis by different age categories (12-17 years and 18-25 years) is reported in Appendix E.

<sup>13</sup> Total client counts reported in the first evaluation (Muir et al, 2009) and the preliminary output for this second evaluation under-estimated client numbers as figures were calculated from the old MHAGIC administrative dataset, which had large amounts of missing data.

**Table 3.1 Demographic characteristics of headspace clients, 2013/14 financial year**

Characteristics	headspace Clients		Australian Youth Population		
	12-25		12-25		
	N	%	%	N	
<b>TOTAL</b>	<b>44,195</b>		<b>3,992,042</b>		
<b>Gender</b>	Male	14,816	37.2	51.1	2,038,302
	Female	25,022	62.8	48.9	1,953,740
<b>Sexuality</b>	LGBTI male	2,345	5.9	NEA	<sup>14</sup> NEA
	Non-LGBTI male	12,463	31.3	NEA	NEA
	LGBTI female	5,683	14.3	NEA	NEA
	Non-LGBTI female	19,324	48.5	NEA	NEA
<b>Country of birth</b>	Australia	37,461	92.8	82.0	3,106,396
	Overseas	2,905	7.2	18.0	680,470
<b>Indigenous status</b>	Aboriginal	2,970	7.4	3.7	138,447
	Torres Strait Islander	150	0.4	0.2	8,090
	Both	148	0.4	0.2	6,030
	Non Indigenous	37,106	91.9	96.0	3,791,035
<b>Language other than English (LOTE)</b>	English only	37,713	93.4	80.7	3,060,062
	LOTE	2,645	6.6	19.3	731,708
<b>Security of living arrangements</b>	Secure	35,489	88.3	NEA	NEA
	Homeless/insecure housing	4,711	11.7	NEA	NEA
<b>State</b>	NSW	13,953	31.1	31.3	1,249,190
	VIC	11,208	25.0	24.9	995,267
	QLD	8,931	19.9	20.6	822,356
	SA	2,594	5.8	7.2	289,311
	WA	3,306	7.4	10.8	429,338
	TAS	2,553	5.7	2.2	87,608
	NT	1,097	2.4	1.1	44,711
	ACT	1,247	2.8	1.8	73,629
<b>SEIFA (quintiles)</b>	1 (Most disadvantaged)	7,499	16.7	19.7	777,109
	2	9,446	21.1	19.8	781,427
	3	10,665	23.8	20.0	788,066
	4	9,763	21.8	20.1	792,275
	5 (Most advantaged)	7,469	16.7	20.4	805,858
<b>Remoteness</b>	Major city	26,417	58.8	71.6	2,853,575
	Inner regional	13,167	29.3	17.7	703,267
	Outer regional	4,345	9.7	8.5	337,927
	Remote	932	2.1	1.3	51,139
	Very remote	28	0.1	0.9	37,200
<b>Participation</b>	Studying only	17,807	48.1	30.5	901,934
	Working only	3,906	10.6	34.5	1,018,477
	Studying and working	7,794	21.1	24.3	719,214
	Not studying or working	7,483	20.2	10.7	315,756

<sup>14</sup> Data on sexuality status is not collected in the Australian census. In the Second Australian Study of Health and Relationships (Richters et al., 2014) which used a representative sample of 20,093 men and women aged 16-69 years, 3.3% of men identified as homosexual, bisexual or other, in comparison to 3.6% of women. This information is provided to assist in the interpretation of findings as it suggests that headspace has been successful in engaging a larger proportion of LGBTI young people than exists across the population.

Characteristics		headspace Clients		Australian Youth Population	
		12-25		12-25	
		N	%	%	N
K10	Low	4,390	10.9	36.4	1,739
	Moderate	5,968	14.8	29.2	1,395
	High	10,942	27.2	19.5	931
	Very high	18,900	47.0	14.9	709

Note: NEA = No equivalent available

Data Source: Authors calculations from hCSA and other data sources. The majority of population level statistics have been derived from the 2011 Australian Census. Distributions of K10 scores are from survey data collected for this evaluation.

## Age and gender

Just over half of the young people using headspace services in the 2013/14 financial year were aged between 12-17 years, and just under half were aged 18-25 years. As shown in Table 3.2, a very small number fell outside of the target age group (0.6%). headspace staff reported that for the older cohort, this was most likely to be clients not exiting as soon as they reached 26 years, but rather being transitioned as appropriate to adult services. This transition was described as a slow process for some older clients with entrenched problems and high needs. The slow transition of older clients may also be a result of limited other appropriate, available services in the local area.

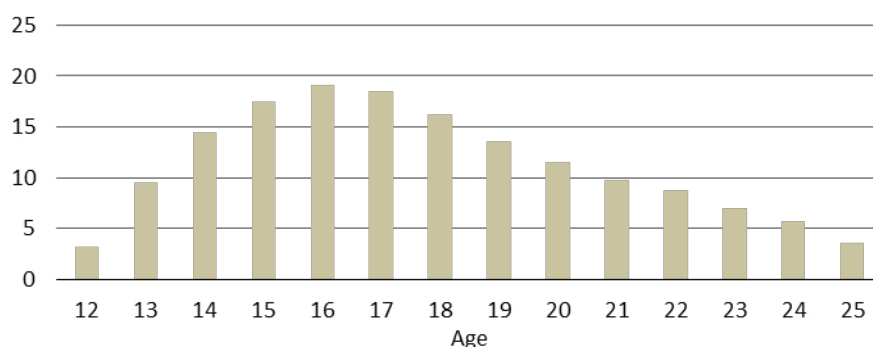
**Table 3.2 headspace clients by age group, 2013/14 financial year**

Age	Number	Percentage
<12	40	0.1
12-17	23,029	51.0
18-25	21,879	48.4
>25	247	0.5
<b>Total</b>	<b>45,195</b>	<b>100</b>

Source: Authors calculations from hCSA data.

The highest proportion of headspace clients were 16 years, with 19 out of every 1,000 of this age group across Australia having sought treatment from a headspace centre in the 2013/14 financial year (Figure 3.2). This was closely followed by young people aged 15 and 17 years. These age groups represent an important period for young people, where social and vocational pressures can be many as they move towards the final years of high school.

**Figure 3.2 Number of headspace clients per 1,000 population by age, 2013/14**



Note: Population are those young people that received a headspace service within the 2013/14 financial year.

Source: Authors calculations from hCSA data and ABS 2011 Census tables.

headspace services were accessed by more females than males in the 2013/14 financial year. Almost two-thirds of 12-17 year olds who accessed headspace services were female (65.5%). Similarly, 59.2% of 18-25 year olds were female. The higher service use by females is consistent with other mental health programs. Approximately two-thirds (66.7%) of people who accessed the Access to Allied Psychological Services (ATAPS) program in 2012/13 were female. As a funding stream for

headspace, and a program designed to treat people with mild to moderate mental health problems, this program provides a sound comparison. While ATAPS can be accessed by people of all ages, the rate of ATAPS usage for females was more than twice that for males in the 15-24 year age group (AIHW, 2013). Higher service use by females is also consistent with higher rates of mental disorders among 16-24 year old females.<sup>15</sup>

## Sexuality

Around one in five headspace clients (20.2%) identified as lesbian, gay, bisexual, transgender or intersex (LGBTI). While age-specific comparisons are not available, the 2013 Second Australian Study of Health and Relationships<sup>16</sup> found that of the adult population, only 3% of men and 4% of women identified as LGBTI (Richters et al, 2014). This over-representation of LGBTI young people seeking services is a success for headspace (who have targeted this group with campaigns, resources and support groups) because Australian studies have shown that sexual minorities have significantly higher rates of anxiety and depression, higher levels of psychological distress and more frequent suicidal ideation and attempts than the general population (Smith et al, 2014; Rosenstreich, 2013).

The proportion of LGBTI young people was slightly higher in the 18-25 year category; however, the difference was not significant, particularly for females (refer Appendix E. LGBTI females 12-17 years, 14.1%; 18-25 years, 14.5%). Finally, there was a significantly higher proportion of women identifying as LGBTI (14.3%) than men (5.9%).

## Indigenous Australians

Indigenous Australians constituted 7.4% of headspace clients (12-25 year olds) in the 2013/14 financial year, which is double their representation in the general population (3.7%). The proportion of young Indigenous people accessing headspace centres is slightly higher in the younger age group (8.4% for 12-17 year olds; and 6.3% for 18-25 year olds. Refer Appendix E). This may suggest that it is more challenging to engage Aboriginal and Torres Strait Islander young people in services as they get older and/or that need decreases as this group gets older.

It is recognised that Indigenous Australians experience high levels of psychological disorders (Chenhall & Senior, 2009; Hunter, 2007). Research has shown that Indigenous Australians are twice as likely to experience psychological distress as non-Indigenous Australians (Pink, 2008), and 40% of Aboriginal youth (13–17 years) will experience mental health issues within their lifetime (Westerman, 2010). The increased rates of mental health issues in the Indigenous population have been associated with increased exposure to risk factors including high levels of social disadvantage and discrimination (Hunter, 2007).

It is important to note that the proportion of headspace clients identifying as Indigenous can vary substantially across headspace centres. Several centres with large local Indigenous communities report more than 10% of clients with an Indigenous background, and for some centres this represents around one in five clients. Regional areas of Port Augusta, Alice Springs, Tamworth, Broome and Cairns are among those headspace centres where more than 15% of clients were Indigenous in the 2013/14 financial year.

## Cultural diversity

Young people from culturally and linguistically diverse backgrounds (CALD) were under-represented as headspace clients. While 18% of Australian young people were born overseas, this group only represents 7.2% of headspace clients. Under-representation was more pronounced for young people who were born overseas and who speak a language other than English at home. This group accounts for 15.4% of young people in the general population, but only 2.4% of headspace clients.

<sup>15</sup> 60.6% of those with a moderate or severe ICD in the 2007 National Survey of Mental Health and Wellbeing were female (Patulny, et al, 2012).

<sup>16</sup> The Second Australian Study of Health and Relationships is a national study consisting of sample of 20,094 men and women aged 16-69 years. The study ran from October – November 2013.



These figures are consistent with the small body of research that confirms the widespread under-utilisation of mental health services by CALD young people (Gorman et al, 2003). One reason cited by service providers for this under-representation was some centres' inability to fully engage local CALD services to facilitate mutual referral. The lack of CALD young people attending centres may continue to perpetuate their under-representation because other young people from similar backgrounds are less likely to hear positive stories about headspace and attend a centre.

### Location of clients (state and remoteness)

The proportion of headspace clients by Australian states and territories generally aligns with population distributions of 12-25-year olds (Table 3.1). Almost one-third of clients were located in New South Wales (NSW). There was a small under-representation of clients from Western Australia and a small over-representation of clients from Tasmania. This is likely to be a reflection of the placement of centres and may also be related to centre-based engagement practices.

The majority of headspace clients (57.8% of 12-17 year olds and 60% of 18-25 year olds) live in major cities. This is lower than the proportion of 12-25 year olds living in major cities throughout Australia (71.6%)<sup>17</sup>. Hence, there was an over-representation of headspace clients living outside of major cities. While this group make up 28.4% of the population, they accounted for 42.3% of 12-17 year olds and 40.2% of 18-25 year olds accessing headspace. This result is positive for young people living in regional areas. It is also important to recognise that judgement of over- or under-representation of headspace clients throughout areas across Australia may not reflect relative need.

### Disadvantage / Advantage

An analysis of headspace clients' postcodes and the ABS SEIFA Index of Disadvantage shows that the proportions of clients living in each SEIFA quintile roughly align with proportions of young people across the population, except for those living in the most disadvantaged and advantaged quintiles. There is a small under-representation of young people living in the most disadvantaged areas (16.7% of headspace clients reside in the most disadvantaged SEIFA quintile in comparison to 19.7% of the general youth population). While the difference is small, the result is surprising given that centre allocation prioritises low SEIFA areas. This priority is important as research indicates that the stress associated with poverty and social disadvantage may contribute to mental health disorders (see for example Lawrence et al, 2015).

Table 3.1 indicates that there is also a small under-representation of young people living in the most advantaged areas with 16.7% of headspace clients residing in the most advantaged SEIFA quintile in comparison to 20.4% of the general youth population.

### Security of living arrangements

The living arrangements of headspace clients vary significantly across age groups. Not surprisingly, younger clients (12-17 year olds) were more likely to be living in secure housing arrangements than older clients (93% versus 83.3%). This shows a stark increase in and risk of housing insecurity as clients age.

Seven per cent of 12-17 year olds and 16.7% of 18-25 year olds were homeless or living in unstable housing such as refuges, hotels, motels and boarding houses. Along with the distress, social exclusion and other compounding challenges insecure housing can cause a young person, it can also present a barrier to service access, engagement and effective delivery. Young people who visited headspace only once were more likely to be living in insecure housing than all headspace clients (15.2% and 12.6% respectively).

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<sup>17</sup> The under-representation of young people in major cities becomes slightly less pronounced in the older age group (18-25-year olds).

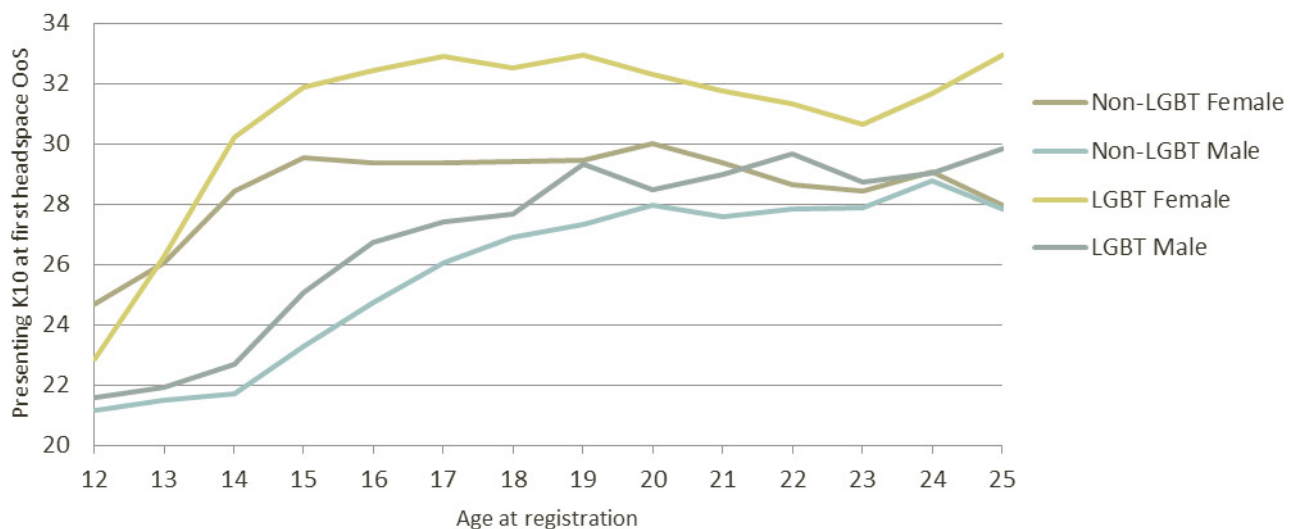
## Levels of psychological distress

headspace is being accessed by young people with significantly higher levels of psychological distress than those in the general population. Seven in every 10 young people attending headspace had high or very high levels of psychological distress when they first sought help (based on the Kessler 10<sup>18</sup>). Large numbers of young people (43.4% of 12-17 year old clients and 50.9% of the 18-25 year olds) had very high levels of psychological distress, compared to only 6.5% in the general population.

The mean K10 score of young people on entry to headspace services in the 2013/14 financial year was 28.8 (a score indicating a high degree of psychological distress). While no program model and client cohort can be directly compared to headspace, the Australian Mental Health National Outcomes and Casemix Collection submissions from each state and territory in Australia recorded an average K10 score of 26.8 for Australian young people (aged 15-24 years, 2012/13 financial year) upon admission to ambulatory mental health services.<sup>19</sup> The mean K10 score for consumers of all ages accessing services through the ATAPS program<sup>20</sup> prior to treatment was 31 (Bassilios et al, 2013). These comparisons are provided to assist in interpretation of the findings; however, AMHOCN and ATAPS data is not collected in the same way as headspace and the cohorts may be quite different.

Figure 3.3 shows the K10 scores at presentation for headspace clients by age, sex and sexuality. Older clients had higher levels of psychological distress than younger clients, females had higher levels than males, and LGBTI clients had higher levels than heterosexual clients although male LGBTI clients below the age of 19 had lower levels than heterosexual females. Female LGBTI clients had the highest levels at all ages except for the youngest age group.

**Figure 3.3 Average K10 score at presentation by age, sex-and sexuality, headspace clients 2013/14**



Note: LGBTI include young persons who reported their gender as trans or intersex and their sexuality as lesbian, gay, bisexual, questioning and other. Not all young people record their age, gender, sexuality and K10 scores within the hCSA. Young people aged less than 12 years and above 25 have been excluded. Cell sizes are provided in Appendix E.  
Source: Authors calculations from hCSA data.

<sup>18</sup> As described in Table 2.3, the K10 is a self-report, 10 item questionnaire that measures psychological distress based on questions about anxiety and depressive symptoms that a person has experienced in the past 4 weeks. The K10 is scored between 10 and 50. Higher scores indicate higher and more severe distress, while lower scores indicate less distress (Slade & Andrews, 2001). In this evaluation, K10 scores are categorised based on Australian Bureau of Statistics health surveys into low (10-15), moderate (16-21), high (22-29) and very high (30-50).

<sup>19</sup> Derived from the Australian Mental Health Outcomes and Classification Network, AMHOCN-NOCC, Standard Reports data cube; <https://reports.amhocn.org>.

<sup>20</sup> The ATAPS program was introduced by the Australian Government in response to low treatment rates for common mental disorders. The mean age was 38.

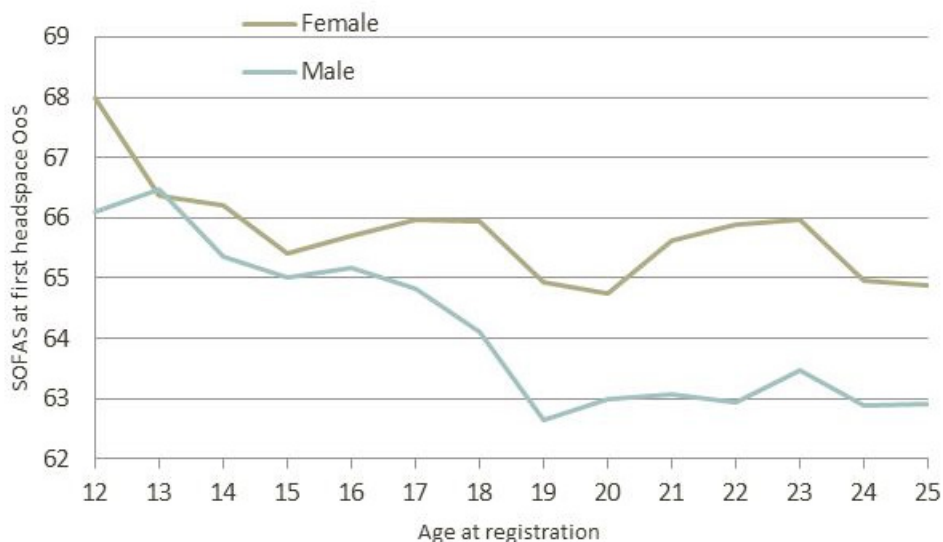
## Social and occupational functioning

Young people attending headspace aged 12-17 years were most likely to be in education only (70.9%) or studying and working (19.2%). A small number (1.6%) were working only, and 8.3% were neither in education nor work. Older young people (18-25 year olds) were much more likely to be disengaged from economic participation. One in three were neither studying nor working (33%). Of the remaining 18-25 year olds, 23.8% were studying only, 20.1% were working only, and 23.1% were studying and working.

Despite the majority of young people still being engaged in education and/or work, most young people (60.2%) on first presentation to headspace had at least some difficulty in social, occupational or educational functioning (as scored by practitioners using the Social and Occupational Functioning Assessment Score, SOFAS)<sup>21</sup>. According to the SOFAS assessment on first presentation, around one in four young people had a serious impairment in functioning, 13.6% had no more than a slight impairment, 1.9% were experiencing an inability to function in almost all areas, and 0.1% were not maintaining minimal personal hygiene.

On average, social and occupational functioning was higher for younger males and females when they first presented at headspace (Figure 3.4). The older the young person was when they first presented at headspace, the worse their functioning. Average SOFAS scores for male and female headspace clients remained relatively consistent from the ages of 19 to 25 years.

**Figure 3.4 Average SOFAS scores at presentation by age and gender, headspace clients 2013/14**



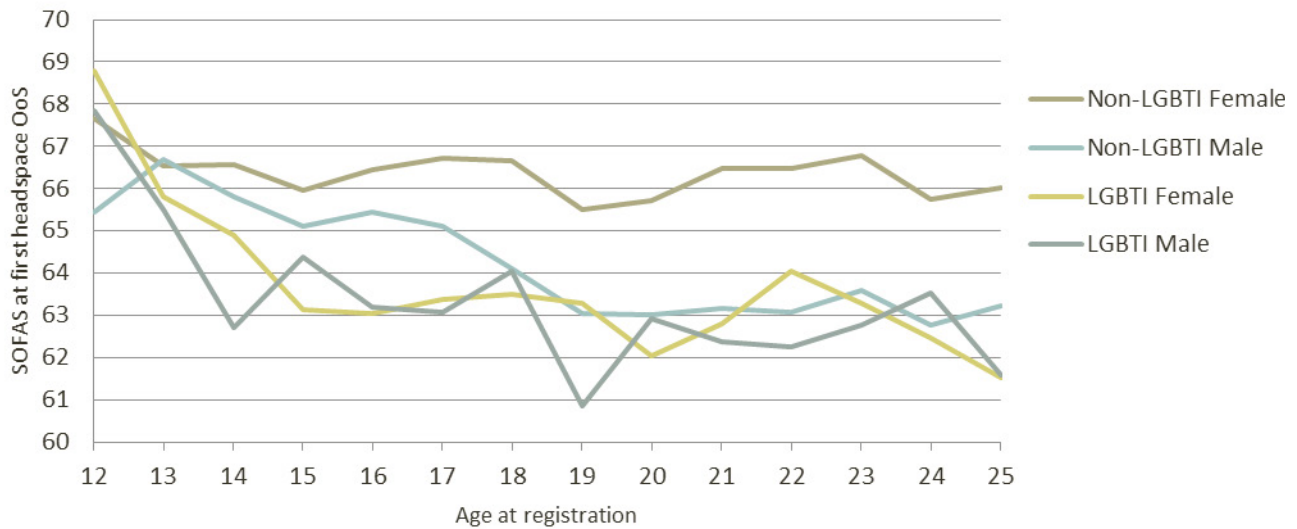
Notes: SOFAS is generally reported by the service provider at each occasion of service. Cell sizes are provided in Appendix E.

Source: Authors calculations from hCSA data.

Levels of functioning at presentation to headspace also differed by sexuality (Figure 3.5). SOFAS scores of heterosexual females were quite stable across all age cohorts throughout adolescence, while members of the other groups (LGBTI females and LGBTI and heterosexual males) came to headspace with varying scores. In general, the older the heterosexual males were when they first visited headspace, the poorer their functioning. LGBTI males and females followed a similar pattern to heterosexual males, but with slightly more fluctuation. The poor functioning of 12-14 year old LGBTI males and females may be linked to the onset of puberty, and the decline at 18-20 years may be linked with the transition from school to further education or employment.

<sup>21</sup> Data on young people's social and occupational functioning is collected at each visit to a headspace centre. During visits, clinicians rate clients' level of impairment due to mental and physical health problems using the Social and Occupational Functioning Assessment Scales (SOFAS). Functioning is measured on a scale from 10 (serious functional impairment) to 100 (optimal functioning) with scores of 80 and above representing normal functionality (Romera et al., 2011). Scores around 60 indicate a person may have moderate difficulty in functioning, while scores around 70 represent adequate functioning though with some difficulty (Chanen et al., 2007). SOFAS scores are recorded at almost all (88 %) occasions of service.

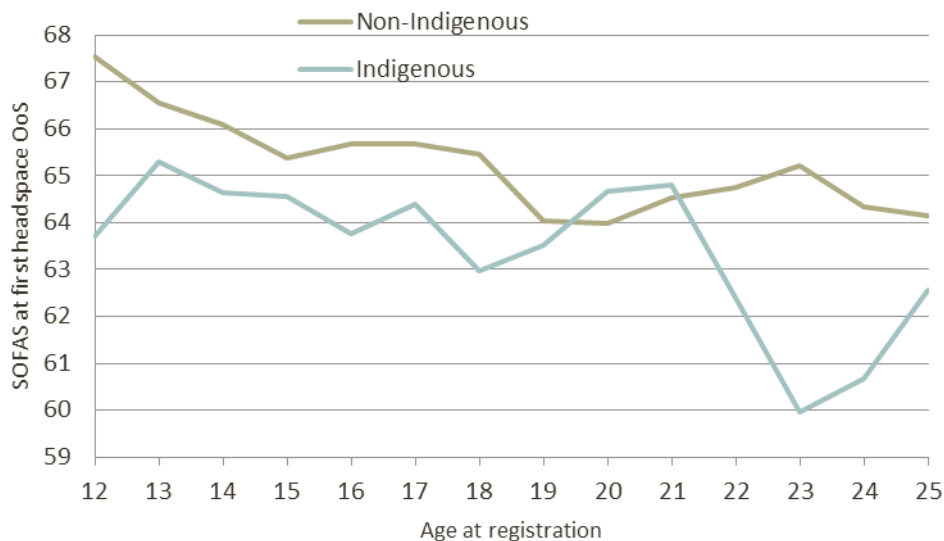
**Figure 3.5 Average SOFAS scores at presentation by age and gender-sexuality group, headspace clients 2013/14**



Note: LGBTI include young persons who reported their gender as trans or intersex and their sexuality as lesbian, gay, bisexual, questioning and other. Cell sizes are provided in Appendix E.  
Source: Authors calculations from hCSA data.

Indigenous headspace clients recorded consistently lower functioning than non-Indigenous young people across most age cohorts when they first attended headspace. Indigenous young people who were 22-25 years old had the poorest levels of functioning (Figure 3.6).

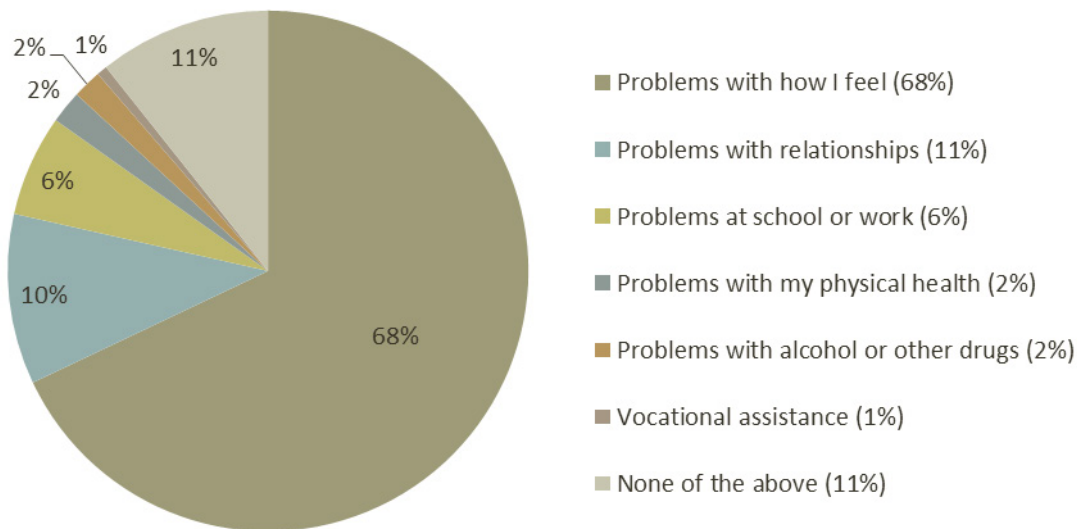
**Figure 3.6 Average SOFAS scores at presentation by age and Indigenous status, headspace clients 2013/14**



Source: Authors calculations from hCSA data.

### Reason for attending headspace

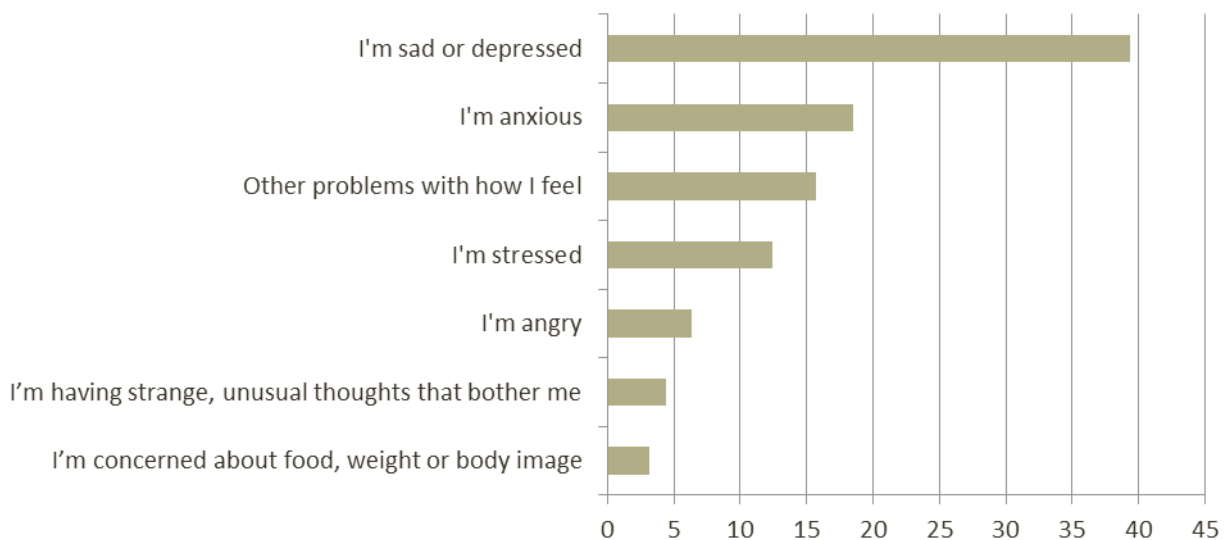
As shown in Figure 3.7, the main reason reported by young people for attending a headspace centre was because they were having problems with how they were feeling (68%). The second most commonly self-reported reason was 'problems with relationships' (11%), followed by 'problems with school or work' (6%). A very small percentage of young people sought help for physical health problems (2%) or vocational assistance (1%).

**Figure 3.7 Client reported main reason for first visit to headspace, 2013/14**

Note: Population are young people that received a headspace service within the 2013/14 financial year. Main reason for visiting headspace is taken at presentation.

Source: Authors calculations from hCSA data.

Of the young people who sought help for problems with how they were feeling, the largest proportion reported that they were feeling sad or depressed (39%) or anxious (18%; Figure 3.8).

**Figure 3.8 Main problem with how clients feel at the first visit, 2013/14**

Source: Authors calculations from hCSA data.

Further, of those young people that sought help for relationship problems, this was overwhelmingly related to problems with family relationships (65.2%) rather than intimate relationships (11.7%; Table 3.3).

**Table 3.3 Types of relationship problems reported by headspace clients**

Main problem reported	Number	Percentage
1. I'm having problems with family	2,660	65.2
2. I'm having problems with my boyfriend, girlfriend or partner	476	11.7
3. Other problems with relationships	389	9.5
4. I'm having problems with bullying	214	5.2
5. I'm having problems with friends	211	5.2
6. I'm concerned about my sexuality or gender issues	118	2.9
7. I'm having problems with cyber bullying	13	0.3
<b>Total</b>	<b>4,081</b>	<b>100</b>

Source: Authors calculations from hCSA data.

## Primary presenting issue

The primary presenting issue is recorded by service providers into the following categories:

- Mental health and behaviour:
  - Anxiety symptoms
  - Depressive symptoms
  - Suicidal thoughts/behaviour
- Physical health
- Vocational assistance
  - Issues in engaging with education/training
  - Assistance in engaging with employment.

This data is not a formal diagnosis of a mental disorder, but rather an assessment of the primary issue at presentation. Formal diagnosis of a mental disorder by an appropriately qualified clinician is available for only a small proportion of headspace clients (Rickwood et al., 2014), and consequently, this data is not included in the evaluation.

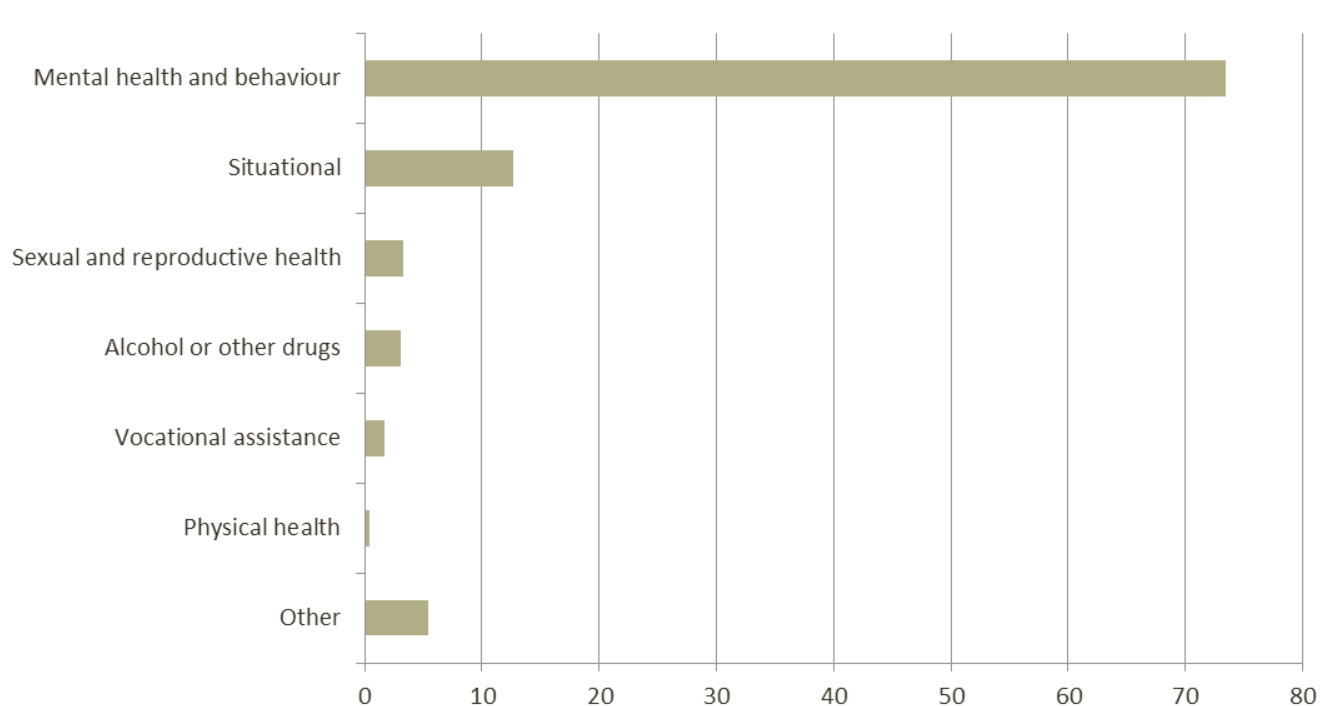
Service providers' assessment of young peoples' primary presenting issues were largely consistent with self-reported reasons for attending. The overwhelming majority of young people entered headspace with mental health and behavioural problems (74%; Figure 3.9). The next largest group presented with situational problems (such as conflict in the home or at school; 12%). A small proportion of young people were assessed as having problems associated with sexual and reproductive health (3%) or alcohol or drug use (3%) as their primary presenting issue. More than half of the clients whose primary presenting issue was sexual and reproductive health were aged between 16-19 years.

Problems related to physical health were identified as the primary presenting issue for only 167 clients. However, many more young people received physical health services through headspace. In 2013/14, 6,315 occasions of service were for physical health services. Although young people were unlikely to come to headspace with a primary physical health problem, given the presence of GP services within many centres and the multi-disciplinary nature of headspace and trust built up with headspace centres, it is reasonable that young people sought and received physical health services at headspace. These services may also help prevent or address comorbid health problems.

Six per cent of young people presented at headspace for 'other' issues<sup>22</sup>, including attention deficit disorder, adjustment disorder, developmental disorder, communication disorder and other types of disorders (Figure 3.9).

<sup>22</sup> Categorisation within the headspace administrative dataset.

**Figure 3.9 Primary presenting issue of clients as assessed by service providers at the first visit, 2013/14**



Source: Authors calculations from hCSA data.

### 3.3 What facilitates and hinders young people's engagement with headspace services?

Australian young people have a high prevalence of mental health problems, but low rates of service use (Patulny et al, 2013). Findings from the 2007 National Survey of Mental Health and Wellbeing show that more than one in four of the 16-24-year old participants were experiencing symptoms of an anxiety, affective or substance use disorder, but less than a quarter of these young people had accessed health services in the previous 12 months (Reavley et al., 2010). Moreover, other studies show that when young people do access mental health services, they often disengage earlier than recommended (Hoagwood et al, 2001; Booth et al., 2004).

In response to this problem, headspace designed its centres and services to both attract and meet the needs of young people. As the section above has shown, large numbers of young people are accessing headspace.

#### Factors that facilitate engagement

This section describes many of the factors that headspace staff, service providers, young people and their parents/carers identified as facilitating young people's access to and engagement with headspace. Many of the factors that facilitate engagement were rated highly by young people in the satisfaction survey that headspace clients are invited to complete at their second, fifth, eleventh and sixteenth centre visits. This section also reports results from the satisfaction survey data collected during the 2013/14 financial year from 22,614 clients. headspace clients reported a high degree of satisfaction, with 88% reporting to be satisfied and a similar number indicating that they would recommend headspace to a friend. Results for individual components of the satisfaction survey are presented below.

#### Youth-friendly environment

The factor most frequently identified as encouraging young people to access services was the youth-friendly nature of headspace centres. The importance of this feature is confirmed by research stating that regardless of background or circumstances, young people are more likely to actively participate in treatment if they feel comfortable and safe in the setting (Muir et al., 2012).

Many staff members contrasted headspace with more traditional, clinical settings and felt that young people were drawn to headspace precisely because of the centres' non-clinical presentation, which they described as welcoming, relaxed and engaging. This was confirmed by a young male who described how he felt about his local centre:

I love this place, I feel comfortable, I can just – I don't know, I feel almost at home ... I used to come here all the time, even if I wasn't here for appointments I'd go down to [the centre] and they'd have like youth events and stuff, and now I come here every Thursday ... I don't know, it's just like the look of it, I guess it – they have plush lounges, and it's not all really that business like, it just looks comfortable (Male, 15 years)

In the Satisfaction Survey, where clients were asked to report responses on a 5-point Likert scale (strongly agree to strongly disagree), 89.5% of respondents agreed or strongly agreed that they felt comfortable within their headspace centre, 1.7% of respondents reported feeling uncomfortable, with the remaining 8.9% of respondents indicating neutral feelings.

Staff that are friendly, non-judgemental and that 'click' with you

In addition to the physical appeal of headspace centres, many stakeholders highlighted the key role played by headspace personnel in actively engaging young people. A number of young people who were interviewed spoke about how staff made them feel at ease:

Staff are here to help you, they're not – they're paid but they're here to help you, it's a little bit hard to explain, they're paid but they actually enjoy their job here (Male, 18 years)

A young female client was keen to emphasise how staff were welcoming and understanding:

These people are not biased, you know, they are understanding, they genuinely want to help people. They recognise that mental illness is not a good thing to live with, that you need to have help if you need help and they're very open. I've seen people when I've been in the waiting room or whatever, and I've seen people just walk in and say "I need to speak to someone. Can I speak to someone?", and someone will be found for them – I've seen that happen three times, I think. It's very efficient but it's also very relaxed at the same time, you know, you don't feel like you can't come here if you just need to which is important (Female, 18 years)

headspace staff members' vibrancy, ability to engage and show interest in the young people attending headspace sites were noted as being particularly important. Further, the importance of the relationship between the young person and their counsellor was highlighted by both young people and their parents. Both groups described situations where the young person had initially dropped out because they did not 'click' with their counsellor, only to return a number of months later, and successfully engage after being allocated a new counsellor that they did 'click' with.

Findings from the Satisfaction Survey indicate that even though young people reported high levels of satisfaction for centres and the help they received, young people are most highly satisfied with headspace staff. Ninety-three per cent of respondents strongly agreed or agreed with the statement that they felt listened to by staff; almost 90% of respondents strongly agreed or agreed with the statement that their worries and views were taken seriously by staff; and around 85% of respondents felt that they were involved in decisions concerning their care and were able to raise concerns with staff.

Free or low cost service

The fact that headspace services are provided free or for a small gap payment was also key to the appeal and accessibility of the service.

I'm glad that a service like this exists because that was another concern I think I had. I wasn't sure if I'd have to pay anything and I didn't have any money when I first approached them (Female, 24 years).

And the service is free which is just – I don't have to – when I get older, and hopefully it's still here, I won't have to pay for it. Well mum doesn't have to pay for it so that's just a blessing really (Male, 18 years).



## Wide range of services

A number of headspace staff and service providers felt that providing a wide range of services through the sites broadened headspace's appeal because this helped to detract from the mental health focus of the service, which could be stigmatising for young people. Consequently, the provision of additional, non-mental health-related support services was considered important for enabling young people to visit and become familiar with headspace in a non-stigmatising context.

Whilst there's still the stigma there, we've gone a long way at kind of conveying to people that this is a place where you can get help for all kinds of different things (Psychologist)

## Innovative modes of engagement

Several staff members spoke of how innovative modes of engagement also heightened headspace's appeal to young people. Involvement in community events, visiting schools and music events were seen as crucial for raising community awareness of headspace and for promoting the service to young people. The wide range of youth-friendly events organised by the sites clearly facilitated young people's engagement with and awareness of the service:

They sometimes have – I haven't been to them, but they have skating events, gaming events and the ones I've been to were mainly music events where my friends singing, or playing guitars or something, so I went along to support them. (Male, 18 years)

The adoption of information and communication technology, such as free Wi-Fi, iPads, and the use of social media including Facebook, was also noted by some as important for engaging young people.

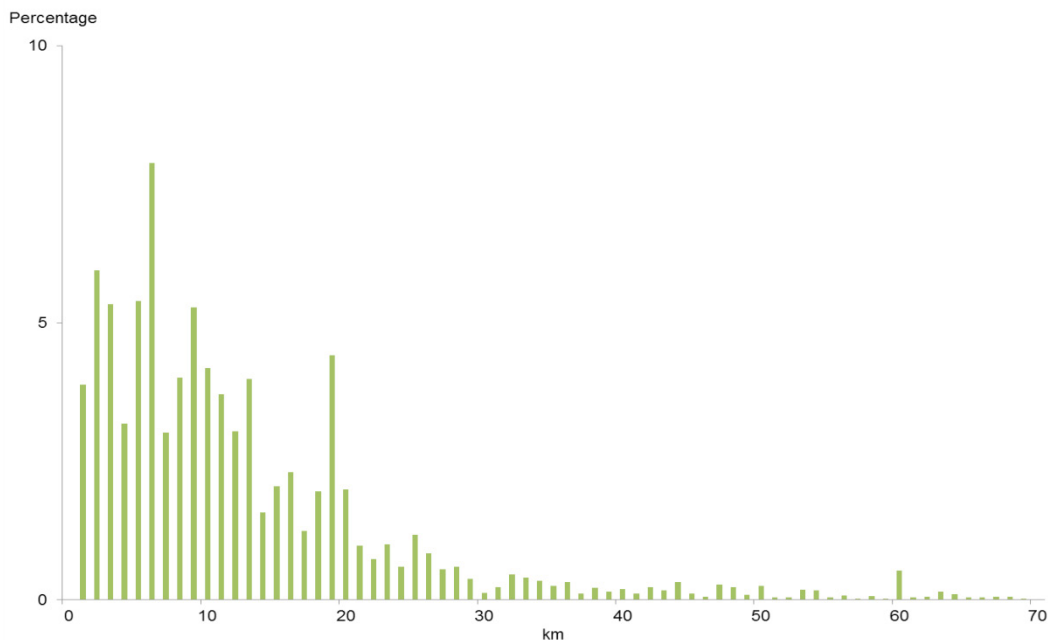
Other less frequently noted factors that staff and service providers considered important for broadening headspace's appeal to young people included: flexibility with appointments, extended opening hours, a focus on quick response, group support (e.g. drumming, drama groups), reminder calls about appointments, follow-up calls to check up on young people, consultation with the Youth Reference Group concerning headspace promotional material, no geographical boundaries, no need for a referral and high quality service.

## Factors that hinder engagement

While stakeholders were largely overwhelmingly positive about headspace's accessibility, they also identified a range of factors that may hinder young people's access to and engagement with headspace.

### Distance from a centre

The economic evaluation of headspace, which included an analysis of centre expansion models, determined a strong relationship between the use of headspace services and the distance of a centre from a clients' home. The full analysis (reported in Appendix B) shows that there was a rapid decline in the probability of young people accessing services as the distance to a headspace centre increased. In addition, there was a correlation between knowledge of headspace and proximity to a headspace centre. Again, with increasing distance there was a substantial decline in knowledge of headspace services. As shown in Figure 3.10, the majority of headspace clients live within 10 kilometres of a centre.

**Figure 3.10 Distribution of headspace clients by travel distance to headspace centre**

Source: Authors calculations from hCSA data.

This finding indicates that additional support or alternative models of service delivery may be required to engage young people who reside more than 10 kilometres from a headspace centre. During interviews with young people and headspace staff, a lack of transport options or money to afford travel costs to a centre were identified as problematic for young people living in regional and remote areas. Some young people commented that they had received assistance in getting to a headspace centre:

It's really easy because, like, my mum works so sometimes I can't, but if you call them and then they call a taxi and then the taxis have a thing that's, like, it's all free and everything. So it makes it really, really easy to get here because there have been times that I can't.  
(Female, 17 years)

As indicated in the quote below though, the provision of assistance with cost of taxis and train fares is not only helpful for some young people that live a distance from the centre, but also for young people who simply have no money:

We have some young people that ring up and say "My Centrelink payment hasn't come in, I can't get there". They don't have even the money to get onto the [transport] card to get onto public transport to get here, so money is definitely an issue. (Receptionist/Admin).

#### Practical barriers such as centre opening hours and lack of transport

During interviews, a few young people commented on the challenges of attending centres that do not provide extended opening hours.

Because it's only open 8.00 to 5.00 Monday to Friday; it's not open on the weekends. Well, I know some kids would be at school and they wouldn't be willing to skip school or anything to come and get help because then they get in trouble (Female, 24 years).

There's kind of a general assumption made that people don't have nine to five jobs, which is, to be perfectly honest, generally true - quite a lot of people don't. But also people have school, and especially when they're doing their [Year 12 or equivalent qualification] ... that's a difficulty, because they need to be at school, or I need to be at work. (Male, 18 years)

A number of parents were critical of centres that did not offer extended opening hours as this meant that they had to take time off work to transport their young person to headspace. As indicated by Table 3.4 below, a substantial proportion of clients had to wait for more than two weeks before receiving a service from headspace.

## The stigma of mental illness

The most frequently identified service barrier mentioned was the stigma associated with mental health problems and the inaccurate representations of people with mental disorders. Young people frequently described their initial reluctance to attend headspace centres because they themselves believed– or feared others saying– that this meant that they would be considered ‘crazy, psychotic or anything like that’. For some young people who attended headspace, this meant that they were careful about disclosing their help seeking:

If someone said, “Oh, why can’t we catch up?” You said, “Oh, because I’ve got a headspace appointment.” They’d be, like, “What’s wrong? What’s going on with you?” People would be all nosy and then people would, like, mock you for being depressed and stuff like that.  
(Female, 14 years)

One participant felt that the stigma issue was greater for young people in small towns where they could be recognised when entering headspace offices. She felt that this was probably less of an issue for young people in urban centres, which afforded greater anonymity.

## Wait times for service

Evaluation data identified wait times as a barrier to service engagement. Not surprisingly, young people who expected to immediately access services mentioned this issue:

The waiting period was a little bit longer than I expected, but I know that that does happen; services do have long waiting lists, and unfortunately in positions like mine, it does make it a little bit hard to think well, you know, considering I’ve got to wait this long, is it really worth it and is it going to help? (Female, 19 years)

The only bad thing was, is it took so long to actually see a psychologist. It took I think around about three months ...<sup>23</sup> (Female, 25 years)

While this last quote specifies an excessively long wait time, hCSA data indicates that the majority of young people did not wait long to access services. At every occasion of service, clients are asked ‘do you feel you had to wait too long to get this appointment?’. In the 2013/14 financial year, more than 90% of respondents answered ‘no’ to this question.

At each occasion of service, clients are also asked ‘how long have you waited for this appointment (from when you or someone else tried to make an appointment for you)?’ Because of this method of data collection, mean wait times are not able to be calculated; however, results for specified wait times at any point in the services young people receive are provided in Table 3.4 below.

**Table 3.4 Wait times for headspace clients, 2013-14 financial year**

Appointment wait times	Freq.	Per cent
Less than 3 days	25,163	12.91
Between 3 and 6 days	24,779	12.71
1 - 2 weeks	73,000	37.44
3 - 4 weeks	23,525	12.07
More than 4 weeks	7,540	3.87
I don't know	15,552	7.98
missing	25,409	13.03
<b>Total</b>	<b>194,968</b>	<b>100</b>

Source: Authors calculations from hCSA data.

Results indicate that a little more than a quarter of clients waited less than a week for services, and almost two-thirds of clients waited less than two weeks.

<sup>23</sup> This appears to be rather unusual in that less than 4% of clients recorded waiting times of more than 4 weeks in the hCSA.

**Table 3.5 Proportion of clients and regional areas who felt that they had waited too long for an appointment\***

YP felt they waited too long for appointment	No	Yes	missing	Total
major cities	80.7%	7.8%	11.5%	100%
regional areas	78.4%	6.8%	14.8%	100%

\* Insufficient data to include an analysis of remote centres.  
Source: Authors calculations from hCSA data.

As indicated in the Centre Managers Survey, the wait times vary according to the practitioner type, with young people waiting longest to see occupational therapists, clinical psychologists and psychiatrists (reported average waiting time in days of 18.4 to 19.6), and shorter waiting periods for vocational workers, youth workers and social workers (reported average waiting time in days of 7.6; 8.6; and 12.4 respectively).

### Cultural appropriateness

As indicated above, headspace is achieving some success in engaging Indigenous young people. Analysis indicates that a significantly higher proportion of Indigenous young people have accessed headspace services than Indigenous young people in the general population (7.4% versus 3.7%). However, interviews with staff in five fieldwork sites confirmed that headspace could do more to make the service more culturally appropriate for Indigenous clients:

As an organisation I think that we could be better at meeting young Aboriginal people and finding out what they want from us (Youth Worker)

A number of staff who were interviewed raised concerns about staffing, with most being critical of the fact that their centre did not have an Aboriginal worker. While it was acknowledged that lack of suitably qualified Aboriginal staff was a sector-wide problem, it needs to be addressed as it was clear that a number of non-Aboriginal staff found it challenging to engage Aboriginal young people.

As well as staff shortages, a few workers commented that the centre-based service model did not meet the needs of Indigenous young people: 'Aboriginal kids don't usually like coming into an office.' One staff member further explained:

Of the Indigenous people that I have worked with - just the kind of way that appointments are set up, attending at a scheduled time, that hasn't always worked well I don't think. I think for that population perhaps it needs to be a little more open and flexible on an as needs basis. So that when things arise there's somebody there to talk to, not having to book in an appointment a week later or something like that (Psychologist)

During interviews, staff suggested a number of measures that could improve the engagement of Aboriginal young people. Suggestions included to:

- provide training to non-Indigenous staff to implement culturally appropriate engagement and treatment practices
- employ more Aboriginal practitioners in centres
- make connections and build relationships with Aboriginal organisations, Aboriginal workers, and key figures in local Aboriginal communities
- offer different forms of outreach that 'take the service out to them'
- provide more flexible services that do not follow a rigid, place-based, time allocated, clinical model, but rather are flexible, non-threatening model based on the needs and lives of Aboriginal young people.

A third of interviewed staff felt that headspace needed to improve engagement practices with Aboriginal young people. Most of these staff spoke of the goodwill of centre staff to think creatively and suggest ways to better engage local Aboriginal young people. However, it was clear that the pressures of work restricted the enactment of these ideas.

CALD young people were found to be under-represented in the first evaluation of headspace (Muir

et al., 2009) and remained so in this evaluation. This suggests that headspace needs to change its engagement and/or treatment practices to better meet the needs of this group. This type of change requires greater understanding of the barriers and facilitators of service access for CALD young people, including the locations of centres relative to areas of higher CALD density, as well as the key issues that affect them. Interviews with headspace staff indicate that this is not a priority area (only 3 of 25 staff members interviewed spoke about CALD young people). Two interviewed workers expressed concern that they were not seeing many young refugees despite being located in an area where this would have been expected. They did, however, not know how to respond to this circumstance:

Every now and then we get some clients with some level of language barrier and that have migrated here and are on their own and that sort of thing. Often in that case we do refer to a trans-cultural clinical service because there is that barrier and... we don't have any interpreters.

We don't get very many of the African communities and we've got a lot of African people living locally.

Another staff member questioned why CALD young people were not attending headspace:

I haven't had any referrals from non-English speaking backgrounds. Not really any referrals for young people from the various ethnic groups in the area. There's a lot of Turkish families and there's African families here now and they're certainly not any of the young people that I have had referred to me over the time that I've been here. So I'm not sure what's happening there.

Although the vulnerability and under-representation of this group was acknowledged by some headspace staff, the majority did not comment on this issue, perhaps suggesting that staff do not know how to respond. Only one staff member suggested community engagement as a strategy for addressing the under-representation of CALD young people as headspace clients.

### Personal barriers

Interviewees identified the mental and cognitive functioning of clients as a barrier to access and sustained engagement with headspace services. A number of young people talked about their reluctance to attend a centre because they were too scared to talk face-to-face to a counsellor. Given that many of the young people who attend the service are dealing with crippling anxiety issues, making initial contact was often described as a huge challenge.

The problem is themselves. It's the going out and seeking help and wanting to get better. The problem is more to do with that than problems with the actual centre. (Male, 18 years)

## 3.4 How do parents/carers facilitate or hinder young people's access to and engagement with headspace services?

Research has demonstrated that parents can play an important role in facilitating young people's access to mental health services and help-seeking behaviours (Wahlin & Deane, 2012). As discussed above, 40% of young people reported that they mostly attended headspace because of the influence of family or friends. This was further reinforced in the headspace Parents and Carers Study.

Interviews with young people and parents/carers indicate that some young people were encouraged to attend headspace because of the actions of their parents. Six of the 50 young people interviewed (all were female and ranged in age from 13 to 24) described how their mother had made their first appointment with headspace:

Mum found [headspace] online and then a few weeks after she made an appointment and I don't know, I just started going from there... I didn't even want to go in the first place because I thought that I was okay and there was nothing wrong with me and that mum was just over-reacting to me being upset (Female, 15 years)

The Parents and Carers Survey data indicates, however, that while parents employed many

strategies to encourage their young person to keep attending headspace, they were unlikely to have encouraged their young person to contact headspace to begin treatment. This is because awareness of headspace and the services it offers was relatively low among this stakeholder group. The majority of survey respondents (63% or n=58) either had not heard of headspace before their young person started attending a centre, or had heard of headspace but did not know what they did. According to survey data, most parents/carers first heard about headspace from a community service provider or health worker such as a GP (35% or n=33). Another 14% had heard about headspace from a family member, friend or partner. Smaller numbers of survey respondents had heard about headspace from an advertisement (13% or n=12) or found headspace online, through social media or another website (9% or n=8).

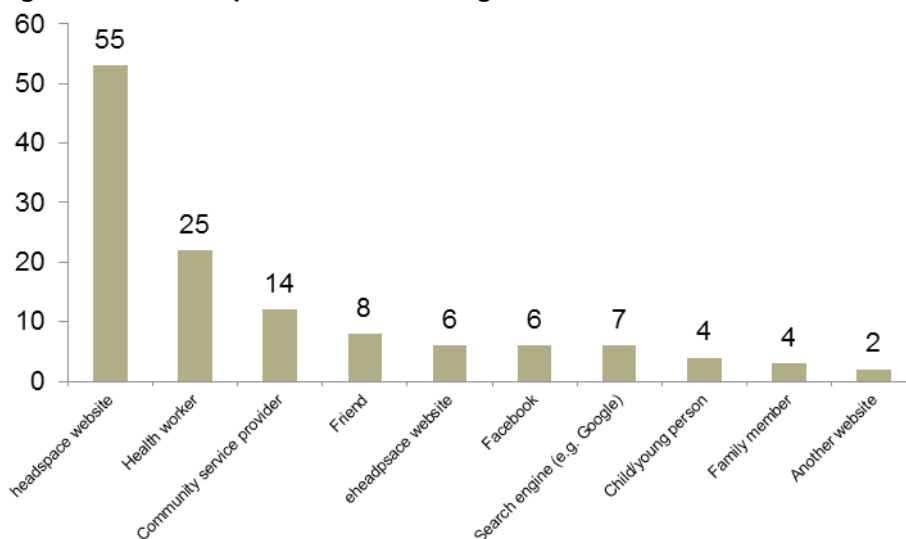
Interviews highlighted that young people often found their way to headspace through a multi-step referral process (for example through recommendation from a school counsellor, followed by a visit to a GP). Parents often helped their young people along this process (particularly by driving them to appointments), but they were generally not the ones that suggested that their young person visit headspace. A common complaint of parents interviewed in focus groups was that they used other services first because they had not heard of headspace:

Then we went through another school psychologist and we wasted six months and in the process he got worse. Nobody mentioned headspace.

I've lived in [this suburb] all my life [and] I didn't even know about this place and I wish I knew years and years ago.

Service providers were an important referral point to headspace, rather than young people and/or their parents directly knowing about and seeking assistance from headspace centres. Despite this, once they knew about headspace, these parents and carers were often actively involved in seeking further information and supporting their young person's engagement with the service. Survey data indicates, for example, that a high proportion of parents/carers sought more information about headspace prior to, or during the young person's treatment at a centre. This was mostly from the headspace website (n=55) or health or community service providers (e.g. school counsellors and youth workers) (n=39; Figure 3.11).

**Figure 3.11 Where parents/carers sought further information about headspace**



Source: The Parents and Carers Survey

Parents most frequently sought further information about headspace because they wanted to know more about the services available (n=58), to make sure that headspace would make their young person feel comfortable (n=37), that it was affordable (n=23) and safe (n=16). Less frequently cited reasons were ensuring that headspace staff were qualified (n=11) and concerns about privacy and confidentiality (n=12).

Parents who were interviewed reinforced the important role they played in supporting their young person in attending headspace. Some participants commented that for their young person, fear of

stigmatisation and having their friends find out was a strong disincentive to attending a centre, while for others, their young person's reluctance to talk to someone about their problems was a disincentive.

She was, like, 'I don't want to go there. I'm not dumb. I'm not this'. And I used to say, 'It's going to help you'.

Just general anxiety of going to a new place, and telling someone he didn't know his problems. Not being sure what to expect.

My daughter wouldn't get out of the car.

The majority of participants noted, however, that this reluctance dissipated quickly after the young person had visited the centre and spoken to staff members:

My daughter was resistant at the beginning but once we got here, no she was fine. It's just a matter of put it on the calendar; remember you've got that appointment, yes, yes. Okay.

They feel comfortable once they're here.

The Parents and Carers Study found that parents who responded to the survey mostly encouraged their young person to attend headspace because they felt their young person needed professional assistance and/or because they feared for their safety:

I thought it would be good for my child/young person to talk to a qualified individual about their problems (n=67).

I thought that my child/young person was not going to get better by themselves and needed help (n=55).

I was concerned about the safety of my child/young person (n=40).

I was tired of dealing with my child/young person's behaviour (n=14).

Parents and carers played an ongoing, active role to ensure that their young person continued to attend headspace. These actions were practical (e.g. transportation / funding for transport, appointment reminders and connections to other services) and emotional (e.g. listening, encouraging, discussing; see Table 3.6).

**Table 3.6 Actions taken by parents/carers to encourage their young person to attend headspace**

Action undertaken by parents/carers	N
I drove them to the headspace centre	68
I listened to what they wanted to share from their appointments with headspace staff	63
I reminded them of appointments with staff at headspace centres	56
I encouraged them to carry out whatever lifestyle or education-related suggestions the headspace staff made (such as joining a gym or enrolling in a course)	53
I discussed ways that the family could help them to feel better (such as establishing health family routines like regular walking)	46
I read information about their mental health, emotional and/or behavioural concerns	39
I contacted other services that were recommended to the young person by headspace staff	15
I gave them money for transport costs to travel to the headspace centre	8

Source: The Parents and Carers Survey

Some parents, however, indicated that they wanted to support their young person in their treatment but were excluded from doing so:

I was never told of appointments, always kept in the dark, never received any input from staff here.

Sadly, my son does not talk to me, so no conversation had.

My daughter won't talk to us about headspace.

These findings indicate that the majority of the parents and carers who participated in the surveys and the focus groups felt that headspace is accessible and appropriate for their young people. However, the level of knowledge about headspace among parents was relatively low, and a large proportion had not heard of headspace before being referred by another health professional or other source.

Related to this, most parents indicated that the pathway to the young person receiving headspace services was often rather complex, and relatively few of the young people in this sample had directly accessed a headspace centre. Many had a poor experience with another service before finding and attending headspace.

### 3.5 How are headspace services provided to young people in remote or regional areas? What facilitates and hinders the provision of extended services?

As indicated in section 3.2 above, headspace is achieving some success in reaching young people who live in regional areas, and who are over-represented as headspace clients in relation to their numbers in the general population of young people aged 12-25 years. While the proportion of clients living in remote locations is very small, it roughly aligns with population figures.

Despite this success, service provision to young people living in regional and remote areas is largely dependent upon them attending a headspace centre. Many of these young people live a considerable distance from a headspace centre, and a lack of transport is a restricting factor for many young people. As indicated above, the majority of young people that attend a headspace centre live within 10 kilometres of the centre.

To ensure that services are provided to young people living in regional and remote areas, centres have been established in a number of locations that can service nearby regional or rural communities through outreach models. The headspace centre in Warwick, for example, provides a weekly outreach service to the nearby town, Stanthorpe. In addition, the Townsville centre collaborates with other local services to provide fortnightly outreach services at a local skate park.

Staff interviewed and some service providers surveyed reported the challenges associated with providing face-to-face services and support to geographically isolated young people, as well as their desire for headspace to do outreach:

I'm originally from a rural area and I've lived in cities for quite a while, but I still have a big love for making sure rural stuff gets looked at, and it is an area I still don't think headspace looks at enough. I think it's more looked at purely on the numbers of people that are around and not really considering the fact that rural and remote areas have historically never gotten the support that they need, and I think this model of service would be amazing in more rural areas (Clinical Team Leader)

I would love to ideally set up a pop up counselling space in [name of regional town], and we'd operate out of a bus, or we'd operate out of an office somewhere or something like that, because there's major gaps there. Young people out there don't see workers (Youth Worker).

When asked how headspace could be improved to better meet the needs of young people, 13% of respondents (20/157) to the Professional Stakeholders Survey called for increased 'outreach' services. For example:

There would be great value in developing a mobile headspace treatment space for young people in isolated regional towns and villages.

There is a need for additional staff with appropriate resources to outreach to our outlying communities as there is no public transport options for young people to access the service.

Providing service delivery within local communities through outreach satellite services would be beneficial.

The need for outreach services was a clear priority for service provider respondents, but two staff members from different headspace centres identified current barriers in the model's structure. One staff member, for example, expressed concern about the funding model for outreach:

I don't think the business model we run here is likely to work in [in remote areas] because people are going to expect to be paid more, or have some kind of incentives... The grants for those sort of centres will need to be substantially higher. They are going to need corporate partnering (Clinical Team Leader)

In another location, a manager described her centre offering a form of outreach to young people who were not geographically isolated, but who were unlikely to come into headspace without an



introduction in a space they were comfortable:

[Our consortium partner] has a youth engagement officer that works out of [headspace] once a week. We had to be really creative in that position, so what I'm using it for is if we have young people who are not quite ready to come in yet, but want them to, then what we do is we send the youth engagement officer out to that home to facilitate community work...like an outreach service (Service Manager)

Finally, the capacity of headspace to provide services to young people in regional and remote areas is boosted by eheadspace, which provides an online and telephone counselling service. eheadspace operates as both an alternative to centre-based treatment, and a form of support that complements the centre-based program. The degree of online and face-to-face service integration is evidenced by the fact that almost one third of headspace clients that received services at a centre in the 2013/14 financial year also used eheadspace. The contribution of eheadspace to the headspace service delivery model is elaborated in section 5.6. Evaluation data shows that eheadspace is highly regarded by centre staff and facilitates service access for young people, including those living in regional and remote areas:

I think eheadspace is a great initiative. I know it's primarily meant to be for people who can't access centres, so more rural and remote. We still use it a lot as another contact point for a young person to be able to engage if they need support (Clinical Team Leader)

### 3.6 How does headspace increase awareness of mental health literacy among young people? To what extent have the number and type of young people accessing mental health services changed?

Mental health literacy refers to the knowledge and beliefs about mental disorders that aid in their recognition, management or prevention (Jorm et al, 1997). Mental health literacy includes four key components:

- the ability to recognise specific disorders
- knowing how to seek mental health information
- knowledge of risk factors and causes, of self-treatments; and of professional help available, and
- attitudes that promote recognition and appropriate help-seeking (Jorm et al, 1997).

Incomplete mental health literacy is a significant barrier to service use among young people (Wilson et al, 2011) and consequently headspace works to increase community awareness of mental health issues, increase knowledge, and encourage help seeking. During interviews, staff identified two strategies employed to increase awareness of mental health literacy: community engagement and national branding activities.

Community engagement is an integral part of the headspace service model. Each headspace centre employs a community engagement officer whose role is to coordinate and deliver activities in the local area that focus on promoting the headspace brand and the service provided by headspace centres, and building young people's knowledge and reducing the stigma associated with mental health problems to encourage earlier help-seeking. During interviews, staff described a number of local events that their centre had arranged such as visiting local schools and talking to students and staff, hosting drama and music events, facilitating drop-in sessions for local young people, and holding information evenings for key stakeholders such as school counsellors and principals. Further, headspace staff also worked to raise community awareness of mental health problems by participating in national events such as Youth Week and NAIDOC Week. In a survey of headspace centre managers (n=29), the majority of respondents self-rated their centre as 'very effective' in raising the awareness of youth mental health issues (15/29). This result was supported by interview data.

All the staff who discussed community engagement during interviews were very supportive of their centres' activities and discussed related benefits such as asserting the organisation's focus on early intervention and prevention, and enabling young people to become familiar with the centre

environment and staff prior to receiving treatment:

We devote a lot of our resources here to community engagement and developing that community partnership with schools and clubs and the community in general (Site Manager)

In the true sense of early intervention and prevention I think you have to have a very active community engagement and community awareness model, as well as your clinical services (Site Manager)

It's good that we have community engagement – what they call soft entry – so we can sort of demystify headspace. We've got things like school holiday programs, so people can come in and not necessarily see a worker and have an appointment, but still they come into headspace and they're getting to learn about us and getting to meet us as workers (Youth Worker)

Some staff reported that community engagement events were successful in drawing in vulnerable young people:

I think we're reaching more people with very few staff. I think – you know in the last few days there has been a really good example of that – the community event, the connecting with other agencies and other people in schools and a number a young people have come here that would never have come here otherwise. It's just a really good example of how we can maybe make a difference to a lot more people (Clinical Leader)

Interviewed staff felt that the engagement strategies implemented by their centres were improving awareness of mental health literacy at a community level. Indeed, in the Centre Managers' Survey, 69% (n=20/29) of respondents rated their centre as very effective in raising the awareness of youth mental health issues. The remaining 31% (n=9/29) rated their centre as effective in raising awareness.

Finally, it was also clear in interviews with young people that positive engagement with headspace practitioners helped to enhance mental health literacy at an individual level.

# 4. Outcomes of headspace Clients

The primary focus of the evaluation is to assess the effectiveness of the headspace program in achieving outcomes for young people receiving headspace services. Three key research questions guided our analysis:

- How do young people's outcomes change after using headspace services?
- How do the outcomes of young people using headspace services differ from the outcomes of young people across the population not using headspace services?
- According to clients, parents/carers and service providers, how and why has headspace contributed to/not contributed to changes in client outcomes?

To answer the first two questions, we used the program minimum data set (hCSA) and survey data collected from a sample of headspace clients and a comparison group of young people. The final question is answered by drawing on qualitative data collected from program stakeholders.

hCSA data was used to examine changes in outcome indicators for clients at different points in time throughout their headspace treatment. The hCSA data is advantageous in that it is population level data. While the hCSA contains a smaller number of outcome indicators than the young people surveys, it is a valuable source of data that provides specific information about services accessed by clients as well as the dosage and duration of treatment. The survey data enabled evaluators to examine changes in multiple outcome indicators for headspace clients, and to compare these with changes for a comparative group of young people. The sample sizes differ for different outcome areas. This is a result of both the data source and the completion and quality of the data within the datasets.

As outlined in Chapter 2, the outcomes analysis uses two complementary measures of effectiveness, and draws on measures of both statistical and clinical significance. These methods are also supplemented by observed patterns of change in client outcomes throughout their headspace treatment and triangulated (where feasible) with other analyses. The two primary methodological approaches that have been used are:

- The difference-in-difference (DID) approach, and
- The clinically significant change (CSC) method.

The young people survey data has been analysed using the DID approach – a method of analysis outlined in Chapter 2. This approach compares the results of a sub-set of the headspace client population (the intervention group) with two comparison groups of young people (those that have received an alternative form of mental health treatment, and those that have received no treatment). To achieve a closer alignment between the treatment and comparison groups, the samples were matched on four key variables using propensity score matching (K10 score, age, gender and days out of role).

The hCSA data was analysed using the Clinically Significant Change (CSC) method as outlined Chapter 2. The CSC method focuses on clients' changes in psychological distress and classifies individuals along a continuum from a clinically significant improvement to a clinically significant decline. Significance includes two measures of change – a *reliable change* and a *clinically significant*

*change*. A *reliable* change (RC) in K10 scores is one that represents a statistically significant improvement over the course of the headspace intervention. Significance is measured at the 5% level. A *clinically significant* improvement occurs when the change in K10 score is both reliably significant and also moves the headspace client below the threshold K10 score that represents the *functional* benchmark for the general population.

Results of these methods of analyses (DID and CSC) are reported in this chapter. These methods are complementary and provide similar results, revealing a pattern of small program effect.

## 4.1 How do young people's outcomes change after using headspace services?

### Overall results for young people attending headspace

The mean baseline K10 score for the 26,058 young people recorded in the hCSA who attended headspace in the 2013/14 financial year and had more than one recorded K10 score was 28.8. The mean last K10 score<sup>24</sup> for the sample was 26.5 indicating an average decrease of 2.3 points. However, as shown in Table 4.1 below, there were significant differences within the sample. Overall, almost half (47%, n=12,233) of young people's K10 scores decreased: 13.3% experienced a clinically significant improvement, 9.4% a reliable improvement and 24.3% an insignificant improvement. Table 4.1 below shows the mean reduction or increase between the first and last recorded K10 scores for those in each categorization. The mean reduction for those who showed a clinically significant improvement was 14.6 points. Almost 29% of young people experienced no change in their K10 score. As shown in further analysis presented below (suicidal ideation and self-harm), it is possible for headspace to make an impact on clients' wellbeing even if their psychological distress does not improve. For example, a few parents interviewed for the evaluation commented that while their young person had not improved noticeably in terms of their mental health functioning, they had not deteriorated and this for them represented a successful intervention. As one parent commented, 'if it wasn't for headspace my son would be dead or in gaol'.

Almost one in four young people (24.3%) experienced an increase in their K10 score (that is a deterioration in their psychological distress). Of the latter group, 4.5% experienced a clinically significant decline, 4.9% a reliable decline and 14.9% an insignificant decline. Overall, the level of psychological distress reduced significantly (clinically or reliably) for more than double the number of headspace clients whose psychological distress increased (5,908 compared with 2,457; Table 4.1).

**Table 4.1 K10 changes for all young people and by first and last K10 recorded**

Characteristics	CS improve N=3,455 %	RS improve N=2,453 %	Insig improve N=6,325 %	no change N=7,477 %	Insig decline N=3,891 %	RS decline N=1,274 %	CS decline N=1,183 %	Total N=26,058 %
<b>All young people</b>	13.3	9.4	24.3	28.7	14.9	4.9	4.5	100
<b>K10 Score</b>								
Mean First	32	36.6	29.6	27	26.6	28.3	18.1	28.8
Mean Last	17.4	25.8	24.8	27	31.3	39.2	32.2	26.5
Change	14.6	10.8	4.8	0	-4.7	-10.9	-14.1	2.3

Notes: Calculations are based on the change in the Kessler K10 measure of psychological distress of headspace clients between the first and last recorded visit to registered headspace centres. A reliably significant improvement (RS improve) or decline (RS decline) represents a statistically significant change at a size of 5%. A clinically significant improvement (CS improve) occurs when the change in K10 is both reliably significant and moves the headspace client below the threshold (age and gender specific) for the general population. Thresholds for clinical significance are calculated using the combined (c-threshold) method of Jacobson and Truax (1991). Figures are based on those young people who received a headspace service within the 2013/14 financial year.

Source: Authors calculations from hCSA data.

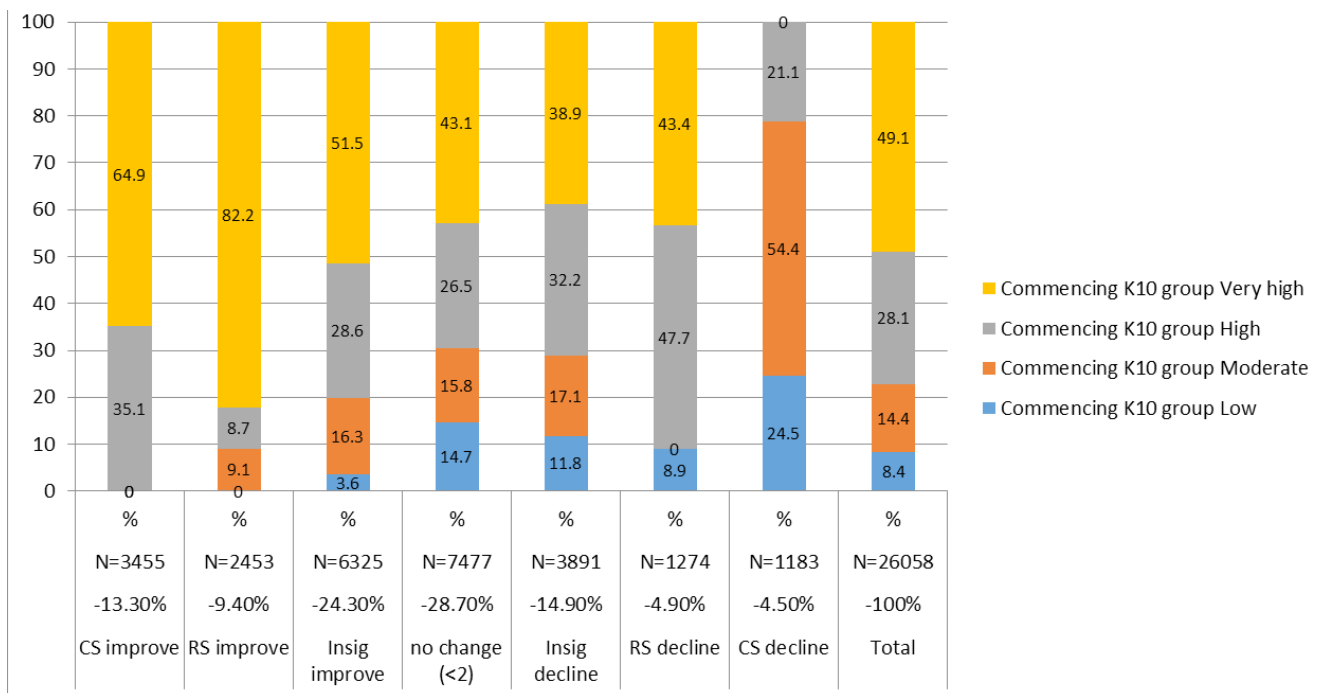
Young people who first attended headspace with very high or high levels of psychological distress (49.1%) were most likely to experience clinically or reliably significant improvements in their levels of distress. Almost two in three young people (64.9%) who experienced clinically significant improvements had very high levels of distress when they first attended headspace. The remaining

<sup>24</sup> Young people are asked to complete the K10 at each occasion of service. The last recorded K10 score is not always an exit score and will include young people who are still receiving treatment.

35.1% had high levels of distress. Of the group who experienced a reliable change, 82.2% had commenced headspace with very high levels of distress, 8.7% with high and 9.1% with moderate levels of distress.

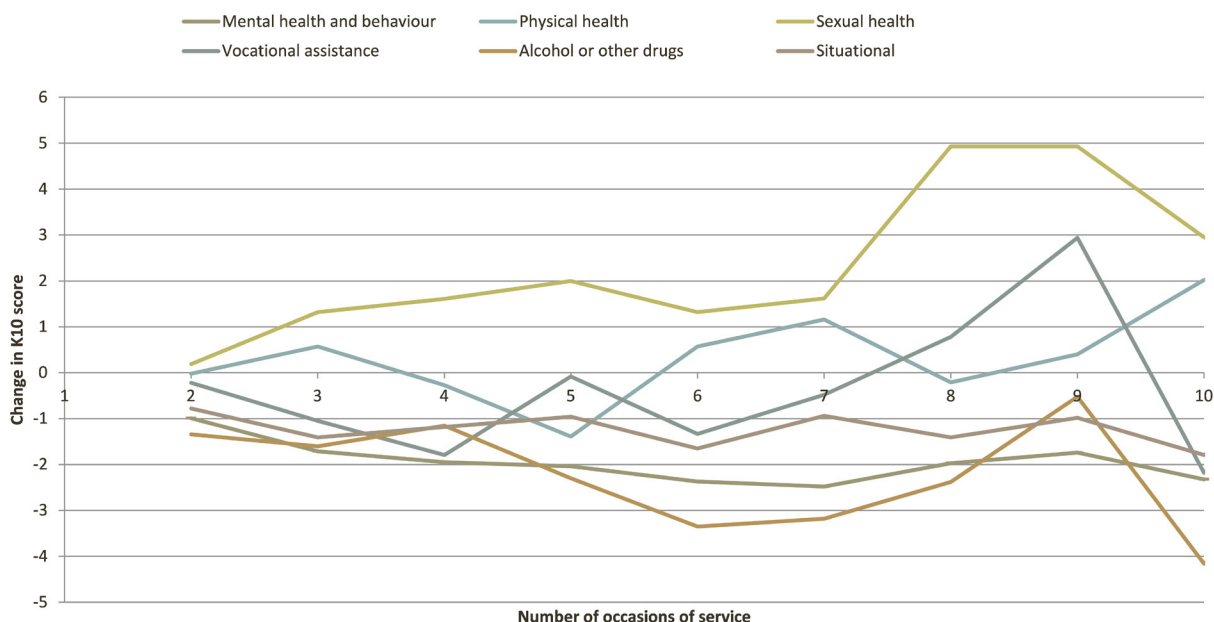
Young people who attended headspace with low or moderate levels of distress were over-represented in the group who experienced a clinically significant decline (a worsening of their distress levels). While 8.4% of the sample had a low K10 score when they first attended headspace and 14.4% a moderate K10 score, they accounted for 24.5 and 54.4% respectively of the group who experienced a clinically significant decline (Figure 4.1).

**Figure 4.1 K10 changes by commencing K10 group (%)**



Changes in K10 scores differed for young people presenting with different primary issues and by the number of occasions of service they received. Young people presenting with a primary issue of mental health and behavioural problems experienced decreases in their K10 scores (i.e. improvements in their psychological distress). In contrast, psychological distress deteriorated between visits 2 and 3 for the group of young people who presented with a primary issue of sexual or physical health problems. Young people with alcohol and other drug issues experienced an initial deterioration in psychological distress, but levels fluctuated across their occasions of service, with a steep increase in average K10 scores displayed between visits 9 and 10 (Figure 4.2). The findings may be influenced by the smaller sample size.

**Figure 4.2 Cumulative average change in K10 scores - by the primary issue the young person presented with at initial consultation and total number of visits**



Note: The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. Not all clients are observed at each data point, either because the service provider has not recorded a primary issue at first presentation, or the young person has not recorded their K10 score, or the young person has ceased treatment at a certain point. headspace clients are not requested to record their K10 score at each visit. This information is generally asked at the initial, 3rd, 6th, 10th and 15th visits; however, some clients record this information at other intervals. Further, not all clients provided information about their level of psychological distress when asked. Smaller numbers of clients are observed as the number of occasions of service increases. Smaller cell sizes are also present for clients presenting with certain issues, in particular vocational assistance, physical and sexual health. Cell sizes for these data can be found in Appendix F. It is also important to note that a client may have more than one issue that they require help with when presenting at headspace. The information provided here relates to the primary issue as recorded by the service provider.

Source: Authors calculations from hCSA data.

## Demographic characteristics

K10 changes by demographic characteristics are detailed in Table 4.2 below. Most of the K10 changes reflect the distribution of these characteristics across the cohort. There are, however, a couple of interesting deviations. Women (who made up 64.9% of the cohort) were over-represented among young people who experienced a clinically or reliably significant decline in their mental health functioning as indicated by a change in K10 scores (73.5% and 66.3% respectively). Nonetheless, women were also over-represented in the reliably improved group. Men were slightly over-represented in the group who experienced a clinically significant improvement. Although the cell size was small, young people with insecure housing were over-represented in the reliably improved group.

**Table 4.2 K10 changes by demographic characteristics**

Characteristics		CS improve N=3,455 %	RS improve N=2,453 %	Insig improve N=6,325 %	no change N=7,477 %	Insig decline N=3,891 %	RS decline N=1,274 %	CS decline N=1,183 %	Total N=26,058 %
<b>All young people</b>		13.3	9.4	24.3	28.7	14.9	4.9	4.5	100
<b>Gender</b>	Male	37	30.7	36.3	36.9	34.2	26.5	33.7	35.1
	Female	63	69.3	63.7	63.1	65.8	73.5	66.3	64.9
<b>Sexuality</b>	LGBT male	5.9	5.3	6.1	5.8	6.1	4	5.8	5.8
	Non-LGBTI male	31.1	25.3	30.1	31.1	28.1	22.6	27.9	29.3
	LGBT female	12.7	18.8	14.6	14.7	15.7	18.1	13.7	15.1
	Non-LGBTI female	50.3	50.5	49.2	48.4	50.1	55.4	52.6	49.8

Characteristics		CS improve N=3,455 %	RS improve N=2,453 %	Insig improve N=6,325 %	no change N=7,477 %	Insig decline N=3,891 %	RS decline N=1,274 %	CS decline N=1,183 %	Total N=26,058 %
<b>Country of birth</b>	Australia	93.5	92.1	93.1	92.7	93.3	93.6	93.7	93
	Overseas	6.5	7.9	6.9	7.3	6.7	6.4	6.3	7
<b>Aboriginal or Torres Strait Islander</b>	Yes, Aboriginal	6.1	6.6	6	5.6	6.7	8.5	7.2	6.2
	Yes, Torres Strait Islander	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
	Yes, Both	0.2	0.4	0.4	0.3	0.3	0.5	0	0.3
	No	93.4	92.6	93.4	93.7	92.7	90.7	92.6	93.1
<b>Language other than English</b>	No, English Only	94	92.3	94.1	93.7	93.1	95	93.6	93.7
	Yes	6	7.7	5.9	6.3	6.9	5	6.4	6.3
<b>Culturally and Linguistically Diverse</b>	English Lang & AUS Born	89.5	87.2	89.1	88.5	88.4	89.6	89.6	88.7
	Other Lang & AUS Born	4	4.9	4	4.2	4.8	4.1	4.1	4.3
	English Lang & Overseas Born	4.5	5	5	5.2	4.7	5.4	4	4.9
	Other Lang & oversea Born	2	2.8	1.9	2.1	2	1	2.3	2.1
<b>Security of living arrangements</b>	Secure	89.7	86	90.5	90.7	90.4	87.2	93.3	90
	Homeless/insecure housing	10.3	14	9.5	9.3	9.6	12.8	6.7	10
<b>Participation</b>	Studying only	49.3	48.9	48.6	49.4	51.8	52.1	49.9	49.7
	Working only	10.1	9.5	10.8	9.9	9.5	7.9	11.4	10
	Studying and working	22.5	21.4	22.9	21.8	21.2	20.4	21.5	21.9
	Not studying or working	18.2	20.3	17.7	18.9	17.4	19.6	17.3	18.4

Source: Authors calculations from hCSA data.

Table 4.3 shows a more detailed analysis of differences in the pattern of improvement in psychological distress between males and females in headspace, as measured by the change in K10 score by age. The calculations again relate to the change in K10 between the first and last visit to headspace.

The analysis shows that young women aged 14 and under, or 15 to 17, have relatively high psychological distress on entry into headspace, with average K10 scores of 28 points at 14 and under, and rising to 30.5 for those aged 15 to 17. The proportion of young women aged 14 and under who improve clinically over the course of their engagement in headspace is 10.9%, with a further 7.9% showing a reliably significant improvement.

Males in younger age categories typically have lower presenting levels of psychological distress (K10 scores) on entry to headspace compared to young women of the same age. For example, young men aged 14 have a mean K10 score of 22.5, which is 5.5 percentage points lower than the K10 score for young women in the same cohort. K10 scores are 26.1 on average for young men aged 15 to 17, some 4.4 percentage points lower than for young women of the same age. The change in K10 is also a little stronger for younger men over their time in headspace (between 2.2 and 2.5 points reduction) than for younger women (who reduce by between 1.8 and 2.1 points).

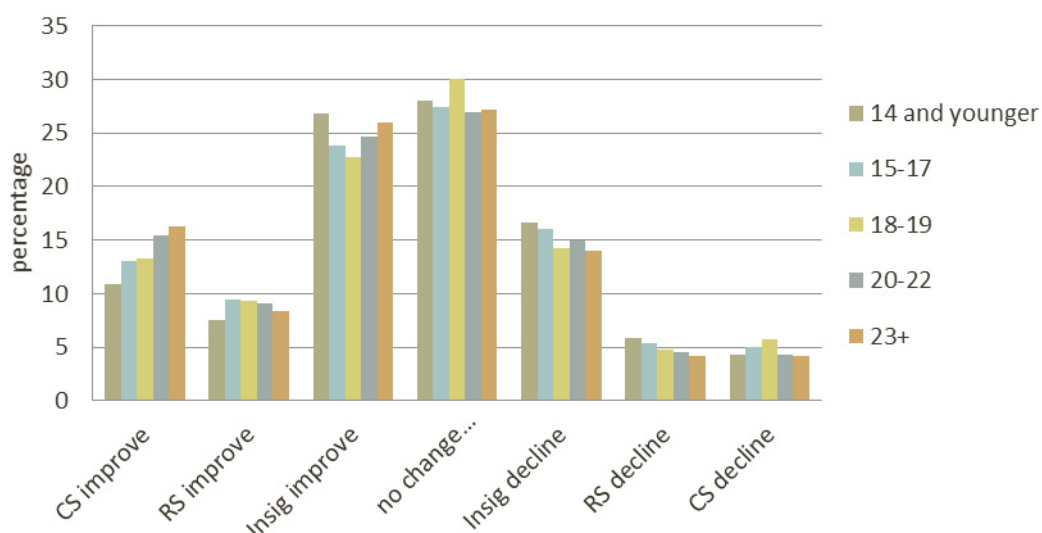
**Table 4.3 Changes in K10 score between first and last headspace treatment: by age and gender**

	presenting K10 at headspace (mean)	K10 change (mean)	CS threshold	CS improve	RS improve	Insig improve	no change (<2 K10pts)	Insig decline	RS decline	CS decline	N
<b>Females</b>											
up to 14	28.0	-1.8	21.2	10.9	7.5	26.8	28.0	16.6	5.9	4.4	2,805
15-17	30.5	-2.1	24.7	13.0	9.4	23.8	27.4	16.0	5.4	5.0	6,203
18-19	30.7	-2.1	27.5	13.3	9.3	22.7	30.0	14.2	4.8	5.7	2,858
20-22	30.2	-2.7	25.6	15.4	9.1	24.7	27.0	15.0	4.6	4.3	2,891
23+	29.2	-2.8	25.5	16.2	8.3	26.0	27.2	14.0	4.2	4.2	1,634
<b>All</b>	<b>29.9</b>	<b>-2.2</b>	<b>24.7</b>	<b>13.5</b>	<b>9.6</b>	<b>23.8</b>	<b>27.9</b>	<b>15.1</b>	<b>5.2</b>	<b>5.0</b>	<b>16,391</b>
<b>Males</b>											
up to 14	22.5	-2.5	18.1	15.0	7.1	26.8	29.9	14.0	4.0	3.3	1,503
15-17	26.1	-2.2	20.2	13.2	8.1	24.7	30.2	14.3	5.3	4.2	2,757
18-19	28.1	-2.4	23.9	14.2	8.6	23.4	28.9	16.6	4.2	4.2	1,584
20-22	28.6	-2.7	25.0	14.5	8.7	24.6	30.4	14.3	3.5	4.0	1,913
23+	28.8	-2.9	25.3	13.5	9.4	26.8	31.2	13.1	3.0	3.1	1,111
<b>All</b>	<b>26.7</b>	<b>-2.5</b>	<b>25.3</b>	<b>13.8</b>	<b>8.5</b>	<b>25.1</b>	<b>30.1</b>	<b>14.5</b>	<b>3.9</b>	<b>4.2</b>	<b>8,868</b>
<b>Total</b>	<b>28.8</b>	<b>-2.3</b>	<b>23.7</b>	<b>13.3</b>	<b>9.4</b>	<b>24.3</b>	<b>28.7</b>	<b>14.9</b>	<b>4.9</b>	<b>4.5</b>	<b>26,058</b>

Notes: Calculations are based on the change in the Kessler K10 measure of psychological distress of headspace clients between the first and last recorded visit to registered headspace centres. A reliably significant improvement (RS improve) or decline (RS decline) represents a statistically significant change at a size of 5%. A clinically significant improvement (CS improve) occurs when the change in K10 is both reliably significant and moves the headspace client below the (age and gender specific) threshold for the general population. Thresholds for clinical significance are calculated using the combined (c-threshold) method of Jacobson and Truax (1991). Figures are based on those young people who received a headspace service within the 2013/14 financial year. headspace clients are not requested to record their K10 score at each occasion of service. This information is generally asked at the first, 3<sup>rd</sup>, 6<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> visits; however, some clients record this information at other intervals. Further, not all clients provided information about their level of psychological distress when asked. Cell sizes for these data can be found in Appendix F.

Source: Authors' calculations from hCSA data.

Analysis of change in K10 scores by gender shows that there is a steadily rising trajectory in mental health function by age for females in the headspace program, as shown in Figure 4.3. The proportion of young women showing a clinical improvement rises from 10.9% for those aged 14 and under to 16.2% for those aged 23 or more. In contrast, the age profile of clinical improvement for males is relatively flat. Around 15% of young men in the 14 and under age group improve clinically over the course of their engagement in headspace (see Figure 4.4). These rates fall a little for older males, but not to any significant degree.

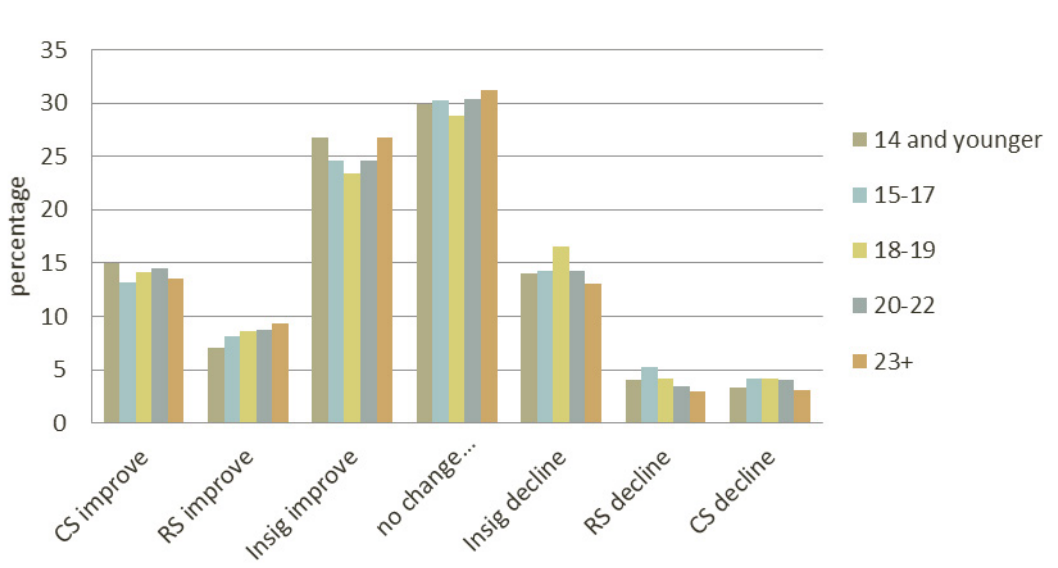
**Figure 4.3 Changes in K10 score between first and last headspace treatment: FEMALE clients, by age**



Note: headspace clients are not requested to record their K10 at each occasion of service. This information is generally asked at the first, 3<sup>rd</sup>, 6<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> visits; however, some clients record this information at other intervals. Further, not all clients provided information about their level of psychological distress when asked. Cell sizes for these data can be found in Appendix F.

Source: Authors calculations from hCSA data

**Figure 4.4 Changes in K10 score between first and last headspace treatment: MALE clients, by age**



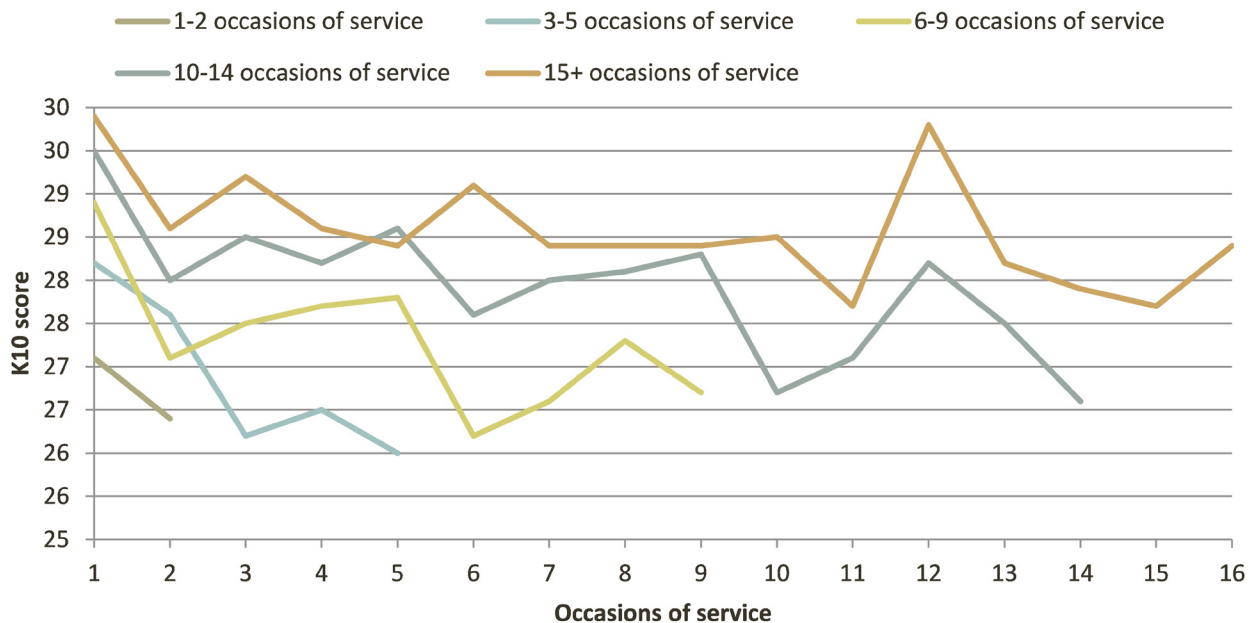
Note: headspace clients are not requested to record their K10 score at each occasion of service. This information is generally asked at the first, 3<sup>rd</sup>, 6<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> visits; however, some clients record this information at other intervals. Further, not all clients provided information about their level of psychological distress when asked. Cell sizes for these data can be found in Appendix F.

Source: Authors calculations from hCSA data

## Occasions of service intervals

The amount and type of treatment a young person receives at a headspace centre can vary considerably. Reasons for this include the needs of the clients, their willingness and ability to stay engaged with the service and the capacity of headspace centres to provide appropriate services. This section explores the relationship between the number of occasions of services and changes in psychological distress.

Figure 4.5 displays the average K10 scores recorded by occasion of service, and groups headspace clients by the number of occasions of service. Overall this figure indicates that the higher the initial K10 score, the more occasions of service a client is likely to receive. The highest K10 scores (indicating higher levels of psychological distress) for each group are recorded at initial consultation. While fluctuations are seen in most groups as the number of occasion of services increases, all groups show decreasing K10 scores.

**Figure 4.5 Average K10 score by visit number and total number of occasions of service**

Note: headspace clients have been divided into mutually exclusive categories based upon how many occasions of service they received from headspace. The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. headspace clients are not requested to record their K10 score at each occasion of service. This information is generally asked at the initial, 3<sup>rd</sup>, 6<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> visits; however, some clients record this information at other intervals. Further, not all clients provided information about their level of psychological distress when asked. Smaller numbers of clients are observed as the number of occasions of service increases. Cell sizes for these data can be found in Appendix F.

Source: Authors' calculations from hCSA data.

The group who had 15 or more occasions of service had declining levels of psychological distress; however, this was smaller and more gradual than groups who had fewer occasions of service. This is not unexpected given they recorded the highest K10 scores on initial presentation. Further, the number of occasions of service suggests that these young people were dealing with more acute issues.

Figure 4.6 below illustrates the proportion of headspace clients by age and gender who show a clinically (CS) or reliably (RS) significant improvement in K10 for different occasions of service (OoS) intervals. The analysis differentiates the rates of clinical or reliable improvement both by age and gender, and by a series of OoS intervals – specifically comparing K10 between the first and third OoS, the first and sixth OoS, the first and tenth OoS, and finally between the first and last OoS in a single episode of treatment.

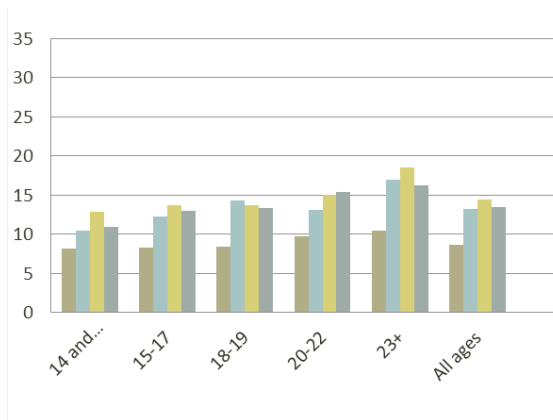
As reported earlier, female clients typically enter headspace with a higher presenting K10 score than males, and females often access treatment for a longer period of time. Females also show a higher level of clinically and reliably significant improvement with age. For example, the proportion of young women aged 14 and under who clinically improve is around 8% by the third visit, rising to 12.6% by the tenth visit (see Figure 4.6). For young women aged 23 and over, the rate of clinical improvement rises from 10% at the third visit to nearly 18% by the tenth. Combining rates of clinical and reliable improvements, the percentage of females aged 23 and over rises from 16% by the third visit to nearly 29% at the tenth.

In contrast, the trajectory of clinically and reliably significant improvements in K10 by age is relatively flat for males, but generally shows a steeper rate of clinical improvement in mental health functioning as the number of headspace visits rises. This is especially the case for the youngest cohort of males who received headspace treatment. Around 12% of males aged 14 and under show a clinical improvement by the third visit, with this figure rising to 22% by the tenth visit (Figure 4.6). When clinical and reliable improvements are combined for young men, around one in four males improve significantly.

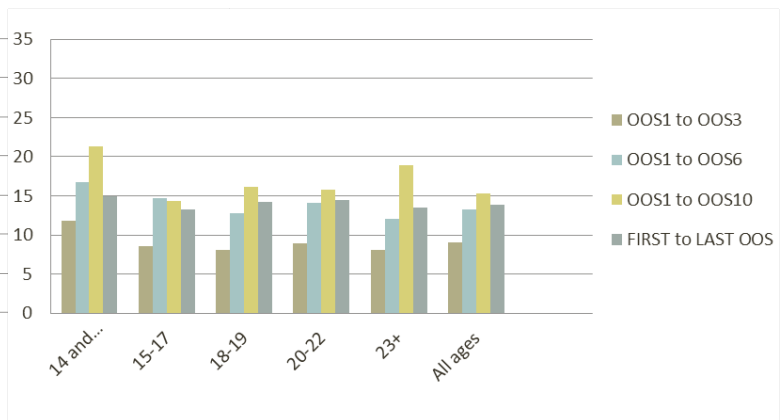
These patterns are likely to reflect the cumulative impact of occasions of service on K10 outcomes; however, the temptation to interpret the patterns of change in K10 by OoS interval in Figure 4.6 as a response to increased treatment ‘dose’ should be resisted. It is likely that those who received more occasions of service had complex issues, and therefore required extended treatment to improve their condition.

**Figure 4.6 Proportion of headspace clients showing clinically (CS) or reliably (RS) significant improvement in K10, by age and occasion of service (OoS) interval**

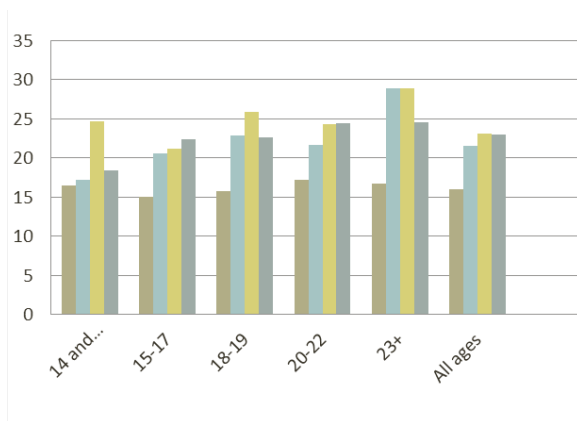
i. Females, CS improvement



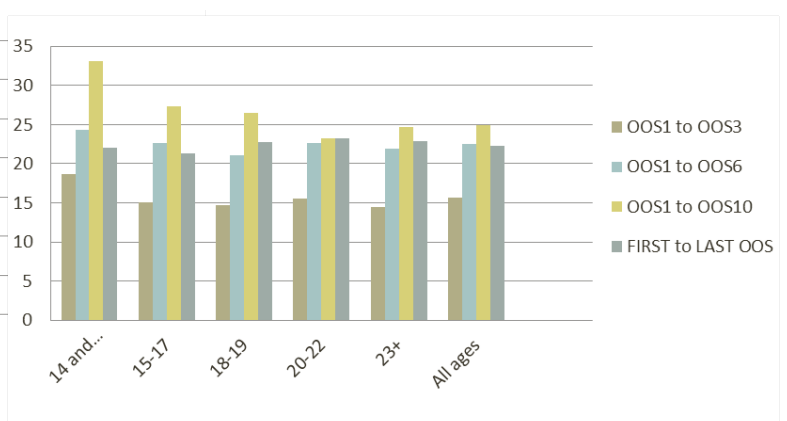
ii. Males, CS improvement



iii. Females, CS or RS improvement



iv. Males, CS or RS improvement



Notes: Calculations exclude those who are observed to engage with headspace for only a single OoS. Furthermore, the K10 change for each OoS interval is generated only for those clients where there is an observed K10 at both OoS in the difference (for example, the average difference in K10 between OoS1 and OoS6 is calculated only for those headspace clients who have their K10 recorded on both the first and sixth visits. headspace clients are not requested to record their K10 score at each occasion of service. This information is generally asked at the first, 3<sup>rd</sup>, 6<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> visits; however, some clients record this information at other intervals. Further, not all clients provided information about their level of psychological distress when asked. Smaller numbers of clients are observed as the number of occasions of service increase. Cell sizes for these data can be found in Appendix F.

Source: Authors' calculations from hCSA data.

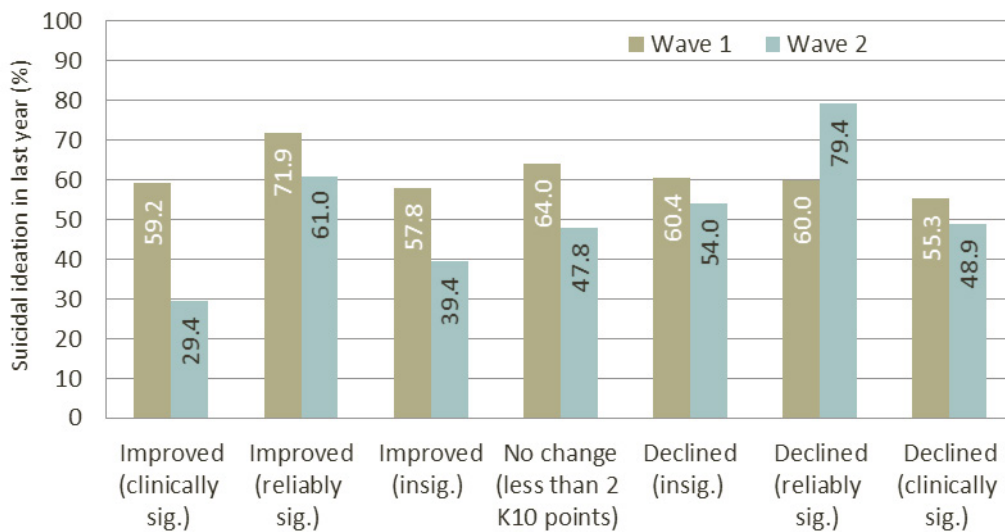
Additional analyses and findings related to changes in K10 scores by Indigenous status, gender and sexual identity, socio-economic status, and remoteness are provided in Appendix F.

## Suicidal Ideation and Self-Harm

Changes in young people's suicidal ideation and reported instances of self-harm were examined as additional indicators of changes in mental health. This was undertaken to balance the substantive weight placed on changes in K10 scores in the evaluation, and to highlight that relative stability in the level of psychological distress as measured by K10 may not necessarily indicate a poor outcome.

Survey respondents were asked in each wave whether they had considered suicide in the last year. A clinically significant change analysis was replicated using the intervention survey to categorise respondents according to their prevalence of suicidal ideation by changes in K10. The results show that focusing only on K10 scores can mask important changes in mental health functioning.

**Figure 4.7 Percentage of headspace clients who considered suicide in the last year, by K10 change and intervention survey wave**



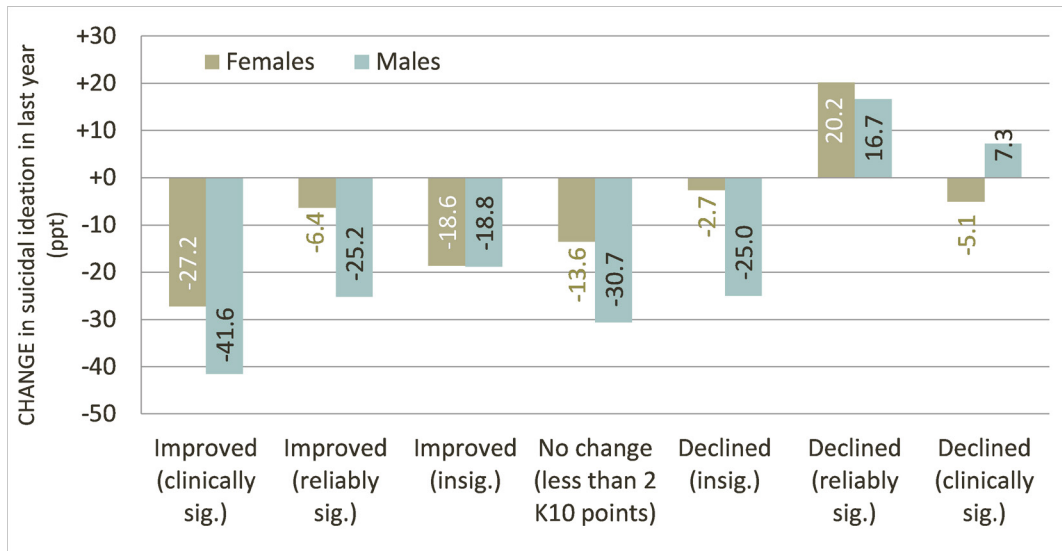
Note: Data for this analysis is sourced from the headspace intervention survey. Estimates of clinically significant change were tested for the survey data and were shown to align well with hCSA data. Suicide ideation data was specifically collected within the survey data and is not available in the hCSA dataset. Sample sizes can be found in Appendix F. Source: Authors' calculations from headspace intervention survey data.

Figure 4.7 reports the proportion of survey respondents in each K10 change category who had contemplated suicide for both survey waves. The results reveal two highly significant findings. First, the propensity to consider suicide falls by more than half among those whose K10 had improved clinically during their progress through headspace, from 59.2% in the first survey period down to 29.4% at the second. Rates also fell for those who showed either reliable or insignificant improvement, by around 10 percentage points and 18 percentage points respectively.

The second significant finding relates to those headspace clients who exhibited no real improvement in K10, i.e. a change of less than two K10 points between survey waves. Even for this group, the propensity to consider suicide fell by more than 16 percentage points, from 64% to 47.8%.

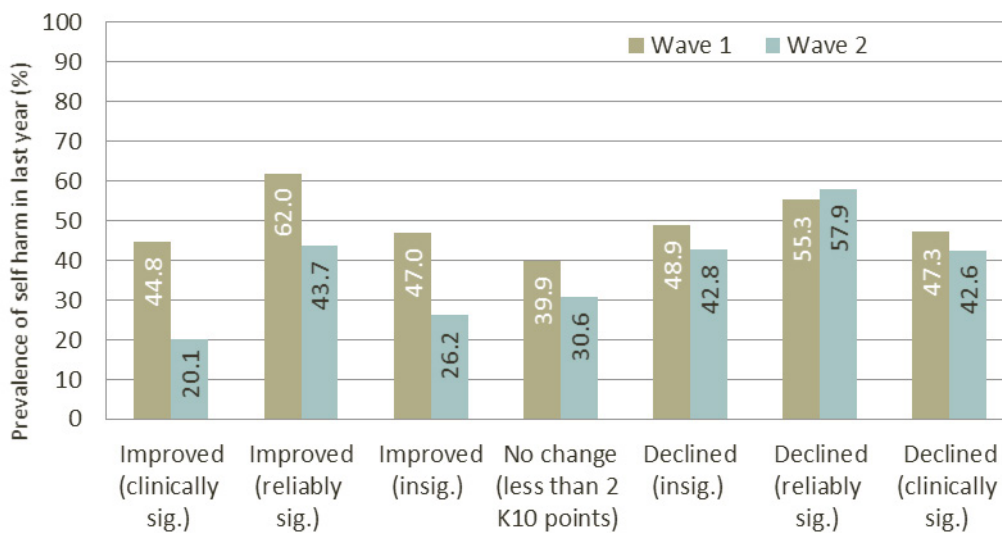
These findings indicate that significant change in critical outcomes may occur for headspace clients at high risk of suicide despite there being no evidence of change in psychological distress through the K10 measure. The finding is an important one in that it highlights the potential protective role that the headspace program may have against such extreme adverse mental health outcomes.

The change in prevalence of suicidal thoughts for young men and women that had received treatment from headspace are considerable, as shown in Figure 4.8. Males appear more responsive than females in relation to lower rates of suicidal ideation, showing a 41.6 percentage point reduction in suicidal ideation for those who clinically improved in terms of their psychological distress levels. Young women in the same group showed a decrease in suicidal ideation by 27.2 percentage points. For young men who improved reliably, suicidal ideation rates decreased by more than 25 percentage points and for young women, the response is lower at 6.4 percentage points. The rate of reduction is also positive across a number of other groups. Young males and females whose mental health functioning declined reliably and young males whose K10 declined clinically, as measured by changed in K10 scores, experienced increases in suicide ideation.

**Figure 4.8 Change in prevalence of suicidal thoughts between waves, by gender and K10 change**

Note: Data for this analysis is sourced from the headspace intervention survey. Estimates of clinically significant change were tested for the survey data and were shown to align well with hCSA data. Suicide ideation data was specifically collected within the survey data and is not available in the hCSA dataset. Sample sizes can be found in Appendix F. Source: Authors' calculations from headspace intervention survey data.

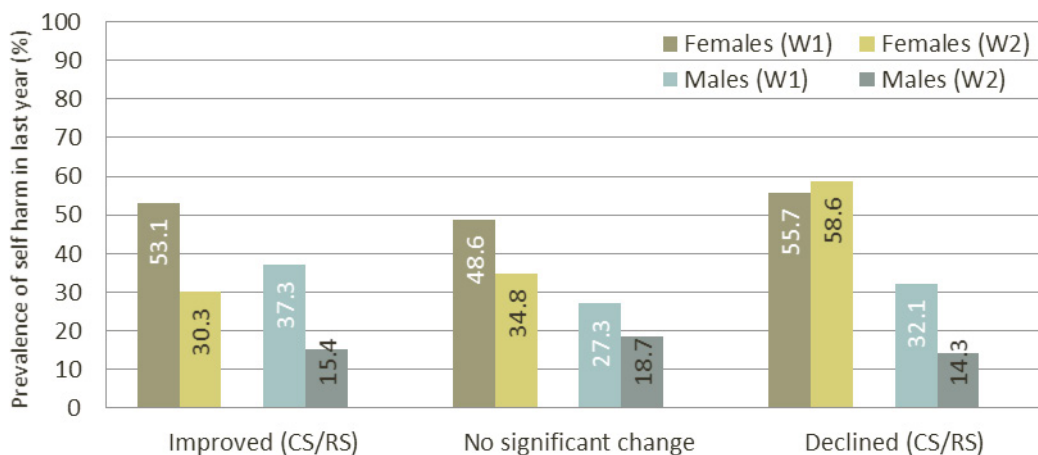
The analysis of reported instances of self-harm shows a similar pattern of reduction. Figure 4.9 shows a decrease in the rates of self-harm across all K10 change groups between Waves 1 and 2, except for those who declined reliably. The greatest reduction in prevalence of self-harm was for those who improved clinically significantly (down 24.7 percentage points) and those who recorded a reliably significant improvement (down 18.3 percentage points).

**Figure 4.9 Percentage of headspace clients who self-harmed in between waves, by K10 change and intervention survey wave**

Note: Data for this analysis is sourced from the headspace intervention survey. Estimates of clinically significant change were tested for the survey data and were shown to align well with hCSA data. Information about self-harm was specifically collected within the survey data and is not available in the hCSA dataset. Sample sizes can be found in Appendix F. Source: Authors' calculations from headspace intervention survey data.

Disaggregation of this analysis by gender is shown in Figure 4.10. Young women display a higher prevalence of self-harm than young men, yet those that improve or have no change in psychological distress have broadly the same rate of reduction in self-harm regardless of gender (around 23-24 percentage points). However, for those whose psychological distress increases over the two survey waves, female rates of self-harm remain high whereas rates for males reduce for all categories.

**Figure 4.10 Prevalence of self-harm in the last year across grouped K10 changes: by intervention survey wave and gender**



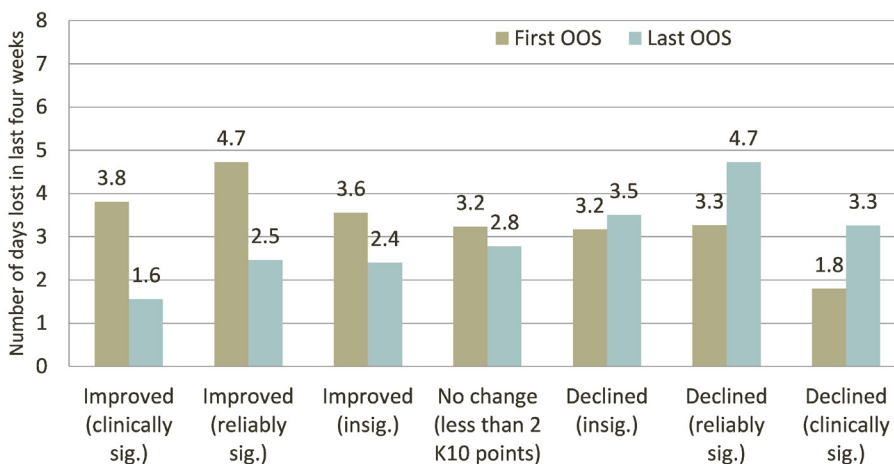
Note: Data for this analysis is sourced from the headspace intervention survey. Estimates of clinically significant change were tested for the survey data and were shown to align well with hCSA data. Information about self-harm was specifically collected within the survey data and is not available in the hCSA dataset. Sample sizes can be found in Appendix F. Source: Authors' calculations from headspace intervention survey data.

## Economic and Social Participation

The evaluation examined the degree to which headspace clients reported a change in the number of days out of role and days cut back in the last four weeks due to psychological distress. Clients were again categorised according to the level of change in K10 scores between survey waves, and for each grouping, the average number of lost days were calculated.

Figure 4.11 reports on the number of days in the last two weeks that headspace clients were totally unable to work or study because of psychological distress, using information from the hCSA administrative survey. The findings show a decrease in the number of days lost for those who experienced a clinical improvement in K10 from 3.8 to 1.6 days. Those who showed a reliable improvement in K10 also saw a similar reduction of days lost between their first and last occasion of service – from 4.7 to 2.5 days in the last two weeks.

**Figure 4.11 Number of days lost in last two weeks due to psychological distress, by K10 change and OoS interval**



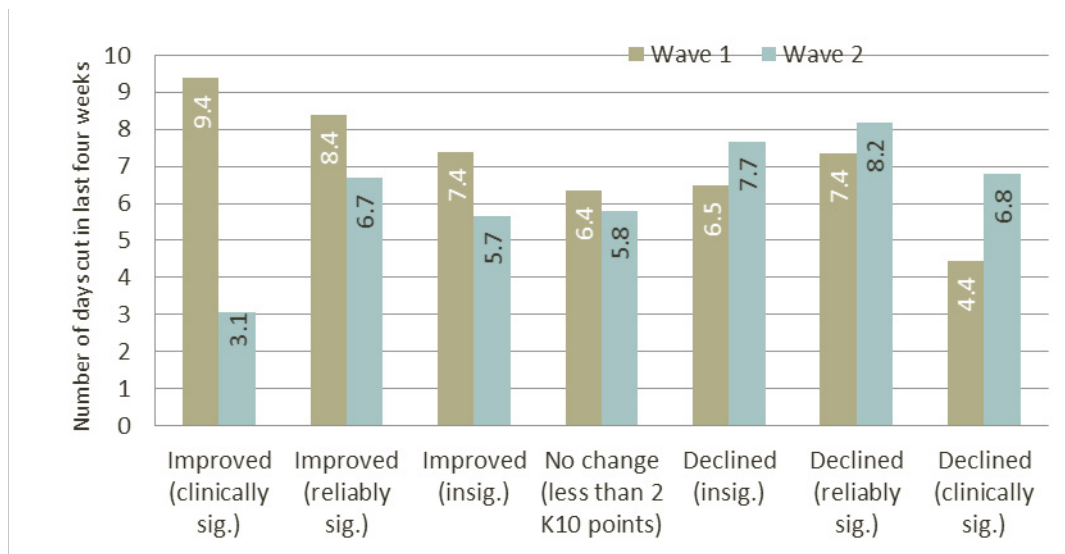
Note: Young people attending headspace were asked how many days in the last two weeks they were unable to carry out most of their usual activities at school, study, work or home. The available responses included 1. None; 2. 1-3 days; 3. 4-6 days; 4. 7-9 days; or 5. Most or all days. A midpoint was used to derive an average days lost measure. Cell sizes can be found in Appendix F.

Source: Authors' calculations from hCSA administrative data.

A similar pattern was evident for clients and the days cut back. headspace clients who improved clinically, when compared with a normative population, reported a reduction in the number of days cut back from 9.4 on average in each month to 3.1. Those who showed a reliably significant change also saw gains in economic participation – from 8.4 days reduced activity on average to 6.7. Young people who improved statistically insignificantly, and those with no change in their K10 score, also reported an increased ability to participate in daily activities. Young people that reported greater psychological distress over the period reported increases in the average number of days cut back. This number was highest on average for those young people whose mental health functioning, as indicated by the K10 score, declined significantly.

These results further demonstrate outcomes for young people and the importance of considering multiple outcome measures when assessing program effect.

**Figure 4.12 Number of days in last four weeks cut down due to psychological distress, by K10 change and OOS interval**



Note: Data for this analysis is sourced from the headspace intervention survey. Estimates of clinically significant change were tested for the survey data and were shown to align well with hCSA data. Information about the number of days cut back was specifically collected within the survey data and is not available in the hCSA dataset. Sample sizes can be found in Appendix F.

Source: Authors' calculations from hCSA administrative data.

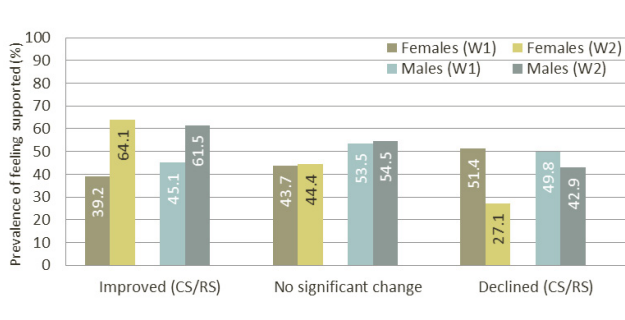
## Social inclusion

Social inclusion indicators show that young women and men who demonstrated a clinical or reliable improvement in psychological distress between waves 1 and 2 also reported improvement in how supported they felt and in their levels of socialisation with friends. In wave 1, 39.2% of young women who improved clinically or significantly reported feeling supported. By wave 2, this rate increased to over two-thirds. Young men experienced similar improvements in feeling supported. Those that experienced no significant change in their levels of psychological distress also reported no change in feeling supported. Young people with increased levels of stress also felt less supported; this was particularly the case for young women.

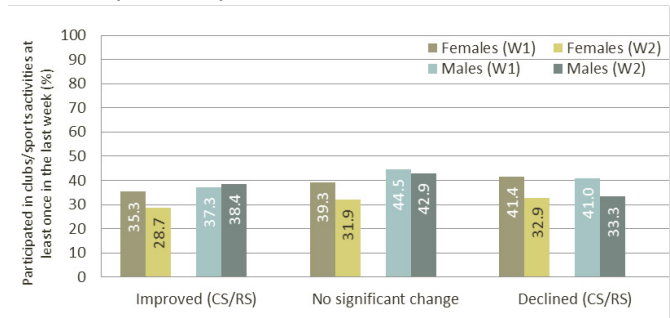
Findings for the relationship between changes in psychological distress and the level of socialising online are mixed. Groups with improved mental health functioning reported relatively little change in their online socialisation practices. Young men whose levels of distress fell over the course of their time in headspace also tended to show increased levels of online activity on average, from 62% to 71%. However, little change was observed among women whose psychological distress improved.

**Figure 4.13 Social inclusion indicators among headspace clients, by gender and intervention survey wave**

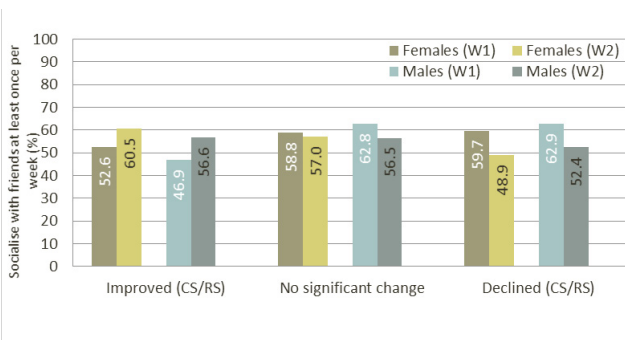
i. Feeling supported



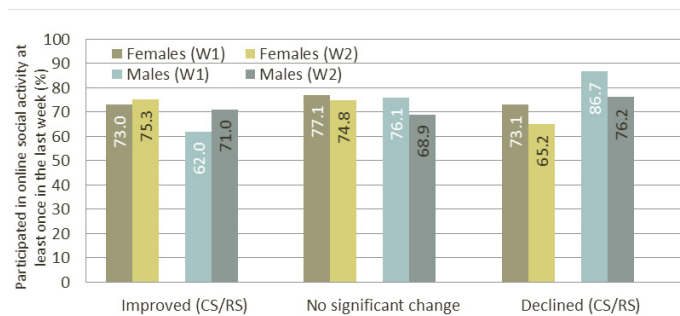
ii. Participate in sports/club activities



iii. Socialise with friends



iv. Socialise online



Notes: Calculations show the percentage of headspace clients (i) who responded “Most of the time” or “all of the time” when asked “Do you feel like there are people who are there for you”; or who (ii) participated club or social activities, (iii) socialized with friends, or (iv) engaged in online social activities more than once each week. The percentage of positive responses to each question were recorded for females and males, and for wave 1 (W1) and wave 2 (W2) of the intervention survey. Results are presented for those who improve significantly - Improved (CS/RS) – or declined significantly – Declined (CS/RS) – as well as for those who exhibited no significant change. Data for this analysis is sourced from the headspace intervention survey. Estimates of clinically significant change were tested for the survey data and were shown to align well with hCSA data. Information about self-harm was specifically collected within the survey data and is not available in the hCSA dataset. Sample sizes can be found in Appendix F. Source: Authors’ calculations from intervention survey data.

## Social and Occupational Functioning

The evaluation uses the Social and Occupational Functional Assessment Scale (SOFAS) to assess how young people’s physical impairment and mental health issues may be impacting on their functionality across a number of different areas (Pederson & Karterud, 2012; Romera et al., 2011). Functioning is measured on a scale from 1 (serious functional impairment) to 100 (optimal functioning) with scores of 80 and above representing normal functionality (Romera et al., 2011). Scores around 60 indicate a person may have moderate difficulty in functioning, while scores around 70 represent adequate functioning though with some difficulty (Chanen et al., 2007). SOFAS is scored by practitioners using the scale in Table 4.4.

Unlike the K10, which is recorded at a particular point of service by the young person, the SOFAS is recorded at almost all points of service by the service provider.



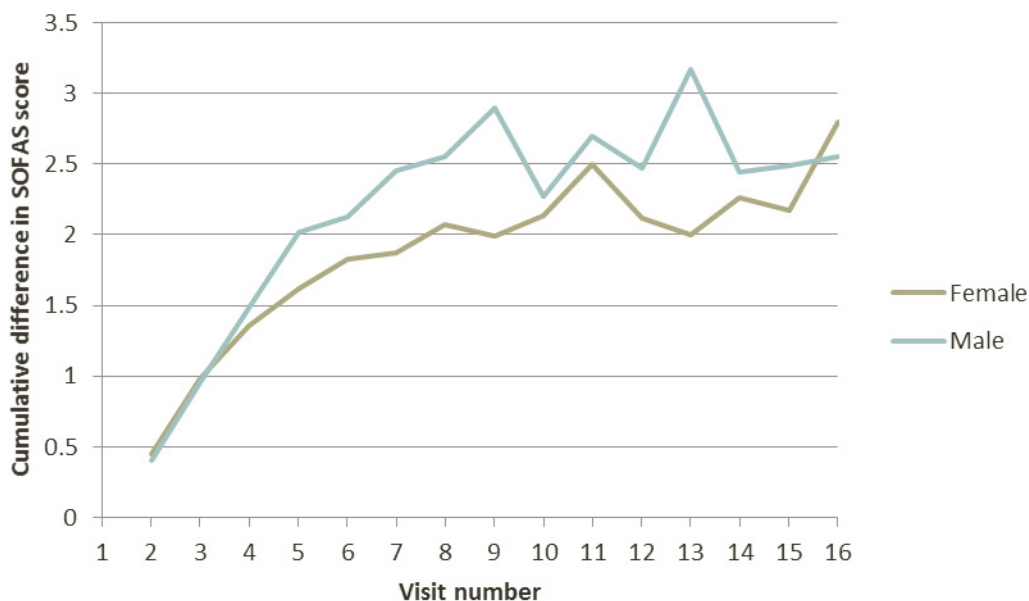
**Table 4.4 Social and Occupational Functional Assessment Scale scoring**

Practitioners enter a score on a scale of 1-100, as follows:

<b>91-100:</b>	Superior functioning in a wide range of activities
<b>81-90:</b>	Good functioning in all areas, occupational and socially effective
<b>71-80:</b>	No more than a slight impairment in social, occupational, or school functioning
<b>61-70:</b>	Some difficulty in social, occupational or school functioning
<b>51-60:</b>	Moderate difficulty in social, occupational or school functioning
<b>41-50:</b>	Serious impairment in social, occupational, or school functioning
<b>31-40:</b>	Major impairment in several areas such as work or school, family relations
<b>21-30:</b>	Inability to function in almost all areas
<b>11-20:</b>	Occasionally fails to maintain minimal personal hygiene.
<b>1-10:</b>	Persistent inability to maintain minimal personal hygiene
<b>0:</b>	Inadequate information

On average, young people's social and occupational functioning improved over time as they received headspace services. Functioning improved most within the first six occasions of service and continued to improve until it stabilised when young people reached around 15 occasions of service. SOFAS scores fluctuated thereafter. Males improved slightly more than females, but males started from a lower base (Figure 4.14).

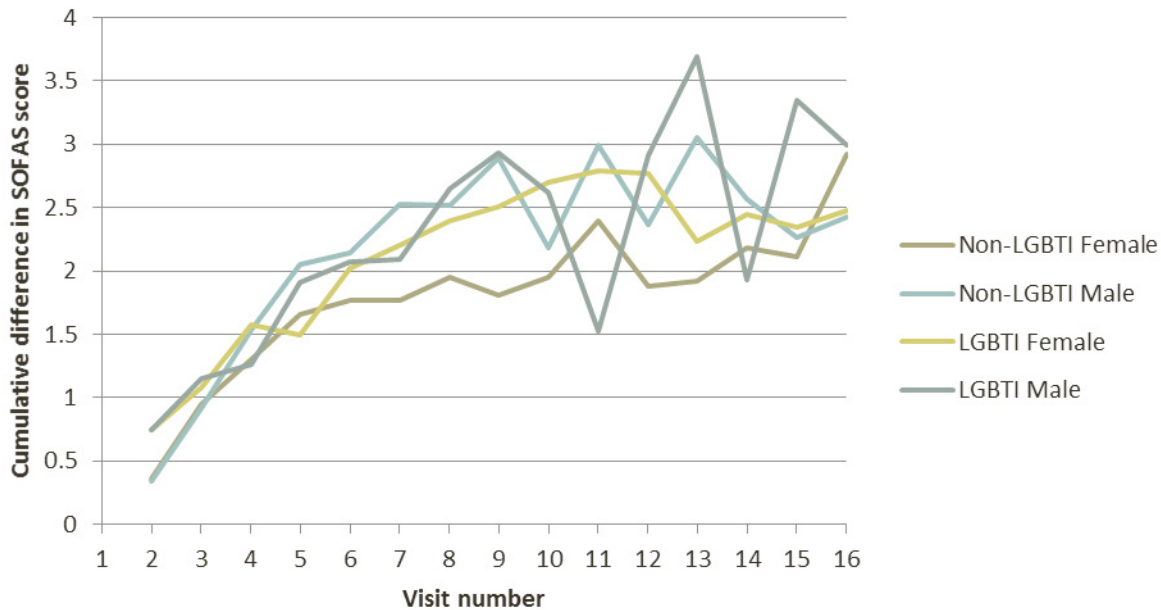
SOFAS scores for young people with different sexual identities increased steadily. Similar gains were found between heterosexual and LGBTI young people (males and females) until around 6 visits, after which functioning continued to improve but at varied rates (Figure 4.15). Non-LGBTI females had lower improvements in social functioning. This cohort was also more likely to record higher functioning levels at the beginning of treatment.

**Figure 4.14 Cumulative average of individual SOFAS changes by gender and total number of visits**

Note: SOFAS is generally reported by the service provider at each occasion of service. The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. Smaller numbers of clients are observed as the number of occasions of service increases. Cell sizes for these data can be found in Appendix F.

Source: Authors calculations from hCSA data.

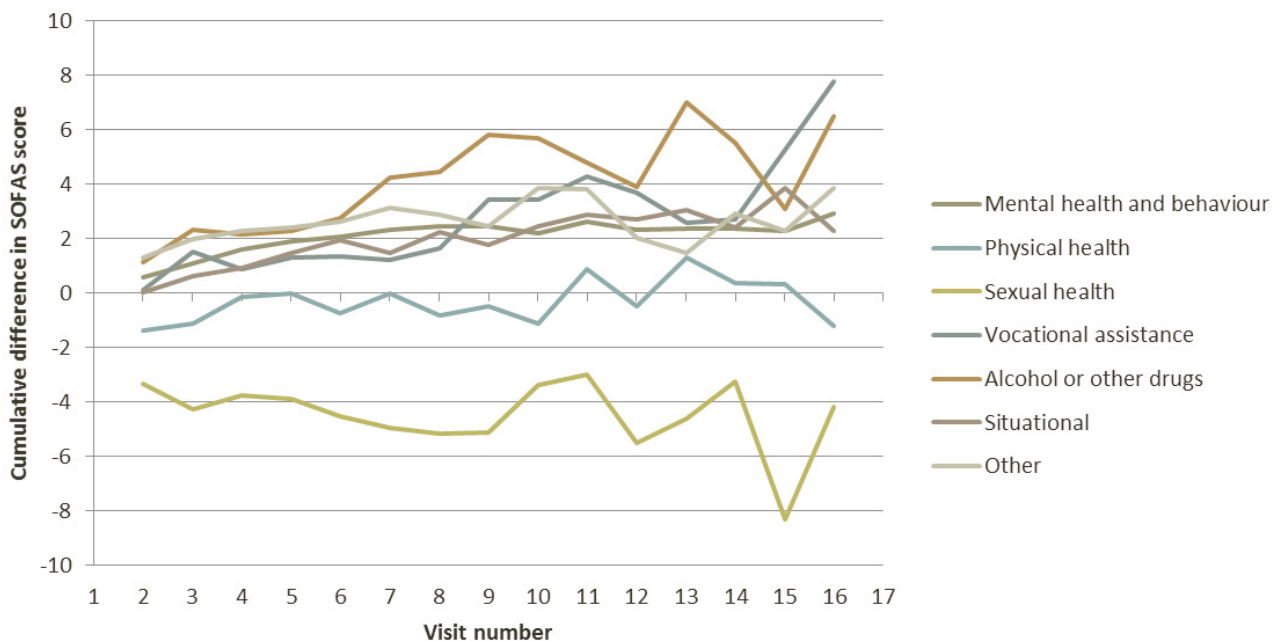
**Figure 4.15 Cumulative average of individual SOFAS differences by gender-sexuality and total number of visits**



Note: SOFAS is generally reported by the service provider at each occasion of service. The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. Smaller numbers of clients are observed as the number of occasions of service increases. Cell sizes for these data can be found in Appendix F. LGBTI include young persons who reported their gender as trans or intersex and their sexuality as lesbian, gay, bisexual, questioning and other. Not all young people reported their gender and sexuality within the hCSA data. Source: Authors calculations from hCSA data.

Young people's social and occupational functioning improved irrespective of young people's initial presenting problem, with the exception of young people presenting with sexual or physical health problems as their primary issue. As the sample sizes of young people presenting with sexual or physical health problems are low (3% and 1% respectively), further investigation of whether headspace is helping young people with sexual or physical health problems is needed.

**Figure 4.16 Cumulative average of change in individual SOFAS scores - by the primary issue at initial consultation and total number of visits**



Note: SOFAS is generally reported by the service provider at each occasion of service. The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. Smaller

numbers of clients are observed as the number of occasions of service increase. Smaller cell sizes are also present for clients presenting with certain primary issues, including vocational assistance and other. Cell sizes for these data can be found in Appendix F.

Source: Authors calculations from hCSA data.

## Changes in SOFAS classification bands

Between the first and third occasion of service, most young people's SOFAS classification remained stable (58.1%). Twenty-three per cent of young people experienced an improvement in the classification of their SOFAS within these three appointments. These increases in functioning were observed in the 61-80 (4.3%) and the 41-60 (16.7%) groups. However, 18.1% experienced deterioration. Moderate decreases in average functioning occurred in the 61-80 (12.3%) and 81-100 (4.7%) classification groups (Table 4.5).

**Table 4.5 Transition in SOFAS classification bands from the first (row) to the third occasion of service (column) (%)**

SOFAS at visit 1	SOFAS at visit 3					Total
	1-20	21-40	41-60	61-80	81-100	
	%	%	%	%	%	%
1-20	-	-	-	0.1	-	0.2
21-40	-	0.7	1.7	0.8	-	3.2
41-60	-	1.1	16.6	15.8	2.1	6.8
61-80	0.1	0.4	11.8	38.7	4.3	55.3
81-100	-	-	0.8	3.9	2.1	6.8
<b>Total</b>	0.2	2.3	30.9	59.2	7.4	100.0

Notes: Cells report percentages of young people who transition between bands of SOFAS score during the visit interval. Calculations are based on 23,577 young persons for whom scores are observed over the two visits in the interval. Cells that constitute less than 0.5% of the population are marked '-'. See Table 4.4 above for SOFAS classification definitions. Source: Authors calculations from hCSA data.

Changes in young people's classifications between the first and sixth occasion of service were similar, but slightly better than between the first and third occasion of service. Just over one in four young people (26.1%) had experienced a shift to a high classification of functioning (20.1% improved within the 41-60 classification and 4.8% within the 61-80 classification). Just over half (54.0%) of young people did not change their classification over this time while 17.7% of young people experienced a deterioration in their functional classification. This was mostly within the 61-80 (12.2%) and 81-100 (4.5%) brackets (Table 4.6).

**Table 4.6 Transition in SOFAS classification bands from the first (row) to the sixth occasion of service (column) (%)**

SOFAS at visit 1	SOFAS at visit 6					Total
	1-20	21-40	41-60	61-80	81-100	
	%	%	%	%	%	%
1-20	-	-	0.1	0.1	-	0.2
21-40	-	0.5	1.9	1.0	-	3.4
41-60	-	0.9	14.5	19.0	1.1	35.6
61-80	-	0.4	11.8	37.4	4.8	54.6
81-100	-	-	0.7	3.8	1.5	6.1
<b>Total</b>	0.1	1.9	29.0	61.5	7.5	100.0

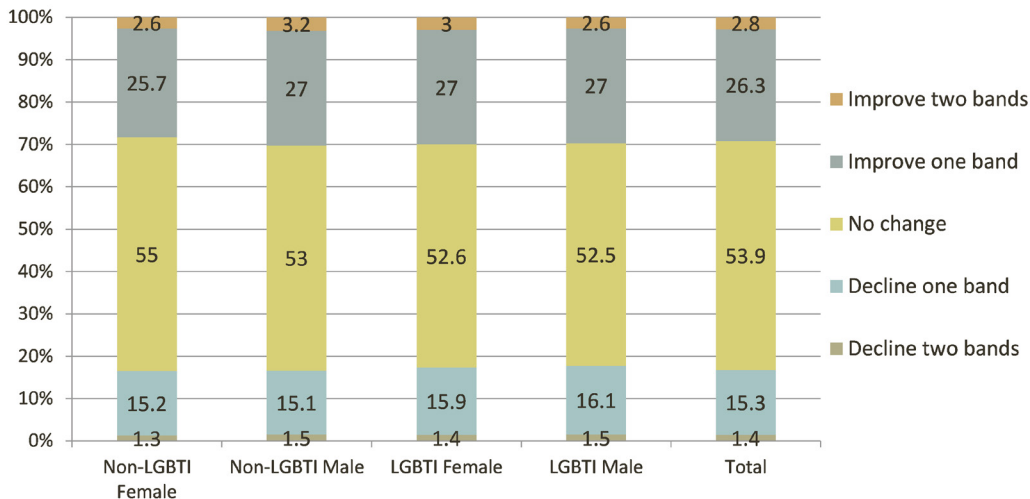
Notes: Cells report percentages of young people who transition between bands of SOFAS score during the visit interval. Calculations are based on 13,433 young persons for whom scores are observed over the two visits in the interval. Cells that constitute less than 0.5% of the population are marked '-'. See Table 4.4 above for SOFAS classification definitions. Source: Authors calculations from hCSA data.

Young people's changes in their SOFAS classification between their first and last visit at headspace were similar to both visits 1 and 3, and visits 1 and 6. Around half of young people (54%) recorded no change in their SOFAS classification between their first and last occasion of service at headspace.

Twenty-nine per cent improved in their functional classification and 16.6% declined. Where there were changes, young people mostly moved up or down one, rather than multiple, classification bands.

There were similar changes in SOFAS classification bands for young people by gender and sexuality. All groups display similar results: approximately 54% remained in the same functional classification, around 29% moved up and 17% moved down. However, heterosexual females were slightly less likely to experience a change and LGBTI males were slightly more likely to improve (Figure 4.17).

**Figure 4.17 Proportion of young people who transitioned in SOFAS classification bands from first to last occasion of service by gender-sexuality**

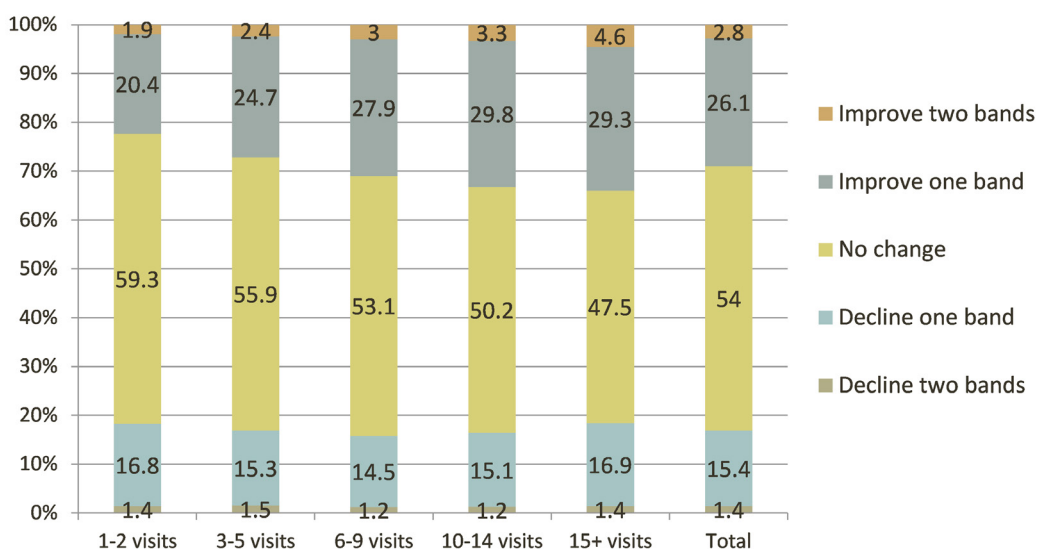


Notes: SOFAS is generally reported by the service provider at each occasion of service. The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. Smaller numbers of clients are observed as the number of occasions of service increases. Cell sizes for these data can be found in Appendix F. LGBTI include young persons who reported their gender as trans or intersex and their sexuality as lesbian, gay, bisexual, questioning and other. Not all young people record their gender and sexuality within the hCSA data. Cell per cent of 28,284 young persons.

Source: Authors calculations from hCSA data.

Improvements in functioning that resulted in a transition between SOFAS classifications were slightly more likely as the number of occasions of service increased (Figure 4.18).

**Figure 4.18 Proportion of young people who transitioned in SOFAS classification bands from first to last occasion of service by total number of visits**



Notes: SOFAS is generally reported by the service provider at each occasion of service. The data is right censored and some headspace clients may have had further treatment than what has been able to be observed within the data. Smaller numbers of clients are observed as the number of occasions of service increases. Cell sizes for these data can be found in Appendix F.

Source: Authors calculations from hCSA data.

## 4.2 How do the outcomes of young people using headspace services differ from the outcomes of young people not using headspace services?

Changes in young people's mental health, physical health, drug and alcohol use and social inclusion were assessed using data collected from the young peoples' surveys. Survey data was collected from a sample of headspace clients as well as two comparison groups: a sample of 12-17 year olds who participated in the Young Minds Matter study and a sample of 18-25 year olds sourced through a national online panel.

The analysis compares findings for three specific groups:

1. the 'headspace treatment' group: young people who received services from a headspace centre
2. the 'other treatment' group: young people who reported receiving mental health services, but said these were not from a headspace service
3. the 'no treatment' group: young people who reported receiving no mental health services from either headspace or another service.

The 'headspace treatment' group was recruited from headspace centres over a 6-month period: between 6 December 2013 to 6 June 2014. The 'no treatment group' was drawn from the comparison surveys and comprises of young people who have not sought any substantial headspace treatment and who also did not seek any treatment from any other health professionals between the two survey waves. The 'other treatment' group comprises of young people within the comparison surveys and includes all those who sought mental health support from a health professional other than headspace between Waves 1 and 2. The results presented below, first compare the 'headspace treatment' with the 'no treatment' group, and then the 'headspace treatment' with the 'other treatment' group.

Changes in various outcomes are compared over the two survey waves. Those who only responded to one wave were excluded from the analysis. Further, during preliminary analysis, steps were taken to match the headspace survey intervention group to administrative data (hCSA) in order to assess the timing of the survey collection against the period of treatment at a headspace centre. This process uncovered 340 observations (32.3%) of young people who had completed their headspace treatment prior to the wave 1 collection data. These observations were excluded from the analysis. Finally, young people within the comparison surveys that sought a substantive headspace treatment between Wave 1 and Wave 2 were also excluded from the analysis (n=90).

### Propensity Score Matching

A complexity of the DID methodology stems from the fact that those in the 'headspace treatment' group are often dissimilar in their observed and unobserved characteristics when compared to other young people within the comparison surveys. In order to mitigate these differences, a propensity score matching technique was applied to the datasets. It is, however, important to note the limitations of this technique, especially in accounting for unobserved differences between the groups.

### Results – headspace treatment compared with no treatment

This section reports the changes in a number of outcomes between the two survey waves for the matched 'headspace treatment' and 'no treatment' groups. Changes between waves 1 and 2, including effect size and difference-in-differences of those treated at headspace and those without treatment, are reported. The statistical reliability of these changes is also assessed given that the data operationalised is a survey sample.

## Psychological Distress

As shown in Table 4.7 below, the mean commencing K10 score was similar for the 'headspace treatment' group and the matched 'no treatment' group (28.7). A reduction in the average K10 score between Wave 1 and Wave 2 was observed for both groups. The mean K10 score for the 'headspace treatment' group decreased by 3 percentage points, while the mean score decreased by 1.6 percentage points for the matched 'no treatment' group – both changes are significant at the 1% level. The effect size of the change over time, as measured by Cohen's *d*, shows a bigger effect for the 'headspace treatment' group (-0.34) than that observed for the matched 'no treatment' group (-0.21).

The observed difference-in-differences shows that the 'headspace treatment' group had a 1.39 percentage points greater reduction in psychological distress when compared to the matched 'no treatment' group. This result is significant at the 5% level. The effect size of these differences is relatively weak, with Cohen's *d* = -0.16.

Turning to the distributional analysis (Table 4.7), a considerable proportion of young people in the 'headspace treatment' group transitioned to low or moderate K10 groups over the survey period. Young people in the low K10 classification increased by 6 percentage points and those in the moderate grouping by 9.2 percentage points. Both increases are highly statistically significant. A highly significant decrease in the proportion of young people in the very high K10 grouping was also observed. The matched 'no treatment' group recorded a statistically significant reduction in young people within the very high K10 classification between waves 1 and 2; however, this reduction was lower than that experienced by young people treated at headspace.

Difference-in-difference results show that three of the four K10 groupings demonstrated more improvement for young people treated at headspace compared with those with similar commencing K10 scores and distributions who had no treatment. These results are statistically significant at the 5% level. Effect sizes of these differences are weak, with Cohen's *d* = 0.12.

## Incapacity

The 'headspace treatment' group displayed a general reduction in incapacity as measured by the number of days out of role (DOR) and the days cut back (DCB) (Table 4.7). There was an average decrease in days out of role from 2.8 to 2.3 and days cut back from 7.9 to 5.9 for the 'headspace treatment' group between Waves 1 and 2. Both differences are significant at the 1% level. The matched 'no treatment' group also experienced a decrease in the days out of role between the two waves, from 2.8 to 2.6, which is significant at the 5% level. Days cut back increased slightly for this group; however, the result is not statistically significant. Effect sizes for the 'headspace treatment' group are larger than that observed for the 'no treatment' group for these indicators of incapacity caused by mental health issues.

The difference-in-difference results illustrate that the 'headspace treatment' group does slightly better in terms of the reduction of days out of role and days cut back when compared to the matched 'no treatment' group between the survey waves. These results are significant at the 1% level.

The distributional analysis of days out of role reveals an overall improvement, particularly in the proportion of young people who reported zero days incapacitated by mental health in the last 30 days. This effect is much stronger for the 'headspace treatment' group than the matched 'no treatment' group (Cohen's *d* = 0.37 and 0.18 respectively). Difference-in-difference results show that the 'headspace treatment' group increased reports of zero days out of role by 8.6 percentage points more than the group that received 'no treatment' over time. This result is statistically significant. A greater reduction in reports of between 15-28 days out of role was observed for the 'headspace treatment' group when compared to the 'no treatment' group – 4.84 percentage points. This result is also highly statistically reliable and the effect size is estimated at -0.18.

Days cut back show similar results, with greater improvements for the 'headspace treatment' group in this outcome indicator when compared with the matched 'no treatment' group. Of note, however, are the differences in the wave 1 distributions of each treatment group, indicating that the 'headspace treatment' group is likely to be experiencing more complex issues, even if the K10 measure is similar.

**Table 4.7 Changes in outcomes, 'headspace treatment' group and matched 'no treatment' group**

OUTCOMES	HS treatment (n=631)					Matched No treatment (n=631)					W1 diff (HS vs matched)					DIFF IN DIFF (W2 vs W1, HS vs matched)				
	W1	W2	Diff sig.	95% CI	Cohen's d	W1	W2	Diff sig.	95% CI	Cohen's d	Diff sig.	95% CI	Cohen's d	DID sig.	95% CI	Cohen's d	DID sig.	95% CI	Cohen's d	
K10 score	28.77	25.74	-3.03 ***	(-4.0, -2.1)	-0.34	28.72	27.08	-1.64 ***	(-2.5, -0.8)	-0.21	+0.05	(-0.9, +1.0)	0.01	-1.39 **	(-2.4, -0.4)	-0.16	+4.12 **	(+0.3, +7.9)	0.12	
Days out of role (DOR)	2.86	2.32	-0.54 ***	(-0.7, -0.4)	-0.36	2.81	2.61	-0.21 **	(-0.4, -0.0)	-0.14	+0.05	(-0.1, +0.2)	0.03	+5.86 **	(+0.6, +11.1)	0.12	+2.54 **	(-0.3, +5.5)	0.10	
Days cut back (DCB)	7.93	5.96	-1.97 ***	(-2.7, -1.2)	-0.30	5.46	5.85	+0.38	(-0.3, +1.0)	0.07	+2.47 ***	(+1.8, +3.2)	0.36	-3.33	(-10.2, +3.5)	-0.05	-1.27	(-5.1, +2.6)	-0.04	
Feelings of inclusion	42.0%	47.4%	+5.45	(-0.1, +11.0)	0.11	54.0%	60.2%	+6.18 **	(+0.7, +11.6)	0.13	-12.07 ***	(-17.6, -6.6)	-0.24	-1.43	(-6.4, +3.5)	-0.03	-6.49 **	(-12.5, -0.5)	-0.12	
Physical health problems	27.9%	26.8%	-1.05	(-5.3, +3.2)	-0.02	26.8%	28.3%	+1.52	(-2.6, +5.6)	0.03	+1.07	(-3.7, +5.8)	0.01	+0.16	(-5.4, +5.7)	0.01	-0.15	(-5.0, +3.4)	0.01	
Alcohol binge days	1.45	1.69	+0.24	(-0.0, +0.5)	0.08	1.46	0.99	-0.46 ***	(-0.8, -0.2)	-0.15	-1.00	(-0.4, +0.4)	-0.01	+0.35	(-3.9, +4.6)	0.01	-4.84 ***	(-7.9, -1.8)	-0.18	
Cannabis use	14.8%	17.0%	+2.28	(-0.3, +4.9)	0.07	14.5%	14.5%	0.00	(-2.6, +2.6)	0.00	+0.27	(-3.9, +4.4)	0.01	+8.58 **	(+2.4, +14.7)	0.16	+15.07 ***	(+9.4, +20.8)	0.30	
<b>DISTRIBUTION OF OUTCOMES</b>	<b>HS treatment (n=631)</b>					<b>Matched No treatment (n=631)</b>					<b>W1 diff (HS vs matched)</b>					<b>DIFF IN DIFF (W2 vs W1, HS vs matched)</b>				
<b>K10 group</b>	<b>W1</b>	<b>W2</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>W1</b>	<b>W2</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>DID sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>DID sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	
Low	8.2%	14.3%	+6.0 ***	(+5.0, +9.5)	0.19	5.7%	7.6%	+1.9	(-0.9, +4.7)	0.08	+2.54 **	(-0.3, +5.5)	0.10	+8.58 **	(+2.4, +14.7)	0.16	+15.07 ***	(+9.4, +20.8)	0.30	
Moderate	13.5%	22.7%	+9.2 ***	(+2.6, +16.0)	0.24	14.7%	18.1%	+3.3	(-0.8, +7.4)	0.09	-1.27	(-5.1, +2.6)	-0.04	+2.54	(-3.8, +8.9)	0.04	+5.56	(-0.7, +11.8)	0.07	
High	27.1%	27.7%	+0.6	(-4.3, +5.6)	0.01	28.5%	32.5%	+4.0	(-1.1, +9.0)	0.09	-1.43	(-6.4, +3.5)	-0.03	-3.33	(-10.2, +3.5)	-0.05	-1.27	(-5.1, +2.6)	-0.04	
Very High	51.2%	35.3%	-15.8 ***	(-21.3, -10.4)	-0.32	51.0%	41.8%	-9.2 ***	(-14.7, -3.7)	-0.18	+0.16	(-5.4, +5.7)	0.01	-6.66 **	(-13.1, -0.2)	-0.11	-6.49 **	(-12.5, -0.5)	-0.12	
<b>Days out of role</b>	<b>W1</b>	<b>W2</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>W1</b>	<b>W2</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>DID sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>DID sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	
0 days	23.5%	40.3%	+16.8 ***	(+11.6, +22.0)	0.37	24.4%	32.6%	+8.2 ***	(+3.1, +13.3)	0.18	-0.83	(-5.6, +3.9)	-0.02	+8.58 **	(+2.4, +14.7)	0.16	+15.07 ***	(+9.4, +20.8)	0.30	
1-2 days	22.2%	24.4%	+2.2	(-2.6, +7.0)	0.05	21.7%	21.4%	-0.3	(-5.0, +4.3)	-0.01	+0.50	(-4.0, +5.0)	0.02	+2.54	(-3.8, +8.9)	0.04	+5.56	(-0.7, +11.8)	0.07	
3-4 days	21.5%	13.0%	-8.5 ***	(-12.8, -4.2)	-0.23	21.4%	19.4%	-2.0	(-6.6, +2.6)	-0.05	+0.17	(-4.3, +4.6)	0	-6.49 **	(-12.5, -0.5)	-0.12	-6.49 **	(-12.5, -0.5)	-0.12	
5-9 days	17.0%	11.0%	-6.0 ***	(-9.9, -2.1)	-0.17	17.9%	12.0%	-5.8 ***	(-9.9, -1.8)	-0.16	-0.83	(-5.0, +3.4)	0.01	-0.15	(-5.5, +5.2)	0	-0.15	(-5.5, +5.2)	0	
10-14 days	8.7%	7.7%	-1.0	(-4.1, +2.1)	-0.04	10.2%	8.8%	-1.3	(-4.7, +2.0)	-0.05	-1.50	(-4.8, +1.8)	-0.07	+0.35	(-3.9, +4.6)	0.01	+0.35	(-3.9, +4.6)	0.01	
15-28 days	7.0%	3.5%	-3.5 **	(-6.0, -1.0)	-0.15	4.5%	5.8%	+1.3	(-1.2, +3.8)	0.06	+2.50 **	(-0.1, +5.1)	0.10	-4.84 ***	(-7.9, -1.8)	-0.18	-4.84 ***	(-7.9, -1.8)	-0.18	
<b>Days cut back</b>	<b>W1</b>	<b>W2</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>W1</b>	<b>W2</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>DID sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>DID sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	
0 days	10.9%	23.0%	+12.1 ***	(+7.7, +16.4)	0.33	20.6%	17.6%	-3.0	(-7.6, +1.5)	-0.08	-9.67 ***	(-13.8, -5.5)	-0.25	+15.07 ***	(+9.4, +20.8)	0.30	+15.07 ***	(+9.4, +20.8)	0.30	
1-2 days	13.0%	18.8%	+5.7 **	(+1.4, +10.0)	0.16	17.9%	18.1%	+0.2	(-4.3, +4.6)	0.01	-4.87 **	(-9.0, -0.8)	-0.10	+5.56	(-0.7, +11.8)	0.07	+5.56	(-0.7, +11.8)	0.07	
3-4 days	20.2%	19.3%	-0.9	(-5.6, +3.8)	0.02	23.9%	20.8%	-3.1	(-7.9, +1.7)	-0.07	-3.76	(-8.4, +0.9)	-0.06	+2.24	(-4.2, +8.7)	0.04	+2.24	(-4.2, +8.7)	0.04	
5-9 days	23.2%	17.3%	-5.9 **	(-10.6, -1.2)	-0.15	16.8%	25.1%	+8.3 ***	(+3.6, +13.0)	0.20	+6.37 **	(+1.9, +10.9)	0.10	-14.20 ***	(-20.5, -7.9)	-0.24	-14.20 ***	(-20.5, -7.9)	-0.24	
10-14 days	18.0%	10.6%	-7.5 ***	(-11.6, -3.4)	-0.21	15.4%	10.8%	-4.6 **	(-8.5, -0.7)	-0.14	+2.61	(-1.6, +6.8)	0.08	-2.89	(-8.3, +2.5)	-0.08	-2.89	(-8.3, +2.5)	-0.08	
15-28 days	14.6%	11.1%	-3.5	(-7.5, +0.4)	-0.15	5.3%	7.6%	+2.3	(-0.6, +5.1)	0.09	+9.32 ***	(+5.8, +12.8)	0.27	-5.79 **	(-10.3, -1.2)	-0.11	-5.79 **	(-10.3, -1.2)	-0.11	

Note: Average changes in outcomes are presented for those observations that are present in both waves, have K10 observations in both waves, and have a propensity-score match from the 'no treatment' comparison group. Total sample will vary for each indicator due to non-responses. N=631 represents young people who met the criteria for inclusion in treatment groups and were able to be matched according to the propensity score matching technique described in Appendix C. Significance at the 1% and 5% levels are denoted by \*\*\* and \*\* respectively.

Source: Authors calculations from headspace evaluation survey data.

## Social inclusion

Social relationships, or social inclusion, are recognised as having a number of factors that benefit psychological health. While social support is recognised as providing companionship, it can also provide emotional sustenance and act as a buffer to stress by assisting with coping mechanisms. These factors can combine to act as protective factors against psychological distress (Thoits, 2011).

Changes in the degree to which young people felt they were socially supported were compared over time. The 'headspace treatment' group had lower proportions of young people who reported feeling that people were there for them either all or most of the time when compared with the matched 'no treatment' group at Wave 1 (42% compared to 54% of young people felt supported). These differences are highly statistically significant and illustrate the differences that remain between the two groups after propensity score matching.

Both the 'headspace treatment' group and the matched 'no treatment' group reported an increase in feelings of inclusion between Waves 1 and 2 (5.5 and 6.2 percentage points respectively). These changes were not significant for the 'headspace treatment' group but were significant at the 5% level for the matched 'no treatment' group. No significant differences were observed between the two groups.

## The impact of physical health problems on psychological distress

The matched groups were used to compare the proportion of young people who felt that physical health problems were a cause of psychological distress. The 'headspace treatment' group experienced a slight decline in the proportion of young people citing physical health being a cause of psychological distress, and the matched 'no treatment' group a slight increase, although neither result is statistically reliable. No significant differences exist between the two groups at Wave 1, and no significant differences between the groups can be observed over time.

## Drug and alcohol use

Analysis was undertaken to assess two outcomes related to drug and alcohol use: binge drinking and cannabis use. For young people within the 'headspace treatment' group, the average number of days binge drinking in the last 30 days changed from 1.5 to 1.7 between the two survey waves; however, this result was not significant at the 1% or 5% level. The matched group that received 'no treatment' experienced a decrease in binge drinking, from 1.5 to just under 1 day on average each month. This decrease is statistically significant ( $p < 0.001$ ). No significant differences exist between the wave 1 values for each group; however, the difference-in-differences observed over time are significant at the 1% level, with the 'no treatment' group reducing binge drinking by 0.7 days more than the 'headspace treatment' group.

Cannabis use was similar for both the headspace and matched 'no treatment' group at wave 1, with 14.8% and 14.5% of young people having used cannabis in the past 30 days. Cannabis use for the 'headspace treatment' group was 14.8% at Wave 1 and 17.0% at wave 2; however this difference was not significant at the 1% or 5% level. No change was observed for the matched 'no treatment' group, and there are no statistically significant differences between the groups at wave 1 or within the differences.

## Results – headspace compared with other treatment

This section reports changes in a number of outcomes between the two survey waves for the matched 'headspace treatment' group and young people who received other treatment (that is, a non-headspace mental health treatment). Changes between waves 1 and 2, including statistical reliability, effect size and difference-in-differences are reported.

### Psychological Distress

The mean psychological distress score (captured by K10) was similar for both the 'headspace treatment' group and the matched 'other treatment' group at wave 1 (28.7), as was the case with the 'no treatment' group (Table 4.8). A reduction in the average K10 score between Wave 1 and Wave 2 was observed for both groups. The mean K10 score for the 'headspace treatment' group decreased



by three percentage points, and 2.1 percentage points for the matched 'other treatment' group. Both changes are significant at the 1% level, and the effect size of the change over time within each group, as measured by Cohen's *d*, shows a bigger effect for the 'headspace treatment' group (-0.34) than that observed for the matched 'other treatment' group (-0.24). These results were similar to the comparison between the 'headspace treatment' and the 'no treatment' group; however, a greater reduction in psychological distress occurred for young people who received headspace treatment.

The difference-in-difference results demonstrate that the 'headspace treatment' group had a greater reduction in psychological distress over time when compared to the matched 'other treatment' group - 0.96 percentage points. This result is significant at the 5% level. The effect size of these differences is relatively weak with Cohen's *d* = -0.11.

The distributional analysis shows an increase in the proportion of young people in both the 'headspace treatment' group and matched 'other treatment' group in the low and moderate K10 groups over the period, and a corresponding decrease in the very high K10 group. All changes are highly statistically significant. Difference-in-difference results show that only one of the four K10 groupings reveals a stronger improvement for young people treated at headspace compared with those that received another mental health treatment. The proportion of the 'headspace treatment' group with high levels of distress decreased 5.4 percentage points more than the 'other treatment' group. This result is statistically significant at the 10% level and the effect size is -0.09.

### Incapacity

A reduction in incapacity, as measured by days out of role and days cut back occurred for both the 'headspace treatment' group and the matched 'other treatment' group (Table 4.8). The 'headspace treatment' group had an average decrease in days out of role from 2.9 to 2.4, and days cut back from 8.2 to 6.0 between Waves 1 and 2. Both differences are significant at the 1% level. The matched 'other treatment' group also experienced a decrease in the average days out of role (0.21, 5% significance) and days cut back; however, the decrease was smaller and insignificant for the days cut back indicator. Effect sizes for the 'headspace treatment' group were larger than for the 'other treatment' group.

The difference-in-difference results for these outcome indicators illustrate that the 'headspace treatment' group did slightly better in terms of the reduction of days out of role and days cut back when compared to the matched group of young people that received an alternative mental health treatment between the survey waves. The difference-in-differences for days out of role is -0.34 percentage points greater for the 'headspace treatment' group and -2.01 greater for this group when assessing days cut back. Both results are significant at the 1% level; however, the commencing wave 1 differences for days cut back need to be considered when interpreting these results.

The distribution results of changes in days out of role and days cut back are similar to that observed between the 'headspace treatment' and 'no treatment' group. An overall improvement in days out of role, particularly in the proportion of young people that report zero days incapacitated by mental health in the last 30 days was observed. This effect is much stronger for the 'headspace treatment' group than the matched 'other treatment' group (Cohen's *d* = 0.35 and 0.19 respectively). Difference-in-difference results show that the 'headspace treatment' group increased reports of zero days out of role by 7.8 percentage points more than the group that received 'other treatment'. This result is statistically significant at the 5% level. A greater reduction in reports of between 15-28 days out of role is observed for the 'headspace treatment' group when compared to the 'no treatment' group - 4.3 percentage points. This result is also statistically reliable and the effect size is estimated at -0.15.

Days cut back show similar results, with greater improvements for the 'headspace treatment' group when compared with the matched 'other treatment' group. As with the above analysis, clear differences in the wave 1 distributions of each treatment group exist, again indicating that the 'headspace treatment' group is likely to be experiencing more complex issues in relation to mental health, even with similar K10 distributions.

**Table 4.8 Changes in outcomes, ‘headspace treatment’ and matched ‘other treatment’ groups**

OUTCOMES	HS treatment (n=631)					Matched other treatment (n=631)					W1 diff (HS vs matched)					DIFF IN DIFF (W2 vs W1, HS vs matched)				
	W1	W2	Diff	sig.	95% CI	Cohen's d	W1	W2	Diff	sig.	95% CI	Cohen's d	Diff	sig.	95% CI	Cohen's d	DID	sig.	95% CI	Cohen's d
K10 score	28.77	25.74	-3.03	***	(-4.0, -2.1)	-0.34	28.74	26.66	-2.07	***	(-3.0, -1.2)	-0.26	+0.03		(-0.9, +0.9)	0.01	-0.96	**	(-1.9, +0.0)	-0.11
Days out of role	2.91	2.36	-0.55	***	(-0.7, -0.4)	-0.37	2.89	2.67	-0.21	**	(-0.4, -0.0)	-0.14	+0.03		(-0.1, +0.2)	0.01	-0.34	***	(-0.5, -0.2)	-0.21
Days cut back	8.21	6.02	-2.19	***	(-3.0, -1.4)	-0.34	5.99	5.81	-0.18		(-0.9, +0.5)	-0.03	+2.22	***	(+1.5, +2.9)	0.30	-2.01	***	(-2.9, -1.1)	-0.27
Feelings of inclusion	42.0%	47.4%	+5.45		(-0.1, +11.0)	0.11	52.8%	63.4%	+10.62	***	(+5.2, +16.0)	0.22	-10.80	***	(-16.3, -5.3)	-0.22	-5.17		(-10.9, +0.5)	-0.10
Physical health problems	27.9%	26.8%	-1.05		(-5.3, +3.2)	-0.02	30.4%	30.9%	+0.51		(-3.5, +4.5)	0.01	-2.47		(-7.3, +2.4)	-0.07	-1.56		(-7.7, +4.5)	-0.03
Alcohol binge days	1.45	1.69	+0.24		(-0.0, +0.5)	0.08	1.41	0.89	-0.52	***	(-0.8, -0.2)	-0.18	+0.04		(-0.3, +0.4)	0.01	+0.75	***	(+0.4, +1.1)	0.23
Cannabis use	14.8%	17.0%	+2.28		(-0.3, +4.9)	0.07	17.3%	15.6%	-1.73		(-4.4, +0.9)	-0.05	-2.58		(-6.7, +1.5)	-0.02	+4.02		(-0.5, +8.5)	0.03
<b>DISTRIBUTION OF OUTCOMES</b>																				
<b>HS treatment (n=631)</b>																				
<b>K10 group</b>	<b>W1</b>	<b>W2</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>W1</b>	<b>W2</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>
Low	8.2%	14.3%	+6.0	***	(+2.5, +9.5)	0.19	5.4%	8.9%	+3.5	**	(+0.6, +6.3)	0.13	+2.85	**	(+0.1, +5.6)	0.11	+2.54		(-1.1, +6.2)	0.07
Moderate	13.5%	22.7%	+9.2	***	(+5.0, +13.4)	0.24	15.4%	21.9%	+6.5	***	(+2.2, +10.8)	0.17	-1.90		(-5.8, +2.0)	-0.05	+2.69		(-2.7, +8.1)	0.05
High	27.1%	27.7%	+0.6		(-4.3, +5.6)	0.01	29.5%	30.0%	+0.5		(-4.6, +5.5)	0.01	-2.38		(-7.4, +2.6)	-0.05	+0.16		(-6.6, +6.9)	0
Very High	51.2%	35.3%	-15.8	***	(-21.3, -10.4)	-0.32	49.8%	39.3%	-10.5	***	(-15.9, -5.0)	-0.21	+1.43		(-4.1, +7.0)	0.03	-5.39		(-11.8, +1.0)	-0.09
<b>Days out of role</b>	<b>W1</b>	<b>W2</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>W1</b>	<b>W2</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>
0 days	22.8%	38.8%	+16.0	***	(+10.8, +21.2)	0.35	22.4%	30.7%	+8.2	**	(+3.2, +13.3)	0.19	+0.34		(-4.4, +5.1)	0	+7.77	**	(+1.8, +13.7)	0.15
1-2 days	21.4%	24.9%	+3.5		(-1.4, +8.3)	0.08	22.1%	24.1%	+2.1		(-2.8, +6.9)	0.05	-0.68		(-5.2, +3.9)	0.02	+1.41		(-5.1, +7.9)	0.02
3-4 days	21.7%	13.2%	-8.5	***	(-12.9, -4.2)	-0.23	21.9%	16.3%	-5.7	**	(-10.2, -1.1)	-0.14	-0.17		(-4.6, +4.3)	0	-2.89		(-8.8, +3.1)	-0.06
5-9 days	17.5%	11.5%	-6.0	***	(-10.0, -1.9)	-0.17	17.8%	11.8%	-6.0	***	(-10.1, -1.9)	-0.17	-0.34		(-4.5, +3.8)	-0.02	+0.02		(-5.4, +5.5)	0
10-14 days	9.1%	8.1%	-1.0		(-4.2, +2.2)	-0.04	9.4%	10.4%	+1.0		(-2.4, +4.5)	0.03	-0.34		(-3.6, +2.9)	-0.04	-2.04		(-6.5, +2.4)	-0.05
15-28 days	7.5%	3.6%	-3.9	***	(-6.6, -1.3)	-0.17	6.3%	6.7%	+0.3		(-2.5, +3.2)	0.01	+1.20		(-1.6, +4.0)	0.04	-4.27	**	(-7.6, -0.9)	-0.15
<b>Days cut</b>	<b>W1</b>	<b>W2</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>W1</b>	<b>W2</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>	<b>Diff</b>	<b>sig.</b>	<b>95% CI</b>	<b>Cohen's d</b>
0 days	9.9%	21.7%	+11.8	***	(+7.5, +16.1)	0.33	17.0%	18.4%	+1.4		(-3.1, +5.9)	0.04	-7.11	***	(-11.1, -3.2)	-0.17	+10.42	***	(+4.8, +16.0)	0.23
1-2 days	12.8%	18.5%	+5.7	**	(+1.4, +10.0)	0.16	19.5%	17.0%	-2.6		(-7.1, +2.0)	-0.07	-6.71	***	(-10.9, -2.5)	-0.17	+8.25	**	(+2.1, +14.4)	0.14
3-4 days	20.1%	20.6%	+0.4		(-4.4, +5.2)	0.01	24.8%	22.4%	-2.3		(-7.3, +2.6)	-0.05	-4.63		(-9.3, +0.0)	-0.07	+2.75		(-3.7, +9.2)	0.05
5-9 days	22.5%	17.6%	-5.0	**	(-9.7, -0.2)	-0.12	16.6%	25.4%	+8.8	***	(+4.1, +13.6)	0.22	+5.89	**	(+1.4, +10.4)	0.13	-13.76	***	(-20.7, -7.5)	-0.23
10-14 days	18.9%	10.7%	-8.2	***	(-12.4, -4.0)	-0.23	13.2%	8.1%	-5.1	**	(-8.7, -1.5)	-0.16	+5.66	**	(+1.6, +9.7)	0.13	-3.14		(-8.5, +2.2)	-0.08
15-28 days	15.8%	11.0%	-4.7	**	(-8.8, -0.7)	-0.14	8.9%	8.7%	-0.2		(-3.5, +3.1)	0.01	+6.89	***	(+3.2, +10.6)	0.18	-4.52		(-9.5, +0.5)	-0.12

Note: Average changes in outcomes are presented for those observations that are present in both waves, and have a propensity-score match from the other treatment comparison group. Total sample will vary for each indicator due to non-responses. N=631 represents young people who met the criteria for inclusion in treatment groups and were able to be matched according to the propensity score matching technique described in Appendix C. Significance at the 1% and 5% levels are denoted by \*\*\* and \*\* respectively.

Source: Authors calculations from headspace evaluation survey data.

## Social inclusion

As with the previous comparison, the 'headspace treatment' group had much lower proportions of young people feeling included at Wave 1 when compared with the matched 'other treatment' group at the same reference point (42% compared to 53% of young people felt supported). The differences between the Wave 1 reference points are highly statistically significant ( $p < 0.001$ ), and again illustrate the differences that remain between the two groups after propensity score matching.

Both the 'headspace treatment' group and the matched 'other treatment' group were more likely to report feeling included at Wave 2 – an increase of 5.5 and 10.6 percentage points respectively. These changes are significant at the 5% level for the 'headspace treatment' group and at the 1% level for the matched 'other treatment' group. The difference-in-differences show a greater increase in the 'other treatment' group in terms of their feelings of inclusion over time; however, as the commencing values are statistically different between the two groups, the result is inconclusive.

## The impact of physical health problems on psychological distress

No significant differences were found between waves 1 and 2 in the proportion of young people who felt that physical health issues were a cause of psychological distress for the 'headspace' or the 'other treatment' group (Table 4.8). Further, no significant differences were observed between the two groups and no significant difference-in-differences were seen. These results are consistent with those observed for comparisons between the 'headspace treatment' group and the 'no treatment' group.

## Drug and alcohol use

Consistent with the matched 'no treatment' group, the matched 'other treatment' group reported a decrease in binge drinking, from 1.4 to under 1 day on average each month. This decrease was statistically significant ( $p < 0.001$ ). No significant differences exist between the wave 1 values for each group. However, the difference-in-differences observed over time for each group was significant at the 1% level, with the 'other treatment' group reducing binge drinking by 0.75 days more than the 'headspace treatment' group.

The matched 'other treatment' group had slightly higher reported cannabis use than the 'headspace treatment' group at wave 1 – 17.3% compared to 14.8% respectively; however, these differences were not statistically significant. No significant change is observed for the matched 'other treatment' group, and there are no significant difference-in-differences between the groups over time.

## Summary

This analysis has sought to provide evidence to assess the changes in young people's mental health, physical health, drug and alcohol use and social inclusion outcomes after using headspace services. It has also sought to compare these changes to other groups of young people that are not using headspace services.

A difference-in-difference approach was undertaken using a matched group of young people that either sought some other form of mental health treatment between the two survey periods (the 'other treatment' group) or did not seek any other treatment (the 'no treatment' group). Propensity score matching was used to try and identify a similar sample of young people to those that were treated at headspace. Statistical reliability and effect size of the results are estimated.

Results suggest improvements in mental health outcomes among young people using headspace services relative to young people not receiving treatment or young people receiving treatment elsewhere. Changes recorded over time in measures of psychological distress and incapacity due to psychological distress point out the efficacy of the headspace treatment relative to its absence as well as to alternative form of treatments. The effect of the headspace treatment is larger when compared to matched young people that did not seek any treatment between the survey waves and those that sought treatment elsewhere. The 'headspace treatment' group reveals a greater reduction in psychological distress (K10) when compared with both groups over time, with both results statistically significant. The effect size for this outcome indicator may be considered relatively small (-0.11 for difference-in-difference in 'no treatment' and -0.16 for difference-in-difference for 'other

treatment’); however, as outlined above, classifying the magnitude of the strength of an effect size should be undertaken with caution (see for example Baguley 2009).

Noting the limitations that exist within the propensity score matching, outcomes for other indicators are not as strong for the ‘headspace treatment’ group. While there was an overall statistically significant improvement in feeling socially included for the ‘headspace treatment’ group, they did not experience as large an increase when compared to matched ‘other’ and ‘no treatment’ groups. No results for physical health as a cause of mental health are statistically significant.

### 4.3 According to clients, service providers and parents/carers, how and why has headspace contributed to/not contributed to changes in client outcomes (across four outcomes areas)?

#### Mental health

The statistical analysis conducted for the evaluation demonstrates that a greater proportion of young people showed clinically and reliably significant improvement in mental health functioning than those that showed deterioration in functioning. Moreover, the survey data analysis makes clear the effectiveness of headspace, as the sample of headspace clients showed greater improvement in mental health outcomes than young people receiving no treatment and alternative forms of treatment. While the task of attributing these results to headspace service provision has been a methodologically complex and contested issue during the course of the evaluation, most of the stakeholders that spoke of young people’s positive change had no hesitation in attributing results to headspace.

The story is not so explicit in relation to other outcome areas examined for the evaluation. The data does not show consistent patterns of improvement in measures of physical health, drug and alcohol use and social inclusion. The qualitative findings are relatively consistent with this story; however, they remind us that there is often an intersection between mental health and other outcome areas. Poor mental health is linked to a range of negative outcomes including poorer physical health, greater likelihood of substance abuse, lower educational achievement, social isolation and reduced quality of life (World Health Organisation, 2011). This intersection is evidenced within the data.

hCSA data shows that 74% of young people accessed headspace with mental health problems as their primary presenting issue. Interviews with young people (n=50) indicated that the overwhelming majority felt that attending headspace had led to improvements in their mental health. This is supported by findings from the Survey of headspace Centre Managers, where 24 of the 29 survey respondents rated headspace services as ‘very effective’ in improving clients’ mental health. The remaining 5 respondents rated their centres’ services as ‘somewhat effective’ in improving clients’ mental health.

The positive outcomes described by young people included experiencing none or fewer depressive episodes, improved self-confidence, a change in attitude/perspective, decreased suicidal ideation and fewer instances of self-harm, and an increased ability to regulate emotions and better manage mental health symptoms.

Many young people spoke about how headspace had helped them to reduce or eliminate depressive symptoms that first caused them to seek support from headspace.

I’m not the same person as I was when I first came here and I was more depressed and stuff like that, and after coming here for a year and a half or something, I’m more happy and I can walk in here now with a smile on my face rather than just being upset. (Female, 17 years)

They helped me a lot... I don’t think I would have been able to get through last year without them. I was that bad that I wouldn’t even move off my bedroom floor to get up on my bed and go to sleep, I just laid there. (Female, 15 years)

A 25-year-old male described how he had started attending headspace because of long-term feelings of depression and hopelessness. He felt that as a consequence of the support he received from the headspace counsellor his depressive symptoms had lessened:

I've noticed my depression has been a lot more under control. I take anti-depressants and yes, since I started coming here I found them to be not really necessary. I still take them but basically for at least the last few months I've been lowering my dosage slowly. So basically I should be able to sort of get off of them completely because, yes, I think this has helped me and it's made my moods a bit more stable. (Male, 25 years)

Many young people talked about how their self-confidence had improved since they started attending headspace. For example, young people spoke about how their depression and anxiety had prevented them from participating in different areas of their lives, but that the support they received through headspace enabled them to overcome their fear and anxiety. A 20-year-old man who had experienced anxiety and depression for some time felt that the support he received through headspace had enabled him to try things he was too anxious to try previously. This included catching a bus, getting his driver's licence, and seeking employment assistance. He believed that improved mental health had led to greater self-confidence, which in turn led to improvements in other life domains:

They've helped me build up my confidence. A lot of my confidence went down a lot. Not only did they help me build up my confidence, they also helped me and supported me with a lot of things I needed, like Centrelink... He's helped me with filling out forms, to see doctors and organise appointments, to help me start studying again and to look for jobs... Because of [my headspace counsellor] I've got my own place now. Yeah, I've got my full driver's licence because of [my headspace counsellor], helped me with my confidence, where before I couldn't do that. (Male, 20 years)

A number of young people felt that they had gained a different perspective on life since they started receiving support through headspace. For some, this amounted to a change in attitude. For others, it was about feeling more positive about life in general:

I used to just think there's nothing, like, there's no point to life. I might as well not try at school. I might as well not, you know, not get anywhere in life, just drink this stupid stuff. Then I just - I come here and they talked to me and I kind of realised, well, there is a point. You know, I've got to do stuff. Then kind of got that attitude out and, yeah, better - I've got, like, a whole future plan and stuff now. (Female, 14 years old)

Some days I thought, 'What's the point in getting out of bed?' Now I focus on new things which I've been taught to do and it's not just trying to get out of bed it's just, you know, tomorrow's going to be so exciting. So I'm looking at life differently. So, yeah, it's certainly helped. (Male, 24 years)

It's also helped me realise that, there's a bigger picture and, like, how messed up my life is when really it's not really that messed up, which is really good because I really needed that. (Male, 16 years)

I'd definitely link the optimism at least to the headspace. Yeah, and the calm. I feel a bit more in control and less stressed out, because I know I've got somebody there who'd help. (Female, 20 years)

When asked to explain what specifically had contributed to these positive changes, several young people spoke about how they had learned to recognise and manage their mental health symptoms as a consequence of attending headspace. The young people spoke of the strategies they had learned to help them work through their negative feelings or to help them deal with their anger:

Now I know how to deal with the downs a bit more, because they tell you - like, with [my psychologist], he'll say certain ways to think when you're doing - when you're down. Then they just help you get through it a bit more than you would have otherwise. So just having that kind of helps. (Female, 17 years)

Well they just kind of let me talk about it and they kind of just let me know that that's not normal stuff. And they don't tell me to ignore it - I mean, they just kind of give me strategies, like they say, ignore it, but then they give me strategies to do it, like go to your room or read or something like that. (Female, 15 years)

A number of young people reported having fewer thoughts of suicide following headspace intervention. An interviewed 18-year-old female felt that had she not started attending headspace,

she may well have committed suicide. She spoke highly of having the opportunity to talk to people at headspace and to learn coping strategies to help deal with her anger issues:

Certainly looking back, I don't think I would have coped, you know, deep down I can recognise that I was using failing Year 12 as an excuse, if you follow that. You know, I wasn't planning on sticking around if I failed Year 12, so it was probably a very good thing that I found headspace. (Female, 18 years)

A 26-year-old male who first came to headspace to manage his depression and anger issues similarly felt that the assistance he received through headspace had 'saved' him. He described how learning strategies to manage his anger and experiencing fewer depressive episodes had helped turn his life around:

If it wasn't for headspace I would not be - I would be probably - God knows the way I would be. I'd be probably in jail or dead or something like that. So, I'm a lot - because I used to try and kill myself at points too. And that was the anger and the depression mixed up together wasn't too good. I don't think about doing that anymore. I'm grateful for this place because I think the best words to say is, they saved me. (Male, 26 years)

Others spoke about how attending headspace had helped them to overcome their desire to self-harm. One young female particularly valued having the opportunity to speak with a mental health professional who could validate her feelings and experiences and help her work through them:

There's something about getting told 'this is what is happening to you' by a professional that makes it all so much better, if that makes sense, and so I like that. Yeah, so what I've learnt has really helped me in a short amount of time and I will miss coming here once my 12 weeks is up. (Female, 24 years)

A 23-year-old woman who was homeless and pregnant when she first started attending headspace felt that she had come a long way as a consequence of headspace. She no longer engaged in self-harm:

So I came at a time where my mental health was ridiculous and I've come so far, I'm a completely different person and it's all thanks to headspace. Just had that constant help, it's just helped me so much to become the person I am. I used to be addicted to cutting and I don't - I haven't cut since I've been coming here and everything like that. They're a great support team who've always been there for me. (Female, 23 years)

Overall, of the 50 young people interviewed, all but two had experienced improvements in mental health due to their involvement with headspace. Only one young person did not feel that his improved mental health was attributable to headspace while another reported that she had not been attending long enough to have experienced any improvement in her mental health.

## Drug and alcohol use

Three per cent of headspace clients were identified as having problematic alcohol consumption and/or drug use as the primary presenting issue for which they sought headspace services. This proportion is likely to under-report substance abuse issues as the analysis identified only the primary presenting issue recorded by headspace practitioners. As a result, the analysis does not report on the prevalence and patterns of co-morbid conditions. It is acknowledged, however, that co-morbidity in young people is an increasing problem and frequently involves mental health and drug and alcohol problems (Raphael, 2000).

Only one in five young people spoke about their alcohol consumption and drug use during interviews (n=11/50). All of these young people self-reported improved outcomes in this domain. This result is somewhat supported by findings from the survey of headspace Centre Managers. Overall, managers rated the headspace services provided at their centres as less effective in reducing alcohol and drug use than improving mental health. Eight of 29 respondents rated their service as 'very effective' in reducing clients' alcohol and drug use; two respondents rated their centre as 'neither effective nor ineffective' in reducing clients' alcohol and drug use; and the majority of respondents (19) rated their centres' services as 'somewhat effective' in reducing clients' alcohol and drug use.

Eleven young people reported different types of improvement in this domain including reductions

in the frequency and/or volume of alcohol consumption and illicit drug use, ceasing illicit drug use altogether, reductions in craving alcohol, and increased ability to manage drug use because of a greater understanding of personal triggers and habitual behaviours.

All but one of the young people who spoke about their alcohol consumption and drug use attributed their improved outcomes to the support, information and counselling that they had received from headspace practitioners:

She managed to talk me into quit smoking [marijuana]. Like both times I'm like no, it's not going to happen, not going to happen. But she worked her little magic dust and then I quit. (Female, 20 years)

[My headspace counsellor] told me you know, don't try and give it up straightaway if you don't want to, but gave me a whole heap of pamphlets, which I read. She was like maybe just try one day on and one day off and I think it was about a day or two after that I was just sitting there and I had a cone and I thought you know, I don't want to do this anymore.... A lot of the stuff she said really sunk in. So the next day I went cold turkey and I haven't smoked anything since. (Female, 20 years)

This last quote was from a young person who had been smoking marijuana for four years prior to attending headspace. A headspace practitioner confirmed similar results stating:

A lot of my clients have quit marijuana in the time that I've seen them... yeah a lot of people are just ending drug use for good, which is fantastic. (Youth Worker)

Two young people commented that they had reduced their alcohol consumption because they had a greater awareness of how they had used alcohol to self-medicate, and this knowledge helped them to change their behaviour.

### Physical health

hCSA data indicates that service providers identified problems with physical health as the primary presenting issue for less than 1% of clients (n=167 clients, 2013/14 financial year). Sexual and reproductive health problems were identified as the primary presenting issue for another 3% of clients. Service data indicates, however, that many young people received general health services that are offered as part of the model to provide holistic care, and also because mental and physical health are fundamentally linked. In 2013/14, 6,315 occasions of services were for physical health issues. Service usage data therefore shows that general health services are needed. General healthcare was also identified in interviews with headspace staff as an important soft entry point for young people who may require mental health support, but who are unlikely to actively seek treatment for fear of being stigmatised.

During the site interviews, young people and their parents described a range of behaviours and lifestyle factors that lead to poor physical health. This included smoking cigarettes, substance abuse, physical inactivity, poor nutrition, poor sleep and poor hygiene. Young people typically attributed a positive change in health behaviours and consequently an improvement in their physical health to the practical support and advice they received from their headspace practitioner(s):

What headspace has taught me is if you don't like something then do something about it. So I've never been really happy with my body so now I go to the gym and I'm going to the gym three days a week and everything like that and that's just a part of headspace. So I can get – I can vent when I go to the gym, get it all out and then I can handle my son better. (Female, 23 years)

[My headspace practitioner] has tried to help me with my sleeping pattern as well and she's been showing me some relaxation exercises. So it's good with that and my sleeping pattern has gotten a lot better. (Male, 17 years)

After sorting out all the problems I was really skinny. [My headspace practitioner] is always shoving food in my face [laughs] or offering to help me out. She's even raided out the staffroom downstairs when I had no money for food and she gave me a big bag of food and helped me out a lot. (Female, 20 years)

General health services were often described as invaluable by staff members who were interviewed

because they offer those young people who are reluctant to access mental health services a soft entry point into headspace. The survey of headspace Centre Managers indicates that the majority (27 of 29 respondents) also believe the services to be 'somewhat effective' or 'very effective' in improving clients' physical health. Only two respondents felt that the services at their centre were 'neither effective nor ineffective' in improving clients' physical health.

During interviews, a number of young people acknowledged the connection between mental and physical health, and the reality that they were unlikely to change unhealthy behaviours until they felt emotionally healthier:

I chafe easily. That's because of my weight. I've unfortunately put on a bit of weight but it's because I don't walk around enough. So that one's just about me making a mental change to be able to make a physical change. I'm not going to be able to do one before the other...I want to sort out my head before I sort out the rest of me really because it's the things in my head that's preventing me from getting out, going for walks, eating healthy. (Male, 22 years)

Research confirms that people with mental health problems are likely to have significantly lower levels of physical activity (MIFA, 2011). It is therefore an important qualitative finding that a number of young people reported that they were now more physically active because their mood had improved and they were feeling more hopeful about their future.

## Social outcomes

headspace aims to assist young people to participate in activities that reduce social isolation and develop a supportive network of family and/or friends to aid recovery. headspace practitioners offer a variety of specific social support services as part of the multidisciplinary model of care offered at centres. This includes the provision of therapeutic counselling that can assist in reducing conflict and improving relationships with family and friends. One practitioner at a fieldwork site described a weekly program run in partnership between headspace, another local agency and the local school. The aim of the program is to help those at risk of social isolation to build friendships and learn social skills:

It's learning about what are the skills that we use in terms of building good relationships, what are the skills that we use in terms of managing our emotions, what makes us good communicators, what do we do when we feel stressed out, how can we best support each other? So it's a whole lot of different social skills. (Youth Worker)

A number of headspace centres also run a drop-in space and conduct community-based activities such as concerts where young people can meet and socialise.

A number of young people spoke of having few or no friends at school, of disengaging through non-attendance and/or dropping out, and of becoming socially isolated:

I was horrible with school, I had no friends... Before that I was fine because I would just ignore everyone, and then they started picking on me. So I would shut myself away from the work and I couldn't concentrate so I was failing at school... Then we moved here and I started at [name] high school and they started picking on me, and I stopped going to school because I had panic attacks at 5am in the morning, and I'd end up throwing up and feeling really crap, so I wouldn't go to school. I just ended up dropping out completely. (Female, 15 years)

I wasn't very social a while ago, especially with my [abusive] ex just because I didn't feel like my mates were like his scene... so I didn't socialise with them for ages, and barely ever went out and all that but now I've got a new boyfriend but I'm seeing my mates more at the moment because I haven't seen a lot of them since high school... I was hiding under a massive rock for a while. (Female, 20 years)

Interview data indicates that support aimed at improving the social participation of young people is necessary. About half of those interviewed reported improved relationships with peers at school and with family and friends since they had started attending headspace centres. While some interviewees could not articulate a reason for improved relationships with family and/or friends, a few felt that it was at least partly due to their improved mental health as well as feeling more confident and happier in themselves:



When I first came I was feeling really unhappy about myself, and now I'm not. Because like [in the past] I got 'you're so ugly', 'you're so fat', 'you're a ranga', 'no one must like you'. I remember when I started coming I felt much better about myself. (Female, 13 years)

This result reflects both the interconnection between mental health and social functioning and the effectiveness of headspace as a holistic intervention. For many young people, it appears that headspace services aimed at improving mental health (such as psychological counselling) had beneficial effects on their confidence and ability to engage socially.

Other interviewees felt that it was easier to make and keep friends now that they were no longer so irritable or stressed:

It used to be the fact that I was very irritable and sometimes not that nice to be around, and now I'm trying to be a bit more happy with [my friends] just sort of be – like instead of trying to hide myself away, I'm being more open to people and it seems to be working out so far. (Male, 17 years)

I've never been good at friends and when I was going through everything I closed off a lot of my friends to the point where I had no friends. I've really in the past two years actually started making friends and being able to keep them, and it's very good. My mental health sometimes gets in the way but I come to headspace and I calm down and everything like that and I see people again. (Female, 23 years)

Some other young people talked about having family relationships characterised by high levels of conflict and mistrust. During interviews, examples were provided of headspace staff mediating some family relationships and helping young people and parents better understand each other's feelings and needs:

[My counsellor] was there when [mum and I] were having an argument and she sorted it out a little bit... It was good because my mum had to listen to what I had to say, she couldn't just leave. (Male, 18 years)

I love my mum... she's always been so supportive, and she put up with everything. So I guess after last year and treating her horribly I feel a lot better – headspace kind of led me in the way that – they were like 'dude, she's the one supporting you, she's been helping you through everything, you can't see that?' Then I finally opened my eyes. (Female, 15 years)

During interviews, headspace practitioners acknowledged the importance of family as a primary support for recovery.

While practitioners also referred young people to supports such as housing and accommodation services, few interviewees discussed the impact of headspace on the housing status of young people. Appropriate, stable and secure housing is fundamental to mental health (Mental Health Coordinating Council, 2007) as it provides a base to focus on recovery. One young person interviewed acknowledged the positive impact of an improved housing situation:

I've gotten a lot better than I was back then and I think it's a mixture of headspace and improved kind of living situation. I don't think I would have been able to make those steps and simply go back to uni and all that without first having help with headspace. (Female, 25 years)

However, many interview respondents spoke of living in places that were temporary, unsafe and crowded. A number of respondents spoke of 'couch surfing' at friends' places because of high conflict in the family home. Three young people spoke about being referred to a local housing and accommodation service, but none held real hope that contacting the service would be beneficial:

[My counsellor] and my psychologist tried – like they spoke about [emergency housing]... It's just that there's no emergency housing places around here. (Female, 20 years)

These qualitative reports suggest that more may need to be done to effectively support young people at risk of becoming homeless. The proportion of young people attending headspace who live in unstable accommodation (see Chapter 3) reinforces the importance of this.

## 4.4 Summary

As evidenced in Chapter 3, young people receiving services and support from headspace centres represent a diverse group in terms of their presenting issues, family circumstances, demographic characteristics, past experiences and their service needs. It is clear that most of the young people and parents/carers who participated in interviews viewed headspace positively. They attributed a range of improved outcomes, across the four key domains, to the supports and services they received from headspace practitioners. The few young people who did not directly attribute improvements to headspace felt that their increasing ability to handle frustrations and difficult situations was a result of their growing maturity and/or support from their family.

The qualitative results are decisive and they align with the improvement in young people's mental health that is evidenced in the quantitative findings. The quantitative data does not, however, show consistent patterns of improvement in measures of physical health, drug and alcohol use and social inclusion. The qualitative findings in this area were positive but less pronounced than in relation to mental health outcomes. It needs to be remembered that interviews were not conducted with young people who dropped out of the service following an intake assessment. These young people are included in the administrative data, and this perhaps helps to explain the divergence between positive qualitative and equivocal quantitative findings in relation to drug and alcohol use, physical health and social inclusion.

During interviews, young people provided varied examples of positive changes in their lives. While many discussed improvements in specific areas, a number spoke in more general terms, perhaps indicating the interconnectedness of mental health and wellbeing. Further, young people often talked about their mental health problems interacting with as well as intensifying problems in their behaviour and wellbeing. Importantly, they gave examples of improved mental health motivating and/or enabling them to make positive changes in other areas of their lives and to better cope with daily problems.

Another clear finding relates to the importance of relationships in youth mental health care. For most young people, the individual relationship with their headspace practitioner formed the core of their experience with headspace and was fundamental to improved outcomes. Many young people expressed a genuine regard and appreciation for their headspace practitioner(s). Data indicates that two characteristics were particularly valued by young people: practitioners who encouraged and motivated young people to enact their own ideas for improving their life, and practitioners who listened to young people while still respecting their right to share as much or as little information as they wanted.

The headspace evaluation included an examination of the centre-based service delivery model to identify features that help or hinder the achievement of headspace program objectives. The findings related to the specific research questions are provided throughout this chapter and a summary of key findings is presented at the end of this chapter.

The headspace service delivery model was designed to encourage earlier help seeking among young people at risk of mental health problems, and to ensure that they receive a range of high quality services that flexibly meet their needs and improve their outcomes. The services provided at centres relate to the key health needs of the targeted age group and include physical and mental health services, drug and alcohol services and services to support increased vocational and social participation. Evaluation data indicates that this range of services available at centres helps headspace to engage with young people who may initially be unwilling to address mental health concerns. In addition, it ensures the treatment of co-morbid conditions or circumstances.

# 5. Service Delivery Model

For the analysis of the headspace service delivery model we draw on five main data sources. These are:

- The headspace Centres Services Application (n = 45,195 young people)
- Interviews with a small non-random sample of clients, parents and carers and centre staff (young people = 50; parents and carers = 38; centre staff = 25)
- The Professional Stakeholders Survey (n = 207)
- The Parents and Carers Survey (n=226), and
- The Centre Manager's Survey (n = 29).

There are five key elements of centre-based service delivery (headspace, 2014). These are:

- Clinical service delivery
- Delivery of vocational and other youth services
- Services targeted to 12-25-year olds, delivered in a collaborative, youth friendly environment
- Local referral network, and
- Mental health promotion.

Each feature is examined separately below.

## 5.1 What aspects of the headspace model are most and least effective in assisting headspace to meet its objectives?

There are multiple service model features that impact on the extent to which headspace is able to achieve its strategic objectives (headspace, 2012) to:

- build awareness of who headspace is and what it does
- enhance access to appropriate services for all young people
- provide seamless services that are responsive to the individual needs of young people
- develop a long-term, sustainable funding approach with multiple funding streams
- deliver the best, most effective model through continued research and evaluation.

The service model features that impact on the achievement of these objectives are examined below.

### Build awareness of who headspace is and what it does

All headspace centres run community-based activities to raise awareness of the headspace brand and the services provided by headspace centres (headspace, 2012a). The purpose of these activities is to ensure the sustainability of the centres by building awareness of who they are and what they do,

and to improve the mental health literacy<sup>25</sup> of young people. This latter goal is significant as young people are more likely to seek help if they recognise signs that they may have a problem.

Interviewed headspace staff and service providers held largely positive views about the extent to which headspace's presence and activities had contributed to improved community awareness of their centre as well as the importance of help-seeking for mental health and related problems. The two strategies most valued for raising awareness of headspace and improving mental health literacy were: community engagement activities and the co-location of headspace with other services.

During fieldwork, staff gave examples of many community engagement activities such as visits to local schools by headspace staff, the promotion of free leisure activities such as cooking classes at headspace drop-in centres, and drama and music events. Other events and activities noted as raising the profile of headspace in the local community and helping to engage young people included having a presence during Youth week and NAIDOC week. The appointment of a community engagement officer to all centres was seen as essential in facilitating this important work. Staff at one of the fieldwork sites spoke of the challenges of trying to visit all the schools in their area. To assist in the dissemination of information, this headspace centre planned to host information evenings for school counsellors, nurses and principals. They also planned to send headspace promotional materials to the schools, such as water bottles and wristbands for the school counsellors to distribute.

In the survey of headspace Centre Managers (n=29), all except two centres reported that they were co-located with other services. headspace centres were most frequently co-located with vocational, drug and alcohol and youth services. The co-location of headspace with other youth services was identified as a key factor contributing to young people's awareness of headspace, providing a 'soft entry' point for young people interested in finding out about headspace.

Evaluation data indicates that community awareness of headspace is stronger among some stakeholder groups. More than two-thirds of headspace clients who visited a centre in the 2013/14 financial year claimed at their first visit that they had heard about headspace from someone they knew. About 32% of clients had heard about headspace from family members or friends, and another 33% of headspace clients gained awareness from health workers such as doctors and school counsellors. Awareness of headspace is, however, relatively low among general practitioners (see section 5.10).

Finally, in spite of the progress attributed to headspace for raising awareness of young people's mental health, it was felt by some that there was still a long way to go in terms of lessening the stigma attached to mental illness:

So someone telling you they're embarrassed to talk about their mental health means that it's still not on the level where if you're sick you go to the GP to get antibiotics. Mental health is still not at that level. (Youth Engagement Officer)

It was noted by staff that there is still stigma in using mental health services and many young people revealed that they felt this way in interviews.

### Provide seamless services that are responsive to the individual needs of young people

Referrals to and from headspace centres as well as centre connections to other services within the broader service system are examined in detail in sections 5.8 and 5.9 below, and so these findings are not repeated here. In summary, it is clear that headspace centres provide a range of services that frequently meet the varied needs of young people. To this end, only a small proportion of young people receive formal referrals to other services in the system. This ensures that young people frequently receive a variety of services in a single location, thereby reducing the likelihood that they will disengage from the service.

Evaluation data does indicate, however, that workforce issues present a continuing challenge to

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<sup>25</sup> Mental health literacy is defined as the 'knowledge and beliefs about mental disorders which aid their recognition, management or prevention' (Jorm, 2000). This includes the ability to recognise specific disorders or symptoms; knowledge about how to seek mental health information or professional help; and an attitude that promotes recognition and help seeking.

the provision of seamless service provision. Data indicates that many centres operate with staffing vacancies and/or service gaps. In the Centre Manager's Survey, 14 of 29 respondents confirmed that they were operating with a staffing vacancy. Twenty-two of 29 respondent managers also stated that they were operating with a service gap (defined in the survey as a need for a practitioner type but no funding to fill the position). Service gaps were for a range of different positions but most commonly managers reported needing additional GP and psychiatrist hours (13 of 22 managers identified this service gap). Some respondents mentioned that due to service gaps they were operating with a greater demand for services than could be met by available staff:

The main issue we are facing with headspace is the difficulty in attracting GPs and clinical psychologists into the service (Survey Response No<sup>26</sup>. 38)

Need staff recruited who have relevant qualifications, skills and knowledge to provide clinical services (Survey Response No. 192)

More staff needed to meet the ongoing mental health of young people in [location name] (Survey Response No. 187)

The headspace model has inherent difficulties associated with being able to recruit qualified staff (Survey Response No. 191)

These responses are not surprising as headspace is operating and expanding during a period marked by a nationwide skills shortage in the mental health sector. The undersupply and maldistribution of skilled mental health workers typically impacts young people in regional and remote areas (MHWAC, 2011). However, as indicated in Chapter 3 above (which details the over-representation of young people from regional areas as clients), headspace is helping to build greater equity in service access for young people in regional and remote areas within a challenging workforce environment.

During fieldwork, staff and service providers were also asked to identify any gaps in service delivery at their site. The most frequently reported service gap was in the area of family and carer support. Not surprisingly, the second most frequently identified gap was in relation to GP services – this was identified as a service gap by staff at all fieldwork sites. Some interviewed staff reported a need to increase the amount of time that a GP was providing services to headspace clients. There was an identified need to expand the amount of time that GPs operated and the range of GP services on offer in three fieldwork sites. Staff described how one GP was unable to offer any expanded services because they spent almost all their time developing mental health care plans:

We thought when she first started that we'd like to get to the point where – she does all of our mental health care plans – she'd like to start getting to other areas, like sexual health check, promoting good sexual health, contraception and stuff. And she tries to get there, but then we swamp her again with all of these new clients coming in to do our mental health care plans (headspace non-practitioner)

This quote highlights the important role of GPs as gatekeepers to MBS funding. A GP at another site commented on the need to have another GP in-house. He felt that employing and training GPs onsite was preferable to using external GPs because 'there's a higher consistency with prescribing guidelines and evidence-based practice. I often see people under the age of 18 who are prescribed something not appropriate'.

Staff in three other sites identified sexual health counselling as a service gap. Finally, the provision of drug and alcohol services, outreach mental health services, and free legal advice for young people were also identified as service gaps. The data suggests then that local resource issues and difficulty recruiting staff with particular expertise in certain areas may result in some young people receiving care from practitioners without specific expertise in a particular area. Further, data suggests that the provision of physical health services to young people may be most affected by staff vacancies and service gaps.

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<sup>26</sup> This is the number automatically given to survey respondents during online survey implementation. The number is reported here to distinguish between respondents.

## Develop a long-term, sustainable funding approach with multiple funding streams

The economic evaluation highlighted that headspace operates with multiple funding streams, however, is overwhelmingly reliant on government funding. Delivery of services at headspace centres are partly funded by the Australian Government Department of Health through the Youth Mental Health Initiative. This grant payment covers site costs such as rent, infrastructure and some staff salaries. In addition, multiple funding streams are leveraged through headspace to pay for direct services. These funding streams comprise the Medicare Benefits Scheme (MBS), Access to Allied Psychological Services (ATAPS), the Mental Health Nurse Incentive Program (MHNIP), and the Rural Primary Health Services (RPHS). In addition, services are funded by centre lead agencies and consortium members who are required to co-contribute to the running costs of headspace centres. This is typically managed through the provision of in-kind support and staffing to increase service capacity.

The economic evaluation highlights great diversity in unit costs across centres and this suggests that more efficient use of government funds may be achievable. One way to achieve greater efficiency and less variation in unit costs could be the organisational development and implementation of performance targets or service goals. A small number of centre manager survey respondents (n=5) suggested other ways that they believed would make the funding model more equitable across centres. Suggestions included allocating funds based on client numbers and/or occasions of service provided, as well as taking into account characteristics of the region to be serviced by the centre (such as remoteness, local cost of living, and workforce availability).

Evaluation data suggests then that headspace is yet to develop a long-term, sustainable funding approach. A few stakeholders suggested that this will require greater equity in funding across centres. The rating of importance given by centre managers to alternative sources of income suggests that they understand that a diversification of funding sources, particularly an increase in the contribution of private funding to headspace (through for example philanthropy, social investment and business partnerships) is required for long-term sustainability.

### 5.2 To what extent is model fidelity important?

Model fidelity may be defined as the extent to which the delivery of an intervention or program adheres to the protocol or program model as originally developed (Mowbray et al, 2003). Fidelity measurement, which is increasingly used in program evaluations, is difficult to apply in this context as the centre-based headspace program model is not clearly prescribed or manualised. Rather, each centre operates differently to meet the needs of the local community, and the composition and expertise of the centre consortiums.

Evaluation data highlights diversity in the implementation of the service model across headspace centres. During interviews with staff, variation in model implementation was attributed to multiple factors, in particular local community needs, available resources and differing Lead Agencies. A small number of staff valued the flexibility in the service model:

Having some from such a long history in the public mental health sector, the adjustability of the headspace model is really quite good. It's not rigid with layers of bureaucracy (Psychologist)

However, not all viewed this as a potential strength that enabled services to fit local community needs. Rather, a small number of stakeholder respondents viewed this diversity as problematic:

Headspace has been developed as a one size fits all and this limits its capacity to be flexible around different needs both from a locality perspective and a client's perspective (Survey Response No. 8)

[Need to be] more clear about model of care (Survey Response No. 169)

Little clarity of headspace program and service delivery focus (Survey Response No. 17)

headspace National Office is taking steps towards ensuring greater consistency and quality in service delivery. headspace National Office is undertaking a large project to identify and document a best practice headspace model. An outcome of this project has been the development of the

*headspace Best Practice Framework*. This framework identifies four key outcome areas, along with a set of objectives and implementation indicators which enable the provision of appropriate service responses for young people.

In the organisational strategic plan (headspace, 2012), headspace specifies that the key elements of the centre-based program are:

- clinical service delivery
- delivery of vocational and other youth services
- services targeted for 12-25-year olds and delivered in a youth friendly environment
- local referral network, and
- mental health promotion.

For the purposes of this evaluation, we have used these key elements to assess implementation of the service delivery model (refer question 5.1 above). These elements are too broad to be operationalised as criteria for assessing model fidelity; however, the development of the *headspace Best Practice Framework* suggests that the organisation is moving towards further specification of the service model. The elements are also too broad to support an analysis that links key service elements with client outcomes.

Evaluation data indicates that all elements were implemented at centres but it does not support an assessment of the extent to which service components impact the outcomes of young people.

### 5.3 What are the risk and protective factors for headspace sustainability?

The evaluation has highlighted a number of factors that enhance and threaten headspace's long-term sustainability. These factors are described below:

#### Risk factors

As previously stated, headspace operates with multiple funding streams; however, there is a heavy reliance on government funding. This reliance on government funding is a potential risk to long-term sustainability as any cutbacks to headspace funding streams could impact service provision. The mental health service system competes for finite funding and a reduction in the total amount could negatively impact headspace service delivery.

The economic evaluation also highlighted much variation in unit costs across centres. The analysis identified a number of centres that have very high headspace grant investment with relatively low occasions of service. It was out of the scope of the evaluation to assess operations at individual centres so we are not able to provide an explanation for this diversity in unit costs. It is suggested that centres established during rounds 1-4 with significantly high unit costs be investigated to identify any operational inefficiencies that may exist.

The headspace service model relies upon collaboration between the centre's lead agency, consortium partners and other local service provider organisations that refer young people to centres and/or receive referrals from headspace. Collaboration is therefore crucial to centre-based services. The evaluation highlighted mixed results regarding collaboration with services at the community level. Evaluation data suggests that only a small proportion of young people (3-5%) are referred to other services within the community. This suggests that the headspace model is effective in holistically meeting the needs of young people. Collaboration of headspace centres across the national network is not supported by a database holding contact information. As discovered during the recruitment phase of the Professional Stakeholders Survey, there is no centrally held database of headspace lead agencies and their related consortium organisations. The Department of Health and headspace National Office holds contact information on all lead agencies, but not on consortium partners. It is suggested that such a database of lead agencies and their partners be developed. Such a database would need to be updated regularly given the high turnover of staff within the sector.

Results from the subsample of general practitioners (n=45) who participated in the Professional Stakeholders Survey suggest that greater engagement of this stakeholder group is required not only

to ensure that they view headspace as a preferred treatment option for young people with emerging mental health and related issues, but also to facilitate greater collaboration with the aim of improving young people's outcomes. This issue is described here as a risk to organisational sustainability because general practitioners are important gatekeepers to mental health care treatments, including funded psychological services. Survey findings indicate that a little more than half of the general practitioners surveyed (51%, n=23/45) were more likely to refer a young patient with an emerging mental health problem to another youth mental health provider rather than headspace. Many general practitioners reported that this was because they had established referral networks that they preferred to use or had developed relationships with individual practitioners that they relied upon. Moreover, findings from survey data analysis indicate that some brand awareness activities could better target GPs as almost a sixth of the sample (7/45) did not understand what headspace does or how their own patients could benefit from headspace.

Workforce issues were identified in evaluation data as a risk to the sustainability of centres. This centred on the difficulties in recruiting qualified staff, particularly to work in regional or remote centres.

Finally, the Stakeholder Survey highlighted tensions between centres, consortium members and headspace National Office. This is examined below and is posed here as a risk to organisational stability.

### Protective factors

The rapid expansion of headspace centres as a result of increased government funding demonstrates the organisation's ability to promote the brand and secure increased funding. This suggests that headspace may be successful in seeking diversified funding sources. This would provide a protection against any reduction to government funding or cutback to specific funding streams.

Another protective factor to headspace sustainability is the organisation's ongoing commitment to improving the quality and impact of its service delivery. This commitment is evident in a number of projects that have been implemented by headspace National Office including the Data Capture Project that resulted in the development of a new, fully customised web-based system to collect data on service delivery, thereby supporting ongoing monitoring and evaluation; and the Service Innovation Project, one outcome of which has been the development of the headspace Best Practice Framework. This framework summarises Best Practice within centres with the aim of optimising outcomes for young people (headspace 2014b). Facilitation of the National Collaborative Learning Network that acts as a forum for knowledge sharing and network formation is another initiative that signifies the organisations' commitment to improving its practices and impact.

Evaluation data also identified strong community links as a key factor that enhances the sustainability of headspace. In a non-compulsory open-ended question contained within the Centre Managers Survey, in seven of the total 12 responses, managers identified community support as a key factor in enhancing centre sustainability. Community connections were described as valued local relationships, forged through a positive approach to partnership. The consortium model forms local connections for each centre and as evidenced in evaluation data, some centres are successful in building bigger networks by partnering with other organisations. While the Professional Stakeholders Survey identified some tensions with local service provider organisations, not part of the headspace consortium, it is clear that some centres manage relationships with local stakeholders well, thereby facilitating easier transition to services that young people cannot access through the headspace centre.

Finally, the community awareness work also highlights headspace's commitment to promoting help seeking among vulnerable young people. This component of work is important to the sustained viability of centres that rely on young people seeking assistance.

## 5.4 How could the headspace service model be improved to better meet the needs of young people?

There was a high level of consistency among stakeholders about the three main gaps in headspace service provision. These were: the provision of family based services, the expansion of outreach



services, and the provision of more GP services. It is suggested that the service model could be improved to better meet the needs of young people by addressing these gaps.

Twelve staff members across all five of the fieldwork sites believed that headspace should be providing family support for some young people. A number of reasons were provided for offering family services. Some staff argued that family support is required because a young person's problems are often intertwined with family problems and hence cannot be treated in isolation. This was evident in the Parents and Carers Study where parents often talked about the whole family struggling to deal with problems such as multiple family members with mental health problems, family breakdown, and the suicide or death of a family member. Other staff members simply wanted to help families in crisis:

We get a lot of parents in crisis on the phone; they don't know where to go, they don't know where to start if they've sort of just discovered that their son or daughter is self-harming or using drugs or something. They're in complete crisis themselves as well as the young person and they've just got nowhere to go. We sort of don't have access to the funding to support the family, but because we're human we try to do as much as we can  
(Administrative Officer)

I think that's a gap because it really means that when young people have come here and they're feeling a lot better, if they're going back into the same environment, well what does that mean for that young person? (Service Manager)

Moreover, some staff felt that the provision of family based services, and treating the young person in the family context, was required for headspace to offer a truly holistic preventative service.

There is a rigidity about what headspace will provide to young people. There is a lack of family therapy skills, which is crucial to an early intervention service for this age group.  
(Clinical Leader)

I think the more that there can be a focus on how do we produce or provide preventative interventions – so parenting groups would be a great place to start (Clinical Psychologist)

Staff and other stakeholders also identified the provision of outreach services as a way to better meet the needs of some young people, particularly those located in more isolated areas.

headspace is achieving some success in engaging young people with high levels of psychological distress; however, some enhancements could be made to better meet the needs of specific vulnerable groups. The profile analysis and qualitative data indicates that meeting the needs of CALD young people with mental health problems is a challenge that headspace is not yet meeting. Further, while a higher proportion of Indigenous young people than those in the general population are accessing headspace services, the qualitative data indicates that engaging with this is a challenge for some centres. Evaluation data suggests that engagement with more marginalised groups will require partnerships with community organisations, as well as ongoing relationship building activities that include local community members and leaders. Further research may be required to determine if specific Indigenous and CALD workforce development as well as changes to treatment practices (such as provision of outreach services, and/or increased capacity to see those that drop in to centres without a pre-arranged appointment) would improve the engagement and outcomes of these highly vulnerable young people.

Finally, while young people offered valuable insights into the services that they have received at headspace and the impact of these, they were generally not able to suggest any changes to improve the service. This is because the overwhelming majority of those interviewed were satisfied with the treatment they had received:

I couldn't think of anything right now, to be honest. I think it's great with what they're doing already. Improvements – I couldn't say that they need improvements, and the staff are all nice and I think it's a great place (Female, 20)

There wasn't anything I didn't like (Female, 13)

Of the few young people that offered suggestions for improvement, one recommended that headspace should do more work in schools to make them more accessible; two young people suggested that the service should be advertised more; and another wanted the counsellor to exclude

her mother from her counselling sessions:

The only thing that wasn't useful was I couldn't really tell her everything because Mum was there. That's something I think that annoyed me. I didn't want to say 'I don't want mum to be here' because then mum would be like 'oh what have you been up to'... Mum just wanted to come, like, all the time she wanted to be there and sit with me and I didn't want her to but I didn't want to tell her to go away (Female, 14)

When probed further, it was clear that this young person had seen her counsellor separately at times, but she did not want her mother included in any counselling sessions.

## 5.5 How could the headspace service model be improved to better meet the needs of parents/carers in supporting young people?

The Parents and Carers Study collected data on how the headspace model could be improved to better meet the needs of this important stakeholder group. This section reports study findings that can be classified into two areas: ways that the model can be enhanced to better meet the needs of parents and carers in supporting young people, and ways that the model can be expanded to better meet the needs of the family as a whole.

The study found that parents and carers, in general, were highly satisfied with the services their young person was receiving at headspace, and they reported improvements in their young person's mental health outcomes since receiving services. Despite this high level of satisfaction, study participants did suggest ways that the service model could be improved to better meet their needs as a carer. Firstly, a common complaint of focus group participants whose young person was using headspace services was that they had not heard of headspace before their young person started receiving services, and they wished they had known about it earlier:

Then we went through another school psychologist and we wasted six months and in the process he got worse. Nobody mentioned headspace.

I've lived in [suburb] all my life [and] I didn't even know about this place and I wish I knew years and years ago.

The Parents and Carers Survey confirmed this by showing that awareness of headspace was relatively low among parents and carers. In fact, 40% of parents that participated in the survey had not heard of headspace prior to receiving a referral or recommendation to the service. This finding suggests that headspace could be improved for this stakeholder group by implementing strategies that promote community awareness – thereby ensuring that parents have more choice regarding youth mental healthcare.

The Parents and Carers Study included a significant proportion of participants whose young person had received services through other mental health services. Although parents and carers generally felt that headspace was more accessible than other services, they identified several barriers to accessing headspace. The most commonly-mentioned barrier was the difficulty that some parents had in making appointments for their young person outside of school or working hours:

I've had to take [my child] out of school so many times just to come to an appointment which – it's not the service's fault because that's the hours they operate but if they were a little bit altered... that would suit me.

She didn't have a problem going but the only appointments were in school hours. I was struggling to get her to school and then taking her out of school to go to appointments was defeating the purpose.

You're a working parent too, like I finish at 3.30pm every day. I can come for the afternoon but each time they make an appointment that's a day off work for me.

A few parents commented – as in this last quote – that taking their young person to headspace appointments had negatively impacted on their work productivity. A few other parents commented that they had to wait a number of weeks if they wanted an appointment outside of school or work hours. It is therefore suggested that the service model could be enhanced to better meet the needs of parents by increasing the capacity of centres to offer more appointments and, as a consequence,

services outside of school and work times.

The study identified confidentiality and privacy as an issue that is negotiated well in the mental health care of some young people, but not all. With few exceptions, participants understood and accepted the legal and ethical reasons for confidentiality as well as the more pragmatic justification that young people are more likely to open up to a clinician if they are able to completely trust that clinician.

[My daughter] likes her and trusts her and the big deal for that for [my daughter] is it's her own doctor. It's not my doctor, it's not my husband's doctor, it's her own doctor. So she can go in and see her on her own or she can come, most of the time she gets me to go in with her but I think that gives them a sense of independence for the fact that they have got their own doctor there, some privacy.

However, it was still common for parents and carers to feel some frustration at not knowing the confidential details of the young person's treatment, even if they understand why it had to be confidential. Reactions to the confidentiality measures ranged from complete acceptance to frustration.

The only difference with me is my daughter has allowed them to talk to me. So she's given them permission. She trusts me. The issues that - the issues that you guys are having aren't necessarily headspace, they're the government's privacy laws.

I'm never told of appointments, always kept in the dark, have never received any input from staff here.

It's not about sharing the information it's about actually being able to communicate without breaching confidentiality and realising that you can actually do that.

I have found it incredibly difficult to get any information about my son's mental health. I hope headspace is helping him, and would like to know how he is going, but understand privacy issues, so not expecting any information. Very frustrating.

Some participants also felt that they would have liked more information about the young person's treatment in the broader sense or to be more 'involved' in their treatment in some way. This could, for example, be through more communication with the counsellor on what they as a parent or carer could do to help their young person, or to discuss wider contextual aspects of the young person's personality, background, or treatment.

The family involvement was non-existent, this was and still is very disappointing. I understand that my young person deserves to have privacy and confidentiality but I need some feedback or even just to talk to me would have been appreciated.

I've had no phone call to say, "We've decided, both your son and I as a clinician, have decided that he's okay for now. And when he's ready or he has an episode or he feels that he needs to talk to me, he can give me a call. Are you okay with that? How do you feel about that?" I'm still waiting for that phone call.

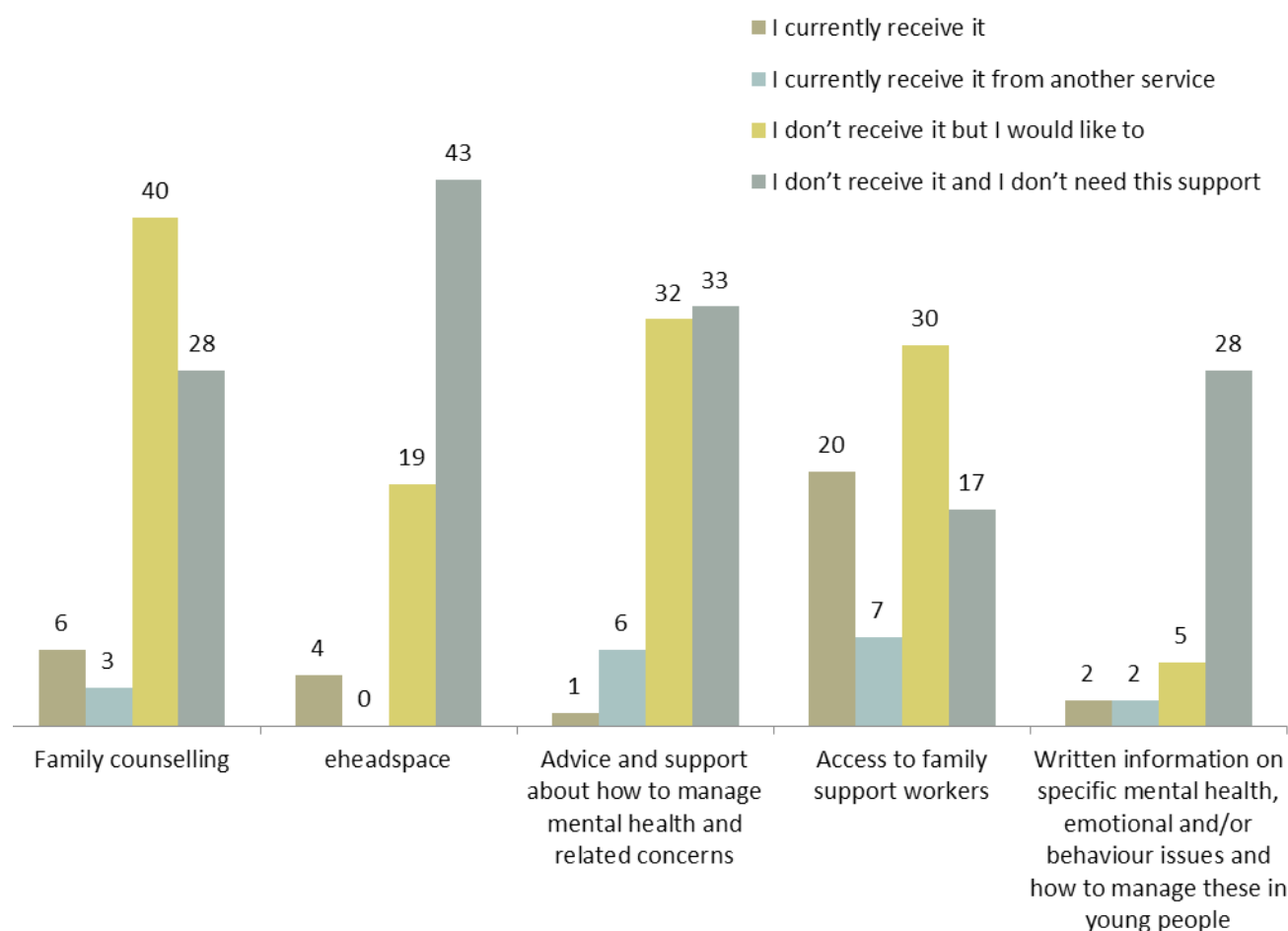
Some parents commented that headspace staff did not make use of their knowledge of their young person's issues to assist in the development of a treatment plan.

The Parents and Carers Study identified overwhelming support among this stakeholder group for their direct inclusion in services, particularly through family counselling. The centre-based headspace program is, however, not funded to provide a direct service to parents and carers as part of its delivery protocol. Yet despite this, and in recognition of the crucial role that parents and carers play in the recovery and sustained wellbeing of headspace clients, headspace does provide some support to parents and carers. There is a specific section for parents and carers on the headspace webpage that contains information and advice. This includes the publication of a position paper about the important role that family and friends can play in supporting a young person's recovery (headspace, 2012), links to videos and free webinars on specific youth mental health issues such as anger and drug use, and contact details for mental health services for parents and carers (such as Parentline). In addition, a number of individual headspace centres offer support to parents and carers through regular support groups and targeted information sessions that cover topics such as ways to help their young person, working effectively with their young person's clinician, and family therapy options.

In the Parents and Carers Survey, parents identified the types of supports and services that they had

accessed through headspace as well as the types they would like to access. The results, shown in Figure 5.1, indicate that very few participant parents had received support from headspace. Further, it is clear that the provision of written information is not the type of support that parents desire. Instead, parents overwhelmingly wanted to participate in family counselling. A significant number of parents also indicated that they would like to receive advice and support about how to better manage mental health and related concerns.

**Figure 5.1 Access to supports/services for parents/carers at headspace**



Source: The Parents and Carers Survey

The Parents and Carers Study showed that many parents were struggling to cope with their young person's acute issues:

My second daughter has had severe depression for eight years. So we've been through the [private hospital] system, back and forward. We've been hospitalised, suicidal many times over the years, heavily medicated... The suffering that she has been through is unbelievable.

[My daughter] actually overdosed on Panadol and tried to commit suicide and then had a period of depression and then that has kind of evolved now... Now she is just quite anxious... She had been having some problems and seeing the school counsellor but then when she took an overdose and we were in the Women's and Children's Hospital she saw a psychiatrist there who basically said that she is not in any harm and so then we came home. But of course we were quite traumatised as a family.

I lay in bed in the morning and burst into tears because I know that I have got to try and get two children out of bed... My son is failing year 11 because he just can't get to school because he's up until 3am or 4am in the morning and then just can't get there.

Further, it was clear that many of the problems that the young people were seeking help to cope with were family problems. Examples included family members that had suicided, violence within the family, family breakdown and divorce, and dealing with grief following the death of a family member.

Further, in some interviews, it was clear that young people and parents were struggling with similar mental health problems:

The first time somebody actually noticed would have been in year seven when I refused to go to school because people were picking on me, and I vomited out of anxiety, and I couldn't breathe at all. Then mum drove me to the doctors and she's like – she just threw up and couldn't breathe, and she just explained everything that I was feeling, and the doctor was like you should really go somewhere, you should go somewhere to find help. Then mum looked online and found headspace (Male, 15 years)

The gap in services for parents was identified by a number of headspace staff who wanted to offer family counselling:

It would be useful if there was more of a focus on parents... If there was more of a focus on being able to do family work (Clinical Psychologist)

Often you can do more work with the family than you might with the young person, but it can have an effect for the young person. And I also think that [the headspace model] just doesn't encourage a lot of inclusive family practice, working with families, which I think makes a huge difference (Clinical Leader)

If I'm working with a family and I can see that there's no point just working with a young person in isolation, we need to work with the family as well, then I will try to access adult counselling for the parents. So I'll refer them because we can't do that here (Youth Worker)

The evaluation therefore identified a need among some families for family counselling and a desire by some staff to offer this service.

## 5.6 How and to what extent are additional components of headspace (such as eheadspace, headspace National Office and Centre of Excellence) perceived as supporting headspace to meet its objectives?

While the evaluation is focused on examining the effectiveness of the centre-based program in improving outcomes for young people, it is acknowledged that centres are supported by additional components that help headspace to meet its strategic objectives. The additional components include eheadspace, headspace National Office and the Centre of Excellence. The contribution of each of these additional components to headspace achieving its objectives is examined below.

### eheadspace

eheadspace is a clinical health service that provides online and telephone support and counselling to young people aged 12-25 years and their families. The service began in 2011 through funding from the Australian Government. The aim of eheadspace is to increase the reach of headspace services around Australia by operating like a virtual headspace centre. The online chat and direct phone service is free, confidential and available seven days a week from 9am to 1pm (AEDST). Services are provided by qualified youth mental health professionals, including specialist family counsellors who are available on particular days.

As shown in Figure 5.2, about 30% of clients that had accessed headspace services in the 2013/14 financial year reported that they had also used eheadspace in the past week, month and/or year. This is a significant proportion of the client group and shows that eheadspace is an important component of the service model. Patterns of eheadspace usage are relatively consistent across states and territories; however, clients in South Australia, Western Australia and the Australian Capital Territory have lower rates of eheadspace use.

**Figure 5.2 Proportion of headspace clients that received support from eheadspace, 2013/14**

Source: Authors calculations from hCSA data.

Interview data sheds some light on young people's usage of eheadspace; however usage among the group of clients interviewed was considerably less than that reported above (only 3 of 50 clients interviewed 6%). During interviews with young people, a number commented that they knew about the eheadspace service but had not used it:

I've got almost no knowledge of [eheadspace] to be honest. I know that it's there, I know that if I feel the need to that I can use it... but I've never felt the need to use it (Female, 18 years)

I know what it is but I've never used it (Female, 23 years)

A number of young people commented that they knew about eheadspace only because they were asked at every appointment if they had received services or support from eheadspace<sup>27</sup>. Three young people described how they had used eheadspace. For one young female, eheadspace was her pathway to centre services:

I was on eheadspace and basically they referred me here (Female, 24 years)

Two other young people spoke about using eheadspace to 'check out' headspace prior to attending a centre:

I went on eheadspace and asked a few questions... When my Mum was checking out the place the first time, I asked a few questions online sort of saying 'what should I do about this?' and I got a quick reply... I was sort of making sure it's safe, basically (Male, 20 years)

[After using eheadspace] I had that sort of sense of these people are kind of in tune with today's youth by the way they use the internet and everything, they weren't sort of back in time, writing everything down, not using computers. But yeah, it gave the impression of they understand basically what this generation is about (Male, 17 years)

During fieldwork, only four headspace staff members (4/25) spoke about eheadspace, but they all spoke highly of it. Those that spoke about eheadspace felt it was important for young people who had difficulty accessing headspace sites due to transport or distance issues. It was also regarded as an alternative mode of contact and communication with young people who were not comfortable with the idea of face-to-face counselling.

In addition, staff described using eheadspace as a way to offer young people some support while they were on a waiting list to access centre services.

We give out [eheadspace contact information] to every new person that comes on our waitlist. When we get a new referral we actually ring that young person, acknowledge

<sup>27</sup> This question is contained in the hCSA data collection.

that we've received the referral, ask them about availability of appointments, let them know that eheadspace is available while they're waiting if they need to talk to somebody... So every new referral is made aware of eheadspace. It's great for us to have something to give the young person to utilise if they just need something extra (Practice Manager)

Most recently we got referred [from eheadspace] someone who had engaged in headspace services but then disengaged and reconnected with eheadspace and they identified that she wanted to come back to us but her counsellor has moved to [location] headspace now so we have a waitlist. But I said 'can you maintain contact with her until she gets connected with a clinician here', and they were really receptive of doing that (Youth Engagement Coordinator)

Data suggests therefore that eheadspace is an effective additional component of headspace that is valued by some staff and accessed by a significant proportion of clients (approximately 30%). Data indicates that young people use eheadspace to access information about centre-based services. In addition, eheadspace often fulfils the function of holding young people steady while they are waiting to access centre-based treatment and/or provides support to young people that are unable to attend a centre. In this way, eheadspace plays an important role in enhancing service access and improving the outcomes of young people with mental health problems.

### headspace National Office (hNO)

The large network of headspace centres is administered and supported by headspace National Office (hNO). The multiple support functions undertaken by hNO include:

- providing advice and support on financial, operational and clinical management requirements. Direct support is provided to centres through State Managers that are employed by hNO.
- developing information technology systems and processes that are efficient and support quality mental health care and evaluation of practice. During the course of the evaluation, hNO has led a project that has resulted in the funding, design, development and delivery of a new administrative dataset that collects information from both clients and service providers.
- facilitating workforce training and education through for example online training workshops and the Collaborative Learning Network (CLN) that links staff from different centres.
- developing and maintaining the headspace website and social media profile that works to enhance community engagement, promote headspace, and disseminate best practice information and research.
- administering and delivering eheadspace – the online and telephone support service that ensures that young people on a waiting list for centre-based services, as well as those that are unwilling or unable to attend a centre, can receive some support.
- administering and delivering the School Support program.

Respondents to the Centre Managers Survey were asked to rank the usefulness of hNO in supporting the work of centres. Twenty-three of 29 respondents reported that hNO was useful or very useful (79%). One respondent stated that hNO was 'somewhat useful', and another 5 respondents reported that hNO was 'neither useful nor not useful' to their centre (17%). Ten survey respondents completed a non-compulsory open-ended question that invited further comments about the supports provided to headspace centres. Six of the 10 comments received related to the support provided by hNO, with all expressing a degree of dissatisfaction:

Obviously the funding support received from hNO is useful but that is about it (Survey Response No. 2)

Support from national office is good in many ways and there is definitely value in some of the national campaigns and the 'muscle' that comes with this. However, it is sometimes delivered in somewhat paternalistic ways, and not as collaborative as we'd like. There is limited appreciation at times of local knowledge and expertise about how our community and centre operate. Parts of national office sometimes feel quite removed from what our

centre actually does (Survey Response No. 3)

As the headspace initiative has expanded, there seems to be less time from National Office to deal with local issues at centre level. All centres are seen as homogenous. The communication from National Office regarding campaigns, high level partnerships is inconsistent. The older centres seem to be penalised for the way they are set up, with little resourcing to support centres to come up to speed with how new centres are being rolled out (Survey Response No. 28)

During fieldwork, it was clear that centre staff had differing levels of knowledge about and contact with hNO. A small number of interviewed staff commented on hNO, with most agreeing that they play a useful support function as centre staff know who to speak to if an issue arises. The training opportunities provided through hNO, particularly through the Collaborative Learning Network, were highly valued by some staff members.

The opportunity for learning and development – that’s phenomenal and the fact that they are even including our private practitioners in that access to learning – it’s sponsored by hNO. I just think that’s phenomenal (Site Manager)

The high regard of managers for the Collaborative Learning Network was evident in the Centre Managers Survey, with 23/29 respondents (79%) reporting this component to be ‘useful’ or ‘very useful’ in supporting the work of centres.

In the Professional Stakeholders Survey, a small number of respondents (8/207) wrote comments about headspace National Office in non-compulsory open-ended questions that asked for suggestions about how headspace could be improved. All of these comments were critical of the National Office, with comments focusing on two issues: centralisation of control, and the role of the National Office in promoting collaboration and integration.

The national office needs to encourage close liaison and integration rather than continually promoting ‘stand-alone’ sites and services (Survey Response No. 5)

headspace National Office could work on communicating better and being more consultative with headspace centres, after all the headspace model is meant to be collaborative (Survey Response No. 41)

Less authoritarian approach and more responsive support from hNO. Divestment of hNO dollars to local services, with direct contracting with DoH (Survey Response No. 177)

Returning to the original vision for developing strong local collaborations, building local capacity (not replacing it with a ‘vanilla’ solution), re-orienting primary care to the needs of young people etc. Fundamentally the ‘command and control’ approach of hNO must end or headspace will be a failure as a service innovation... headspace National Office is a constant source of frustration and interference in the management of the centre and the development and enhancement of local partnerships. hNO has a strong emphasis on control, engages in continual micro-management, runs ‘interference’ in local partnerships and community engagements. hNO has not focussed on its prime roles – workforce development, evidence based practice development, systems development, monitoring and evaluation (Survey Response No. 57)

Need more local control over budget, facilities, marketing, community engagement, service integration (with existing service providers) etc. will all help build community ownership and commitment to services to young people. hNO appears to believe IT is the service for all young people. This is simply wrong and counter-productive (Survey Response No. 57)

These comments indicate that there are some tensions between headspace National Office and centres, focusing around how much authority the National Office should have over centres. As these quotes illustrate, some stakeholders believe that centres should have more autonomy to meet local needs and develop the services in different ways. The development of the *headspace Best Practice Framework* implies, however, that the National Office is seeking more control in relation to the range and quality of activities provided at centres.

The economic evaluation indicates that around 1/8th of centres’ funding is allocated to hNO, which



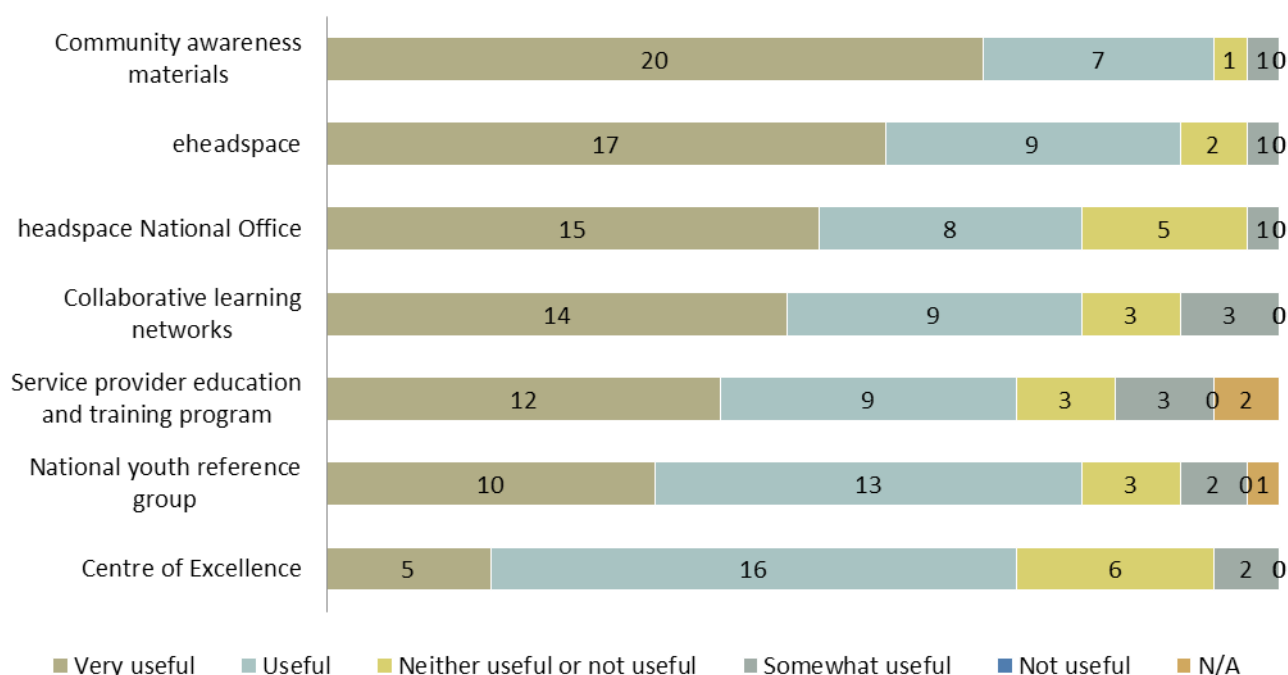
is a considerable portion. On the other hand, the economic evaluation points out that there are potential economies of scale in further centralisation of some 'back room' processes. It should be noted that this evaluation did not collect data on the effectiveness and efficiency of hNO itself.

### Centre of Excellence (CoE)

The Centre of Excellence collates, analyses, conducts and disseminates research in youth mental health care and related issues to ensure that the practices adopted by headspace staff are evidence based. Information provided by the Centre of Excellence is distributed to centres and is made available to service providers and others on the 'resources' section of the headspace website. Resources for headspace practitioners include 'Evidence Summaries'<sup>28</sup>, which provide up-to-date information on a range of topics, including Mythbusters<sup>29</sup> which expose common myths that are contrary to research evidence (such as that self-harm is an attempt at suicide) and Fact Sheets and videos for workers on how to engage young people dealing with specific issues.

The evaluation collected very little data on the contribution and effectiveness of the CoE. In the Centre Managers' Survey, respondents were asked to rate the usefulness of the Centre of Excellence in supporting the work of their centre. Seventy-two per cent of respondents (21/29) rated the Centre of Excellence as 'useful' (55%) or 'very useful' (17%) to their centre. However, as shown in Figure 5.3 below, when compared to managers' ratings of other headspace components, the Centre of Excellence was rated the least useful of all listed components.

**Figure 5.3 Usefulness of range of headspace components (n=29)**



Source: The Centre Managers' Survey.

During interviews, most staff did not comment on the CoE. Only two staff members spoke about the CoE, with one stating that they found some of the fact sheets 'a bit technical' and only marginally useful, whilst the other felt that the information and support provided was very valuable. This may suggest that staff hold mixed views about the contribution of the CoE, but interviews with a larger sample would need to be undertaken to confirm this.

<sup>28</sup> Nine Evidence Summaries are available on the website and titles include 'working with same sex attracted young people'; 'using SSRI antidepressants and other newer antidepressants to treat depression in young people' and 'diagnosing borderline personality disorder in adolescence'.

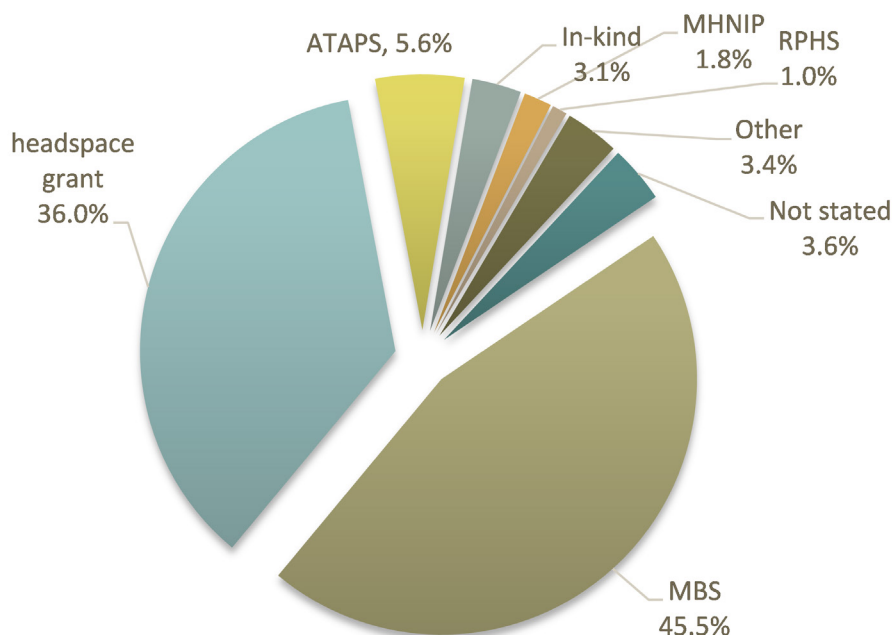
<sup>29</sup> Three are available on the website and topics comprise eating disorders; suicidal ideation and self-harm.

The Professional Stakeholders Survey did collect some information on one of the primary functions of the Centre of Excellence – to disseminate best practice information. Results indicate that while the majority of respondents rated headspace to be ‘effective’ or ‘very effective’ (113/199 respondents or 57%) in disseminating best practice information about youth mental health care to local service providers, a significant sample (30/199 or 15%) rated headspace as ‘ineffective’ or ‘very ineffective’ in this role. Further, a higher proportion of survey respondents rated headspace as ‘very ineffective’ or ‘ineffective’ in disseminating best practice information about youth mental health care (15%) than they were in undertaking other tasks including facilitating connections between local service providers (23/198 or 12%), providing increased treatment options for young people (13/198 or 7%), or increasing the capacity of local service delivery (25/199 or 12%).

## 5.7 To what extent are headspace services linked with other government funded programs?

As described above, headspace utilises existing government funding streams, in particular the Medicare Benefits Schedule (MBS); the ATAPS, the Mental Health Nurse Incentive Program (MHNIP) and the Rural Primary Health Services (RPHS) to provide direct services at centres. As evidenced in Figure 5.4 below, just under half of headspace services are funded through the MBS (45.5%) and just over a third by the headspace grant (36%), with the remaining 14.9% of occasions of service funded through other government funding programs (ATAPS, MHNIP, RPHS), in-kind contributions from centre lead agencies and consortium members, and other sources of funding. While the funding source for 3.6% of occasions of service are not known, the results shown highlight that the overwhelming majority of services provided (89.9% of occasions of service) are funded through government programs and grants.

**Figure 5.4 Direct funding source for headspace occasions of service<sup>30</sup>**



Source: Authors calculations from hCSA data.

The results highlight the great extent to which headspace services are linked to other government funded programs. In the Centre Manager’s Survey, respondents acknowledged the important

<sup>30</sup> Funding source is reported for occasions of service. Funding source is not reported for approximately 3.6% of occasions of service within the 2013/14 financial year. Authors calculations from hCSA.

connection to the government funding programs for clinical service delivery; however, three managers (3/29) commented on the ‘uncomfortable fit’ between MBS funding and a holistic service model. As one manager commented ‘the fact that practitioners such as private psychologists cannot bill for case conferences with a school or GP means there is a financial imperative in conflict with good clinical practice’. The MBS cap on psychology sessions was also described by a few managers within interviews and the survey as incompatible with the provision of high quality care:

The limitations of the MBS model is something that we frequently get feedback about from young people and parents who state it is not enough (Site Manager)

A notable result from the Centre Manager’s Survey is that respondents rated non-government sources of funding such as donations as equivalent in importance to in-kind support (mean score of 4.5 out of 5). This suggests that managers understand the need to diversify funding sources if headspace is to develop a long-term, sustainable funding model.

## 5.8 To what extent are there referrals between headspace services and the broader service system?

Young people can access headspace services through a number of informal and formal referral sources. Further, to ensure that the young person receives appropriate treatment, headspace clinicians can refer young people to other services within the community. This section examines referrals into and out of headspace.

headspace allows for young people to visit a centre without any formal referral. This is an important feature of the service model as it can facilitate earlier help seeking from young people who may be reluctant to visit a GP simply to get a referral to headspace. Analysis indicates that many clients make use of this service model feature. During the 2013/14 financial year, only a little more than a quarter of headspace clients (26.4%) had a formal referral for their first visit. During fieldwork, staff in all five sites spoke of receiving multiple referrals from other services in their local communities. One psychologist reported that half of her referrals came from doctors at the local medical centre as a consequence of the good connections they had built up over the years. For one site manager, the sheer volume of referrals they received was indicative of local service providers’ awareness of headspace.

As indicated in Table 5.1 below, the overwhelming majority of young people who attended headspace with a formal referral received one from a primary healthcare provider such as a GP.

**Table 5.1 Source of formal referral into headspace**

Formal referral source	Percentage
Primary health care e.g. GP	84.0
Specialist health care e.g. psychiatrist, paediatrician, inpatient service	3.5
Community based mental health service e.g. CAMHS, AMHS	2.5
Community based allied health professional	0
School based service e.g. school psychologist, guidance counsellor	4.5
Alcohol or other drug service	0.2
Community service/welfare agency	3.1
Employment agency	0.8
Legal, justice, corrections service	1.0
eheadspace	0.3
headspace School Support staff	0.1

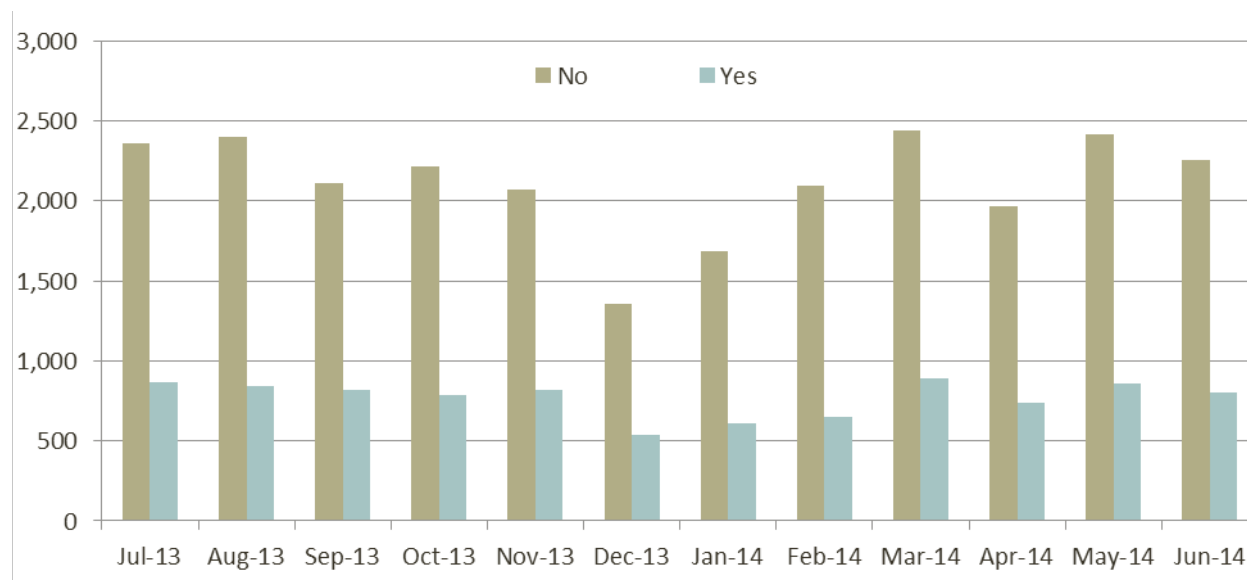
Source: Authors calculations from hCSA data.

Interview data also indicates that while it is frequent for young people to first attend a headspace centre without a formal referral, if they are assessed at intake as requiring psychological services, they are often asked to visit their own GP or one connected to the headspace centre to get a mental health care plan so that they can access psychological treatments funded through the MBS.

As can be seen in Figure 5.5, the number of clients accessing headspace each month with a formal

referral is relatively stable, while the number of clients who visit headspace without any formal referral fluctuates across the year. The number of young people who visit headspace without a formal referral decreases significantly during the end of year holiday period (December and January), although less clients in total attend headspace during this period. Analysis of referrals by state indicates that Tasmania and Queensland have the highest proportion of clients that enter headspace without a formal referral. In contrast, New South Wales and Western Australia have the highest proportion of clients accessing headspace with a formal referral (Figure 5.6).

**Figure 5.5 headspace clients with a formal referral at first visit, 2013/14**



Source: Authors calculations from hCSA data.

**Figure 5.6 Proportion of headspace clients with formal referral at the first visit by state, 2013/14**



Source: Authors calculations from hCSA data.

Program data also indicates that headspace staff infrequently referred clients to other services within the community. Table 5.2 below reports the future care decisions for clients after specific occasions of service during the 2013/14 financial year. As shown, the data indicates that only 3 to 5% of clients received formal referrals to other services during their first and last visit.

**Table 5.2 Proportion of future care decisions for clients after specific occasions of service (OoS)<sup>31</sup>**

Future care decisions	All OoS	First OoS	Last OoS*
Commence treatment at headspace	15.6	52.3	5.3
Continue current treatment	65.8	23.2	61.9
Treatment goals have been met, not further treatment required at this time	2.7	2.3	11.4
Allocate to other headspace service in conjunction with current treatment	3.6	5.4	2.8
Allocate to other headspace service and cease current treatment	1.3	2.7	1.4
Formal referral to other service in conjunction with current treatment	2.1	2.8	2.5
Formal referral to other services and cease current treatment	0.8	2.1	1.7
Young person has decided not to continue	1.0	2.7	2.7
No referrals made	3.6	1.6	6.0
Other	3.4	5.0	4.4

\* Last occasion of service refers to the last recorded occasion of service within the hCSA data.

Source: Authors calculations from hCSA data.

Thus the overwhelming majority of young people access headspace services without a formal referral, and are treated by staff within the centre. This latter finding is likely because the consortium model ensures that young people are able to access a diverse range of services within a centre. The interview data does not, however, align easily with the findings that only a very small proportion of headspace clients receive referrals to other services. All interviewed staff (n=25) spoke of referring clients to other services in their community when the support the young person required could not be provided in-house. Indeed, 93% (n=26/28) of centre managers rated headspace as 'somewhat effective' or 'very effective' in providing referrals to other services within the broader service system.

Respondents in the Survey of Centre Managers most commonly identified referring young people to Child and Adolescent Mental Health Services (CAMHS). Qualitative data indicates that referral to CAMHS and Adult Mental Health Services (AMHS) is likely to be made when young people are assessed as having severe and complex mental health problems that require intensive intervention. Some data indicates that CAMHS and headspace staff see each other as a referral option and resource. CAMHS, for example, includes links to headspace factsheets on their website. Some data also indicates that the connection between headspace and CAMHS is variable, working well in some sites and not so well in others. Evaluation data indicates that headspace and CAMHS do not share clients and that in instances where young people had sought treatment from both services, one service would discontinue treatment following a discussion on what would be best for the young person.

The next most commonly reported referral locations (in order and according to respondents in the Survey of Centre Managers) were tertiary mental health services for children and young people, youth services, non-government community service organisations providing non-clinical services (for example Salvos and Mission Australia) and housing and accommodation services.

Interview data provides some additional insight into referral processes with three of the 25 staff interviewed expressing concerns about referrals to and from CAMHS. As evidenced in the final quote below, some of the difficulty is related to the fact that both services treat young people with mental health problems and that assessment of the most suitable service is often done during treatment.

We have specifically had a meeting at CAMHS because there was misunderstandings between our services and what we actually do and can provide and how they refer to us and vice versa. Following that meeting... they had concerns that we were talking about clients, yet no identifying information was used... So instead of taking from that meeting that we need to refer properly with the referral form, they decided that we had problems with confidentiality... So stuff like that is really difficult. I think we get some resentment from their service (Intake Officer)

A GP might say that they have a 12 year-old with a behavioural disturbance for instance

<sup>31</sup> There are 5% of occasions of service with missing service type information. Clients who visited headspace only once during 2013/14 are not counted as the last visit. Authors calculations from hCSA data.

and they'll send that person to headspace because I can get them in quicker or because I can choose the clinician that they'll see or for whatever reason. But that kid may not be suitable to come here. That 12 year-old may be better suited and better serviced by going to CAMHS. So that's not being triaged anywhere, that's not actually being done. There needs to be some sort of clinical liaison between the two services that sorts these issues out on a case-by-case basis and that's not happening (Psychiatrist)

The Professional Stakeholders Survey collected information on collaboration between headspace and other organisations – an activity that supports referral making. Survey respondents were asked to identify the form and extent of collaboration that their organisation had with headspace. Twenty-two per cent of respondents were from headspace lead agencies (n=46), and another 35% were representatives from consortium partners (n=72) – organisations that collaborate with headspace centres in the delivery of services.

Of the respondent organisations that were not lead agencies or consortium partners (n=89), only 25% stated that they collaborated with headspace. This is significant and suggests that headspace connects mainly to organisations that make up centre consortiums rather than independent service providers within the community.

Eighteen percent of all survey respondents stated that their organisation had not collaborated with headspace. Of the 35 organisations that had not collaborated with headspace, 16 (or 46%) responded that they would like to collaborate with headspace. Representatives from another 16 organisations (46%) were not sure if they wanted to collaborate, and another 3 organisations (9%) did not want to collaborate with headspace. The primary reason given for no collaboration was distance to the headspace centre and the existence of other local services that provided similar services. However, a number of respondents commented that they did not collaborate with headspace because they did not know how to engage. Some respondents had made attempts to collaborate but had received no response:

I have never been approached by headspace nor have I received any information re it's role or services. As a practicing GP with an interest in mental health I, like other do not have a knowledge of all the resources or agencies in the community. There really needs to be some sort of coordinating service to direct referrals to the most appropriate agency (Survey Response No. 148)

The one time I did make a referral, I never heard back (Survey Response No. 190)

I have had minimal exposure to services headspace provides. Information has been via local Medicare Local newsletters. I am unaware of details of referral process. I am unsure of benefits of headspace compared to other services (Survey Response No. 137)

We refer patients there but no collaboration (Survey Response No. 108)

How do we connect? (Survey Response No. 126)

## 5.9 How effective is the service model in providing an entry point into and connection to other services within the broader system?

The analysis of evaluation data presented above suggests that the headspace service model is effective in providing young people an entry into the youth mental health care service system. In the 2013/14 financial year, 73.6% of young people accessed headspace services without a formal referral. As shown in Table 5.3, mental health services are the main service type provided at centres; however, young people also receive physical health, sexual health, drug and alcohol, and vocational services at centres, as well as general assistance, dietary counselling and other forms of support.

**Table 5.3 Proportion of main service type at headspace<sup>32</sup>**

Main service provided during this visit	All visits	First visit	Last visit
Mental health	65.0	14.2	73.9
Engagement and assessment	23.7	77.4	11.2
Physical health	3.4	2.5	4.0
Sexual health	1.5	2.4	2.6
Group work	1.7	0.7	1.4
Alcohol and/or drug specific intervention	1.2	0.6	1.6
General assistance	1.1	0.6	1.6
Vocational	1.1	0.5	1.4
Family-based intervention	0.3	0.1	0.5
Dietary counselling	0.0	0.0	0.0
Other because not matched	1.1	1.2	1.7

Source: Authors calculations from hCSA data.

Future care decision data provided in Table 5.2 indicate that few young people are formally referred from headspace to external services. This suggests that headspace is largely successful in providing comprehensive health care that meets the multiple needs of young people, as intended by centres which were established to provide holistic care in a single location. Interview data indicates that the range of services provided in-house by the sites' consortium partners/co-located services/private practitioners influenced the degree to which staff needed to source additional support services from the community and/or broader service system. Sites with a large number of consortium partners servicing a broad range of support needs could often provide integrated services in-house. This is a positive result as young people are more likely to disengage from a service if there are multiple contact points; however, it also suggests that the service model may not be effective in connecting young people to other services the community.

Qualitative and survey data indicates that this is not the case and presents a picture of staff frequently referring young people to other services. Staff in all five fieldwork sites spoke of making referrals to other services in their community when the support the young person required could not be provided in-house. It is suggested that the future care data captured in the hCSA under-counts the extent of formal or written referrals as limited exit data is collected, which is due to the fact that many young people simply stop attending a centre when they feel better. In addition, headspace staff frequently make informal referrals (that is, those made verbally) and these are not counted in the hCSA data. Importantly though, these referrals do connect young people to relevant services available within their community.

While connections with the broader system were considered to be good for the most part, several staff felt that there was always room for improvement. Some felt that links with schools, Centrelink and GPs could be strengthened in order to increase referrals to headspace.

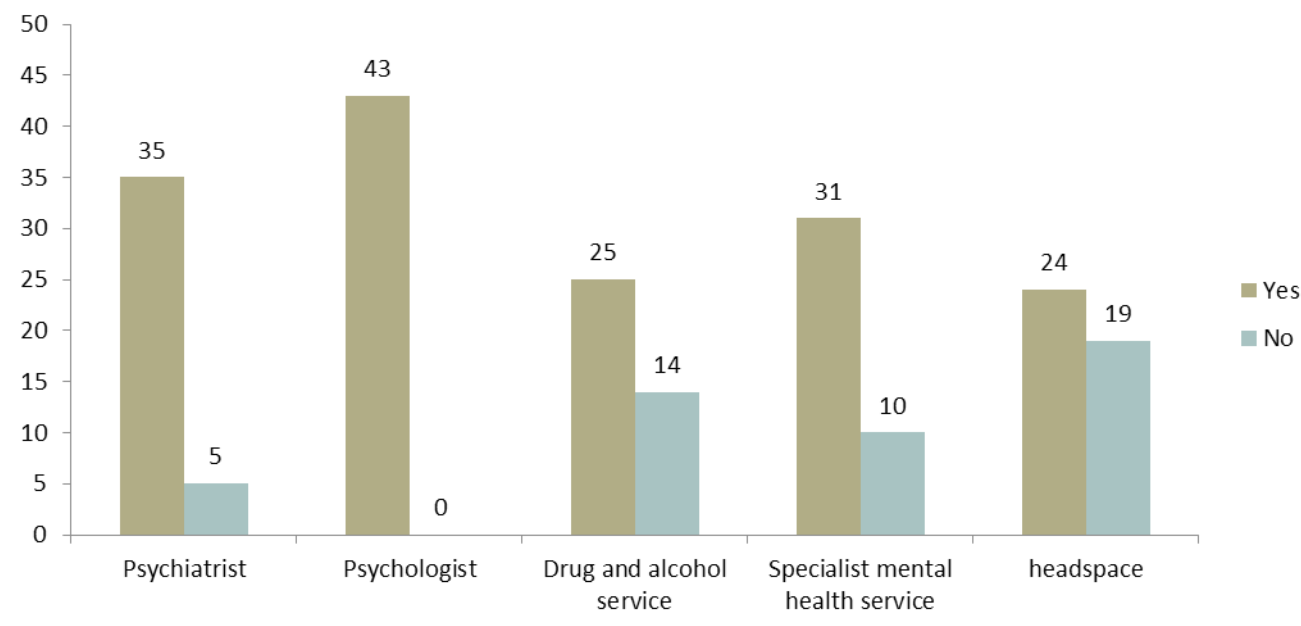
## 5.10 What perceived impact has headspace had on the skill and confidence of GPs regarding the provision of youth mental health care? To what extent do they report changes to practices as a result?

The Survey of Professional Stakeholders included a section that examined whether and how headspace had impacted on the practices, skills and confidence of general practitioners in the provision of youth mental health care. Of the total 207 that completed the survey, 43 were General Practitioners (GPs). While this sample size is small and cannot be used to generalise findings, the results provide a clear picture of limited collaboration, and suggests ways that this can be changed to enhance service delivery.

<sup>32</sup> 3.6% of occasions of service have missing service type information. Clients who visited headspace only one during the 2013/14 financial year are not counted as the last visit.

Of the 43 GPs surveyed, 19 (44%) had previously referred patients to headspace. All GPs reported referring young people in the last 12 months to a psychologist; however, only 24 (56%) said that they had referred a young person to headspace (Figure 5.7).

**Figure 5.7 GP referral of young patients to services within the last 12 months (n=43<sup>33</sup>)**



Source: Survey of Professional Stakeholders.

Psychologists, psychiatrists, specialist mental health services and drug and alcohol services were more popular referral pathways for the GPs surveyed. Further, 53% of respondent GPs (n= 23) reported that they were more likely to refer a young patient with an emerging mental health problem to another youth mental health provider rather than headspace.

The open-ended responses help to explain these results. A number of GPs reported that they had established referral networks that they preferred to use or had developed relationships with practitioners that they relied upon:

Our local headspace does not have psychiatric services, so if psychiatric oversight is needed I prefer our local Child and Adolescent Mental Health team. For psychology – if the family can afford it, I would usually refer to private child psychologists with whom I have an established relationship. Our local Medicare Local provides a good service with no gap for uncomplicated 10 session psychology so I have traditionally used this (Survey Response No. 55)

We have 2 psychologists in the clinic who are very good at what they do (Survey Response No. 85)

I know a good bulk billing psychologist and I prefer to be able to recommend to a person rather than an organisation, which can be hit and miss (Survey Response No 91)

Other GPs did not refer to headspace because there was no centre within the immediate local community. In some of these cases, GPs were also unaware of headspace and the services offered:

headspace is not in the immediate locality. I'm not clear of the nature of their services, and have other services which I already use (Survey Response No. 42)

I'm not aware of what headspace do and have my own referral network (Survey Response No. 65)

I don't know the level of service provided by headspace (Survey Response No. 100)

<sup>33</sup> Responses do not total 43 for each referral option indicating that some referral options may be inapplicable for some respondents.



I don't know enough about [headspace] or what they do (Survey Response No. 103)

I don't know how to [refer to headspace]. Phone calls haven't been helpful (Survey Response No. 102)

A larger group of GPs were critical of headspace services and/or reported unsatisfactory responses from the service:

The service is too far away and run in an incompetent and substandard manner (Survey Response No. 88)

I didn't get any response from my one and only referral. Good patient outcomes rely on effective communication and collaboration (Survey Response No. 154)

Integration with mainstream is not very good. Sometimes difficult to get [headspace] appointments. Feedback [from headspace] is sporadic (Survey Response No. 28)

I have not had much success in getting patients accepted [to headspace]. I have found it easier if patients self-refer, OR if I refer elsewhere for quicker and more effective service (Survey Response No. 112)

So far I have not had much support from this organisation in managing young people (Survey Response No. 89)

Better liaison with other providers (Survey Response No. 37)

Impression that referral is easy and swift [but] rarely does this happen. Different to referring to other private psychologist or psychiatrist when reception can give a sense when client or GP rings when the appointment will be. But [with headspace] referral goes off and client leaves GP a bit up in the air (Survey Response No. 68)

These comments indicate that headspace needs to do more to educate general practitioners about headspace, the services it can provide, and how these can be accessed. In addition, staff at some headspace centres need to undertake activities to build genuine, collaborative relationships with local general practitioners. This engagement should be founded on the position that general practitioners are partners in the provision of mental health care for young people rather than mere gatekeepers to funded treatment through headspace:

[the centre] often sees us as a means of getting access to Medicare funded psychologists and [we] are not valued as a team member (Survey Response No. 119)

We did some clinics located in headspace. Many of the youth had their own general practitioners. It was difficult for us to provide a GP service. We like to provide a holistic service. headspace saw us as the mental health care plan generators. Unfortunately I like to treat the whole patient, so there is a direct disconnect between their aims and my own. There was too much paperwork cross-over – need for us to do our own notes as well as headspace notes as well as potential health care plans. Many of their staff did not know what a GP role was – called up and asked for patient results etc. I think headspace needs to make an effort and engage their local GPs who will do a much better job at collaborating care compared with a ring-in GP service onsite (Survey Response No. 101)

The Professional Stakeholders Survey shows that the connection between general practitioners and centres is satisfactory in some locations. Fifty-six per cent of GPs surveyed (n=24/43) had referred young people to headspace, although only a little more than a third (n=15/43, 35%) reported that they would refer a young person with an emerging mental health problem to headspace in preference to another youth mental health provider. Open-ended explanations provided by some respondents indicate, however, that the preference to refer to headspace is more to do with the quality and accessibility of the service rather than any direct relationship between the GP and the centre:

Only youth mental health provider I know (Survey Response No. 94)

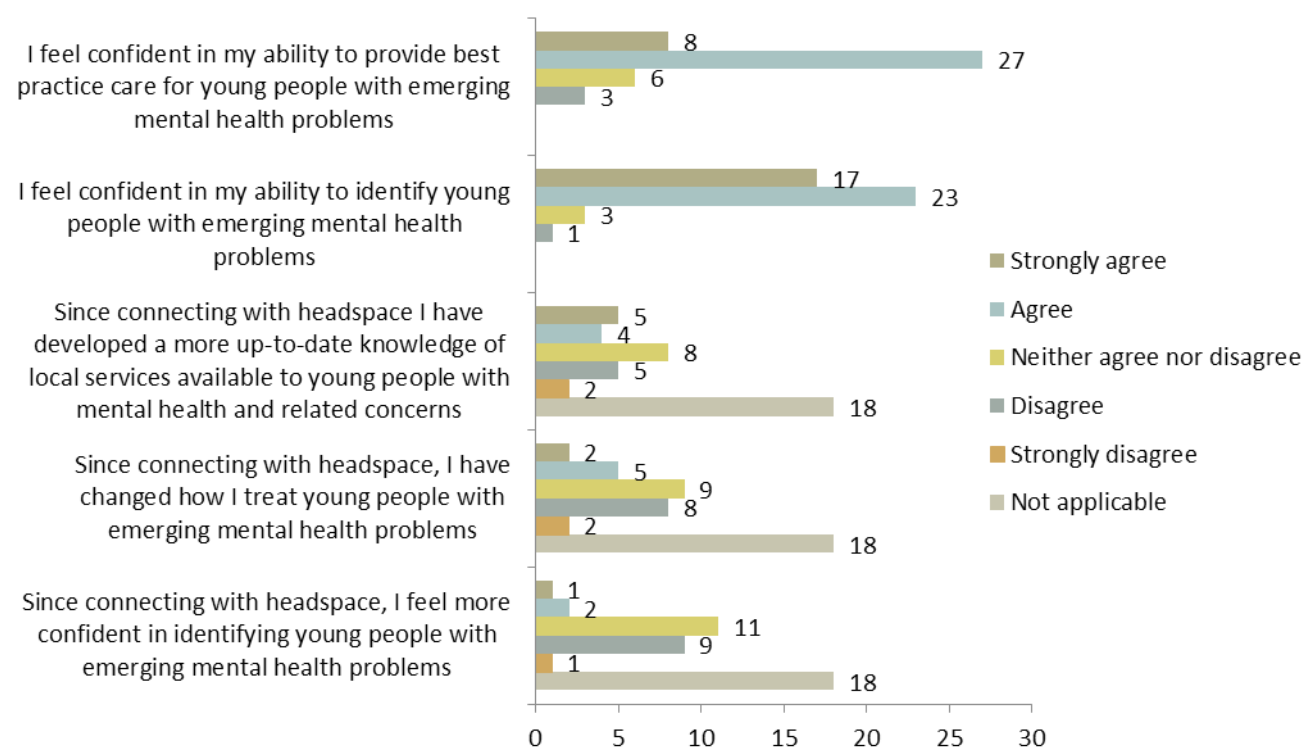
headspace more likely to have service in young person's geographic area (Survey Response No. 100)

Because it is accessible and no out of pocket expense (Survey Response No. 110)

As it is predominantly for that particular age group with specialised services (Survey Response No. 98)

Given the low levels of engagement that the surveyed GPs had had with headspace (19/43 have not referred patients to headspace), it is perhaps not surprising that very few GPs reported feeling more confident in identifying and treating young people with mental health problems since the establishment of headspace. As Figure 5.8 below shows, the majority of respondent GP's reported feeling confident in their ability to provide best practice care for young people with emerging mental health problems (n=35, 81%), and an even larger proportion reported feeling confident in their ability to identify young people with emerging mental health problems (n=40, 93%). In contrast, very few GPs reported any changes to their confidence levels or practices since connecting with headspace. Only 5 GPs (12%) reported feeling more confident in identifying young people with emerging mental health problems; a further seven (16%) indicated that they had changed how they treat young people with emerging mental health problems, and a slightly higher number still (n=9, 21%) reported that since connecting to headspace, they have developed a more up-to-date knowledge of local services. As shown in Figure 5.8 below, a significant number of respondents marked 'not applicable' to these questions (approximately 42% of respondents).

**Figure 5.8 GP referral of young patients to services within the last 12 months (respondent numbers)**



Source: Survey of Professional Stakeholders.

None of the GPs surveyed had been invited by headspace to participate in youth mental health care training.

These results are reported from a small subsample of general practitioners and, therefore, should be used with caution. The Professional Stakeholders Survey findings suggest, however, that headspace needs to engage in information sharing and relationship building activities with this important stakeholder group. The Centre Managers Survey identified GP services within centres as a gap in service delivery – identified by one-third of respondents (13 of 29 respondents). The headspace model currently aims to provide GP services within centres and relies upon a connection to local GPs that refer young people to centres. This feature of the service model is not working well at all centres and, as suggested by one survey respondent, successful sites could provide mentoring:

I know some headspace sites are very good at their GP engagement – perhaps they could mentor or share resources with the sites that are not so strong (Survey Response No. 78)

Finally, and as identified above, increased and genuine engagement with local GPs could result in the development of alternative modes of collaboration and shared care. While sample sizes are small, evaluation data provides a warning that genuine engagement with this important stakeholder

group is required. Fourteen per cent of survey respondents who provided suggestions for improving the headspace service delivery model (22/161) focused on improving collaboration with GPs:

[headspace could be improved with] a person who could liaise with GPs and keep it simple and to the point, who could facilitate communication between headspace and general practices (Survey Response No. 100)

Requires liaison officer to visit GP practice and enhance working relationship (Survey Response No. 107)

Come to our clinic and talk to up to a dozen GPs (Survey Response No. 116)

Meet your local GPs and liaise and follow up (Survey Response No. 114)

Start active liaison and education with GPs (Survey Response No. 127)

Lots of talk about collaboration with GPs but I haven't seen any here. Happy to cross refer but no direct connections made (Survey Response No. 155)

Active and ongoing liaison with GPs is required if headspace seeks to change the practices of GPs in providing youth mental health care. Evaluation data suggest that, to date, headspace has had minimal impact on the practices of GPs, with few reporting any change to their confidence levels (5/43) and treatment practices (7/43), and the majority surveyed (23/43, 54%) reporting that they would refer patients to other mental health treatment options in preference to headspace.

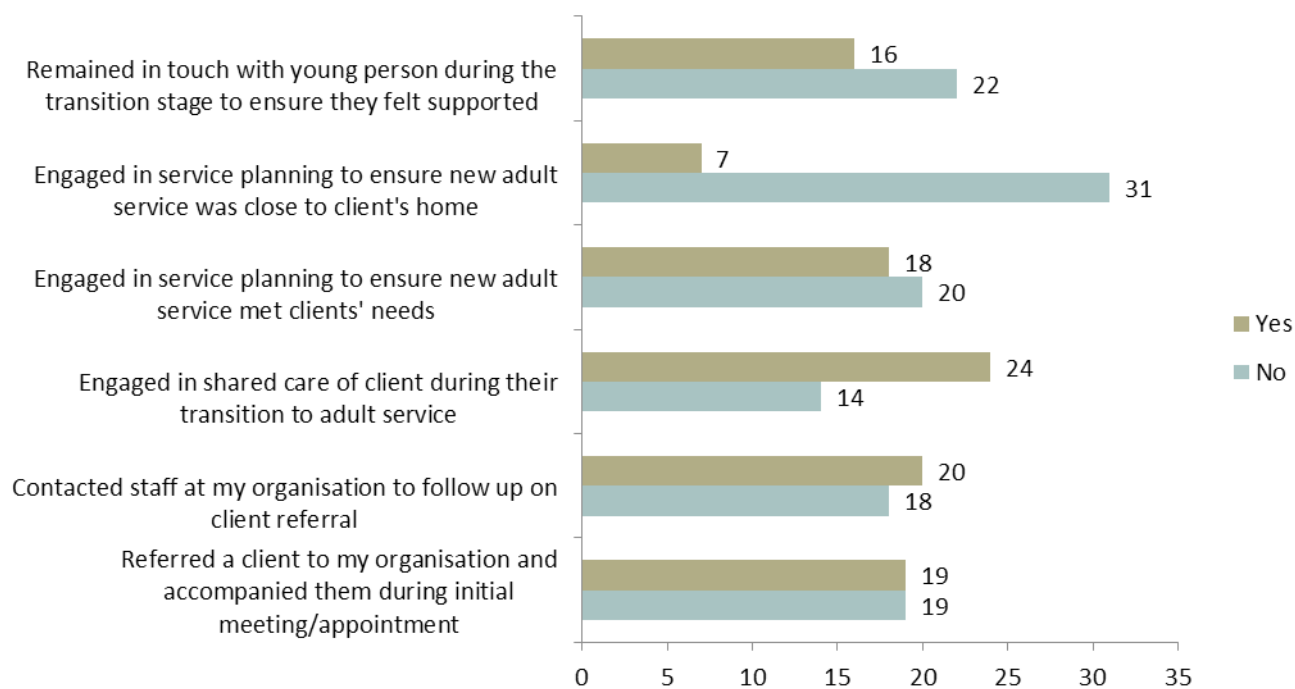
## 5.11 How do service providers transition young people using headspace to adult services where appropriate? To what extent are young people supported in the transition process?

The process of transitioning older headspace clients to adult services was examined in the Professional Stakeholders Survey. Almost 20% of survey respondents (38/199) stated that they had worked with headspace staff to ensure a smooth transition for the client to a new adult service. The survey automatically directed these respondents to answer further questions exploring the transition process and results from this sample are reported below.

Ninety-four per cent of the sub-sample (34/38) reported that headspace staff had worked with their organisation to ensure a smooth transition for clients from headspace to an adult service. Figure 5.9 below highlights the strategies that headspace staff implemented to transition clients to adult services. The most commonly used strategy was the shared care of clients. During interviews with centre staff, one site manager confirmed this:

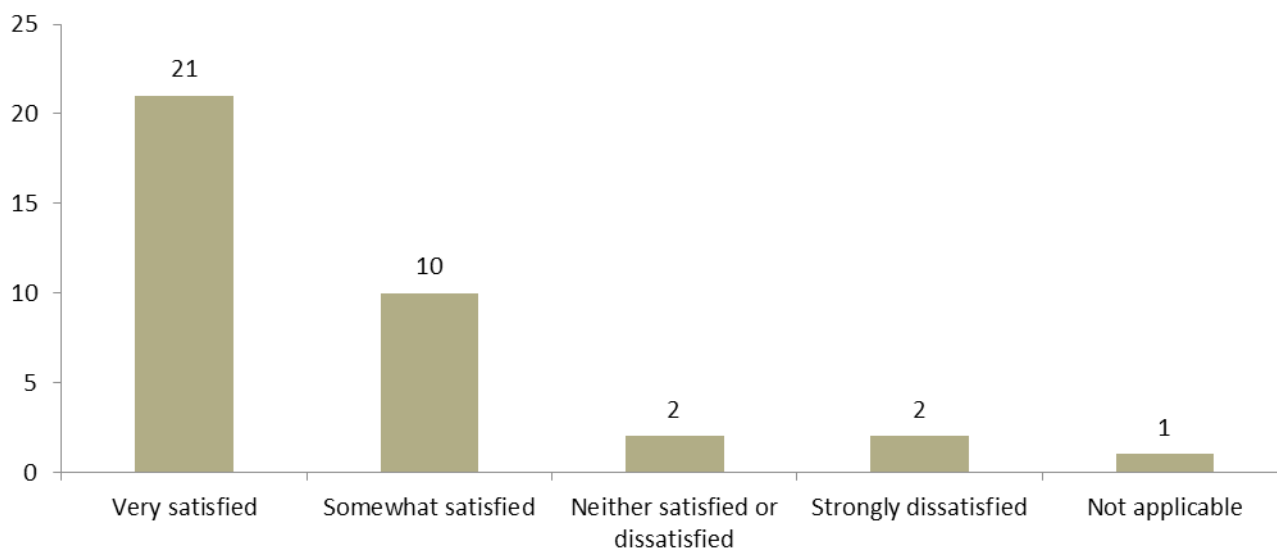
There's always a period of sharing care, and the understanding that even if they've reached their 25th birthday and they need to come back for a bit, it's okay (Site Manager)

Other strategies employed were contacting staff at the adult service to follow up on a client referral, and accompanying the client to their initial appointment at the new adult service. headspace staff were least likely to engage in service planning to ensure that the new adult service was close to the client's home – a result that perhaps reflects a shortage of available services more than inadequate transition practices.

**Figure 5.9 Strategies implemented to transition clients from headspace to adult service**

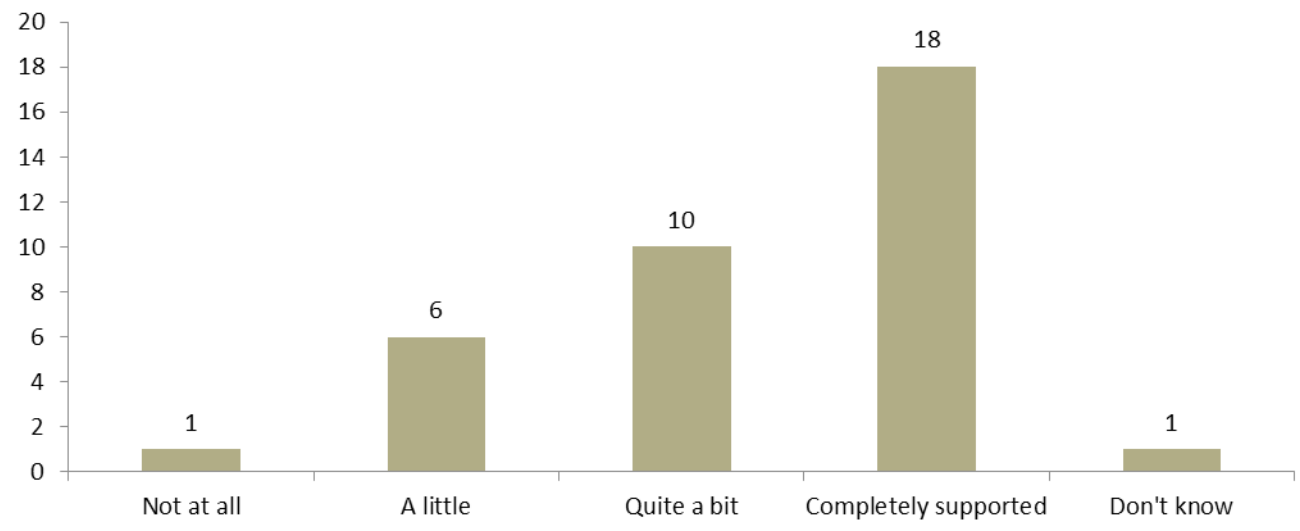
Source: Survey of Professional Stakeholders.

When asked to rate their satisfaction with the process, 86% of respondents (31/36) reported that they were very satisfied or somewhat satisfied with the level of liaison and collaboration with headspace staff to ensure a smooth transition of the headspace client to an adult service. Only two respondents (5%) reported that they were strongly dissatisfied with the level of collaboration. Figure 5.10 below shows survey results.

**Figure 5.10 Level of satisfaction with liaison and collaboration to transition client**

Source: Survey of Professional Stakeholders.

Survey respondents were also asked to indicate the extent to which the young person was supported during the transition process. The results for this question were mostly positive with 78% of respondents (28/36) stating that the young person was supported 'quite a bit' or 'completely' (Figure 5.11).

**Figure 5.11 Extent to which young person was supported by headspace during transition**

Source: Survey of Professional Stakeholders.

Interview data provides little additional insight and of the seven staff (7/25) who were asked directly about their experience in transitioning clients, most of these had not engaged in this process:

The other thing that I haven't had much experience with yet, and that's interesting because I've been here for five years... I haven't had to do a lot of transitioning people into the adult system... So I guess my concern [is] I'm just not quite sure how that will go for some people when they have to move from a youth service like this into the adult system (Psychiatrist)

[clients needing to transition to adult services] are such a small percentage of who we service. I rarely get someone who's 24 or 25 (Youth Worker)

I don't think I've had experience of that because I don't think I've had anyone that's needed to transition, but I think one of the other workers has (Social Worker)

Despite the limited information provided by interviewed staff, the survey results suggest that headspace staff are successfully implementing a number of strategies to help transition clients to adult services and that service providers who collaborate with headspace are generally satisfied with the processes being implemented and the level of support provided to the client. Improvement in this area is possible as a few respondents have clearly had unsatisfactory experiences; however, the overwhelming majority reported that liaison had taken place and that the client had been supported during the transition process.

## 5.12 Summary

Evaluation data provides some insight into how services for some young people could be enhanced. Firstly, the evaluation identified a need for family counselling to be included as part of the treatment options provided at centres. It is clear that the problems that many young people are dealing with are family problems, and so the family should be the unit of analysis.

Further, the service model could be enhanced to better meet the needs of parents by increasing the capacity of centres to offer more appointments and therefore services outside of school and work times.

This chapter also examines clients and other stakeholders' views about and satisfaction with the service delivery model. headspace clients were overwhelmingly positive about headspace, and generally satisfied with the services they had received. It needs to be remembered when interpreting the results, though, that we did not interview any young people who had dropped out of treatment after a single visit. Moreover, the profile of headspace clients presented in Chapter 3 suggests that the service delivery model is not meeting the needs of CALD young people who are starkly under-represented as clients.

It was out of the scope of the evaluation to examine any differences in the service model as implemented by specific lead agencies.

# 6. The Costs of headspace

One of the main aims of the evaluation was to conduct an economic evaluation of headspace. The economic evaluation aims to assess whether headspace offers good value for money and to estimate future program costs based on possibilities for national expansion. This chapter presents the main findings of the economic evaluation by key research question. The economic evaluation was conducted by different consortium members. The cost effectiveness analysis was conducted by researchers at the Bankwest Curtin Economics Centre (BCEC) at Curtin University, and the centre expansion and national coverage analysis was conducted by researchers at the Telethon Kids Institute at the University of Western Australia. The centre expansion and national coverage analysis is contained in Appendix B.

Findings for the economic evaluation reported in this chapter were informed by multiple data sources including:

- headspace Centres Service Application
- headspace Centres Finance Application (centre-level)
- headspace National Office program management cost data
- additional data on MBS expenditure obtained from the Department of Health, and
- evaluation survey data collected from headspace clients and a comparison group of young people.

## 6.1 What are the overall costs of headspace?

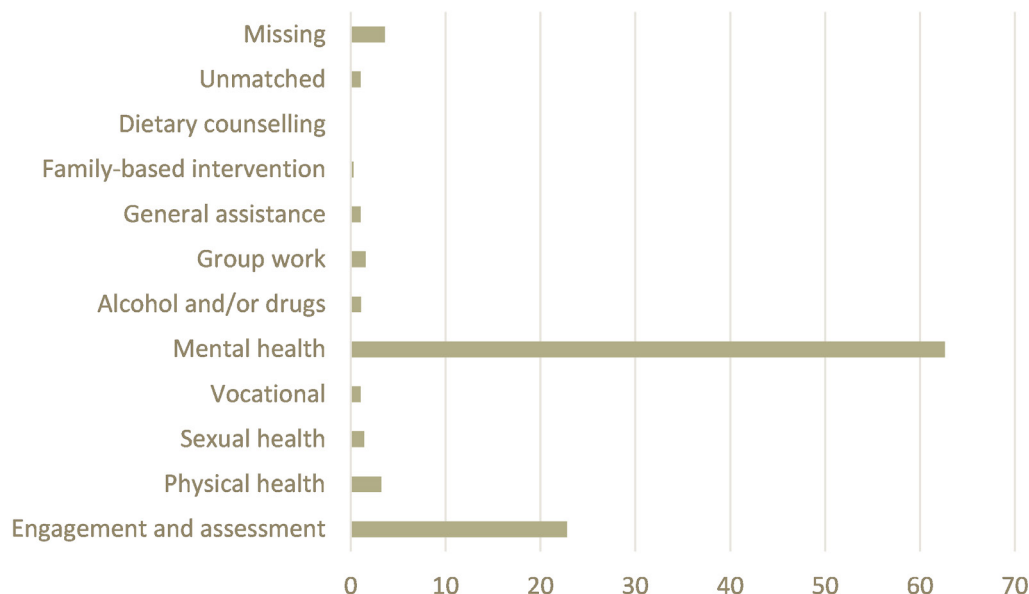
The first step of the economic evaluation was to estimate the total cost of services provided by headspace centres. To this end, the goal was to estimate the total costs and the total number of occasions of service as indicated in the following formula:

$$\text{Cost per occasion of service} = \frac{\text{Total in-scope costs (\$)}}{\text{Total in-scope occasions of service}}$$

### In-scope occasions of service

headspace centres throughout Australia deliver a variety of services to young people, ranging from services specifically related to physical and sexual health problems to services targeted at mental health and behavioural issues and those that relate more closely to vocational and alcohol and drug problems. Services are provided by different practitioner types for differing durations and intensity.

A young person visiting a headspace centre can receive any combination of service types throughout the course of their treatment. Generally, the majority of young people that visit headspace receive a mental health service as their main type of service – 63% of services (Figure 6.1). The second most common service provided to young people is that related to engagement and assessment. These services constituted 23% of headspace services in the 2013/14 financial year.

**Figure 6.1 Main type of service provided at each visit, 2013/14 financial year**

Note: Main service type is reported by the service provider for each occasion of service. Main service type has not been reported for approximately 3.5% of occasions of service within the 2013/14 financial year. It is important to note that young persons can receive more than one type of treatment at a particular service and that results reported relate to the main service received

Source:

Authors' calculations from hCSA administrative data

While the majority of the main service types provided were for mental health, it is important not to conclude that only two-thirds of headspace services were mental health related. This is because consideration must be given to both the primary and secondary issue that young people were assessed as initially presenting with. For example, of the 122,125 (63%) mental health occasions of service provided at centres within the 2013/14 financial year, approximately 80% were provided to young people whose primary issue was reported to be mental health and behavioural issues (Table 6.1). A further 12% of mental health services were provided to young people whose primary presenting issue was reported to be situational problems. The majority of engagement and assessment type services were also for those young people whose primary presenting issue was mental health and behavioural (79.5%), followed by situational problems (12.1%).

Table 6.2 below, which compares young people's primary presenting issue with their secondary presenting issue, shows the complexity and interaction of issues addressed by staff at headspace centres. Of those occasions of service where a young person presented with a primary issue recorded as mental health and behavioural, 17.4% also had a secondary issue related to situational problems such as conflict in the home, bullying at school or were at risk of becoming homeless. Further, many occasions of service were provided to young people whose primary presenting issue was not recorded as mental health and behavioural, but whose secondary issue was identified as such. For example, of the total 93,584 occasions of service where the secondary presenting issue was recorded as mental health and behavioural, only 17,623 services did not have mental health and behavioural as the primary presenting issue. As indicated in some of the qualitative data presented earlier, this shows the interaction between mental health and other problems for young people.

The administrative data (hCSA) shows that a young person visiting headspace for treatment (which constitutes on average 5 occasions of service) can receive any number of combinations of services and present with varying primary and secondary issues over the course of their headspace treatment, with the services all working together to improve the emotional, social and mental wellbeing of the young person.

Given this analysis, and taking into account the overarching and holistic goals of the headspace service model, all headspace occasions of service are considered to be either directly or indirectly related to the overall wellbeing of young people in terms of their emotional, social and mental health. Within the 2013/14 financial year, headspace centres across Australia delivered 194,968 occasions of service and all of these are considered to be in-scope for the cost per unit estimate.



**Table 6.1 Main service type provided by primary issue the young person presents with at each visit, 2013/14 financial year**

Primary Issue	Engagement and assessment	Main service type										Missing
		Physical health	Sexual health	Vocational health	Mental health	Alcohol and/or drugs	Group work	General assistance	Family-based intervention	Dietary counselling	Unmatched	
Mental health and behavioural	79.5	25.5	4.1	14.7	82.8	27.5	69.6	49.2	53.3	1.2	47.3	0.9
Physical health	1.0	67.1	3.7	0.3	0.5	0.3	0.1	2.0	0.2	0.0	1.6	0.0
Sexual health	0.9	4.3	89.0	0.3	0.5	0.3	0.3	1.9	0.2	0.0	1.0	0.0
Vocational assistance	1.4	0.1	0.0	79.8	1.3	0.8	2.4	8.9	4.2	0.0	2.1	0.0
Alcohol and/or drugs	2.9	0.9	0.2	0.2	1.2	66.1	1.0	1.5	0.2	0.0	1.1	0.1
Situational	12.1	0.6	0.5	2.9	12.1	4.1	12.7	26.0	37.7	0.0	14.4	0.1
Other	1.0	0.4	0.1	0.4	0.9	0.3	0.7	1.4	2.0	0.0	0.7	0.0
Unmatched	1.3	1.1	2.3	0.7	0.8	0.8	13.2	9.1	2.2	98.8	31.7	0.0
Missing	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100	100	100	100	100
N	44,469	6,315	2,823	2,091	122,125	2,192	3,094	2,060	589	82	2,072	7,056

Note: Main service type and primary issue upon presentation is reported by the service provider for each occasion of service. Main service type and primary issue upon presentation has not been reported for approximately 3.5% of occasions of service within the 2013/14 financial year.

Source: Authors calculations from hCSA

**Table 6.2 Primary issue by secondary issue young person presents with at each visit, 2013/14 financial year<sup>34</sup>**

Secondary Issue	Primary Issue										Total
	Mental health and behavioural	Physical health	Sexual health	Vocational assistance	Alcohol or other drug	Situational	Other	Unmatched	Missing		
Missing	16	1	3	0	0	3	0	3	7,005		<b>7,031</b>
Additional disorders	1,392	17	12	62	21	233	53	13	0		<b>1,803</b>
Alcohol or drugs	3,538	113	42	65	310	427	17	34	0		<b>4,546</b>
Mental health and behavioural	75,961	1,446	708	1,168	2,266	10,545	905	584	1		<b>93,584</b>
None of the above	31,646	3,113	1,957	1,512	947	5,336	430	2,208	1		<b>47,150</b>
Other	90	13	3	5	2	15	1	1	0		<b>130</b>
Physical health	924	147	140	5	18	24	7	12	0		<b>1,277</b>
Sexual and reproductive health	256	162	338	2	4	19	6	11	0		<b>798</b>
Sexual health	730	182	405	13	18	127	12	42	0		<b>1,529</b>
Situational	24,937	204	239	706	613	4,302	224	179	0		<b>31,404</b>
Vocational assistance	4,101	28	20	627	124	715	63	38	0		<b>5,716</b>
<b>Total</b>	<b>143,591</b>	<b>5,426</b>	<b>3,867</b>	<b>4,165</b>	<b>4,323</b>	<b>21,746</b>	<b>1,718</b>	<b>3,125</b>	<b>7,007</b>		<b>194,968</b>

Note: Primary and secondary issue upon presentation is reported by the service provider for each occasion of service. Primary and secondary issue upon presentation has not been reported for approximately 3.5% of occasions of service within the 2013/14 financial year.  
 Authors calculations from hCSA  
 Source:

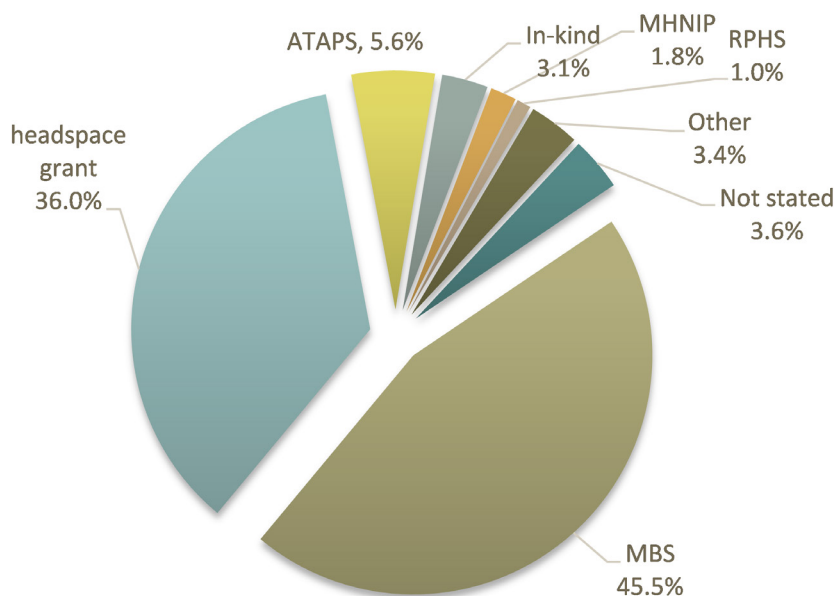
<sup>34</sup> In contrast to table 6.1 above, results for this analysis are presented in total numbers to highlight the cell sizes.

## In-scope government investment

Government investment into headspace services is facilitated through a number of funding streams. Leveraging off the headspace platform, these funding streams include the headspace grant, MBS and other funding streams such as Access to Allied Psychological Services (ATAPS), the Mental Health Nurse Incentive Program (MHNIP) and the Rural Primary Health Services (RPHS).

Out of the 194,968 occasions of service recorded in the 2013/14 financial year, 70,140 (36%) were directly funded by the headspace grant, and 88,691 (45.5%) occasions of service were funded out of MBS (Figure 6.2). The remaining 36,137 (18.5%) occasions of service were funded from a variety of other sources, including ATAPS (5.6%), MHNIP (1.8%) and the RPHS (1.0%).

**Figure 6.2 Direct funding source for headspace occasions of service, 2013/14 financial year**



Note: Funding source is reported by the service provider for each occasion of service. Funding source has not been reported for approximately 3.5% of occasions of service within the 2013/14 financial year.

Source: Authors calculations from hCSA

It is important to note that while a particular occasion of service may attract a certain funding stream, the overall course of treatment for a young person can have a large degree of heterogeneity. For example, a young person may initially visit headspace and receive an engagement and assessment service, with the service provider being funded by the headspace grant. The young person may then be referred to a psychologist within the centre with each occasion of service delivered being funded by the MBS. This same young person could then be referred to an alcohol and drugs specialist who is funded by headspace, or a mental health nurse who is funded by the MHNIP.

Furthermore, individual services and treatment courses delivered at a headspace centre have been made possible by both direct (staffing) and indirect (operational) costs related to that service. These costs can be borne by multiple funding sources. For example, an occasion of service may attract the MBS for direct salary component, while other components related to the occasion of service such as the physical space and administrative support required and other indirect components may be funded from the headspace grant.

Consequently, it is not practical or prudent to separate out government investment for a headspace treatment into the various funding streams. The headspace grant component that is directed towards centre operations (indirect costs) is an important component of valuing a headspace treatment against outcomes for young people.

## Valuing the in-scope headspace grant component

In order to further understand the way in which the headspace grant is utilised and to estimate the average cost per occasion of service, an analysis of each headspace centre operating within the 2013/14 financial year was undertaken and these results are presented below by implementation round.

An assessment of Round 5 centres has shown that these centres are anomalous across a number of financial and operational indicators. This is to be expected because these centres were only beginning operations when the analysis was undertaken. This means that expenditure undertaken by these centres at this time is over-estimated relative to occasions of service and that including these amounts in an overall cost per unit will distort estimates. To this end, all Round 5 centres have been excluded from the analysis.

Total revenue, direct and indirect costs, along with other approved expenditure and operating surplus/deficits for Round 1-4 centres are presented in Table 6.3 below. Across these rounds, headspace centres are operating with net surpluses, adding to a value of approximately \$7.6 million for the 2013/14 financial year out of a total grant value of \$57.2 million. Net surpluses as a proportion of total revenue (which largely represent unspent headspace grant funding and interest on grant funds) range from 11.5% to 17.7% across each round, with an overall average of 13.4%. It is recognised that it is general business practice to maintain a surplus cash flow; however, the value of this cash flow could be reviewed.

The differences observed between total revenue received and total expenditure are important to take into account when estimating the headspace grant contribution that can be assessed against outcomes. For our purposes, we have selected total expenditure within the financial year (both direct and indirect) rather than total revenue received.

**Table 6.3 Revenue, expenditure, average costs by centre round, headspace grant 2013/14 financial year**

Revenue/ Expenditure	Round 1	Round 2	Round 3	Round 4	Total (Rounds 1-4)
Total Revenue	\$11,403,738	\$20,574,466	\$10,580,177	\$14,628,086	\$57,186,467
Total Direct Costs	\$6,791,396	\$13,495,240	\$6,889,569	\$9,587,400	\$36,763,605
Total Indirect Costs	\$2,472,083	\$4,303,059	\$2,311,328	\$3,206,762	\$12,293,232
Total Approved Other Expenditure	\$123,241	\$177,555	\$24,801	\$154,503	\$480,100
<b>Total Expenditure</b>	<b>\$9,386,720</b>	<b>\$17,975,854</b>	<b>\$9,225,698</b>	<b>\$12,948,665</b>	<b>\$49,536,937</b>
Net Surplus / (Deficit)	\$2,017,018	\$2,598,612	\$1,354,479	\$1,679,421	\$7,649,530
Net Surplus/Total Revenue	17.7%	12.6%	12.8%	11.5%	13.4%
Direct Costs/Total Expenditure	72.4%	75.1%	74.7%	74.0%	74.2%
Indirect Costs/Total Expenditure	26.3%	23.9%	25.1%	24.8%	24.8%
Other/Total Expenditure	1.3%	1.0%	0.3%	1.2%	1.0%
No. of headspace centres	10	20	11	15	56
Average cost per centre within round	\$938,672	\$898,793	\$838,700	\$863,244	\$884,588

Revenue/ Expenditure	Round 1	Round 2	Round 3	Round 4	Total (Rounds 1-4)
No. of Occasions of service	44,669	68,067	36,846	41,189	190,771
<b>Average cost per OoS</b>	<b>\$210</b>	<b>\$264</b>	<b>\$250</b>	<b>\$314</b>	<b>\$260</b>

Note: Round 5 centres have not been included in this analysis.

Data Source: Authors' calculations from hCSA and hCFA

In assessing the allocation of headspace grant funding to individual centres within the 2013/14 financial year and the value of total expenditure as a function of the number of occasion of service, we observed a large degree of heterogeneity at the centre level (results not shown). This variation can be caused by a number of factors including:

- operational phase relative to start-up time
- an undercount of occasions of services in the headspace centre services allocation data collection<sup>35</sup>
- reporting errors in either datasets
- variation in centre location and lead agency partnership.

Taking only those centres that could be considered fully operational within the 2013/14 financial year (primarily Rounds 1-4 centres), there remain a number of centres that have very high headspace grant investment with relatively low occasions of service. These centres require further investigation as to the underlying causes and operational efficiencies that could be achieved as well as the necessity of the overall grant revenue in receipt.

Turning to the variation among centre rounds, we can observe that centres operating in rounds 1-4 record an average cost per occasion of service of \$210 - \$314. Round 1 centres have the lowest average cost per occasion of service and Round 4 the highest, which is also likely to be a product of the relative newness of these centres in 2013/14.

Our estimate for government investment via the headspace grant within the 2013/14 financial year is \$260 per occasion of service. This estimate takes into account that the expenditure component only and includes Rounds 1-4 centres.

## headspace national office

headspace centres also receive ongoing support from headspace National Office (hNO). This involves a range of services and support including human resources, compliance training and assistance, information technology, specialised training, clinical support, contract management and community engagement and awareness. The Department of Health has allocated \$96,000 per centre annually for hNO to be able to deliver these services. The actual expenditure from this grant component varies, and it is not possible to extract a precise value from the current financial data due to the inter-relationship with other headspace services. The grant allocation of \$96,000 per year is taken to be an estimate of the actual expenditure towards support from hNO for each centre. This equates to a value of \$6,336,000 for those centres that are in-scope, within the 2013/14 financial year (Rounds 1-4).

## Medicare Benefits Scheme (MBS)

More than 45% of services received at headspace centres attract a Medicare subsidy. This pattern reflects the headspace model and funding arrangements, which were designed to leverage from the MBS. Given the substantial MBS benefit that is realised through headspace centres, we have considered that government investment via the MBS is in-scope for analysis of the overall government investment to provide services to young people at headspace centres across Australia. It is recognised that a number of services that are related to headspace and also attract the MBS

<sup>35</sup> This has been an issue in Broome for example, but has recently been addressed.

(and potentially other funding streams) are not able to be observed. This would entail, for example, young people that are referred to services outside a headspace centre during an initial consultation within a headspace centre.

### Valuing the in-scope MBS component

Using data sourced from the headspace centre Service Application (hCSA) database, we are able to observe those services that were reported as being directly funded by the MBS and the type of service provider who administered the service. From published Medicare data, we are also able to estimate an average benefit paid for services that generally attract the MBS. These data are shown in Table 6.4 below.

**Table 6.4 Average MBS benefit by service provider, 12-25 year olds, 2013/14 financial year**

Service Provider	No. Services	Benefits paid	Average Benefits Paid
Clinical Psychologists	393,358	\$50,443,299	\$128.24
GPs	533,740	\$44,317,337	\$83.03
Other allied health	536,113	\$47,116,390	\$87.89
Psychiatrists	327,721	\$51,155,399	\$156.09
<b>Total</b>	<b>1,790,932</b>	<b>\$193,032,425</b>	<b>\$107.78</b>

Data Source: Medicare tables

Within the 2013/14 financial year, young people aged 12-25 years received 1.79 million services that were funded through the MBS. These services have a total benefit paid of just over \$193 million. An average benefit paid per service for each service provider has been estimated, with a service provided by a psychiatrist receiving on average \$156 in Medicare benefits, clinical psychologists \$128 and GPs around \$83. In order to calculate the contribution of MBS to headspace services, these averages have been applied to services observed within headspace centres that have reported being funded through the MBS.

**Table 6.5 Estimated MBS benefits for headspace clients, by service provider, 2013/14 financial year**

Service Provider	Average Benefits Paid	No. of headspace occasions of service	Estimated MBS benefit towards headspace services
Clinical Psychologists	\$128.24	55,851	\$7,162,201
GPs	\$83.03	17,865	\$1,483,393
Other allied health	\$87.89	11,332	\$995,923
Psychiatrists	\$156.09	3,642	\$568,567
<b>Total</b>		<b>88,691</b>	<b>\$10,210,085</b>

Notes: Only those service providers that are generally eligible to receive the MBS have been included. Data within the hCSA is completed by the service provider and may be unreliable in some circumstances.

Data Source: Medicare tables and hCSA

For this analysis, a total of 88,691 occasions of service were deemed to be in-scope firstly because they reported attracting the MBS, and secondly because they were eligible to receive MBS benefits (Table 6.5). The majority of these services (more than half) represents those provided by clinical psychologists. These services have an estimated MBS benefit value of \$7.16 million. Services provided by GPs are the second most common service that attracts the MBS within headspace centres. Almost 18,000 headspace GP services within the 2013/14 financial year received Medicare funding, with a total value of \$1.48 million. Other allied health services and services provided by social workers comprise 11,332 occasions of service at an estimated value of \$995,923. Lastly, 3,642 psychiatric services received MBS funding at an estimated value of \$568,567.

The total estimated MBS value that has gone towards a headspace client's treatment is approximately \$10.2 million. This value is added to the overall government investment towards providing services at headspace centres within the 2013/14 financial year.

## Other government investment

As discussed earlier, a number of other government funding streams are operating within headspace centres. The value of some of these funding streams is not able to be estimated with the current available data, and hence this analysis represents an under-estimate of total government investment directed at headspace services. These streams are described below.

The Access to Allied Psychological Services (ATAPS) is a targeted, discretionary fund that was previously administered through the Divisions of General Practice and Medicare locals (ATAPS Operational Guidelines, 2012). Estimates gained within the hCSA data show that 5.6% of services are funded directly from ATAPS. Services funded under ATAPS tend to be provided by psychologists (48%), mental health nurses (17%) and social workers (10%).

The Mental Health Nurse Incentive Program (MHNIP) provides a non-MBS payment to community based general practices, private psychiatrist services, Divisions of General Practice, Medicare Locals and Aboriginal and Torres Strait Islander Primary Health Care Services who engage mental health nurses to assist in the provision of coordinated clinical care for people with severe mental disorders. A smaller proportion of services are provided through direct funding from the MHNIP (1.8%). As expected, these services are primarily mental health nurses (77%). A small number of headspace centres, mainly Barwon, Geelong, Camperdown, Coffs Harbour and Knox are utilising this funding stream.

The Rural Primary Health Services (RPHS) was established on 1 July 2008 as a response to the Audit of Health Workforce in Rural and Regional Australia. It involved the amalgamation of a number of health programs to generate efficiencies in service provision in rural and remote areas throughout Australia. The primary objective of the RPHS is to provide and maintain access to supplementary allied health and primary care services that are based on identified needs in each community. Aligning with the RPHS's service provision guidelines, rural and regional headspace centres receive funding through the RPHS and constitute 1% of all headspace services. Launceston, Morwell, Bendigo and Warwick are more likely to be utilising the RPHS funding stream to provide services within their headspace centres.

It is important to note that while these funding streams do not represent a substantial component of headspace centre operations, variation exists across each centre, with some utilising particular funding sources more heavily than others. Any changes to these programs could compromise centre operations for some centres.

## 6.2 Summary

The estimated total value of government investment towards headspace services received at headspace centres within the 2013/14 financial year is valued at around \$67.2 million (Table 6.6). The majority of this value is sourced from the headspace grant (\$49.5m), which constitutes 75% of government investment into headspace services. This is followed by the MBS (\$11.4m) and hNO allocation per centre (\$6.3m). It is important to note that the MBS component is an estimate based upon averages within the entire Medicare system. Other government investment including that related to the Mental Health Nurse Incentive Program and the Access to Allied Psychological Services are unable to be valued at this time, but only constitute a small component of the overall government investment.

Overall, it is estimated that an average occasion of service within headspace centres costs \$339 per occasion of service<sup>36</sup>, taking into account the full government investment. An average treatment for all headspace clients (5 services per client) is estimated to attract just over \$1,695 in total government investment.

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<sup>36</sup> There is no similar program with which to directly compare and benchmark headspace program costs; however, this occasion of service cost compares closely to ambulatory services which nationally averaged \$303 per treatment day in the 2012-13 financial year (excluding Victoria). Ambulatory care services (a form of community based mental health services) are provided by outpatient clinics (hospital or clinic based), mobile assessment and treatment teams, day programs and other services dedicated to assessment, treatment, rehabilitation and mental health care (SCRGSP, 2015).

**Table 6.6 Funding source, 2013/14 financial year**

<b>Funding source/Occasions of service</b>	<b>Value</b>
headspace grant	\$49,536,937
hNO	\$6,336,000
MBS	\$10,210,085
<b>Total</b>	<b>\$66,083,022</b>
<b>No. Occasions of service</b>	<b>194,968</b>
<b>Average total cost per occasion of service</b>	<b>\$339</b>



# 7. Conclusion

The evaluation of headspace focused on assessing the effectiveness of the program. This assessment included an examination of young people's access to and engagement with the program, the service delivery model and client outcomes. This scope oriented the project towards a mixed method evaluation, informed by multiple data sources. The evaluation findings are somewhat mixed – a result that complicates a simple synthesis of findings. Moreover, as evidenced in Chapter 4, any assessment of program effect must consider multiple outcome indicators as a narrow focus on K10 scores can obscure other important effects. This is most evident in the analysis of suicidal ideation which showed that some young people who did not show a clinical or significant improvement in psychological distress levels did show significant reductions in suicidal ideation.

As evidenced throughout this report, headspace is a complex program, serving a diverse range of vulnerable young people with high levels of psychological distress and a range of social, emotional and health disorders. The evaluation found that headspace is generally accessible and effective. As is typical in large human service evaluations, the qualitative data is overwhelmingly positive, with most young people and their parents attributing improvements across a number of outcome areas to headspace while the statistical data shows a more modest pattern of program effect.

The key findings and conclusions related to the evaluation scope areas are outlined below.

## Access and Engagement

headspace was established to provide a highly accessible mental health program for Australia's young people, and the findings indicate that this program goal is being achieved. Evaluation data shows that headspace is being accessed by a diverse group of young people whose need for mental health care is evidenced by young peoples' K10 scores on entry. Three in four young people were recorded as having high to very high levels of psychological distress at first assessment. The evaluation shows that headspace has had success in engaging groups of young people who traditionally have been disadvantaged in their access to mental health care. Most notably, young people living in regional areas as well as those from Aboriginal and/or Torres Strait Islander backgrounds are over-represented as headspace clients. These findings are important. The first indicates that headspace is providing services to a significant proportion of young people within communities that traditionally have few or no options for specialised local-based youth mental health care. Young people living in regional areas represent 26.2% of the population nationally, but make up 39% of the headspace client population.

Further, Indigenous young people comprise 3.7% of the youth population nationally but make up 7.4% of headspace clients. This over-representation is significant as Indigenous young people are a high risk group for emotional and psychological problems but are less likely to seek help than non-Indigenous young people (Price & Dalgleish, 2013). While the proportion of Indigenous clients varies greatly according to the geographic location of centres, this over-representation works towards balancing inequalities in mental health provision and outcomes for Indigenous young people. Qualitative data indicates that some centres could do more to make their services more culturally appropriate for Aboriginal or Torres Strait Islander clients. Data suggests that more flexible and informal drop-in services are more likely to engage Indigenous clients, as are outreach models.

headspace has been successful in attracting other young people from marginalised and at-risk groups. The service is being accessed by a high proportion of young people who identifies as LGBTI (approximately one in 5 clients), as well as those who are homeless or living in conditions of insecure housing such as couch surfing (approximately one in 10 clients). Access, however, does not guarantee sustained engagement and improvement. The outcomes analysis shows that LGBTI young people are less likely to show clinically or reliably significant improvement following treatment than young people who identified as heterosexual. Furthermore, homeless young people are less likely to return to headspace for a second occasion of service than the general client population.

headspace has been less successful at engaging young people who were born overseas and who speak a language other than English at home. These groups are significantly under-represented at headspace. This finding is consistent with the literature that indicates that CALD young people are more reluctant to seek help than young people from mainstream cultures (Rickwood et al, 2007).

Evaluation data shows that the centre-based program implements a variety of strategies to make services accessible for a diverse range of young people. Strategies most valued by young people include the provision of a wide range of services available at a single location, free or low cost services, the welcoming space filled with friendly and non-judgemental staff and the innovative and youth-friendly methods used to foster engagement including the use of iPads and social media.

Despite efforts to increase service accessibility, barriers remain. Evaluation data indicates that most headspace clients live within 10 kilometres of a centre and the service is much less accessible to those living at greater distances. Perhaps in recognition of this, a significant number of stakeholders argued that headspace needs to expand its outreach services. Other barriers to service usage include centres that do not provide any extended opening hours, have long waiting times for services, and do not ensure that practices are culturally appropriate. In addition, young people identified the stigma of mental illness as a reason why they did not seek help earlier. This barrier is a challenge for all mental health services and evaluation data suggests that headspace may be having a positive impact in this area. Young people and their parents often spoke about accessing headspace after having unsatisfactory experiences with other services and generally headspace appears to be doing better than many mainstream services to engage young people.

Data collected for the evaluation suggests that headspace could implement additional strategies to specifically target vulnerable groups of young people identified as under-represented. As part of this, centre staff should engage in genuine and ongoing liaison with services that target these groups of young people, including refugee and CALD support services. This active liaison is required to build links into these communities, which will assist centres to provide services that are more culturally appropriate. The evaluation found that awareness of headspace was relatively low among parents (63% of respondents to the Parents and Carers Survey reported that they either had not heard of headspace before their young person attended a centre or had heard of headspace, but did not know what they did). Interview data indicates that most young people accessed headspace through a multi-step referral process (for example through recommendation from a school counsellor or a friend; or a referral from a GP) and parents often assisted them along the way (for example by driving them to a GP). Indeed, survey data indicates that parents provide important practical assistance to encourage their young person to attend appointments (such as driving them to a centre) as well as providing emotional support during the treatment process. Data suggests that parents play a more active role in supporting their young person's engagement with headspace rather than encouraging access for the first time.

## Outcomes for young people

The qualitative data is overwhelmingly positive about young people's outcomes. Most young people and their parents attribute improvements across a number of outcome areas to headspace. Findings from the statistical analysis show a small positive improvement in outcomes of young people who sought headspace services relative to similar young people and a functional population.

Specifically, the headspace treatment group records a greater reduction in psychological distress (K10 score) when compared with both matched groups over time ('other treatment' and 'no treatment'), with both results statistically significant. The effect size for this outcome indicator may be considered relatively small (-0.11 for diff-in-diff in no treatment and -0.16 for diff-in-diff for other

treatment); however, classifying the magnitude of the strength of an effect size is often contentious, especially for a diverse group of people accessing a wide range of different services.

Other outcome indicators, including social inclusion and drug and alcohol use, show weaker results. While the 'headspace treatment' group shows an overall improvement in social inclusion over time, this improvement is not as strong as that observed for the matched 'other' and 'no treatment' groups. Further, while no significant change was observed in binge drinking in the 'headspace treatment' group, a reduction in binge drinking was observed in the matched 'no treatment' group from 1.5 days to just under one day on average each month. The difference-in-differences observed over time are significant at the 1% level, with the matched 'no treatment' group reporting a reduction in binge drinking by 0.7 days more than the 'headspace treatment' group, and the 'other treatment' group reporting a reduction in binge drinking by 0.75 days more than the 'headspace treatment' group. No statistically significant differences were observed for cannabis use. These results must be interpreted with caution as these outcome indicators were not included as benchmarks in the matching technique and clear differences are seen at baseline between the groups, particularly for the social inclusion outcome.

Results that seek to extend this analysis by testing the prevalence of a clinically significant change show that overall, substantially more young people using headspace services get significantly better (22.7%) than get worse (9.4%) when measured against 'functional' benchmarks of psychological distress derived from the general youth population. Further, particularly strong effects arising from the improvements in mental health delivered through headspace include a significantly reduced prevalence of suicidal ideation and self-harm.

One of the more important findings in this evaluation is the improvement that can be seen in other valuable outcomes (most notably a reduction in suicidal ideation and self-harm) for those receiving headspace treatments, even among those for whom the K10 measure of psychological distress shows little change. The outcomes analysis also highlighted gains for clients related to enhanced social inclusion and economic participation. Economic and social benefits from improved mental health functioning are delivered through a number of positive outcomes, and to the extent that these can be attributed to headspace treatment, add value to the headspace investment. The strongest economic benefits arise from a significant reduction in the number of days lost due to illness, the number of days cut down, and the reduction in suicide ideation and self-harm. It should be recognised that employment may be a longer term outcome than possible to fully judge from this evaluation. Nevertheless, these findings provide some indication of the economic and social value to society of the improvements in mental health functioning being delivered through headspace.

Caution should be taken when interpreting the outcome findings. Young people interviewed attributed improvements across a number of outcome areas to headspace while the statistical data shows a small program effect. Given the timing of the fieldwork, it was not possible to explore statistical analysis results with young people and headspace staff.

## The headspace service delivery model

headspace is a holistic program that operates on a national, community and individual level. The value of national branding and mental health promotion work as well as local community awareness initiatives in educating young people about the services available to them, encouraging help seeking, and reducing the stigma of mental health problems are highlighted by the Centre Managers Survey, the Professional Stakeholders Survey and interview data.

The headspace service delivery model is designed to enable young people to receive multiple services from different practitioner disciplines within one location. This minimises the need for referral to other services, which may explain the very low rate of formal referrals to other services for headspace clients. Evaluation data suggests that the majority of referrals that connect young people to other services within the system are informal or verbal. These are not recorded in the administrative data, but staff at all fieldwork sites spoke of referring frequently. It was clear that some centres are working effectively with other local service providers while tensions and challenges are evident in other centres. Centres that have developed good links with local GPs and CAMHS in particular should work with other sites to lead positive change and share successful methods of communication and cooperation. Overall, this evaluation confirms, however, that the service context

for youth mental health is complex and fragmented. While individual headspace centres can and do mitigate some of these issues locally, there are significant structural barriers to providing a holistic and continuous service to vulnerable young people.

The evaluation identified a number of ways that the service delivery model could be enhanced to better meet the needs of young people and their parents. Many parents and carers would like to be more engaged with their young person's treatment and wanted more help to learn how to effectively support their young person. Further, evaluation data indicates that there is a need for headspace to provide family-based therapy. Many staff at centres acknowledged this need and would like to be better able to support families as a unit.

Another way that the service delivery model could be enhanced to better meet the needs of young people is to increase the capacity of centres to provide outreach services to engage young people who are reluctant to engage in centre based care. While headspace and engagement with schools have attempted to address these issues, there are still large groups of young people not accessing headspace.

The evaluation highlights some workforce challenges, particularly the need for more GPs and psychiatrists in headspace centres or attached to them. Although further evidence is required, headspace should consider and address the reasons why many GPs are not willing to refer young people to headspace. A strategy to actively engage GPs may be required to boost awareness and develop trust. The data collected from GPs suggests that alternative forms of collaboration between centres and GPs should be considered.

Online and telephone treatment methods may be of assistance to help not only increase scale, but to support young people with low needs as well as young people unable to leave their homes or travel to headspace centres.

## The economic evaluation

The economic analysis indicates that the average cost of a headspace occasion of service is \$339 (2013/14 dollars)<sup>37</sup>. Considerable variation in average costs per occasion of service at the centre level exists and can range from \$136 to above \$1,000, taking into account the headspace grant only. Substantial surpluses also exist in terms of the headspace grant within the 2013/14 financial year. It is recognised that legitimate impediments may reduce the ability of some centres to realise operational efficiencies, particularly in certain areas throughout Australia. However, it is recommended that centre level operational efficiencies are examined in order to make better use of finite resources. This could involve a number of measures, including:

- review of funding grant allocation relative to historical and predicted need at the local area level
- targeted assistance to particular centres to ensure operational efficiencies are optimised
- performance indicators and targets linked to grant funding.

Each of these initiatives would need to be carefully considered and implemented to ensure that unintended consequences for the headspace program did not materialise and that headspace can continue to reach its objectives in improving the social, emotional and mental health of young Australians. In terms of the government investment, the mental health of headspace clients improves moderately relative to other matched control groups. It should also be noted that headspace provides a number of benefits such as community engagement and awareness which are difficult to cost but which have raised the profile of youth mental health in Australia.

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<sup>37</sup> There is no similar program with which to directly compare and benchmark headspace program costs, however, this occasion of service cost compares closely to ambulatory services which nationally averaged \$303 per treatment day in the 2012-13 financial year (excluding Victoria). Ambulatory care services (a form of community based mental health services) are provided by outpatient clinics (hospital or clinic based), mobile assessment and treatment teams, day programs and other services dedicated to assessment, treatment, rehabilitation and mental health care (SCRGSP, 2015).

Overall the evaluation found a significant need for early intervention for young people with mental health, substance misuse, social/emotional and sexual/physical health problems. headspace is making some headway to address the service need and has had some success, especially in mental health. The cost of headspace treatment appears comparable to community mental health care. Further, if headspace did not exist, it is likely that large numbers of young people would not access services or would access them at a much later stage in the development of their disorders, potentially incurring significant costs to the government as well as difficulties for the young people and their families. Nevertheless, the evaluation has identified a number of ways in which headspace could improve its service delivery model and its access and engagement processes to better serve young Australians.

### Implications for future research

The evaluation identified a number of additional studies that, if undertaken, would make a valuable contribution to a better understanding of headspace and youth mental health care in Australia.

A significant proportion of headspace clients receive only one or two occasions of service. The evaluation is unable to explain this high rate of single service use as administrative data does not explain why they disengaged, and young people who had left the service early were not interviewed. It is suggested that a longitudinal study be undertaken that monitors the service use of early leavers. As the evaluators were only working with one year's data, we were unable to see if these people return after a period of time. Further, interviewing single service users would provide valuable information on the needs and motivations of young people who do seek help but disengage early from support services.

Also, the logic behind headspace is that as an early intervention service, it will minimise the impact of mental illness over the lifetime of clients. Given the data limitations, the evaluation was unable to establish if this is the case. It is suggested that further work be done in this area as more long-term data collected via the hCSA becomes accessible to researchers. To confirm the efficacy of early intervention in youth mental health, research will require access to other datasets such as MBS and hospital admission data.

# Appendix A

## Evaluation Scope and Research Questions

Evaluation scope areas	Evaluation research questions
<p><b>Clinical outcomes of young people receiving headspace services</b></p>	<p>How do young people's outcomes change after using headspace services?</p> <p>According to clients, service providers and parents/carers, how and why has headspace contributed to / not contributed to changes in client outcomes (across four outcome areas)?</p> <p>How do the outcomes of young people using headspace services differ from the outcomes of young people across the population not using headspace services?</p>
<p><b>Young peoples' access to and engagement with headspace</b></p>	<p>What is the current and anticipated demand for headspace services?</p> <p>What is the number and profile of young people accessing headspace services?</p> <p>How do they compare to young people across the population by demographic, psychological distress and economic participation characteristics?</p> <p>Which groups of young people is headspace successfully reaching; which groups are underrepresented?</p> <p>How does young people's service use in headspace centres compare to the services available?</p> <p>What facilitates and hinders young people's engagement with headspace services?</p> <p>What role do parents/carers play in facilitating or hindering young people's access to and engagement with headspace services?</p> <p>How are headspace services provided to young people in remote or regional areas? What facilitates and hinders the provision of extended services?</p> <p>What perceived impact has headspace had on the skill and confidence of GPs and other service providers regarding the provision of youth mental health care? To what extent do they report changes to practices as a result?</p> <p>How does headspace increase awareness of mental health literacy among young people?</p> <p>To what extent have the number and type of young people accessing mental health services changed?</p> <p>To what extent and why do a sample of young people using headspace services report an improvement in mental health literacy?</p>
<p><b>headspace service delivery model</b></p>	<p>What aspects of the headspace model are most and least effective in assisting headspace to meet its objectives?</p> <p>To what extent is model fidelity important?</p> <p>Do young people's outcomes differ depending on model or service use type?</p> <p>What are the risk and protective factors for headspace sustainability?</p> <p>How could the headspace service model be improved to better meet the needs of young people, and the needs of parents/carers in supporting young people?</p>

Evaluation scope areas	Evaluation research questions
<b>headspace service delivery model (cont.)</b>	<p>How and to what extent are additional components of headspace (such as headspace National Office, eheadspace and Centre of Excellence) perceived as supporting headspace to meet its objectives?</p> <p>To what extent are headspace services linked with other government funded programs?</p> <p>To what extent are there referrals between headspace services and the broader service system?</p> <p>How effective is the service model in providing an entry point into and connection to other services within the broader system?</p> <p>How do service providers transition young people using headspace to adult services where appropriate? To what extent are young people supported in the transition process?</p>
<b>Economic evaluation</b>	<p>What are the overall costs and effects of headspace?</p> <p>What is the overall cost effectiveness of headspace?</p> <p>Are there any differences in cost and/or effects for different profiles of clients?</p> <p>What are the overall costs and effects of expanding headspace to 90 centres?</p> <p>What estimated funding would be required to provide national coverage?</p>

# Appendix B

## Centre expansion analysis and proposals for national coverage

This appendix contains the centre expansion and national coverage analysis conducted for the evaluation of headspace. This analysis was conducted to answer two key research questions:

- What is the overall cost-effectiveness of expanding headspace beyond 100 centres?
- What is the estimated funding requirements for headspace to achieve national coverage?

The analysis presented in this appendix draws on the following methodological and design features:

- The analyses consider the costs and effects of headspace services in different geographical locations and the current geographic and demographic coverage of headspace.
- The main metric used in considering the effects of headspace expansion is the current and potential youth coverage of headspace.
- The costs of national coverage are estimated using the current costing mechanisms for the establishment of headspace sites based on headspace grant funds and an estimate of MBS expenses.
- Cost-effectiveness is defined as the costs per young person with access to headspace centre services under the access definition provided by the current allocation model.

Based on the data available, the analyses presented herein highlights some apparent limitations of the current funding model and invites further discussion of the current centre funding model.

The evaluation of the effectiveness of the current centre allocation model to provide access to headspace services, uses available data to describe youth access to headspace centres and proposes alternative measures of usage and demand. This analysis adds breadth to discussion of what the 'effects' of headspace centre expansion are.

The discussion of alternative models of national coverage, proposes several other models of centre allocation for consideration. While these models do not provide an optimal formula for centre allocation, they propose alternative definitions of access and methods of allocation of centres for further consideration. Costing these models is outside the scope of this evaluation, and given the concerns with the current centre funding model raised in Part One, it is not appropriate to extrapolate costs from the current model to further sites which use a different allocation formula.

As the funder of headspace, the Department of Health (DoH) aims to provide access to headspace services for as many young people as possible across Australia. In order to achieve this, a number of innovative approaches to access have been implemented in addition to the establishment of new centres. These include outreach programs, eheadspace and school services. These services are outside the scope of this evaluation, which focuses on expansion of the centre model.



## The current model of headspace centre allocation

The current model of headspace centre allocation, as developed and used by the Department of Health and headspace National Office (hNO), aims to achieve a network of coverage which maximises youth access. The allocation of centres in each round takes into account the youth population across states and territories, the presence of existing centres, and potential alternative methods of access via outreach-type centres. In addition, the allocation formula aims to take into account local capacity and existing infrastructure with the aim of supporting the development of required services and maximising sustainability. While the allocation of new centres is guided by population modelling, the Department's final decision regarding the location of centres and the timing of implementation is also informed by expert knowledge of community capacity and readiness to provide the headspace model of service.

Creation of new headspace centres is determined through a three stage process (DoH, hNO, 2011).

1. Population modelling is used to determine priority regions. Priority is determined based on the youth population within the area with greater weight given to disadvantaged and remote areas. Allocation is determined at three levels, including the relative distribution between states and territories, distribution between capital cities and other areas, and the weighted youth population within each capital and non-capital city group. For those living in the capital cities, the area is defined by the Australian Statistical Geography Standard (ASGS) Statistical Area Level 4 (SA4) boundaries. For young people living in other areas, the area is defined by the ASGS Statistical Area Level 3 (SA3) boundaries.
2. Candidate areas are reviewed, and planning at this stage incorporates local knowledge or a 'human intelligence' component.
3. The Minister for Health makes a decision regarding recommended areas for future centre sites. A staged roll-out is then managed by the hNO.

The evaluation team have been given enough information to replicate only stage 1 of this process in their assessment of the current model of centre allocation. Information underpinning stages 2 and 3 has for practical reasons not been made available to the evaluators. The outcomes of our analysis of the current centre allocation model should be considered with this limitation in mind.

This section describes how the evaluation team have used the Department's current headspace centre expansion formula (that is, stage 1 from the process described above) to model the current and hypothetical future expansion profile, costs and population coverage of the headspace centre model of service. We follow the model as developed and used by the Department in conjunction with hNO.

The purpose of this section is twofold: first, to demonstrate the population coverage achieved by the current centre allocation model, including all existing centres and those announced up to the end of the evaluation reference period; and second, to apply the Department of Health formula underpinning the current centre allocation model to its hypothetical natural conclusion, thus providing an estimate of the costs and population coverage possible under the existing formula.

## Competing and complementary services

In focussing on Stage One of the Centre Allocation Model (that is, the population modelling step), this evaluation has not had access to information underpinning Stages Two and Three of the centre allocation process used by the Commonwealth. That is, the evaluation which follows has not considered competing and complementary services in all SA3s and SA4s across Australia.

In any given region or area within which the Department calls for tender from lead agencies expressing an interest in operating a headspace centre, the Department must make itself aware of all other providers of similar services within a reasonable distance of the proposed new headspace site. These service providers can include such entities as community mental health services, private psychologists, General Practitioner clinics, and state-run child and adolescent mental health services. This is part of the “human intelligence” component of the Department’s review of candidate areas for headspace sites, and will influence the choice of location for new centres in addition to the population modelling approach used in this evaluation document. The competition for services is an important element to consider when considering headspace centre allocation, and the results of the evaluation which follow should be considered in this light.

## Access to a headspace centre

To ensure that the analysis aligned with the current model of geography-based allocation, young people were considered to have access to headspace if they lived within an area which contained a headspace centre. For those living in the capital cities, the area was defined by SA4 boundaries. For young people living in other areas, the area was defined by SA3 boundaries. These boundaries are explained below.

It is important to note that the definition of client access plays a major role in allocation of centres and in the interpretation of the ultimate service coverage of the headspace centre model. An analysis of the effects of different definitions of client access on the pattern of future centre expansion and service capacity of headspace as an organisation is provided later in this appendix.

## Australian Statistical Geography Standard

In Australia, the ABS provides the main administrative geographic boundaries in the form of the Australian Statistical Geography Standard (ASGS), which was introduced in 2011 to coincide with the Census. The ASGS divides Australian states and territories into geographic regions. This hierarchy of geographies aggregate small areas into larger areas. The main structure comprises of Mesh Blocks, which are the smallest area classification, and these are aggregated to form statistical areas of increasing size. Mesh Blocks are considered to be building blocks, which are primarily designed based on data collection requirements. Statistical Area Level 1s (SA1), which are built from Mesh Blocks, contain populations between 200 and 500 persons. Whole SA1s are further aggregated to form Statistical Area Level 2, with populations in the range of 3,000 – 25,000 persons. These units are again aggregated to SA3s, which attempt to provide a standardised regional division across Australia. As a result, there is substantial variation in the size of SA3s. While these areas are designed to have populations of approximately 30,000 – 130,000, there are a number of SA3s that fall outside of this range. SA4s form the next level on the hierarchy and contain populations of 100,000 – 500,000 persons. SA4s have been designed to replace the previous Labour Force Regions (ABS, 2011). A shift in each level of the hierarchy reflects a substantial shift in both geographic area and population size.

## National coverage of headspace under the current centre allocation model

For the purposes of the evaluation of expanding headspace under the current centre allocation model, national coverage was defined as:

All 12 – 25 year olds in Australia living in an area which contains a headspace centre. That is, national coverage was defined as a headspace centre being located in each SA4 within capital cities

and each SA3 in non-capital cities across Australia<sup>38</sup>.

### Scope – headspace services

In addition to the main centres, and in an attempt to maximise access to headspace, a number of additional outreach-type services are provided:

- Outreach sites are defined as those working outside of the headspace site premises in a one-to-one capacity in order to engage a young person. This model is used on an as-needed basis. In-reach or visiting services are defined as headspace services which are established at another service or school to provide primary assessment and consultation. Staff are provided from the main site and the hours of service to the site are regular.
- Satellite sites are centres which are established when a fully operational main site reaches a critical mass. Satellite sites require ongoing infrastructure, operational support, staffing, supervision and clinical governance from a main site. Satellite sites do not receive independent funding from the headspace national office. Satellite sites may not include all components of the headspace platform and may not be open full-time.

As these outreach-type services offer varying levels of support and access periods, and the geographic areas in which they are established remain in-scope for a new and independent headspace centre, these outreach-type centres were not included in the centre expansion analysis. However, there were two exceptions to this: a funded outpost of headspace Launceston in Devonport which attracts additional funding and fits the profile of a full centre, and a satellite site in Wyong which offers the core services and relies on like-services within the area for operational costs. These two centres, which are considered satellite sites but meet the profiles for funding of full centres, were included in the centre expansion analysis on the advice of headspace and DoH.

### Current Centre allocations (Rounds 1 – 8)

In order to accurately describe the costs and effects of expanding headspace beyond 100 centres using the current expansion model, it is important to take into account the history of the expansion of headspace centres from inception of the program at Round 1 in 2006 through to the most recently announced Round 8 list of centre locations.

**Table B1 headspace centres Rounds 1-8**

Round	Year of Establishment	Number of Centres
1	2007	10
2	2009	20
3	2012	10
4	2013	16
5	2014	15
6	to be established in 2015	16
7	to be established by Dec 2015	10
8	to be established by Dec 2016	5

Following the completion of Round 8 there will be 102 fully operational centres. As noted above, Devonport (Round 4) is designated an ‘outpost’ as it receives additional funding, and Wyong (Round 6) is a ‘satellite’ and does not receive separate funding. The inclusion of these centres explains the inconsistency in terminology in the question regarding expansion of headspace beyond 100 centres, when in fact there are 102 centres.

For each Round of centre expansion from 1 – 8 we describe:

- the increase in coverage of the target population
- the increase in centre level and hNO costs, and
- the proportion of the target population left unserved by a headspace centre based on the

<sup>38</sup> Lord Howe Island and Illawarra Catchment Reserve, which contain youth populations of 30 and 3 respectively, were excluded from the centre expansion analysis.

Department's access criteria as set in the current centre allocation model.

While the current expansion model determines area priority based on weighted youth population, which takes into account socioeconomic disadvantage and remoteness, the following analysis refers to unweighted total youth population unless otherwise specified. Therefore, once the recently announced Round 8 centres are in operation, 80% of Australia's young people will be deemed to have access to a headspace centre using the definition of access supported by the current centre expansion model.

### Hypothetical expansion beyond 100 centres

Applying the methodology used to determine centre location in the first eight rounds of headspace allocation, the current allocation process was taken to the point of national coverage in a series of hypothetical rounds. The results of these analyses are presented in Appendix G.

In order to complete these analyses in direct accordance with the current allocation model as used by the Department, the algorithm used to derive the weighted youth population is applied. The weighting algorithm used was the product of the SEIFA and ARIA weights. These weights mean that greater priority is given to areas with high levels of disadvantage and those in regional, remote and very remote areas, when compared to an unweighted model which allocates centres based on youth population alone. SEIFA and ARIA weights are provided in Table B2 and Table B3 respectively.

**Table B2 Weighting applied for socioeconomic disadvantage**

SEIFA decile	Weight
1 – Most disadvantaged	1.5
2	1.4
3	1.3
4	1.2
5	1.1
6	1
7	1
8	1
9	1
10 – Least disadvantaged	1

**Table B3 Weighting applied for remoteness**

Remoteness classification	Weight
Major cities	1
Inner regional	1
Outer regional	1.5
Remote	2
Very remote	2

In order to investigate the impact of the current centre allocation model beyond its existing level of implementation, we have allocated hypothetical centre locations by extending the current centre allocation model. This involves extrapolating the methodology used for the last actual round of allocation (Round 8) and applying it to all remaining SA3 and SA4 level geographies that do not currently support a headspace centre.

To do so, we have estimated the weighted youth population in all capital city SA4s and non-capital city SA3s. This modelling showed that there were 95 SA3s/4s which contained a headspace centre and 96 SA3s/SA4s which did not yet have a headspace centre after Round 8. Allocating 94 centres across 6 rounds would achieve full national coverage under the operational definition used in this

chapter<sup>39</sup>. To determine the order in which centres were allocated, the current centre allocation model was used. Centre allocation was determined based on the weighted youth population within each region. There was no additional stratification by state or remoteness. This hypothetical allocation consisted of 4 rounds of 16 centres (rounds 9-12) and 2 rounds of 15 centres (rounds 13 and 14).

In order to extend the cost-modelling of headspace centres, some assumptions were made in order to simplify the model specification and interpretation, and retain consistency to allow for direct comparisons with previous rounds. Some of these assumptions include:

- constant hNO centre support costs (in reality, they may vary by centre remoteness, but hNO are not able to disaggregate support costs)
- centre running costs are input as the average for all centres (in reality, they vary by centre remoteness, but providing a breakdown of costs by remoteness can be difficult without a full understanding of lead agency subsidisation)
- similar staff profiles (in reality, they vary by centre remoteness)
- non-headspace costs are input as the average for all centres. These data are only available at a national aggregate, so regional disaggregation is not possible.

Similarly, in estimating 'effects' we are assuming that the effects of each new centre are 'constant' and proportionate to population with access.

### Flexibility of the headspace grant model for centre funding

#### Key Messages

- The headspace grants model provides fixed funding to successful lead agencies over an agreed contractual term.
- This section analysed only fully operational centres, as including centres in the establishment phase introduces considerable variation to the cost analysis and would have resulted in misleading conclusions.
- The headspace grant funding amount is tightly constrained across a wide range of service catchment areas. This means that although areas servicing high numbers of young people typically receive larger amounts of grant funding, they are not compensated proportionally in comparison with areas servicing low numbers. In some instances, areas servicing over 100,000 young people can receive less grant funding than areas servicing only 20,000 young people.
- There are also cases whereby areas servicing low numbers of young people have widely varying grant amounts compared to other similar areas. This may indicate inequity in grant funding or variation in lead agency and consortia contributions.
- The provision of a headspace grant takes into account contributions of the lead agency and consortia partners across the grant term. It also weighs the impact of competing and complementary services around each selected headspace site. Information about these contributions is not available to the evaluation team and has not been factored into the analyses shown here, but may go some way to explaining the apparent discrepancies on display here.
- Even without access to information about lead agency contributions and the existence of non-headspace services, the disproportionately low funding of high service population areas warrants further investigation.

<sup>39</sup> As previously mentioned, Lord Howe Island and Illawarra Catchment Reserve were excluded due to small youth populations.

The assumptions described are implicit in the current expansion model as defined by the Department of Health, as there is little scope for hNO to vary the dollar allocation to centres based on higher costs of doing business in particular areas. That is, the current centre allocation model is constrained to an average of \$842,000 per centre with a range of \$600,000 per annum to \$1,100,000 per annum for fully operational centres.

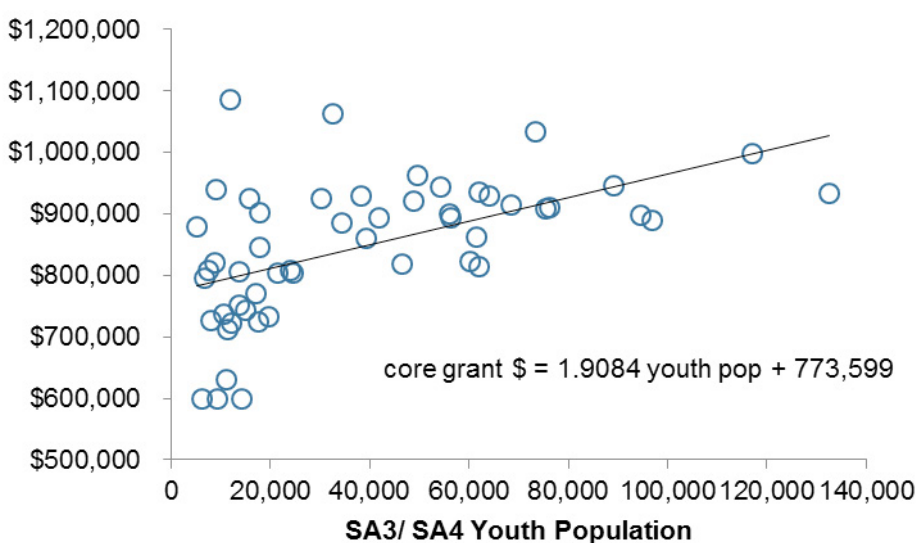
There may be some capacity at hNO to vary the funding made available to individual centres (so long as the overall average of \$842,000 per centre is maintained). For example, greater lead agency input can supplement the overall cost of running any given headspace centre. However, this information was not available to the evaluators nor were the individual funding agreements with individual centres. Therefore, for the purpose of this evaluation, centre allocation and costing is based on headspace grant costs alone. Note that for the reference period of the evaluation costs data for some remote centres such as Mt. Isa were out of scope. The focus is on fully operational (Rounds 1-4) centres.

While the extent of model flexibility to tailor costs to parameters such as rurality is not possible to evaluate due to data availability, this is a significant factor for expansion beyond 100 centres, as new centres will be located disproportionately in non-urban and remote areas in comparison with the geographic distribution of centre allocation for the first 100 centres.

This issue also bears closer consideration for centres currently in existence. For example, a number of headspace centres in highly urbanised areas (i.e. Camperdown, Collingwood and Parramatta) have youth populations of over 100,000 within a 10 km radius, whereas a number of regional headspace centres have total service populations of less than 5,000 within 10 km. That is, potential service populations within 10 km of some urban headspace centres can be twenty times greater than some regional centres. However, the current funding model is quite tightly constrained, and these centres receive broadly equivalent funding despite the wide variation in size of their respective service populations. The allocation of centres to regional locations reflects a number of factors, including equity of access and potentially greater need per capita, but these inequalities suggest a need for closer examination of the current centre allocation and funding models.

To assess the flexibility of the headspace grant funds component of the centre funding model, 2013-14 centre level core grant funds as recorded in the HCFA were plotted against the youth population of the SA3s/ SA4s. Only fully operational (rounds 1-4) centres were included in this analysis. Following the methodology for assessing youth population, headspace centres in SA3s/ SA4s which already had a headspace centre were excluded from this analysis. Therefore, Figure B1 is comprised of information from 52 fully operational headspace centres.

**Figure B1 Core 2013-2014 headspace grant funding by SA3/SA4 youth population size**



While there is an overall relationship between youth population and funding, there is also considerable variation observed. In the 2013-14 financial year, the funding made available to fully operational centres in regions with less than 20,000 young people ranged from \$600,000 to \$1,100,000.

These discrepancies are even more pronounced when considering the number of young people residing within 10 kilometres of an operational headspace centre.

While these analyses do not take into account lead agency funding or justifiable year-to-year variation which may exist in core grant funding, they demonstrate considerable variation in funding relative to youth population. These analyses also demonstrate that extreme caution needs to be applied when extrapolating from current centre level funding to future centres, either under a SA3/SA4 centre allocation (this chapter) or alternative models of centre allocation.

### **Lead agency resources**

The current headspace centre allocation model is designed to leverage off a combination of headspace grant funds, lead agency resources, and a range of other funding sources such as MBS and ATAPS.

However, the analysis of these resources is constrained by data availability. The analysis of occasions of service in Chapter 6 indicates that in 2013-14, 36% of occasions of service were funded direct from the headspace grant, 45.5% were funded by MBS, and 3.1% were funded by in-kind support. In-kind support to occasions of service represents a very small proportion of all occasions of service.

As discussed in Chapter 6, the estimation of the MBS financial contributions associated with these occasions of service is not recorded within the hCFA. Other than the fees paid out of the headspace grant to lead agencies, lead agency financial resources are not routinely collected in the data made available to the evaluation team. While we have been able to assess lead agency contributions to occasions of service as being small, it may be that lead agency financial or in-kind contributions to other aspects of the headspace model (such as accommodation, or administrative support) are much larger. These lead agency contributions may offset deficiencies of the headspace grant observed in this section, and the level of contribution may also vary widely across sites and lead agencies. However, these contributions remain unknown. Therefore, any critique of the centre funding model needs to take into account the unknown contribution of lead agencies.

In order to fully investigate the current centre allocation model, and to understand the true costs of delivering the headspace service, the Department and hNO should give consideration to routinely collecting lead agency costs and contributions.

## Funding headspace centres beyond round 8 under the current model

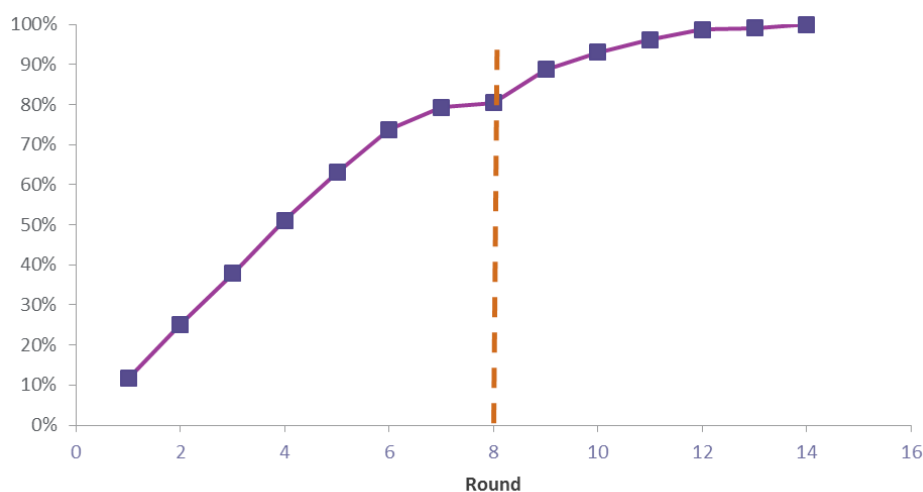
### Key messages

- The Department has so far committed to delivering a total of 100 headspace centres by 2016, which represents 8 rounds of centre expansion since program inception in 2006.
- Eight completed rounds will deliver service coverage of 80% of the Australian youth population for headspace centres under the definition of youth access incorporated into the current centre allocation model.
- Modelling in this section indicates that extending the current allocation model out to a hypothetical round 10 would deliver an additional 32 centres and take population coverage up to 93% using the existing definition of youth access, while being within or just above previously observed limits of acceptable return on investment for a headspace site.
- The same modelling suggests that going beyond round 10 would be more costly than previous headspace rounds by a number of measures. Diminishing returns on investment are most apparent beyond a hypothetical round 10.

The additional coverage of youth population achieved, with the hypothetical six rounds of headspace allocation is provided in Appendix G. These data suggest that following each hypothetical round, which would include the allocation of an additional 15 or 16 new sites per round, there would only be small increases in the coverage of the total youth population. In addition, each additional centre beyond the 100 existing and promised centres would make increasingly little contribution to coverage within the state. These tables are summarised in Figure B2 to Figure B5<sup>40</sup>. As discussed in Section 0, the link between area socio-economic disadvantage, remoteness, and need for services requires closer investigation.

Figure B2 describes the proportion of the Australian youth population (young people aged 12-25) as at the 2011 Census with access to a headspace centre by round, where access is defined as a headspace centre being within capital city SA4s and non-capital city SA3s. Round 8, which is the last 'planned' round of headspace expansion is marked with a dotted line. By round 8, over 80% of the Australian youth population lives within an SA3/ SA4 serviced by a headspace centre.

**Figure B2 Proportion Australian youth population covered by round**



<sup>40</sup> Note that centre allocation and hypothetical centre allocation is calculated on the basis of weighted youth population, so that areas of greater remoteness and/or socio-economic disadvantage are given greater weight, the tables and figures which follow are calculated on the basis of unweighted youth population.



Figure B3 describes the proportion of youth population covered by each round. From Round 1 to 5, each round covered more than an additional 10% of the youth population by providing headspace centres within SA3s/ SA4s.

**Figure B3 Additional proportion youth population covered by round**

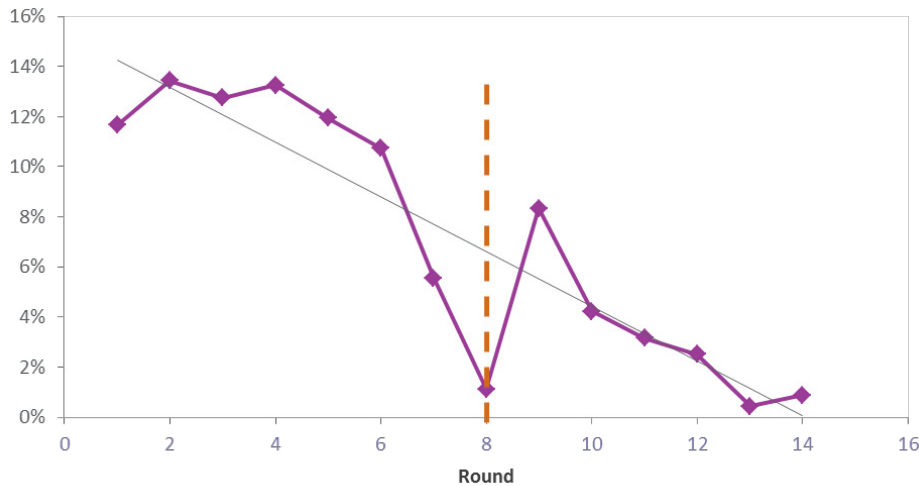
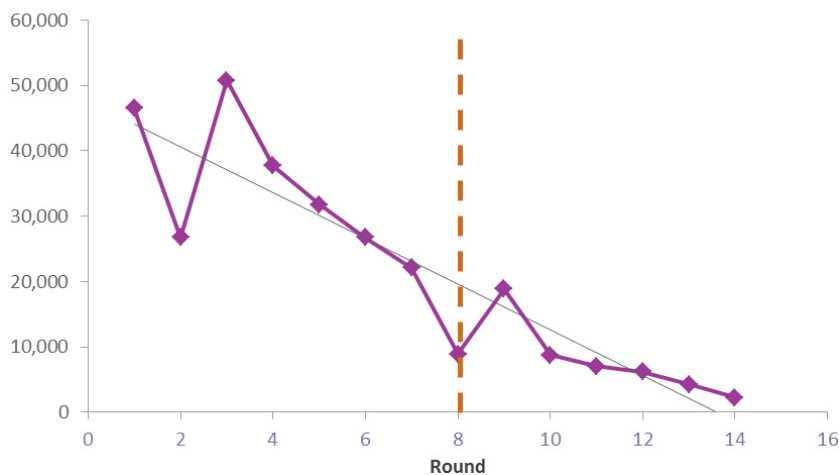


Figure B2, Figure B3 describe the growth of the headspace program by proportion of the youth population covered by round and additional proportion of youth population covered by round. However, as shown in Table B1 there have not been an equal number of centres in each round (e.g. 10 centres in Round 1, 20 centres in Round 2, and only 5 centres planned in round 8). Therefore, in Figure B4 the number of young people with access is described per centre. This analysis takes into account the variation in number of centres allocated per round.

**Figure B4 Average number of young people with access to a headspace centre by round**



The earliest rounds of headspace centre allocation were less structured than the current model of centre allocation, but since Round 3, there has been a steady decline in the number of young people with access per centre, from over 50,000 young people per centre to 22,000 per centre in Round 7. This process of diminishing returns is consistent with the logic of the centre allocation model which is based on weighted youth population. Service capacity is determined by a number of factors including the definition of access used in the centre allocation formula. While there are insufficient data to determine the service capacity for a single headspace centre, or to estimate the optimal number of young people per headspace centre catchment area, issues relating to service capacity and access definitions are discussed in detail in the following chapter.

Round 8 sites were not allocated based on weighted youth population alone. As a result, some areas with lower youth population were assigned headspace centres in this round ahead of more highly populated regions. Based on the planned centre locations, Round 8 would provide access to 8,900

young people per centre. The hypothetical Round 9 centre allocation would provide access to an average of 18,900 young people per centre, and the hypothetical Round 10 would provide access to an average of 8,700 young people per centre. That is, centres were allocated in Round 8 which had lower weighted youth populations than in the hypothetical Round 9. This discrepancy between Round 8 and other rounds indicates the function of the 'human intelligence' aspect of centre allocation which takes into account competing services and other factors which were not made available to the evaluation team. It follows that the sites indicated in the hypothetical rounds 9 and 10 need to be assessed for viability against existing services and other factors.

Nonetheless, based on these data, it could be argued that expansion of headspace to Round 9 and possibly Round 10 is suggested by the logic of the current headspace centre allocation model. That is, if the allocation of 8,900 young people per centre as at Round 8 is considered a reasonable extension of the headspace model, then it follows that an average of 18,900 young people per centre in Round 9 represents a logical extension of the headspace program. The hypothetical Round 10 covers an average of 8,700 young people per centre, which is only marginally less than the coverage offered in Round 8. Therefore, if youth population with access within an SA3/ SA4 is considered a metric of coverage, an extension to a Round 10 may also be considered. Despite the decreasing population coverage with subsequent rounds, there may also be an argument made on the basis of equity for youth in rural and remote areas for extension of the headspace centre allocation model beyond Rounds 9 or 10, but this assessment lies outside the scope of this evaluation.

It should be re-iterated that this analysis does not take into account competing or complementary services or other contextual factors which are part of the complete centre allocation model, and as used by the Department when allocating new centres. Instead, this analysis considers only the factors made explicit in stage one of the current allocation model.

To ensure that the centre expansion program is transparent, the evaluation team recommend that factors such as competing services are made more explicit in the centre allocation model.

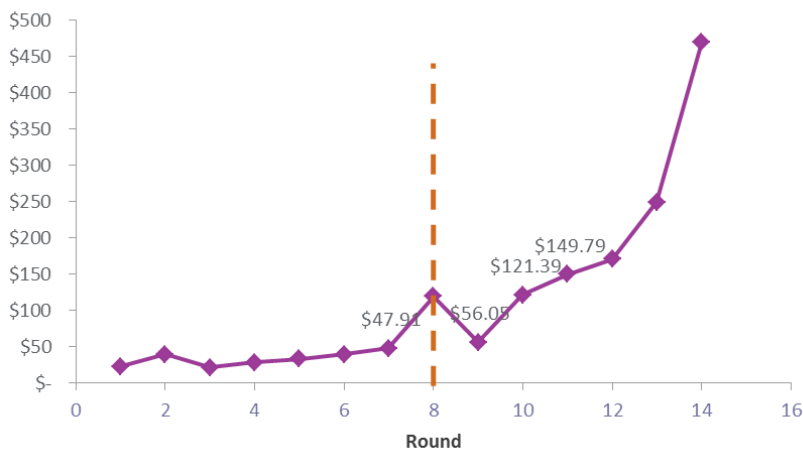
The hypothetical centre locations are described in Appendix G.

At an average cost of \$842,000 per operational centre per year plus \$96,000 in hNO costs<sup>41</sup> and \$120,000 in MBS costs, each fully operational centre costs on average \$1,058,000 per year to run<sup>42</sup>.

We can use the cost per centre to estimate the cost per young person with access, under the current definition of access. These data are summarised in Figure B5. These costs are based on the number of young people in the same SA3/ SA4 as a headspace centre. The earlier rounds of headspace centre allocation were predominantly in areas with higher populations, and the estimated cost per young person with "access" have increased from \$23 per young person in round 1 to \$48 per young person with access in Round 7. As noted before, centres which were allocated in Round 8 had lower weighted youth populations than in the hypothetical Round 9. As a result, "access" at Round 8 rose to \$119 per young person before falling to \$56 per young person in the hypothetical Round 9. The cost per round increases to \$121 per young person in a hypothetical round 10 and increases sharply in Rounds 13 and 14. As noted previously, this analysis does not take into account existing services or other contextual factors which may affect the decision to allocate a headspace centre to a particular area. The costs in these models do not consider economies of scale (such as any centralisation of headspace training and support), diseconomies of scale (such as increased competition for psychologists in remote locations), or the rental costs in different locations. Nonetheless, based on these data, it could be argued that expansion of headspace to Round 9 (16 centres) and possibly Round 10 (16 centres) is suggested by the logic of the current headspace centre allocation model on a cost per young person basis (Figure B5). This occurs as hypothetical Rounds 9 and 10 both contain areas of high youth population not previously serviced by a headspace centre, and these high numbers of young people result in the average cost per young person to be lower than subsequent rounds. Information on the locations and youth populations of individual centres, including Rounds 9 and 10.

<sup>41</sup> These costs are largely made up of staffing costs (HR, IT, compliance etc.). These hNO centre-support costs have been apportioned by hNO on a 'project code' basis. It goes outside the scope of the evaluation to look at the hNO basis for allocating costs between programs.

<sup>42</sup> Estimate based on 66 operational sites (\$61,908,000 (hs grants) + \$7,973,587 (MBS costs)).

**Figure B5 Cost per young person of providing access by round**

This analysis raises the question of whether the current centre allocation model is appropriate for achieving national coverage at the level of servicing each and every SA3 and SA4 with a headspace centre. The concept of national coverage is explored further below.

## Conclusions

### Key messages

- The Department has committed to delivering a total of 100 headspace centres by 2016, the culmination of 8 rounds of centre expansion since program inception in 2006.
- The current allocation process was taken beyond Round 8 to the point of theoretical national coverage in a series of modelled hypothetical rounds.
- This modelling suggested national coverage under the current headspace centre allocation process would be achieved after a hypothetical Round 14, with a total of 196 centres nationally.
- This total of 14 rounds and 196 centres for national coverage does not take into account overall costs, cost-effectiveness, or return of investment.
- Modelling against a set of key service and population parameters indicated that extending the current allocation model out to a hypothetical round 10, for a total of 134 centres, would take population coverage up to 93% using the existing definition of youth access, while being within or just above previously observed limits of acceptable return on investment for a headspace site.
- The same modelling suggests that going beyond round 10 would be increasingly more costly than previous headspace rounds by a number of measures.

This chapter provides an overview of headspace centre expansion from Round 1 to complete national coverage after a hypothetical Round 14 (196 centres), under the current model of headspace centre allocation. At the conclusion of the eight rounds of centre allocation, over 80% of 12-25 year olds will live in an area which contains a headspace centre (see Figure B2). However, the analyses presented in this chapter suggest that if the logic of the current centre allocation is pursued, the allocation of centres identified in hypothetical Rounds 9 (89% of youth population) and 10 (93% of youth population) should be given consideration. This recommendation is based on the assumption that the Round 8 cost per young person is considered acceptable to the Department, and therefore, as Round 9 and 10 are associated a similar average cost per young person with greater youth access, these rounds could be considered justifiable. As noted earlier, this recommendation does

not take into account competing and complementary services, and this limitation must be considered when interpreting these findings. However, the current formula for centre allocation, which assumes that all young people have access to a headspace centre if they live within an SA4 or SA3 area that contains a headspace centre, may not provide equitable access. For example, these regions vary substantially in both geographic size and youth population. As a result, the distance required to travel to a headspace centre may be too great to facilitate access for all young people residing in certain SA4 or SA3 areas despite there being a headspace centre somewhere within the area. In areas with large youth populations, or a high prevalence of youth mental health problems, access may also be limited by the capacity of a single headspace centre to service the demand. These issues are considered in the following chapter.

If the allocation of sites is governed by factors other than weighted youth population (such as competing and complementary services and lead agency financial resources), these factors need to be made more explicit in the centre allocation model. DoH and hNO also need to give consideration to the costs and benefits of a system which records lead agency financial contribution.

Lead agency contribution to occasions of service (as recorded in the hCSA) seems quite low. However, we have no information about the costs associated with lead agency funded occasions of service as costs of occasion of service are not recorded on the hCSA. As well as adding cost of service information to the hCSA, we recommend that the Department and hNO investigate lead agency contributions to the headspace service model beyond that which is observed in hCSA. This will provide a better understanding of the overall contribution of non-headspace funds to the service model than is achievable under the data access limitations of this evaluation.

## Evaluation of the current model of centre expansion

### Background

The previous section described the potential for national coverage of headspace and the funding requirements (see Appendix G) to achieve this under the Department of Health's current allocation model. This chapter provides an evaluation of the effectiveness of the current centre allocation model to provide access to headspace services. The current definition of access to a headspace centre, as defined by the current centre allocation model, and the costs associated with achieving national coverage under this model are described in Part One, Centre Expansion under the Current headspace Centre Allocation Model.

The current centre allocation model does not take into account factors such as the geographic size of the area, the travel times associated with accessing headspace centre services, and the number of young people who require mental health services within the area. In addition, the current funding arrangement of headspace grants for individual headspace centres places limits on the extent to which centres can vary their service type and service volume to meet client demand. The headspace grant amount is fixed for the period of the grant agreement (typically 3 or 4 years), and includes set amounts for centre establishment in Year One and normal operations thereafter. When nearing completion of the grant term the Lead Agency enters negotiations with the Department and hNO for contract renewal. If successful, the process repeats itself, without establishment funding. This funding arrangement effectively places a cap on individual centre resources as the headspace grant amount is agreed in advance and is fixed in contract across the grant term. As described in Part One, there is some flexibility provided by leveraging headspace services off Lead Agency contributions, but these contributions are likely to be variable across sites and Lead Agencies. For reasons described in Part One, information about the size and nature of Lead Agency contributions is unavailable to the evaluation team. These features of the current centre allocation model limit equity of access to headspace centres. Hence the need to investigate what may be possible in terms of youth access to headspace services under a range of alternative centre allocation models.

## The concept of access as it relates to headspace and the evaluation of headspace services

headspace has been established to provide access to mental health and related support services for young people aged 12-25 years in Australia. The concept of access, as it applies to headspace, has implications for the conduct and outcomes of the evaluation. There are five key inter-related considerations underpinning the access concept as it applies here:

- distance from client's home to the nearest headspace centre
- demand for services within the geography of interest
- capacity of a headspace centre to service client demand
- level of funding available to support a given headspace centre, and
- availability of other mental health services.

Variation in any one of these will affect the level and quality of access for an individual young person, and therefore will impact on estimates for any alternatives to the existing centre allocation model.

The current definition of headspace centre access is incorporated into the current centre allocation model, as utilised for the hypothetical centre expansion modelling undertaken for Part One. There are shortcomings with current definition of access that has implications for headspace centre utilisation for young people in Australia.

Part Two is designed to unpack those shortcomings, consider some alternative access definitions, and provide a basis for a series of alternative centre allocation models in the following Part Three. We do this by utilising administrative headspace data and independent survey data combined with ABS statistical geographies and sophisticated mapping techniques to investigate a number of key access parameters as they apply to existing headspace centres.

The definition of access underpinning the headspace service model has direct implications for the cost of the program, the acceptable area coverage, the measurement of patronage, and the potential of the service to maximise impact on youth mental health.

## Evaluation of current Model of Centre Allocation

The existing model of headspace centre allocation is based on the following definition of access: a young person living in an SA4 or SA3 area that contains a headspace centre is deemed to have access to headspace services. This definition is evaluated in the section that follows, by considering evidence regarding:

- travel distance of clients to obtain headspace centre services
- distribution of need, or potential demand, for mental health services
- centre service capacity
- level of funding available to centres under the current model.

### Distance to nearest headspace centre

#### Rationale

The geographic units used in the current definition, and in particular SA3s in regional and remote areas, can cover vast geographic areas. Furthermore, these administrative boundaries are not designed with the primary aim of capturing functional communities and may not represent optimal catchment areas for service use by young people. Therefore, in order to determine a more realistic definition of likely travel distance to access mental health services, data from Young Minds Matter (YMM), the headspace Centres Services Application (hCSA) and the Census were used to determine the relationship between use of headspace services and proximity to a centre.

## Young Minds Matter analysis of distance to headspace centres

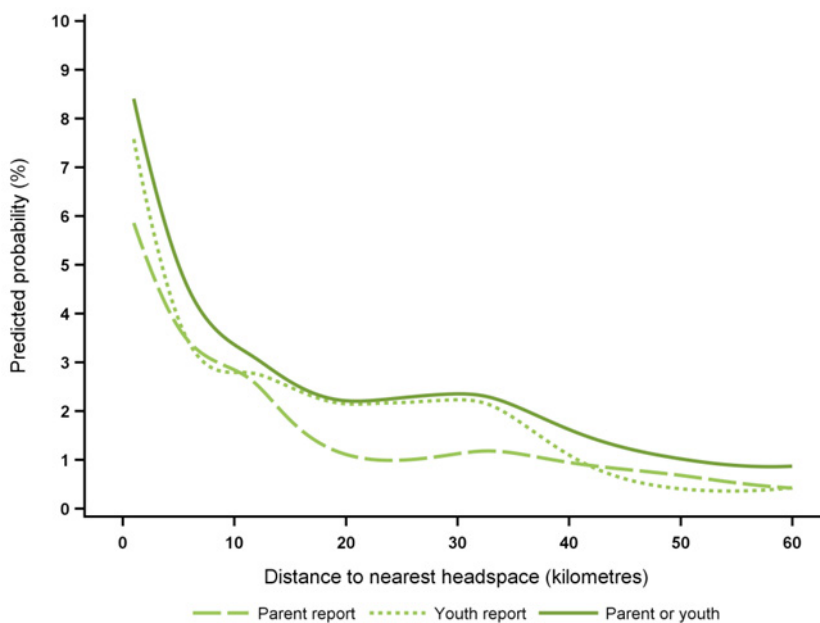
### Method

YMM Wave 1 data were used to examine the association between proximity to a headspace centre and use of centre services. This analysis made use of both parent and youth report data for YMM survey participants aged 12 years and above. Information relating to both the parent and the young person's knowledge and use of headspace centre services was combined with the distance between the survey participant's household and the nearest headspace centre location. These geo-coded data were used to determine an evidence-based definition of service access<sup>43</sup>. YMM did not capture data on 18–25 year-olds, who are also in-scope for headspace services. However, proximity to a headspace centre is more important for 12–17 year-olds as younger clients are more likely to be transport restricted with less access to public transport and private cars. Furthermore, early intervention for mental health problems is optimal, and many serious mental health issues first manifest in the 12-17 age range.

### Results

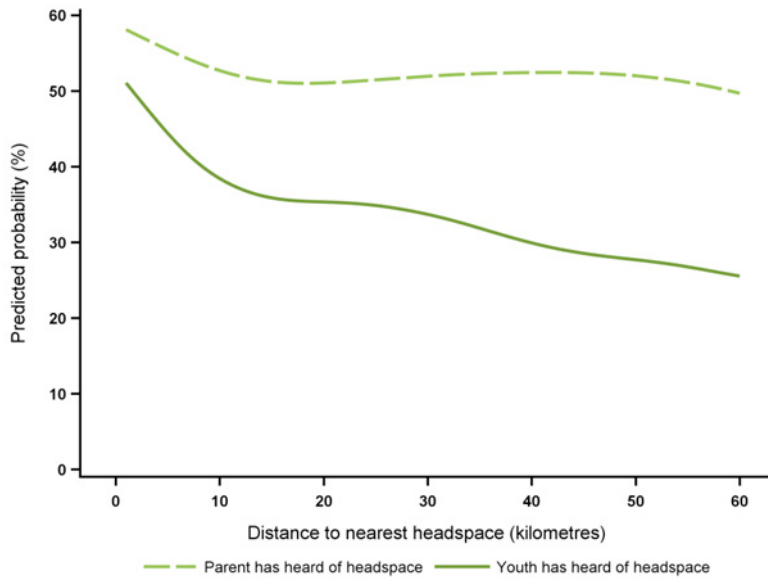
Around 2.5% of 12-17 year olds who participated in YMM reported that they had accessed headspace centre service in the past 12 months. As shown in Figure B6, there was a rapid decline in the proportion of young people who accessed services as the distance to a headspace centre increased. In addition, there was a correlation between knowledge of headspace and proximity to a headspace centre (Figure B7). Again, with increasing distance there was substantial decline in knowledge of headspace services. The relationship between proximity and knowledge of headspace was more evident in young people aged 15-17 years, with those aged 12-14 years being substantially less likely to report having knowledge of headspace (Figure B8).

**Figure B6 Use of headspace by distance to nearest headspace for young people aged 12-17 years (YMM), based on headspace Rounds 1-4**

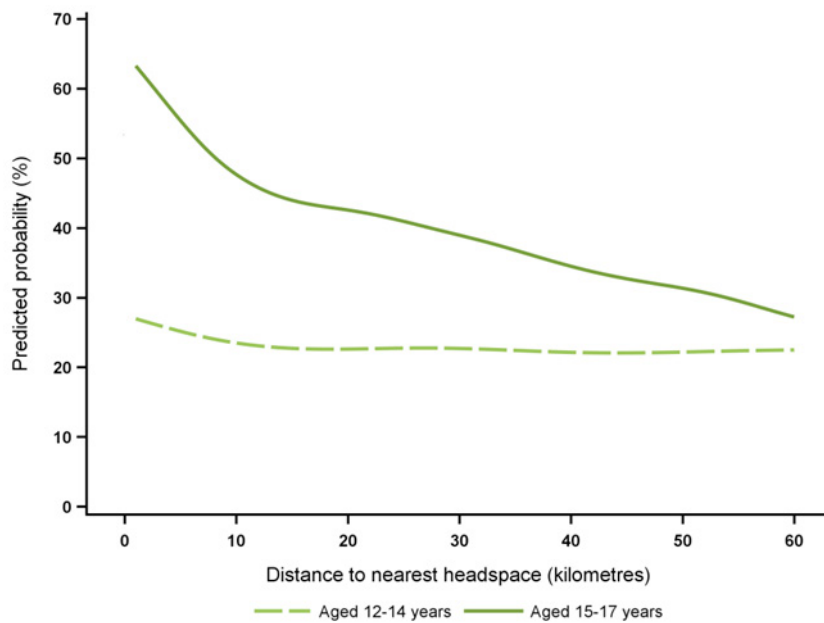


<sup>43</sup> At the time of wave one of YMM data collection only 56 headspace centres, which were allocated in Rounds 1 to 4, were in operation nationally.

**Figure B7 Heard of headspace by distance to nearest headspace for young people aged 12-17 years (YMM), based on headspace Rounds 1-4**



**Figure B8 Use of headspace by distance to nearest headspace for young people aged 12-14 years and 15-17 years (YMM), based on headspace Rounds 1-4**



## Travel distance to headspace centres (hCSA analysis)

In the YMM survey 1,532 (51.5%) of parents of young people aged 12-17 years reported that they had heard of headspace, and 72 (2.4%) parents reported that their young person had visited a centre in the previous 12 months. In addition, 979 young people (33%) reported that they had heard of headspace and 75 young people (2.5%) reported visiting a physical centre in the previous 12 months.

The headspace hCSA data provide a complementary dataset which includes all young people using headspace in the financial year 2013 / 2014. However, unlike the YMM data which are geo-coded and therefore allow calculation of an exact distance from client dwelling to headspace centre, the hCSA data are based on client postcodes. This limits the accuracy of distance calculations due to the broad area covered by some postcodes. This is of particular relevance given that the YMM analysis suggests a rapid decline in attendance and knowledge of headspace services even when clients live within only a few kilometres of a centre.

### Method

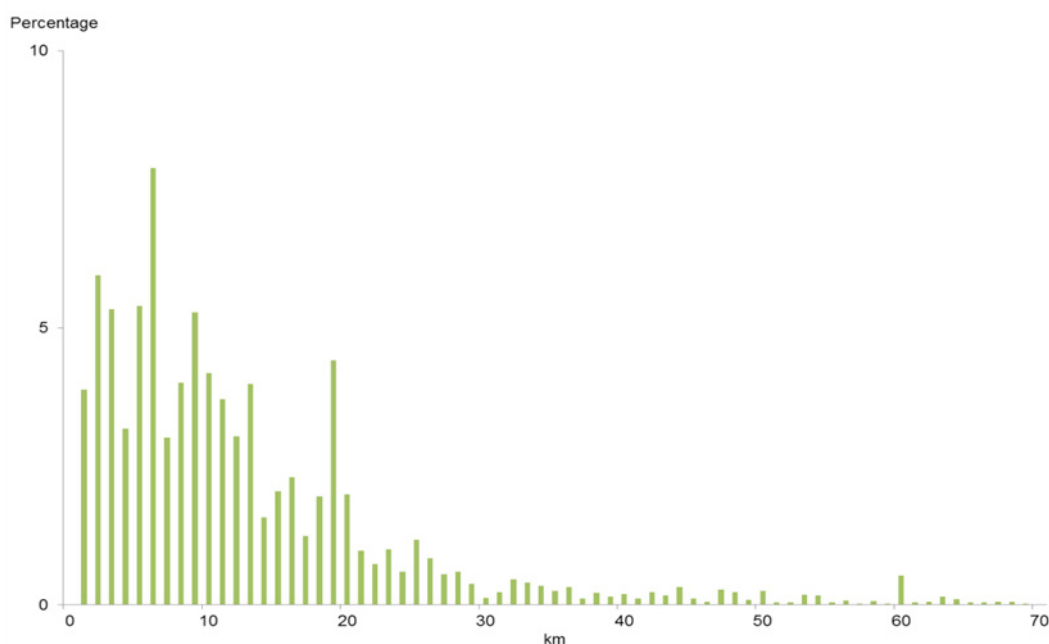
hCSA data using the postcode of the client were also used to determine the proportion of the youth population within a given geographical area who used a headspace centre.

These analyses were based on the postcode of young people using headspace centres, and the geo-coded address of the headspace centre. Because the analysis uses the postcode centroid as a proxy for client residence, there is some error in the estimation of distance travelled. As some postcodes are large, particularly in non-metropolitan areas, the difference between estimated and actual travel distance may be substantial. In addition, each young person within the same postcode will be estimated to have the same residence and therefore the same travel distance. These limitations in the data should be taken into account when interpreting the results of any geographic analyses based on headspace hCSA data and presented in this report. These analyses were based on all occasions of service recorded in the 2013-14 financial year, for all operational centres (Rounds 1-5).

### Results

There are substantial differences in the proportion of the population of 12-25 year olds who utilised headspace services by postcode (Figure B10). While this in part reflects the size of postcodes and small youth populations in regional and remote areas, it highlights the geographic differences in service demand. Figure B19 illustrates the distance travelled by headspace clients to reach a centre. Despite the limitations to these data described above, the findings support the patterns identified in the YMM data and highlight the rapid decline in centre attendance with increasing travel distance.

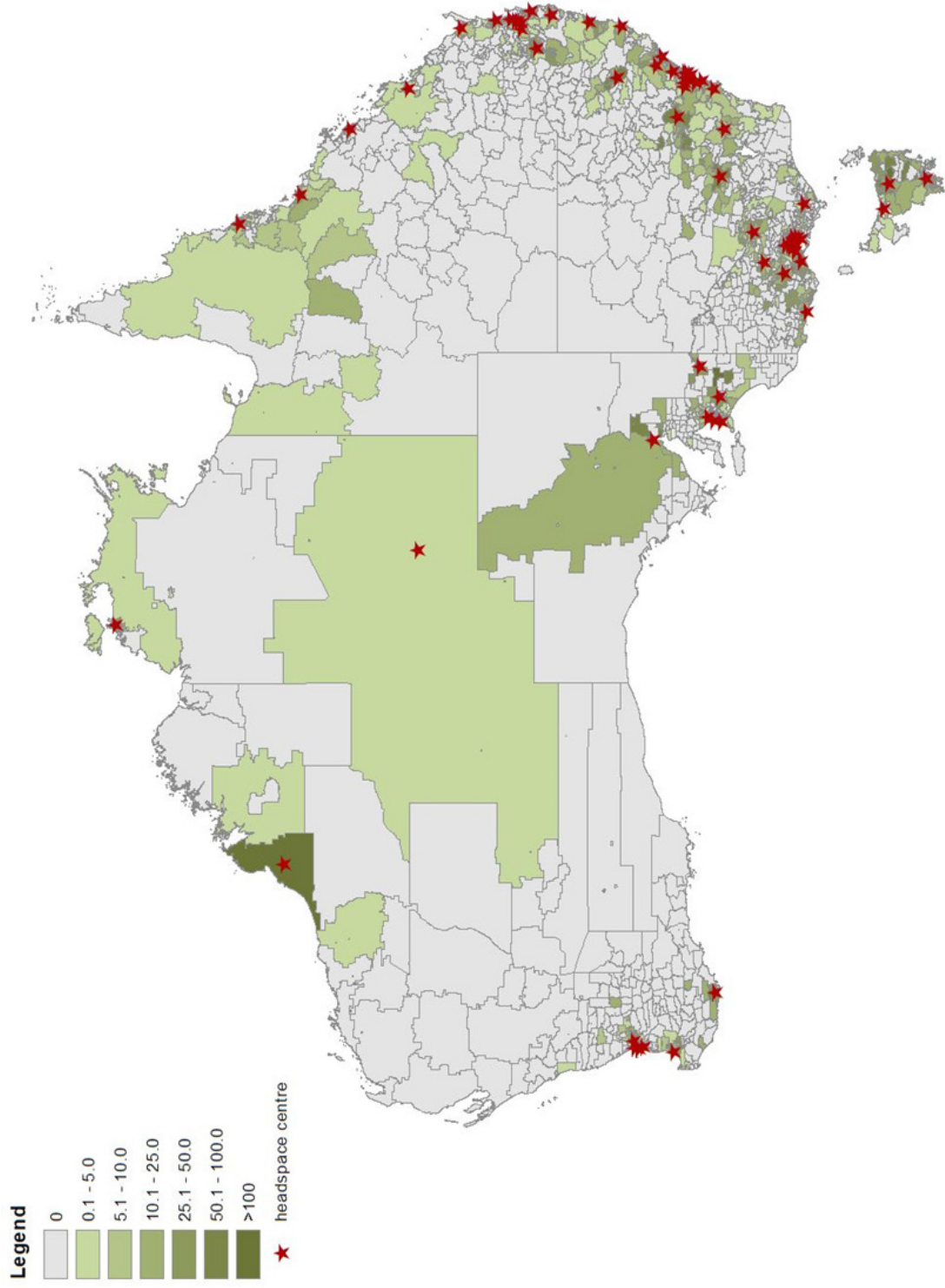
**Figure B9 Distribution of headspace clients by travel distance to headspace centre (hCSA)**



Source: Authors calculations from hCSA data.



Figure B10 Proportion of headspace clients aged 12–17 per 1,000 population by postcode area, 2013/14



## Census analysis of distance to headspace centres

### Method

Based on the shape of the curve in Figure B6, living within 10 km and 30 km from an existing headspace centre were selected as points which represented a substantial decline in use and knowledge of headspace services. Therefore, for the purpose of further analysis, these points were used to define access.

### Centre locations

Using this definition of access, which assumes those living within close proximity to a headspace centre are able to make use of services when required, the number of young people living within 10 and 30 km of all existing centre locations allocated up to Round 8 was assessed. While the YMM analysis described in the preceding section used location information for centres assigned in Rounds 1 to 4 due to the timing of survey data collection, the present analysis was based in the hCSA and was therefore able to use centre location for those assigned in Rounds 1 – 8. This analysis made use of the 2011 census of population and housing usual resident population data. Point locations for established centres were geocoded. In the case of funded centres which have not yet been established in Rounds 7 and 8, exact centre location is not yet known. However, the postcode in which these centres will be located is available. Therefore, likely centre location within the postcode area was estimated, and this point was geocoded. Additionally, for centres allocated in the hypothetical Rounds 9 to 14, which were determined based on the current model of centre allocation, a location was estimated. As these centres were allocated at the SA3 or SA4 level, which in some cases cover substantial areas, the centroid of the most highly populated SA1 within the selected area was used to provide a proxy centre location. As a result, the interpretation of the findings for Rounds 9 to 14 should be undertaken with some caution.

### Distance to centres

The proportion of the youth population living less than 10 kilometres from a headspace centre, within a 10-30 kilometres radius of a centre, and those who were living further than 30 kilometres from a centre was determined using census population data. Distance from each headspace centre was based on the geocoded location of the headspace centre and the geographic centroid of every SA1 in Australia. Some SA1s in remote areas are large, and use of the centroid as a proxy location for certain remote SA1s can result in some errors.

### Results

#### *Distance to headspace centre based on current centre allocation*

At the completion of Round 8 approximately two thirds of young people aged 12-25 years will live within 10 kilometres of a headspace centre, with the proportion of young men being very similar to that of young women (Table B4 and Table B5). Only 12.5% will live further than 30 kilometres from a centre.

**Table B4 Males 18–25 years by distance to nearest headspace centre (Rounds 1-8), by age group**

Distance	Males 12-17 years		Males 18-25 years		Males 12-25 years	
	Number	%	Number	%	Number	%
Less than 10 kilometres	529,721	61.7	812,831	69.2	1,342,552	66.0
10 - 30 kilometres	199,688	23.3	231,324	19.7	431,012	21.2
30 kilometres or more	129,454	15.1	130,158	11.1	259,612	12.8
<b>Total</b>	<b>858,863</b>	<b>100.0</b>	<b>1,174,313</b>	<b>100.0</b>	<b>2,033,176</b>	<b>100.0</b>

**Table B5 Females 18–25 years by distance to nearest headspace centre (Rounds 1-8), by age group**

Distance	Females 12-17 years		Females 18-25 years		Females 12-25 years	
	Number	%	Number	%	Number	%
Less than 10 kilometres	502,492	61.8	798,977	70.3	1,301,469	66.8
10 - 30 kilometres	188,018	23.1	219,940	19.3	407,958	20.9
30 kilometres or more	122,004	15.0	117,761	10.4	239,765	12.3
<b>Total</b>	<b>812,514</b>	<b>100.0</b>	<b>1,136,678</b>	<b>100.0</b>	<b>1,949,192</b>	<b>100.0</b>

Table B6 shows the number of young people aged 12-25 in each state who live within 10 km, 10-30 km and more than 30 km from a headspace centre following the implementation of Round 8 centres. The table indicates that approximately two thirds of young people in Australia will live in close proximity to a centre. However there are significant differences between states. For example, following Round 8, more than 70% of young people in New South Wales and Victoria will live within 10 km of a centre and all young people in ACT will live within 30 km of a centre. In contrast, less than half of the young people in Tasmania and the Northern Territory will live within 10 km of a headspace centre, and more than 30% will live more than 30 km from a headspace centre. These disparities reflect differences in the geographic size, population distribution and number of centres in each state and territory.

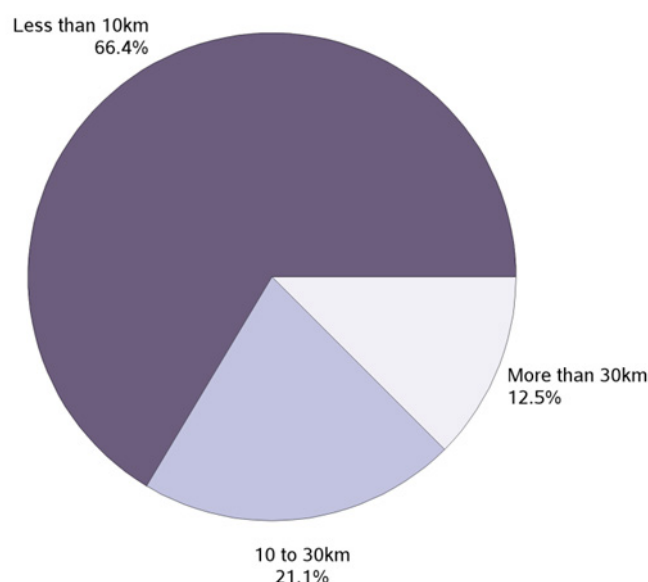
Table B7 reports the distance of clients from a headspace centre, disaggregated by ABS remoteness classifications. As displayed in this table, there are substantial differences in geographic proximity of the population to a centre by remoteness. For example, following Round 8, more than two thirds of young people living in major cities will live within 10 km of a centre but only 1% of young people in remote areas will live within 30 km of a headspace centre. While this finding is not surprising, it demonstrates the variability of equity in access to headspace centres for young people across Australia.

**Table B6 Females 18–25 years by distance to nearest headspace centre (Rounds 1-8), by age group**

		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	Total
New South Wales	Number	892,781	196,467	157,329	1,246,577
	Per cent	71.6	15.8	12.6	100
Victoria	Number	733,776	165,223	94,360	993,359
	Per cent	73.9	16.6	9.5	100
Queensland	Number	479,919	233,359	106,939	820,217
	Per cent	58.5	28.5	13	100
South Australia	Number	178,924	68,711	41,127	288,762
	Per cent	62	23.8	14.2	100
Western Australia	Number	261,082	109,839	57,288	428,209
	Per cent	61	25.7	13.4	100
Tasmania	Number	38,729	21,288	27,324	87,341
	Per cent	44.3	24.4	31.3	100
Northern Territory	Number	13,381	16,060	15,000	44,441
	Per cent	30.1	36.1	33.8	100
Australian Capital Territory	Number	45,429	28,023	10	73,462
	Per cent	61.8	38.1	0	100
Australia	Number	2,644,021	838,970	499,377	3,982,368
	Per cent	66.4	21.1	12.5	100

**Table B7 Young people aged 12–25 years by distance to nearest headspace centre (Rounds 1 – 8), and ABS remoteness area**

Remoteness		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	Total
Major Cities of Australia	Number	2,246,905	590,074	15,185	2,852,164
	Per cent	78.8	20.7	0.5	100
Inner Regional Australia	Number	279,754	192,178	232,248	704,180
	Per cent	39.7	27.3	33	100
Outer Regional Australia	Number	105,788	56,369	175,974	338,131
	Per cent	31.3	16.7	52	100
Remote Australia	Number	11,574	325	39,178	51,077
	Per cent	22.7	0.6	76.7	100
Very Remote Australia	Number	0	24	36,792	36,816
	Per cent	0.0	0.1	99.9	100
Australia	Number	2,644,021	838,970	499,377	3,982,368
	Per cent	66.4	21.1	12.5	100

**Figure B11 Per cent of 12–25 year olds within 10 km, 10 to 30 km, and more than 30 km from nearest headspace centre (Round 1 to 8), Australia**

### Distance to headspace centre based on hypothetical Rounds 9-14

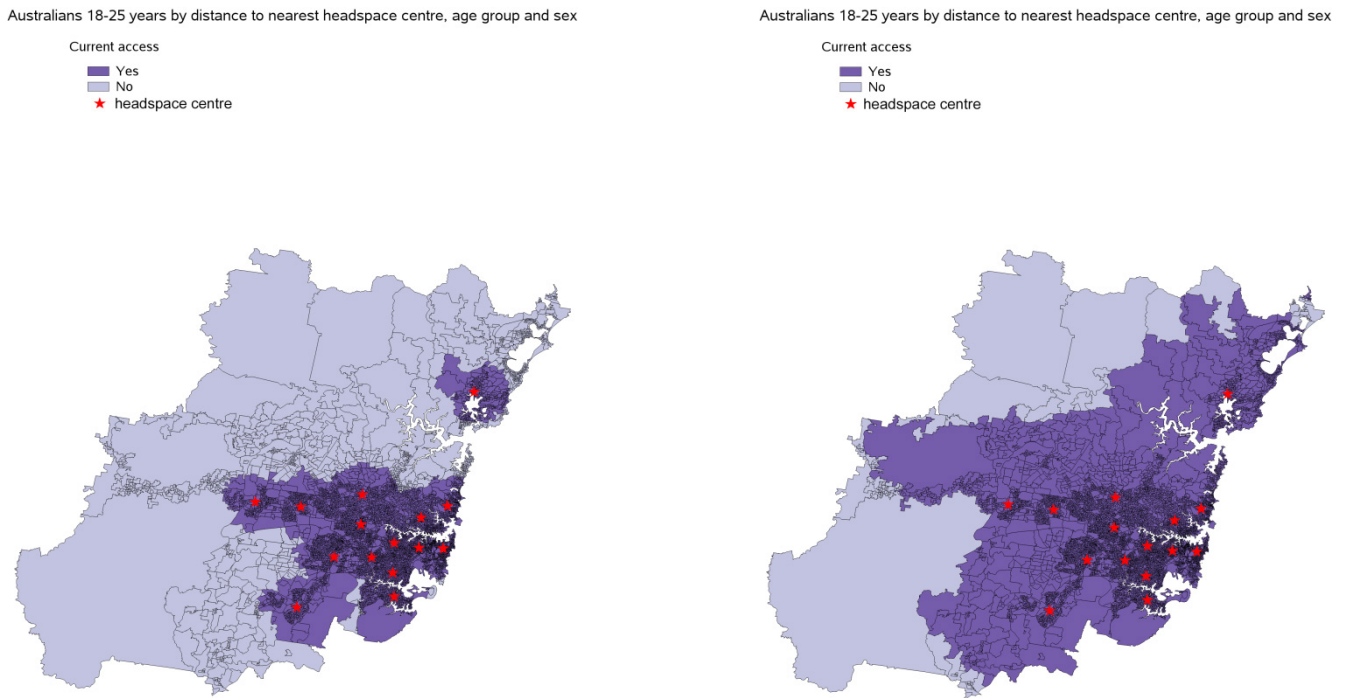
Differences in the level of youth access to headspace services between states will continue to exist if the current model of centre allocation for expansion is rolled out until national coverage is achieved (data included in Appendix G)

### Implications of distance based on definitions of client access

The definition of access which is applied by the model substantially impacts on the interpretation of the model's success in providing services to young people. For example, if access is defined as living within 30 km of a headspace centre (Figure B12) then, following the completion of Round 8 centre implementation, young people in the Sydney metropolitan area could be considered to have good access to headspace services. In contrast, if access is defined as being within 10 km of headspace, population coverage is substantially poorer. These analyses highlight the impact of access definitions on the interpretation of serviced need and access equity, particularly when examined within the context of anticipated need for youth mental health services. This is discussed in greater detail in the

following section.

**Figure B12 SA1s within 10 and 30 km of an existing headspace centre in the Greater Sydney area**



As evident in Figure B12 and Figure B13, the proportion of the youth population considered to have access to headspace is substantially different depending on the definition of access applied. For example, if access is defined as living within 10 km of a centre, following the conclusion of Round 14, 74% of young people have access to centre services. In contrast, if access is defined as living within 30 km of a centre at the conclusion of Round 14, 92% of the population are considered to be covered.

It is important to note that this analysis does not consider other elements of access, such as demand and centre service capacity, which impact on the number of young people who are able to access headspace services.

**Figure B13 Young people aged 12–25 years with access per centre per round (Rounds 1 to 14)**

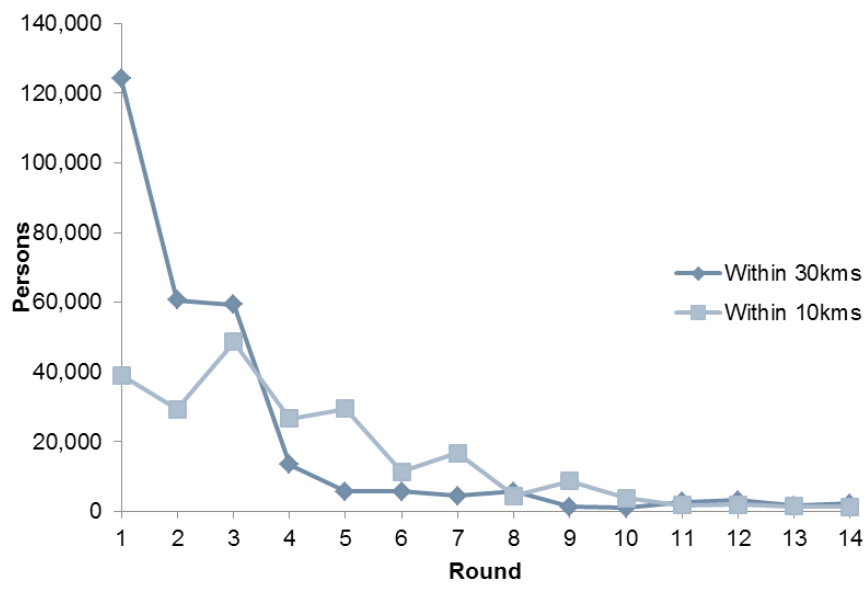


Figure B14 Percentage of the youth population with access, by round (Rounds 1 – 14)

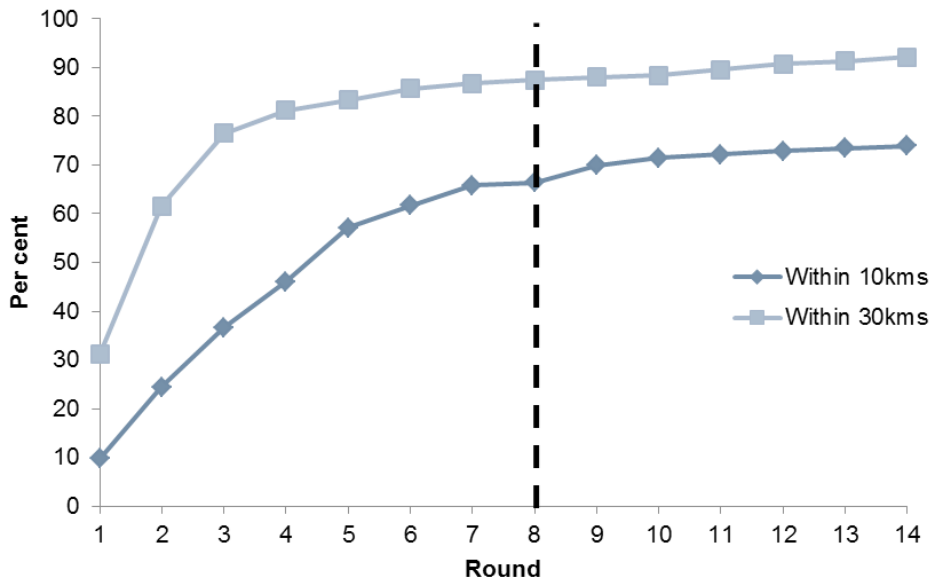
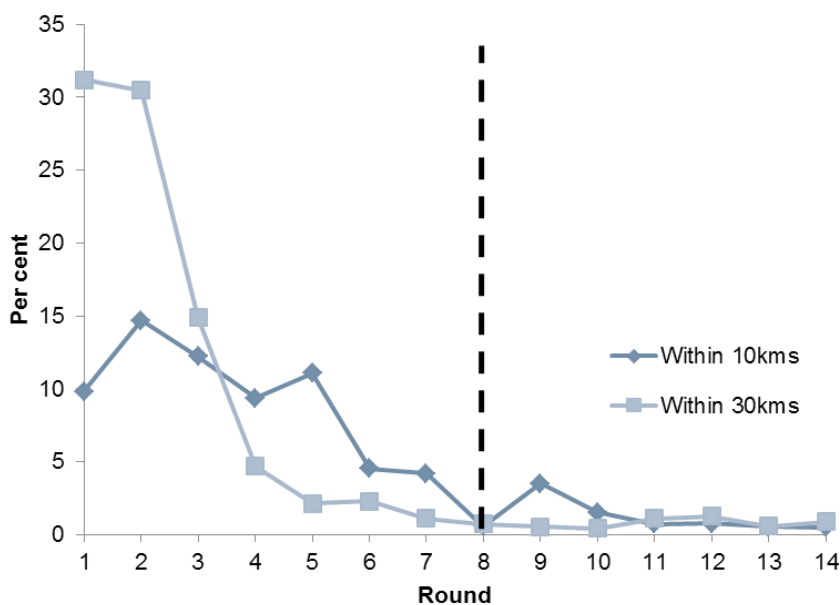


Figure B15 Additional increase in the percentage of youth covered by round (Rounds 1 – 14)



## The distribution of need for mental health services

### Rationale

The prevalence of mental health disorders in young people is not evenly distributed across demographic groups and is strongly associated with social disadvantage. As a result, it is likely that there are regions across Australia with greater numbers of young people who require services for mental health problems. Identifying areas of high need characterised by disadvantage and large youth populations or with an above average prevalence of youth mental health disorders may be useful in determining current access to, as well as allocation of, future centres.

The current model of centre allocation gives greater weight to those areas with low SEIFA scores, reflecting higher levels of socioeconomic disadvantage, and to rural and remote areas. This model assumes that disadvantage and remoteness are associated with a higher youth mental health burden

and less access to mainstream services, and consequently, a greater need for headspace services. However, additional factors may be associated with the prevalence of mental health disorder in young people, and identification of such factors, which can be incorporated into the model of future centre allocation, could result in more effective and efficient resource allocation. It is important to note that this modelling is constrained by data availability. Rather than providing an optimal weighting strategy for centre allocation, this analysis aims to provide an alternative methodology for consideration by the Department.

## Small area estimates of prevalence of mental health disorders

### *Method*

YMM wave one data were used to determine socio-demographic factors associated with the prevalence of mental health disorders in young people. A Poisson regression model was fitted to the YMM data at the SA1 level to predict the prevalence of mental health disorder by socio-demographic variables which were individually associated with prevalence of disorder. Variables included in the model were limited to those which are available for all small areas across Australia and that were collected in YMM and could be matched to census data. This model was applied to census data at the small area level (SA1) to allow for estimation of the prevalence of mental health disorders in young people across the whole of Australia.

In order to assess current and likely access for young people with a mental health disorder, the number of young people within 10 and 30 km of headspace centres for existing Rounds 1-8 and hypothetical Rounds 9-14, using the current model of allocation, was calculated using the method described above. It is important to note that implicit in this model, and any extrapolation based on it, is the assumption that the demographic characteristics of 4-17 year olds are similar to those of 18-25 year olds.

### *Results*

Socio-demographic factors which were identified as being individually associated with the prevalence of mental health disorders in young people were:

- SEIFA
- income
- family type
- Indigenous status
- housing tenure
- language spoken at home
- born overseas.

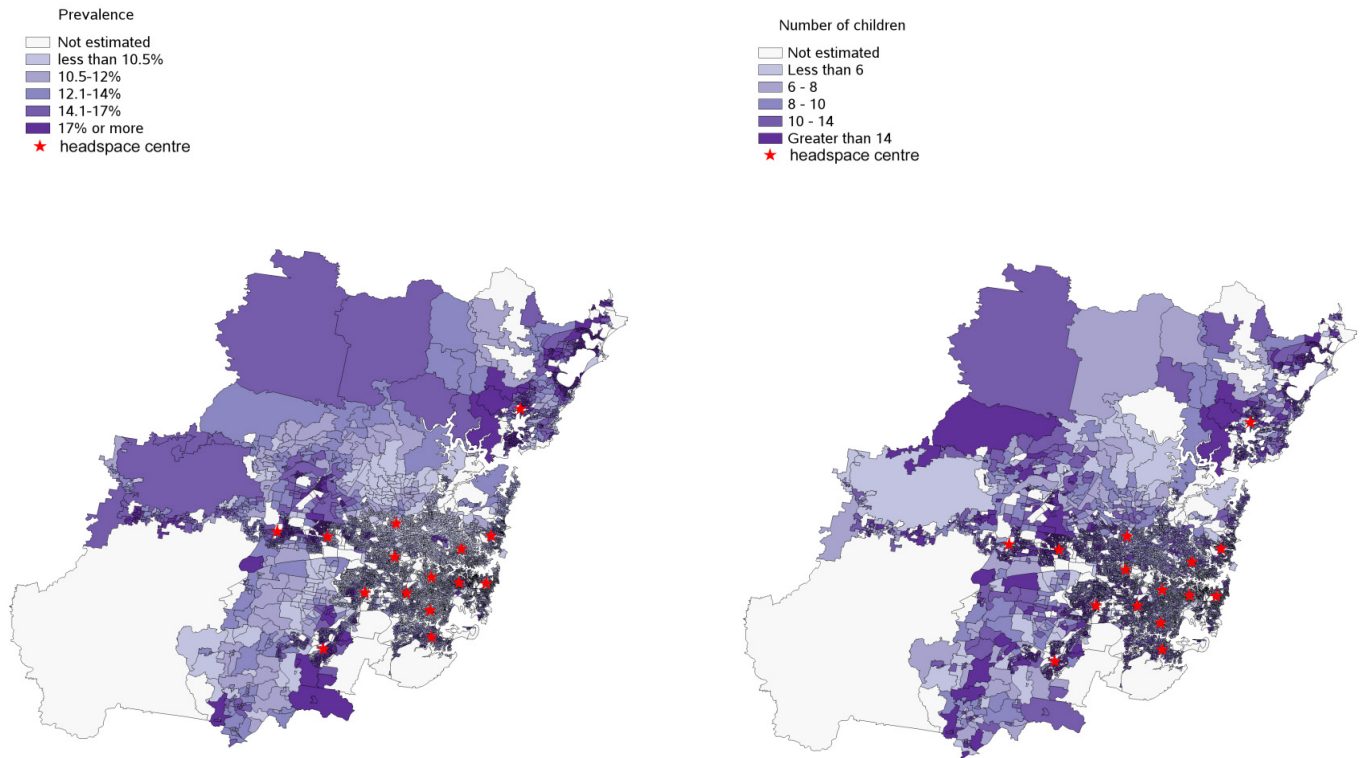
This approach represents a potential methodological improvement over an approach which allocates resources on the basis of SEIFA and remoteness. Although SEIFA and remoteness are intended as proxies for disadvantage and potential service need, the weights applied are not clearly justified. In contrast, the small area estimation process empirically derives the association between risk factors and mental health disorders. The small area estimation process includes a mix of household and individual level factors (such as income, family type) and SEIFA, which is an area-level estimate.

There are substantial differences in the prevalence of mental health disorders in young people across geographic areas in Australia, at geographic levels germane to service delivery. For example, Figure B16 indicates substantial differences in the prevalence of mental health disorders in the Sydney metropolitan area at the SA1 level. Figure B16 displays the prevalence and number of young people in Inner Sydney who are estimated to be at risk of a mental health disorder. This figure displays the catchments of five headspace centres. These centres include headspace Camperdown, headspace Ashfield, headspace Chatswood, headspace Brookvale and headspace Bondi Junction. These figures aim to demonstrate the differences between the two indicators of demand for any defined service catchment area, those indicators being the prevalence of risk of mental health disorder and number of young people residing in the area. For example, many small areas (SA1s) within the central Sydney area have a low prevalence of disorder, relative to other areas in Australia. However,

there are a number of areas with relatively high numbers of young people at risk of a disorder. This reflects the higher population numbers in each SA1 compared to other areas within the state. These results also indicate that small areas with high levels of mental health problems are often geographically clustered, which has implications for targeted service delivery.

The difference between the proportion of young people within a region at risk of a disorder and the number of young people residing in that region requires further consideration in service allocation. This is of particular relevance in areas outside of the major cities which may have a high proportion of youth with mental health problems but small population size.

**Figure B16 Estimated prevalence and number of 12–17 year olds at risk of a mental health disorder in Greater Sydney**





**Figure B17 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Inner Sydney**

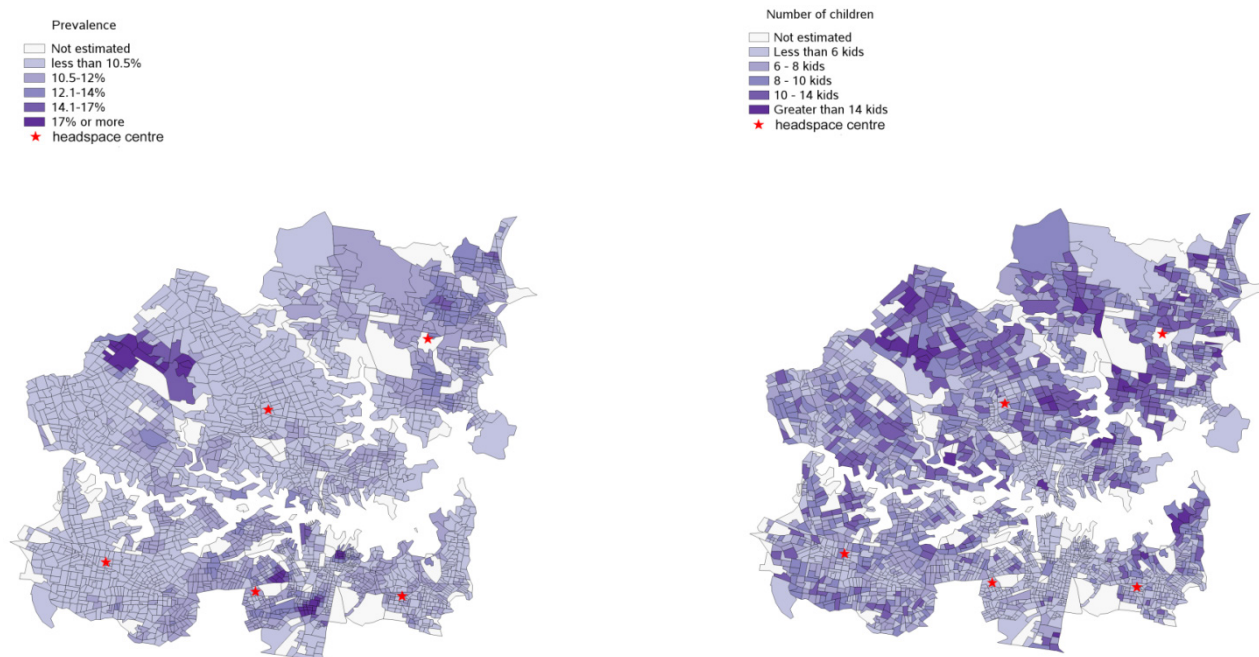


Table B8 displays the estimated number of young people with mental health disorders who live within 10 and 30 km of an existing, or allocated, headspace centre. As outlined above, this analysis makes use of small area estimates of likely mental health burden based on YMM survey data.

These data suggest that the current allocation of headspace services produces a high level of variability in service provision across states and between metropolitan and non-metropolitan areas. In particular, although small in overall population, the Northern Territory appears to receive a lower allocation of headspace centres relative to the needs of the youth population. This is due to both socio-demographic composition of the population and the number of young people who live in rural and remote areas, which both increase the likelihood of mental health disorders and increases the distance required to travel to obtain services. These results suggest that alternative models of allocation which are based on estimated population need and population dispersion may be required to achieve more equitable mental health resource allocation. It is important to note that the current model of centre expansion prioritises allocation to areas with high levels of socioeconomic disadvantage and rural and remote areas. As these variables are correlated with mental health risk, the current model does tend to allocate centres to areas with greater mental health service need, and therefore a model using mental health prevalence data, as specified above, is likely to make a modest difference in the allocation of most centres. A comparison of allocation based on the two methods is included in Figure B19 and Figure B20.

Again, it is important to note that these small area estimates of mental health risk are not proposed as an optimal method of centre allocation. Rather, the inclusion of this example aims to provide an alternative weighting methodology, which may more closely reflect mental health service demand, for consideration by the Department. The figures provided here are not actual observed counts, but are estimates which are constrained by the available data, and should be interpreted accordingly.

As outlined above, the geographic definition of access impacts on the interpretation of current population coverage and remaining need. Figure B18 displays SA1s within 10- and 30 km of an existing centre. It also includes the estimated population at risk of a mental health disorder for the same region. This figure indicates that those areas with higher at risk populations tend to fall outside of the 10 km definition of geographic access; however, they are likely to be considered to have access when the 30 km definition of access is applied. This highlights the importance of the definition of access applied to the interpretation of current coverage, and the potential disparities in service delivery.

**Table B8 Young people aged 12-17 at risk of a mental health disorder by distance to nearest headspace centre, and state**

		Distance to nearest headspace centre (Rounds 1-8)			
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	Total
New South Wales	Number	103,347	33,418	32,546	169,311
	Per cent	61	19.7	19.2	100
Victoria	Number	78,895	22,747	16,008	117,650
	Per cent	67.1	19.3	13.6	100
Queensland	Number	64,151	39,146	31,414	134,711
	Per cent	47.6	29.1	23.3	100
South Australia	Number	23,769	9,444	10,150	43,363
	Per cent	54.8	21.8	23.4	100
Western Australia	Number	32,279	12,703	19,222	64,204
	Per cent	50.3	19.8	29.9	100
Tasmania	Number	5,002	3,893	6,155	15,050
	Per cent	33.2	25.9	40.9	100
Northern Territory	Number	2,619	2,379	12,970	17,968
	Per cent	14.6	13.2	72.2	100
Australian Capital Territory	Number	4,205	3,571	0	7,776
	Per cent	54.1	45.9	0	100
Australia	Number	314,267	127,301	128,465	570,033
	Per cent	55.1	22.3	22.5	100

Figure B19 displays the allocation of round 9 (16 sites) and 10 (16 sites) centres based on the current model of allocation. Figure B20 displays the allocation of sites if centre allocation is prioritised based on the number of young people within each SA3 or SA4 at risk of a mental health disorder. These figures were obtained from YMM small area estimates. For the purpose of data display, hypothetical centres have been assigned to the most highly populated SA1 (Figure B19) within the SA3/ SA4 of interest, or SA1 with the highest predicted number of young people at risk of a mental health disorder (Figure B20) within the selected region (SA3/SA4). These figures indicate some difference in the allocation of centres based on these weighting algorithms. There were 32 centres allocated in the hypothetical rounds 9 and 10. The 2 models allocated centres to the same SA3 / SA4 21 times and to a different geographic region 11 times. The use of estimated demand to assign centres tends to prioritise centre allocation to urban areas, with higher total youth populations and therefore number of young people at risk, whereas the current weighting method used by the Department results in more non-urban centres in Rounds 9 and 10. SA3 and SA4 regions selected using the current and alternative weighting system are included in Appendix G).

**Figure B18 SA1s within 10km and 30km of a round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Sydney**

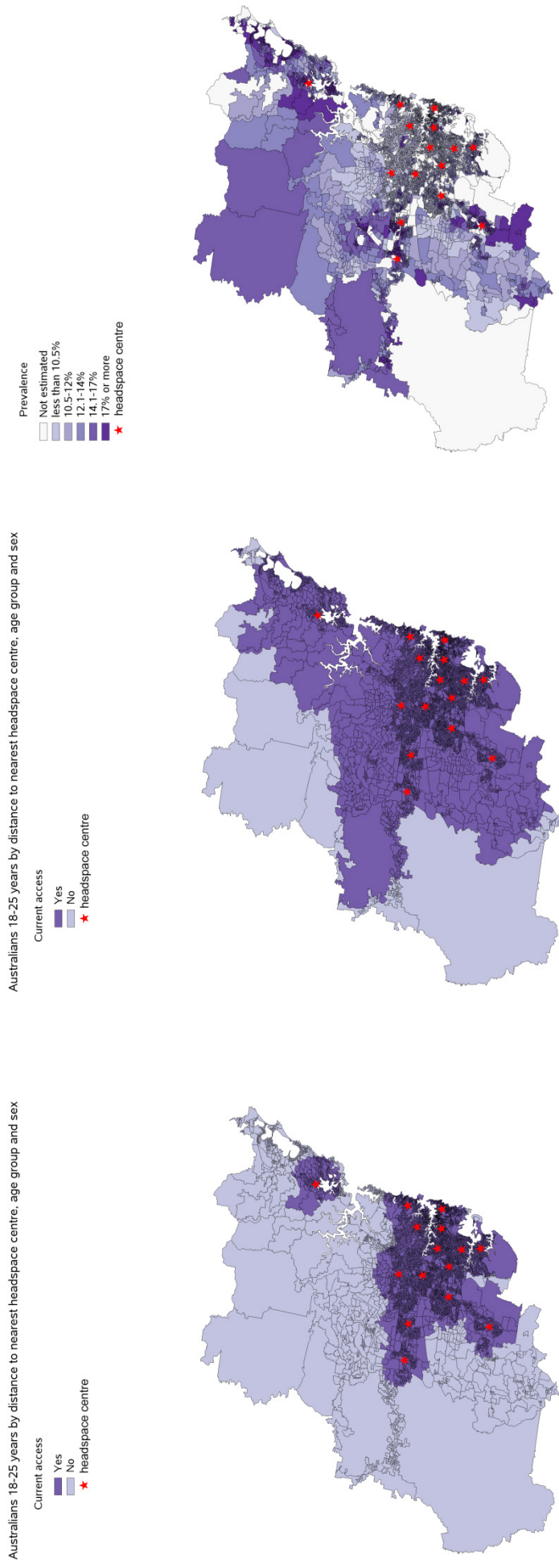


Figure B19 Hypothetical allocation of Round 9 and 10 sites based on the current model of centre expansion

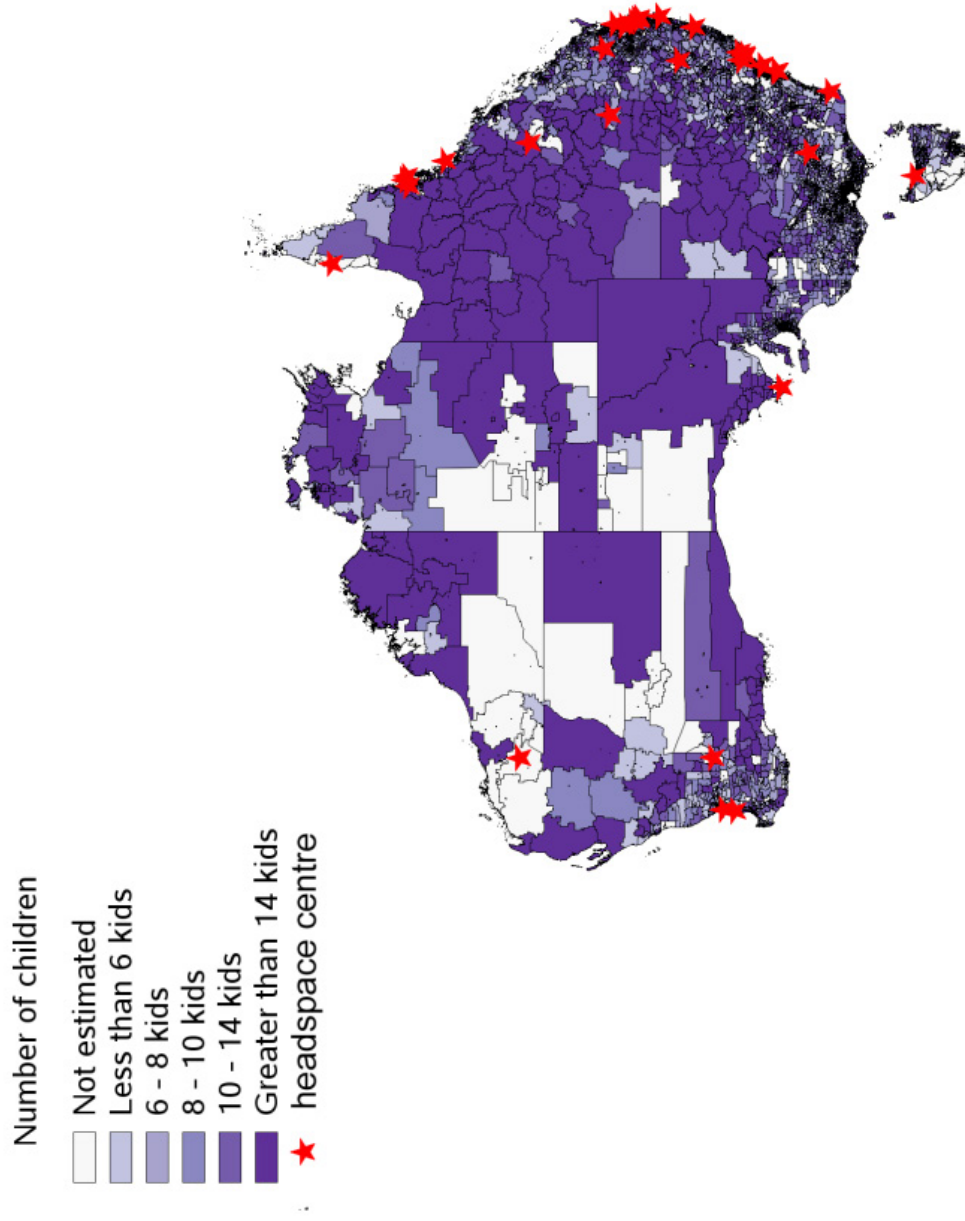
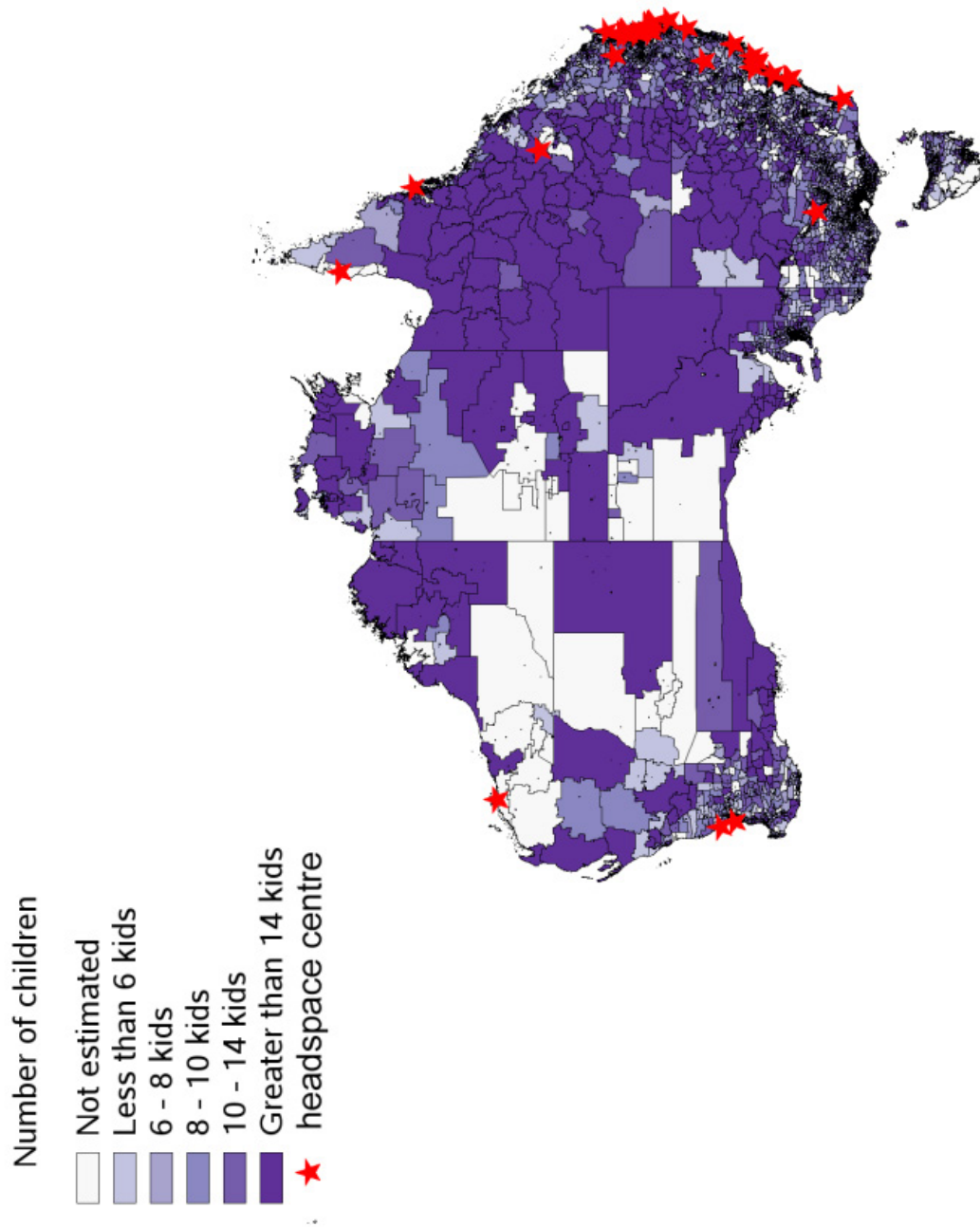


Figure B20 Hypothetical allocation of Round 9 and 10 sites based on the youth population at risk of a mental health disorder



A summary of the strengths and weaknesses of the current and proposed methods of defining access, for the purpose of centre expansion, is included in Table B9.

**Table B9 Strengths and weaknesses of definitions of youth access to headspace for evaluation purposes**

Measure	Strengths	Weaknesses
<p><b>ASGS boundaries</b></p> <p>A young person is considered to have access to a headspace centre if they reside in the same SA3/ SA4 as the centre</p>	<p>- Simple to determine access under this definition as population counts for areas are easily accessible via the ABS</p>	<p>- Does not reflect true access particularly in rural and remote areas in which regions are often geographically large and do not reflect service hubs</p>
<p><b>Distance to nearest centre</b></p> <p>A young person has access to a headspace centre if they live within a defined distance (10 kms metro, 30 kms non-metro) of the centre.</p>	<p>- Likely to better reflect true access to services compared to models which are based on administrative boundaries</p> <p>- Relatively easy to calculate youth with access</p>	<p>- Distance does not reflect likely travel routes of transport hubs which could improve or prevent access. This weakness could be addressed with higher quality geographic data.</p>
<p><b>Distance to nearest centre for young people at risk of mental health distress</b></p> <p>As above, a young person has access to a headspace centre if they live within a defined distance (10 kms metro, 30 kms non-metro) of the centre. However, access is evaluated based on the number of young people estimated to have a need for services rather than the total youth population.</p>	<p>- May better reflect access for those who are more likely to seek services and allow for those areas likely to have greater demand to be prioritised in centre allocation</p>	<p>- Requires small-area estimates of mental health problems. The methodology presented in this paper is indicative of a methodological approach, but does not reflect an optimal product.</p> <p>- Areas at high risk of mental health problems may already have greater availability of alternative services. This was not possible to evaluate due to a lack of data.</p> <p>- headspace does not exclusively provide services to those at risk of mental health distress. Therefore, this model may not accurately estimate demand.</p>

## Centre service capacity

### Key messages

- Centre capacity is largely constrained by the relatively inflexible headspace grant funding allocated to centres.
- No information was available to the evaluation team regarding non-government funding. As a result, the impact of this additional funding of centre capacity via Lead Agency or Consortia sources is unknown.
- Further analysis is required to determine whether funding flexibility could allow individual centres to provide access to young people in a more efficient manner.
- The Department should consider whether future evaluations of headspace might allow evaluators access to some level of information around Lead Agency and Consortia contributions, where it is legal to do so. Even access to indicative data, with the Department's approval, would allow a clearer interpretation of the evaluation observations and outcomes

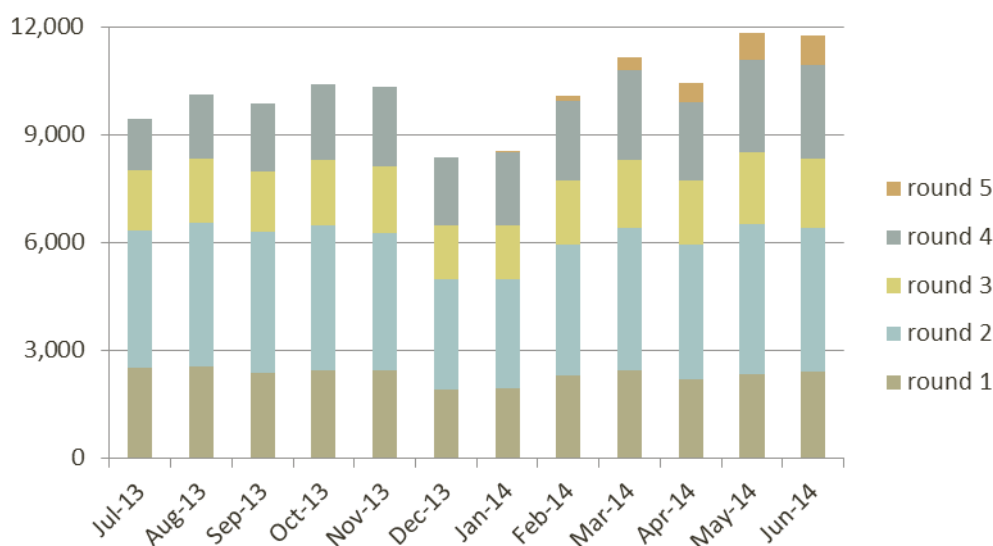
While proximity to a headspace centre and the distribution of mental health needs across the community are important demand side factors which influence centre access, the capacity of centres to provide services to young people within their community may represent a limiting factor in delivering equity of access and is an important consideration in the assessment of unmet needs and future centre allocations.

The current model of centre allocation and funding places an upper limit on the capacity of centres to provide services to young people. There is little flexibility in the amount of funding from headspace for each centre and as SA3 and SA4 regions are limited to one centre, these funding constraints place an upper limit on the capacity of centres to provide services. It is important to note that the evaluation only relates to headspace grant funding. However, the current model is intended to provide a platform for leveraging additional funds and in-kind support from consortia partners. This additional support may substantially increase the funds available to a single centre and, as a result, their ability to provide services to young people. However, as the evaluation team did not have access to this information, it is impossible to consider the extent of additional funding and its implications for centre capacity.

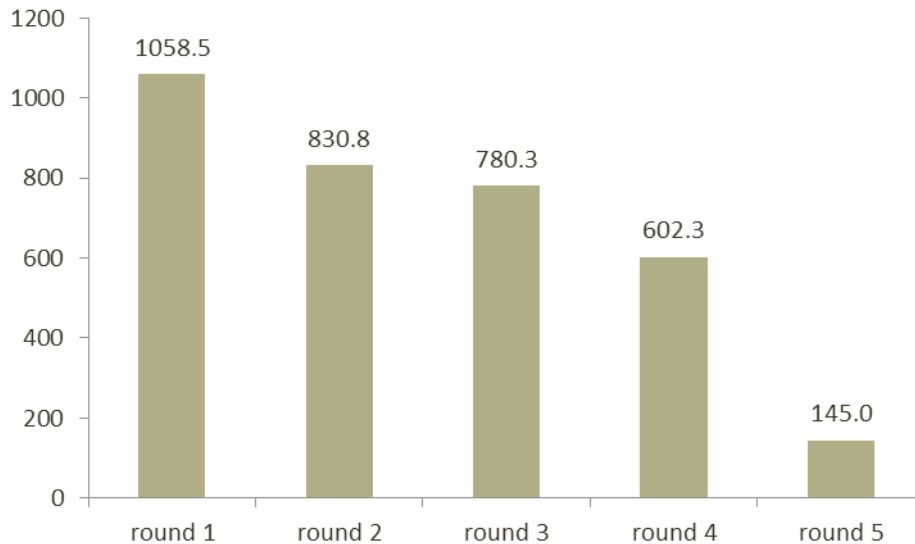
It is difficult to assess centre service capacity with the available data, and substantial differences between centres are likely. At some level, this could be due to differences in available funds. For example, as seen in Figure B21 and Figure B22, there is variation in the number of clients and occasions of service provided by centres in each round. This, at least in part, reflects differences in the stage of centre roll-out. Centres allocated in later rounds provide a smaller number of occasions of service and see fewer clients compared to well-established centres. However, it is important to note that this relationship is unlikely to be driven by stage of centre roll-out alone. Additional factors such as centre location, staffing, demography and type of services offered are likely to impact on the number of occasions of service.

Figure B23 illustrates that some young people have long wait times prior to their first appointment at a headspace centre. These long waiting periods may be indicative of inadequate centre capacity relative to demand in the area. However, there could be a number of reasons for long wait times in any particular centre, and although capacity is an important component of access, there are insufficient data to explore the issue of centre capacity in more detail. With appropriate data, further analysis could be undertaken to examine the reasons for long waiting times in particular headspace centres, and the extent to which these are the result of lack of capacity to meet demand as opposed to other factors such as staff shortages, operational models or average number of occasions of service provided.

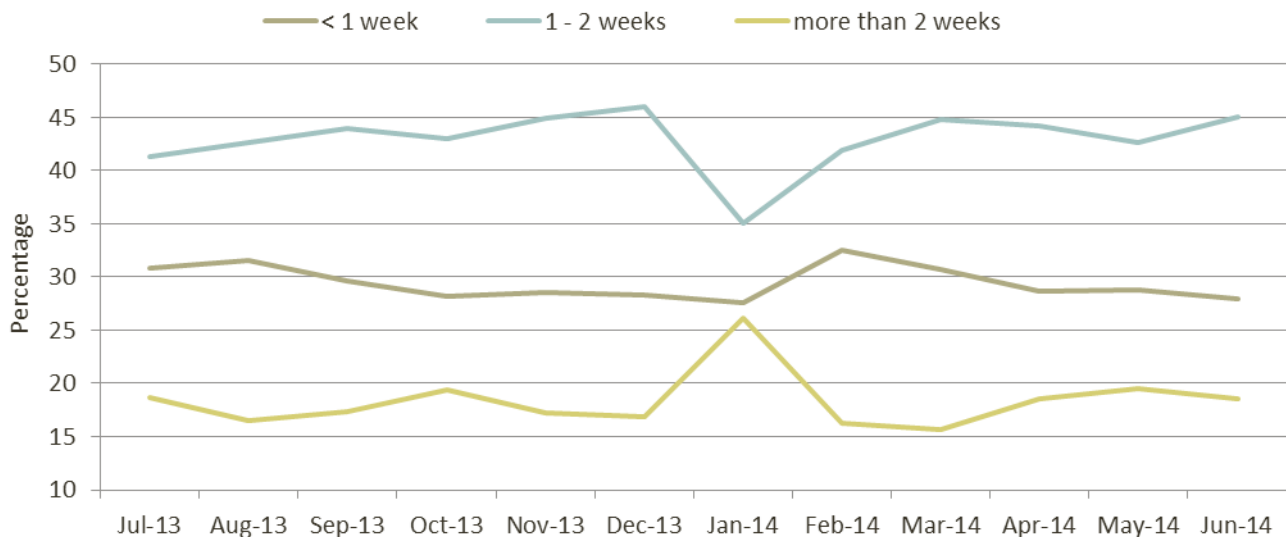
**Figure B21 Number of clients by centre round, 2013/14**



Source: Authors calculations from hCSA data

**Figure B22 Average number of occasions of service per centre by round, 2013/14**

Source: Authors calculations from hCSA data and ABS 2011 Census tables.

**Figure B23 Waiting time for occasions of service by month**

Notes: Wait times are self-reported by young persons for each occasion of service. Young persons are asked: "How long have you waited for this appointment (from when you or someone else tried to make an appointment for you)?" Young people do not report waiting times for every occasion of service. Young people who responded "I don't know" have been excluded from the analysis. These comprise around 9.2% of all responses.  
Source: Authors calculations from hCSA data.



## Current centre funding model

### Key messages

- Current headspace grant funding is relatively inflexible. While flexibility may be gained from consortia partners, this information was not available to the evaluators. Part One has further information on this issue.
- Consideration should be given to matching grant funding to relevant factors such as youth demand, population catchment size, rural location and service profile of centres.
- headspace administrative data (hCSA) record the source of funds used for any given occasion of service, but crucially does not record the cost of that occasion of service. Given that two-thirds of occasions of service are funded out of a combination of MBS and other non-headspace grant funds, this is a major shortcoming. Recording cost would provide further insight into the funding model and greatly improve the quality of any future evaluation.
- Where possible, non-government funding data should be included in future evaluations of the headspace model. As the headspace service model is designed to leverage off funding sources in addition to the headspace grant, a lack of information about these funds within headspace administrative reporting represents an information blind-spot for the Department and a significant data-gap for the evaluation.

### Rationale

The current funding model for headspace centres impacts on the nature and extent of service delivery via headspace centres by placing a cap on individual centre resources. While additional funds may be provided by consortia partners, this information is not available to evaluators and therefore cannot be considered in the analysis. In assessing the current model of centre allocation, some consideration needs to be given to the funding model.

Information relating to the centre-funding model was provided by hNO and DoH over the life of the project. Final audited centre-level expense (hCFA) data were provided to the evaluators in January 2015. The discussion which follows concentrates on the broad funding model.

### Results

For the purposes of this evaluation, the evaluation team applied an indicative annual running cost based on 2013/14 headspace centre funding agreements. This places an average value of \$842,000 per annum of centre funding per centre, as allocated by headspace hNO. We have also included hNO centre administration costs of \$96,000 per centre per annum. The funds allocated to each fully operational centre in 2013/14 by hNO ranged from \$600,000 to \$1,100,000.

In addition, there is a separate establishment funding provided by hNO to support the new centres in their first year of operation. This funding amounts to an additional \$350,000 (for fit-out) plus \$450,000 (for part-year services) to assist with centre establishment in the first year only. As the Round 7 and 8 allocated centres are in various stages of roll-out, and are yet to achieve full functionality, they will be subject to this additional establishment funding rather than the average running cost of \$842,000 per annum.

The headspace centre funding model allocates at least 75% of funding to staff costs, and 25% to indirect costs. Compliance with this cost structure by each centre is monitored by hNO. The grant expenditure is targeted at community engagement, infrastructure costs, centre manager salary, administrative costs, and intake workers. The system has built-in quality controls so that as data is entered at the centre-level, expenses which fall outside agreed parameters are highlighted for query by hNO finance. There is, however, some capacity for flexibility in unusual circumstances.

### headspace and non-headspace contributions to overall service costs

The combined value of headspace centre based operating costs and hNO central administration costs allow the project team to estimate costs of headspace funded services as part of the overall headspace service model. These costs reflect a mix of the cost per occasion of service as well as the administrative and infrastructure costs associated with the delivery of services through headspace centres.

However, headspace sourced administrative costs data (the hCFA/ hCSA) do not include non-headspace funding sources. Analysis by hNO has shown that only 36% of occasions of service recorded in hCSA between January and June 2014 were funded directly by headspace. The majority of occasions of service provided at headspace centres are funded by the MBS (45.5%) through leveraging off the headspace infrastructure. This observation has important implications for the ability of the evaluation to address its original goals as access to data concerning funds administered outside of the headspace grant and costs recorded outside of the hCSA were not available to the evaluation team.

The headspace model deliberately partners headspace with other organisations. Excluding the contribution of non-headspace funding sources from the economic evaluation of the effectiveness of headspace would substantially reduce the scope of the cost-effectiveness analysis given the complementary nature of the design of the headspace service model. The rationale for the inclusion of non-headspace funding sources as part of the headspace model has been discussed with the Department, and the evaluators were directed to estimate the MBS contribution to headspace. Lead agency financial information was beyond hNO jurisdiction for the purposes of the evaluation as it was property of legal entities that are independent of both the Department and hNO. This is why this information is missing from the costing of the existing centre allocation model, and why it may also be absent from any estimates of costs for alternative models if such work were to be undertaken in the future by an external party. These data have never been within the reach of the evaluation. Information about these non-headspace funds is not routinely collected by headspace and is not available to the evaluation team in the administrative datasets supplied to support our analysis. This represents a threat to the generalizability of the evaluation findings as two-thirds of occasions of service related to headspace service delivery are paid for from non-headspace funds, with considerable variability observed across headspace centres. It is also important to note that records of occasions of service (hCSA) do not record the cost of these services, only the source of funds.

Costs are thus difficult to identify and measure given the diversity and complexity of headspace centre third party models. The cost of operating headspace centres can be borne by the government, clients and/or the operating party. Government costs can consist of headspace funding (for occasions of service, intake workers and supporting infrastructure), MBS funding and potentially other government grants to centre operations. The ability to observe and collect information about these costs and distribute them at a per unit level for an individual headspace service is challenging, and no costs other than those provided by the DoH under the funding model have been included in this report.

### Implications of current funding model

The current funding model is highly specified and relatively inflexible in relation to headspace grant funding. For example, a number of headspace centres in metropolitan areas (i.e. Camperdown, Collingwood and Parramatta) have youth populations of over 100,000 within 10 km whereas a number of regional headspace centres have total service populations of less than 5,000 within 10 km. That is, service populations within 10 km of some urban headspace centres can be twenty times greater than some regional centres. The current funding model is, however, quite tightly constrained and these centres receive broadly equivalent funding despite the wide variation in size of their respective service populations. The allocation of centres to regional locations reflects a number of factors, including equity of access and potentially greater need per capita, but these inequalities suggest a need for closer examination of the current centre allocation and funding models. Greater flexibility in centre level funding, which reflects client demand, may allow for more efficient and effective service delivery.

## Evaluation of the current model of centre allocation

Based on the analysis of the current model of centre allocation outlined above, a number of strengths and weaknesses have been identified. These inform the design of the proposed alternative definitions of access and centre allocation.

### Strengths

The current allocation model recognises differences in access between metropolitan and non-metropolitan areas. The model assigns centres at the SA4 level in metropolitan areas and SA3 level in non-metropolitan areas. The use of smaller SA3 units in non-metropolitan areas acknowledges the greater area of geographic units in regional and remote areas, which is likely to reduce access to centre services. There are two key strengths in the current model:

- The model makes use of a weighted youth population to prioritise the allocation of centres to more remote areas and areas with low socio-economic status. As these factors are associated with mental health risks, they are likely to be indicative of community need. Therefore, use of these youth population weights is likely to prioritise areas with greater need when determining centre allocation relative to a more simplistic, unweighted model.
- The current model utilises the ASGS boundaries. These boundaries, which remain relatively stable over time, simplify allocation from an administrative perspective.

### Limitations

While strengths were identified, there are a number of weaknesses of the current model:

- The ASGS boundaries, and in particular SA3 and SA4 units, are not constructed with the primary aim of defining or capturing communities. The areas can contain large populations in metropolitan areas. In addition, many regional and remote areas in Australia cover a substantial geographic area. As a result, it is possible that these areas do not adequately represent mental health service catchment areas in proportion to the service capacity of an individual headspace centre, which has implications for equality of access within each region.
- With the aim of achieving access for all young people across Australia, the current model aims to assign a single headspace centre to each SA4 or SA3 in Australia. However, this model does not take into account the service capacity of centres. In highly populated areas, a single centre may not be resourced to provide timely and adequate services to all young people in the community who seek help. It is important to note that the current funding model effectively caps the service capacity of any individual centre (although it may be that this is made up by other sources of funding in some centres, as indicated above).
- Some areas allocated a centre contain very small youth populations, yet may still contain a full service headspace centre. Although this may be defensible on the basis of equity of access, allocation of a centre to areas with very small youth populations is inefficient and results in very high costs per occasion of service. The current model of allocation lacks specified upper and lower bounds on centre capacity.
- As outlined above, the current model of allocation prioritises remote areas and areas with low socioeconomic status with the use of ARIA and SEIFA weights. However, the basis for the assigned weights is unknown. Additional factors have been identified which contribute to likely community need for youth mental health services. These include family type, Indigenous status, language spoken at home, being born overseas and housing tenure. Inclusion of these factors in determining allocation priority may provide for a more targeted service allocation.

It is important to note that the DoH allocation of existing centres includes a degree of local knowledge and judgement, which would likely address some of the weaknesses outlined above, such as the allocation of centres to areas with very small populations. Other factors such as the availability and cost of suitable accommodation are also taken into account when final decisions are made about the location of headspace centres. However, this is not made explicit in the current model and is therefore difficult to evaluate.

Based on the evaluation of the current model of allocation, alternative models were developed with the aim of addressing weaknesses in the current allocation of headspace resources. These models aim to incorporate community mental health needs, likely catchment areas, and centre capacity. Alternative community mental health services and acute child and adolescent mental health services need to be considered when allocating new headspace centres. The existence of these centres is likely to impact on headspace service requirements. However, the assessment of competing or complementary services is beyond the scope of this evaluation.

## Alternative models of centre allocation

### Background

The previous section outlines a number of issues with the current centre allocation model, including geographic size of the area, the travel times associated with accessing headspace centre services, and the number of young people who require mental health services within the area. In addition, the current funding arrangement for individual headspace centres places limits on the extent to which centres can vary their service type and service volume to meet client demand. This funding arrangement effectively places a cap on individual centre resources and as a result limits the ability of the model to provide equitable access to young people across Australia. While the model has some degree of flexibility due to the ability of individual centres to leverage additional funding from consortia, the average contribution from non-government sources is relatively small. Therefore, there is benefit in examining possible alternative centre allocation models.

This chapter outlines the potential for alternative models of centre allocation to improve youth access to headspace services and considers the nature of national coverage using different centre allocation models.

Three alternative models of centre allocation are outlined below:

- a data driven approach to access, demand and capacity
- use of alternative geographic boundaries in centre allocation
- the use of a hub and spoke model of service delivery.

These models were selected to address weaknesses identified in the current model of centre allocation and in the assumptions which underpin the current model. These alternative models of allocation aim to maximise youth access to mental health services while providing potential efficiencies in service delivery.

A number of factors impact on how access is defined and operationalised in the model. Varying these interrelated factors alters the level and quality of access for an individual headspace client, and therefore will impact on effectiveness estimates for any alternatives to the existing centre. These components relate to service access and include;

#### Distance from client's home to the nearest headspace centre:

This access component can be varied in three ways. Under the current allocation model, which allocates a single centre to each SA4 (metropolitan) and SA3 (non-metropolitan), more centres can be added to each area. Another way to alter geographic access is by changing the size of the unit of geography that qualifies for a headspace centre. Thirdly, these changes can be coordinated by altering the geographic unit and allowing for multiple centres within a single area.

#### Capacity of a headspace centre to service client demand:

Capacity refers to the ability of a centre to provide timely services to those who seek support. This component can be varied by altering the staffing and service mix to better meet the demand profile of an individual centre. It can also be varied by adding more headspace centres to a larger area experiencing high demand/low coverage. Thirdly, centre capacity can be altered by changing the funding received at the individual centre level and at the organisational level to ensure centres have the service resources and physical size required to meet demand.

### Level of funding available to support a given headspace centre:

The existing centre allocation model has a tightly bound funding envelope per centre, with an average of \$842,000 per annum supplied to each individual centre, with a range of approximately \$600,000 to \$1.1m per annum provided to the smallest and biggest fully operational centres respectively. While individual centres receive additional funding and in-kind support from lead agencies and consortia partners, the limited information available to the evaluation team suggests the average contribution from non-government sources may be relatively low. As a result, the current funding model effectively caps the level of service capacity provided, irrespective of service demand. It is important to note that the extent to which service capacity is limited by the funding model is not known, as information regarding non-headspace funding at a centre level was not available to the evaluation team. For example, it is possible that individual centres effectively seek consortia partners and external funding which may increase their service capacity.

The relatively inflexible model of headspace funding means that there may be long waiting times to obtain services in high demand areas. In low demand areas the current funding model may represent diseconomies of scale and/or a level of cross-subsidisation of lead-agency business for non-headspace purposes. The ability to vary the centre funding in a manner which better represents client demand may improve equity of access to services. Flexibility in funding may open the way for such concepts as headspace supercentres for high demand areas, infill of extra centres into high population SA4s that currently have only one centre, and alternative delivery mechanisms in rural areas such as hub-and-spoke, or fly-in fly-out service models.

The alternative models of centre allocation presented here are intended to demonstrate how levels of centre access can be altered when components of access described above are varied. Each alternative model has its own focus and set of specifications, but ultimately they each use different combinations of the three main components of “access”, as described above, to demonstrate the impact of their application of headspace centre expansion.

It is important to note at this stage that there are other options affecting headspace access that could be considered, but are deemed outside the scope of the evaluation. These include eheadspace, which may be a useful tool in reducing barriers to service access. In addition, the Outreach Teams to schools program, which provides postvention support to school communities affected by suicide, provides additional support to communities. Given the significant impact these programs may have on youth access to mental health services, some discussion of their impact and possible extension is included in the following section. However, as they are not within the scope of the report, they are not explored in detail.

Detailed below is the rationale for selection, proposed method for allocation and discussion of the strengths and weaknesses of three alternative models. It is, however, important to note that this discussion does not propose an optimal model of centre expansion. A number of factors which drive decisions regarding allocation of centres are not able to be incorporated into modelling. These factors include, for example, the existence of complementary and competing mental health services in the area, presence of potential lead agency and consortia partners, centre capacity and the impact on service delivery with modifications to the traditional model (i.e. smaller or part-time sites). Therefore, these models have not been fully specified. Instead they aim to provide additional considerations for the Department when expanding the current model.

## A data driven approach to access, demand and capacity

### Key messages

- A data driven approach, using available survey and geographic data, was used to develop a model which maximised youth access to centre services.
- Centre allocation was prioritised based on the predicted risk of mental health disorder at the small area level (SA1).
- This alternative model would be likely to result in a large number of additional centres. This would include infill of existing SA4 and SA3 areas that already contain one headspace centre.
- Pragmatic decisions are needed to achieve agreement on the smallest region size, in terms of youth population, that would be viable to support creation of new centres.
- Prohibitive costs may be incurred if areas containing very small youth populations are provided with full-service headspace centres, as this will result in a dramatic expansion of centre locations. For example, areas with fewer than 1,000 young people living within an agreed distance of a potential centre location may be serviced more cost-effectively under a different access model.
- Additional data relating to centre capacity, the smallest region size which can support a headspace centre, and existence of competing and complementary services in potential in-scope geographies, is required to establish the number and cost of additional centres.

### Rationale

One of the identified weaknesses of the current model of allocation is the assumption that a single headspace centre within an SA3 in non-metropolitan areas or SA4 in metropolitan areas will provide access to all young people within the area. Due to the large population size within some metropolitan SA4 areas, and the vast geographic areas of some regional SA3s, this definition is unlikely to result in equitable access to services for all young people. In addition, need for service is not evenly distributed across Australia. While the current model acknowledges this through weights which are applied based on socio-economic status of areas and remoteness, additional factors that impact on likely service need were identified, including income, family type, Indigenous status, housing tenure, language spoken at home and place of birth.

Instead of using administrative ASGS boundaries to define centre areas for centre allocation, the proposed model of centre allocation described below makes use of a data-driven approach to the issue of access. This model develops service catchment areas which correspond with the likely travel distance to obtain services. Allocation is prioritised based on the predicted population of youth mental health need within a small area. Finally, estimated capacity of centres is incorporated in the model in an effort to maximise equitable access to mental health services.

#### Defining catchment areas

Mental health service catchment areas could be developed to provide an alternative to the ASGS boundaries. Analysis of YMM data (see Figure B6, Figure B7 and Figure B8) indicates that knowledge and use of headspace services decline substantially beyond 10 km travel distance, with further decrements beyond 30 km. Therefore, catchment areas in metropolitan areas could be designed with a maximum radius of 10 km. In non-metropolitan areas, service catchment areas with a maximum radius of 30 km may reduce geographic barriers to access whilst balancing practical limitations such as small population sizes within a single catchment area.

#### Allocation of additional centres

Centre allocation could be given priority based on anticipated population need. For example, the small area estimates of youth at risk of mental health disorder within each catchment area could

provide a method for identifying the priority of areas for future centre allocation. Those areas with the greatest number, or highest proportion, of young people who are at risk of mental health problems could be selected for allocation of new centres.

### Centre capacity

Centre capacity is an important component of equitable access to services. While a young person may live in close proximity to a centre, demand for mental health services may prevent them from receiving access to the help and support they require. Capacity can be addressed in a number of ways. For example, it may be possible to make alterations in funding, which more closely match anticipated demand for services, or expand services through “infill” of centres into highly populated areas currently unable to provide services to all those who seek. While service capacity is an important component in assessing service access and determining the most efficient model of allocation, we lack sufficient data to support the analysis of existing centre capacity.

### Evaluation

This hypothetical model of centre allocation makes use of a data-driven approach to the issue of centre access, likely demand and capacity which address identified weaknesses in the current model. Its implementation is likely to achieve improved opportunity for access to headspace centres compared to the current model and other hypothetical models proposed in this chapter. However, if this model were rolled out to its natural conclusion, which would equate to national coverage under its specific allocation rules, it would require a large number of new centres to be allocated, including significant infill of areas which are considered to have access under the current model.

The resultant service catchment areas would contain small populations, with only 10% of areas containing youth populations of greater than 800 when a 30 km maximum area for catchment areas is established. While we lack information relating to the maximum capacity, and optimal area size for allocation of a headspace centre, the areas defined by this methodology are likely to be too small to provide cost-effective service delivery. As a result, they would be associated with significant costs compared to other models of centre allocation.

An additional consideration is the impact of the introduction of a large number of additional centres, which maximise youth access, on the ability to identify and leverage funding from lead agencies. For example, in rural and remote areas, where existing services are limited, the identification of appropriate lead agencies for a large number of centres may be challenging.

Establishing a model of centre allocation ultimately requires a balance between cost and maximising the ability of young people to access services when required. While this alternative model rolled out to its hypothetical natural conclusion is likely to increase access, the large increase required would make this model very expensive to fund compared to the existing model of allocation. Pragmatically, a lower limit would need to be set on in-scope population size. This is likely to disproportionately impact young people in rural and remote areas in which population distribution is more likely to be sparse.

## Use of alternative ASGS boundaries - Urban Centres and Localities

### Key messages

- This alternative model aims to improve access with the use of Urban Centres and Locality (UCL) boundaries in non-metropolitan areas. The UCL boundaries may better capture service hubs compared to SA3s, which are used in the current model.
- There are 1,592 UCLs in non-metropolitan Australia, and less than 200 of these locations have youth populations exceeding 1,000 persons. Some of these already have access to headspace services.
- If centres are allocated allowing all UCLs to be in-scope, with no lower limit on region size, the number of headspace centres created would be large. As in alternative model 1 (data driven approach), this would make the implementation of this model prohibitively expensive.
- If a lower limit of 1,000 youth population was set, 22 areas currently without headspace services would be in-scope for centre allocation. This would include 5 new centres in metropolitan areas and 17 new centres in non-metropolitan UCL regions.
- If a lower limit of 3,500 youth population was used, which is the size of the current smallest headspace centre under the current allocation model used by the Department, 5 additional sites could be allocated in metropolitan areas and 2 in non-metropolitan areas.
- Additional information regarding capacity, existing services, travel routes, and cost of centres which vary from the traditional model would allow the number of centres, and the cost of implementation, to be estimated.

### Rationale

The use of SA3s as the unit of allocation for centres in regional areas may not be optimal. ABS data show that SA3s are typically functional areas of regional cities, and large urban transport and service hubs. As previously outlined, these areas are often large, particularly in rural and remote areas and, as a result, may not represent service catchment areas of realistic travel distances for headspace service access.

An alternative geographic classification, which falls outside the main ASGS structure, is the Urban Centres and Localities (UCL) classification. The ABS classification states that 'Urban centres and localities (UCLs) are geographical units that statistically describe Australian population centres with populations exceeding 200 persons.' (ABS, 2011) These units are created via the aggregation of contiguous SA1s and are designed for the purpose of data release from the census of population and housing. Areas are defined based on their population size. Areas with a population of 1,000 or more are considered Urban Centres. Areas which have populations greater than 200 and an urban population below 1,000 are classified as Localities. These areas represent rural populations.

Centre allocation based on the UCL boundaries may result in a closer approximation of realistic service catchment areas for headspace services in non-metropolitan areas. However, in metropolitan areas, the use of UCL boundaries results in areas with very large populations, which are unlikely to be serviceable by a single headspace centre. For example, the single urban centre of Sydney contains more than 700,000 12-25 year olds and a total population of almost 4 million. This alternative model of allocation therefore assigns centres to UCLs in non-metropolitan areas and SA4s in metropolitan areas. This definition of access was based on discussions with hNO.

### Defining catchment areas

Across Australia, there are a total of 684 urban centres, 1,128 localities and 27 special purpose UCLs. As outlined above, centres in metropolitan areas could be assigned centres at the SA4 level, and those areas in non-metropolitan areas assigned centres based on the UCL geographies. Urban



centres and Localities in non-metropolitan areas which are within approximately an hour's travel time of existing headspace centres could be considered to have access to services.

### Allocation of centres

The youth population could be weighted using the current headspace weighting method, as described earlier. Therefore, greater weight would be assigned to those areas with higher levels of disadvantage, as defined by SEIFA, and remoteness, determined using ARIA. As a result, those living in more remote areas, or in areas with low socio-economic status, are prioritised in the allocation of additional centres. UCLs with very small populations could be excluded from the allocation model. Alternative service delivery modes could be considered for these areas.

### Centre capacity

Again, centre capacity provides an important component for youth access to services and an important lever which could be altered in the current model. For example, varying the headspace grant centre funding, to tie more closely to centre demand, may allow for more efficient and equitable delivery of services particularly when allocating centres to small UCLs.

There are 1,592 UCLs regions in non-metropolitan areas in Australia. Almost all UCLs have youth populations of less than 3,500 12-25 year olds (3.6%) and only 10% of UCLs in non-metropolitan areas have youth populations greater than 1,000 12-25 year olds. While we lack detailed information on efficient service capacity, it is possible that areas with small youth populations would not support full headspace sites and smaller centres may be required.

If a lower limit of 1,000 youth population was set, 22 areas would be in-scope for centre allocation. This would include 5 new centres in metropolitan areas and 17 centres to UCL regions. If a lower population limit was set at 3,500, as is the case in the current allocation model, 5 additional sites could be allocated in metropolitan areas and 2 in non-metropolitan areas. It is important to note that the allocation of centres is highly dependent on the current availability of mental health services, and potential lead agencies in the area. In the current model, this is described within the 'human intelligence component'. However, this cannot be considered within the evaluation.

Although we lack sufficient data to determine an upper limit of service capacity for headspace centres, the question of centre capacity remains crucial to any efficient expansion of the headspace model.

### Evaluation

UCLs are likely to represent a better definition of a functional town and greater likelihood of access for youth within the geographic unit, when compared to SA3s. The use of administrative boundaries to define access is associated with some clear administrative benefits. For example, ASGS boundaries are relatively stable over time, well-identified, and have defined populations. This increases the ease of implementation of the model of centre allocation. However, in some cases, areas, and in particular SA4s, contain large populations which require more than one headspace centre to meet the demand for services and allow for equitable access to services. This alternative model does not address the issue of excess demand for single headspace centres in large population SA4 areas; see Alternative Model 1 above for a possible solution to that access issue. In addition, if this model was extended to its geographic limit, a large number of areas with small population sizes would be allocated a centre. As outlined in the centre capacity section above, a lower limit of region size, in addition to the introduction of alternatives to traditional centres (e.g. smaller centres operating on a part-time basis), needs to be considered to prevent this model being prohibitively expensive due to the number of centres required whilst still improving youth access. A further consideration is that previous analyses suggest that young people are unlikely to travel large distances to headspace and, as a result, the use of a 1 hour of travel cut-point for access in non-metropolitan areas is unlikely to correspond with a fair definition of service access. It is possible that non-metropolitan areas with small populations could be better serviced by alternative methods of service delivery, such as fly-in fly-out services or online service provision. These are discussed further below.

## Use of a hub and spoke model

### Rationale

Hub and spoke models are a formalised service network in which rural or remote areas which lack service capabilities are supported by larger, better resourced, centres in regional or metropolitan areas. While headspace does not follow this model of service delivery, a number of satellite centres exist. headspace national office enables satellite centres to be established when the main site has fully operationalised all components of the headspace model. A satellite centre, or spoke, is then established in the surrounding community. These satellite centres require ongoing support from the main site. They may offer a limited number of service components and may open on a limited number of days only.

Implementation of a more extensive network of hub and spoke centres has the potential to provide greater access to populations living in rural and remote areas. These populations have been identified as having greater risks of mental health disorders and reduced access to services. In addition, there are likely to be cost savings associated with spoke centres. This is likely to include reduced administration costs, possibility of restricted hours resulting in lower salary costs and reduced need for clinical staff with effective referral to hub centres where required.

The satellite centres which currently exist allow for some evaluation of the hub and spoke model. However, the limited number of centres which follow this model, and substantial variety in the operationalization of satellite centres, limits the generalizability of these examples.

### Defining catchment areas

In the earlier rounds of the headspace program, there were varying implementations of the hub and spoke model, but this approach is not standard hNO practice. There are two exceptions to this which are informative under the current evaluation: a funded outpost of headspace Launceston in Devonport which attracts additional funding and fits the profile of a full centre, and a satellite site in Wyong which offers core services and relies on like-services within the area for operational costs.

The primary sites were established during Rounds 1 and 2. Four of the six primary sites are in non-metropolitan areas and therefore service SA3s. These sites vary substantially in the number of youth for whom they provide access, with youth populations ranging between 9,215 to approximately 76,106 young people within the (SA3/ SA4) service area. The majority of primary sites have a single spoke site. However, two primary sites have multiple satellites. Satellite sites are typically in the same SA3 or SA4, with two exceptions. However, they are typically located in different suburbs within the area and are therefore likely to provide access to different service populations.

There is little consistency between the geographic distribution of existing parent and satellite sites. This makes the assessment of the appropriate catchment area for hub and spoke sites challenging. In addition, the ability of smaller centres to adequately provide the required services to youth, or allow for efficient and effective referral to hub sites as needed, requires further consideration. Improvements in efficiency and reductions in costs are largely dependent on the geographic distribution of hub and spoke sites, which impacts on the number of centres required, and the ability of smaller sites to run at a lower cost. Additional information, from service delivery models external to headspace, is needed to inform the most efficient and effective definition of catchment areas.

### Centre capacity

The use of hub and spoke centres could address capacity issues in highly populated areas. The inclusion of smaller centres, with lower funding requirements, in areas with small populations has the potential to reduce costs at a centre level. However, the extent to which this would impact on centre capacity, and therefore youth access, is not known. Additional information regarding the service capacity or smaller and part-time sites is required to inform this analysis.

### Evaluation

The hub and spoke model of centre allocation is likely to be associated with cost savings if spoke sites could operate at a lower cost than traditional centres. In addition, the use of spoke sites to service regions with small youth populations, which cannot support a fully operational site under the current model, may assist in overcoming barriers to help-seeking, such as travel distance, and allow

for greater flexibility in service specificity which is matched to community or cultural needs. However, the extent to which this model reduces costs is highly dependent on the geographic distribution of hubs and spokes, and the operating costs of both hub and spoke sites. Further, the reach of smaller centres, and their ability to deliver services to the population or effectively refer young people, would require further investigation. Additional variations to the model, such as the use of fly-in fly-out functional teams to spoke centres, could further improve this alternative model of centre allocation. Additional information regarding the cost of smaller centres, effective geographic distribution of hub and spoke models, and service capacity of centres is required to further investigate this model of expansion.

### Conclusion for the three alternative models of centre allocation:

Each of the alternative models described above would, independently, represent an improvement in at least one aspect of client access to a headspace service using physical centres as the delivery mode. The first model described (the data driven approach to access, demand and capacity) prioritises youth access in an expansion of the headspace model. However, this is likely to come at the cost of efficiency due to the implementation of a large number of additional centres. The potential for smaller centres to service low population sizes could mitigate this weakness. Model two (the use of UCLs as the geography of interest) is more likely to allocate centres to service catchment areas compared to the current model of allocation. However, this advantage may be in part addressed due to the 'human intelligence' component of the current model, which suggests that selected sites are likely to represent service hubs. As in the first model, the UCL model would require a large number of sites if rolled out to its natural conclusion, and limits would need to be placed on in-scope region size. The final alternative model, which proposes a hub and spoke method of service delivery, is the most likely of the three to result in cost savings. However, the implications for youth access and effective service delivery and implementation within the context of headspace require further consideration.

There is a need to balance the competing aims of maximising youth access to services against improving the efficiency of service delivery. The models outlined above address different weaknesses in the current model. However, due to data insufficiency it is challenging to provide indicative costs for these models which make use of different geographies and centre sizes. It is likely that the most efficient and effective centre based delivery model would use a combination of the three approaches described here to deliver a centre based service in a way that offered equitable access for a high proportion of Australian young people. Further investigation of these models, with additional data resources, would allow for more robust estimates of the additional number of centres and the cost of expansion under these alternative models.

Included in Table B10, is a summary of the strengths and weaknesses of the current model of centre expansion and the alternative models proposed above.

**Table B10 Summary of strengths and weaknesses of current and proposed alternative models of centre allocation and model expansion**

Measure	Strengths	Weaknesses	Notes
<p><b>Current model</b></p> <p>Assigns headsapce centres to SA4s (metropolitan) and SA3s (non-metropolitan). Centres are prioritised by weighted youth population and a 'human intelligence' factor which considers additional parameters such as existing mental health services and availability of consortia partners in the area</p>	<ul style="list-style-type: none"> <li>- Good information relating to headsapce grant funding</li> <li>- Use of existing, stable ASGS boundaries make roll-out administratively straight forward</li> <li>- Areas at higher risk of mental health problems are prioritised due to use of a weighting algorithm</li> </ul>	<ul style="list-style-type: none"> <li>- Definition of access unlikely to reflect realistic access for all young people in the SA4 or SA3.</li> <li>- Human intelligence factor difficult to evaluate and incorporate in modelling</li> <li>- Difficult to determine non-headspace funding contributions and their impact on service delivery and capacity</li> </ul>	<p>Existing information allows this model to be costed to hypothetical national expansion based on well-defined headsapce grant information and estimates of MBS funds. The contribution of lead agency funding and in-kind input cannot be evaluated</p>
<p><b>Data driven approach to access, demand and capacity</b></p> <p>Catchment areas determined to have a maximum radius of 30 kms to reflect likely access to services. Centre allocation prioritised based on population of youth at risk for a mental health disorder.</p>	<ul style="list-style-type: none"> <li>- Maximises access to services for all young people across Australia</li> <li>- Likely to better reflect true access to centre services compared to the current model</li> <li>- More complex weighting algorithm better reflects likely demand</li> </ul>	<ul style="list-style-type: none"> <li>- Number of centres required to service all small areas defined by the model is excessive resulting in potentially prohibitive costs.</li> <li>- Many small areas have small population sizes. The lower limit population size for efficient service delivery is not known.</li> <li>- The implications for lead agency input and ability to leverage off existing services in very small geographic areas is unknown.</li> </ul>	<p>Smaller populations are likely to necessitate either smaller sites, with lower average headsapce and MBS funding, or a lower limit on the region size in-scope for allocation. This information is not available to the evaluation team and therefore determining robust estimates of costs with expansion based on this model is not possible.</p>
<p><b>Alternative geographic boundaries (UCL)</b></p> <p>Assigns centres to SA4s (metropolitan) and UCLs (non-metropolitan) defined by the ASGS. Those UCLs within 1 hour's travel time of an existing centre are considered to have access and are therefore out of scope for a new centre. Allocation weighted using SEIFA and ARIA</p>	<ul style="list-style-type: none"> <li>- UCLs are more likely to reflect functional communities, and therefore service catchment areas, than SA3s in non-metropolitan areas</li> </ul>	<ul style="list-style-type: none"> <li>- Unlikely to reflect true access for all young people, particularly those in rural and remote areas</li> <li>- Model would result in a large number of sites in regions with small populations. Again, a lower limit may be required based on region size.</li> </ul>	<p>As above, allocation to UCLs includes areas with very small populations and will likely require smaller centres or limits placed on the smallest in-scope region size. Therefore, costing is not possible</p>
<p><b>Hub and spoke model</b></p> <p>A formalised network in which smaller spoke sites are supported by the larger hub sites.</p>	<ul style="list-style-type: none"> <li>- Likely to be associated with some cost saving if smaller spoke sites have lower funding requirements</li> <li>- May provide greater access to rural and remote areas whose small populations will not support a full time headsapce centre</li> <li>- Well established model of service delivery</li> </ul>	<ul style="list-style-type: none"> <li>- Very little information within the current headsapce model to determine impacts on service delivery, number of sites and costs</li> <li>- Diverges from the current headsapce model</li> <li>- Potential implications for quality and timeliness of service delivery in spoke sites</li> <li>- Unknown implications for ability to attract consortia partners</li> </ul>	<p>The evaluation team have no information on which to base the costs of smaller spoke sites. In addition, the lack of information regarding the efficient and effective geographic distribution of hub and spoke sites mean that determining the number of centres and the cost implications of this model is not possible.</p>

## Additional considerations for alternative models of service delivery

### Rationale

While outside the scope of the economic analysis, the headspace model currently offers additional services such as the Outreach Teams to schools program, which provide postvention support to school communities affected by suicide, and the eheadspace program. The eheadspace program provides telephone and web counselling and information services. These services, which are integrated and clinically supervised, aim to widen the availability and reach of headspace services.

Additional alternative services, which do not follow the traditional headspace centre model, have the potential to improve youth access and, depending on the mode of delivery, could potentially be achieved in a relatively low cost manner. As the alternative models, or modes of service delivery, outlined below are beyond the scope of the analysis, we lack data to estimate their impact on access and their likely cost. However, these alternative options should be considered, and empirically costed, by the Department when considering further expansion of the headspace model.

#### hNO having increased responsibility for headspace centres

In the current funding model each lead agency is associated with a program management fee with an average annual cost of \$55,000 or around 7.5% of total centre costs. There are potential savings in procurement and economies of scale in general administration if some of these activities were managed centrally by hNO. For example, many office supplies are currently purchased by individual centres leading to duplication of effort and reduced bargaining power.

#### Part-time centres

While a number of satellite centres exist, which have varying levels of service delivery and opening hours, a greater number of part-time centres could be introduced with the aim of maximising access whilst reducing costs. These centres could follow a hub and spoke model, as described earlier, or alternatives such as fly-in fly-out service delivery. This could allow greater access to youth in very remote areas. As living in remote areas is associated with increased risk of mental health distress, maximising access in these areas where possible is desirable. These models may assist in reducing the inequities evident between states. On the other hand, this, and some of the other models discussed above, is not likely to be consistent with the current definition of a headspace centre. If these models are to be developed, careful consideration would have to be given to the minimum requirements for a 'headspace centre'.

#### Increased online service provision

Continual improvements in technology, such as greater use of smart phone and tablet computers, and increasing access to online services mean that online mental health information seeking, support and treatment are likely to continue to grow in the future.

Online service delivery eliminates travel barriers to access services. In addition, this may eliminate other barriers to service access, such as concerns about privacy, and may reduce physical centre capacity issues. Further, this mode of delivery may have the potential to reduce overall delivery costs and reduce burden on the clinical workforce if effective online clinical services, and appropriate referral systems, are established.

However, online services cannot fully substitute face-to-face service delivery models. There are primary care issues that may not be able to be addressed online (e.g. medical treatments). This may disadvantage young people who are living in regional, rural and remote areas and should be considered when developing alternative service delivery models.

### Costs of National Coverage

The alternative models of centre allocation presented here are intended to demonstrate how levels of youth access to headspace services can be altered when components of the existing model are varied. The use of these models for future centre allocation is largely dependent on the cost of implementation. However, due to a lack of data, costing these alternative models, or determining the likely required number of sites, is challenging and estimates are unlikely to be robust. Outlined below is the additional data required to allow for acceptable estimates of cost under the alternative models

of expansion. It is important to note here that the alternative models component represented by Part 3 has been provided in addition to the evaluation requirements. Further investigation would require separate project funding to complete if pursued externally to the Department or hNO.

While the current model of expansion can be costed based on detailed information regarding current headspace grant funding and estimates of MBS contributions at a centre level being available to the evaluation team, costing alternative models requires additional information not provided for the evaluation. These alternative models of centre allocation propose the use of smaller sites and make use of different geographic boundaries. For example, spoke sites may be identified by a defined catchment area much smaller than the SA4/SA3 regions currently used; they are likely to have reduced service capacity, and may run on a part-time basis. There is no information on which to base the costing for these smaller or part-time sites which diverge from the traditional model. We lack enough cost information for such sites to make even indicative estimates, and attempting to do so with the information made available for this evaluation would risk misleading evaluation stakeholders and undermine the confidence of the public in the integrity of other results of the evaluation.

In addition, the population size required to justify either a full or smaller headspace centre is unknown. The region which contains the smallest youth population and an existing headspace centre has a youth population of around 3,500 12-25 year olds. It is unknown whether this can be interpreted as a lower limit on efficient service provision, or whether smaller populations could support a centre. In addition, the upper service capacity is unknown and difficult to estimate. This is largely due to the paucity of information regarding additional, non-government funds and in-kind support provided to existing centres. These additional funds have the potential to substantially increase the capacity of a centre. Additional information regarding non-government funding input would provide insight into centre capacity. Further, the impact of smaller region sizes on the ability of the model to leverage off existing services and partners is not able to be evaluated but has significant implications for site allocation.

The impact of competing and complementary services is unknown. This variable is likely to be evaluated in the current model within the 'human intelligence' component. This factor has substantial implications for service need and, as a result, likely centre allocation. This may have greater impact when region sizes are small.

Additional information required to allow for robust estimates of costs of centre expansion under the alternative models include:

- defined lower and upper bound on the population size of a region to allow for efficient centre allocation. This is closely related to centre service capacity.
- costing information for smaller sites (e.g. part-time centres, centres with limited services)
- information regarding alternative and complementary mental health services within in-scope areas.

## Conclusions

### Summary of factors for consideration in the future roll-out of headspace

- flexibility in the headspace funding allocation to tailor allocation to relevant factors such as rurality, demand and service requirements
- investigation of the use of alternatives to traditional sites. For example, hub and spoke sites, part-time or centres staffed by fly-in fly-out staff
- potential use of alternative modes of service delivery such as online treatment methods
- prioritisation of centre allocation based on direct measures of service need.

The report provides a data driven approach to evaluation of the current model of centre expansion and the assumptions that underpin this model. It identifies weaknesses and proposes a number of alternative models of centre expansion, which alter components of the existing model with the aim

of achieving more efficient and equitable mental health service delivery for young people across Australia.

## Limitations

This analysis contains a number of limitations which should be considered when evaluating results. These relate to assumptions made in the evaluation and data limitations.

A number of assumptions were made in the analysis, and the results of the evaluation should be interpreted in light of this. Firstly, the evaluation team was unable to take into account competing and complementary mental health services such as acute child and adolescent mental health services. These additional mental health services are likely to impact on the service requirements of headspace centres. These factors need to be considered in future centre allocation, but are beyond the scope of this analysis. A second assumption relates to the definition of access. Access was defined by geographical proximity and centre capacity alone. Additional factors may impact on youth access to service, but these were not explored in detail. Finally, the evaluation team were unable to account for changes in demand and spill-over effects with a large number of additional centres in relatively close proximity.

There are a number of limitations of the data. Population estimates are based on 2011 Census data. There is likely to be some migration into and out of small areas. This will impact on estimates of population access. In addition, these changes are likely to impact on the demographic profiles of small areas and therefore small area estimates of mental health need. In addition, the reader should be cognisant of errors associated with modelling, including small area estimates of population mental health prevalence. Further, variables which are relevant to needs in the community were unable to be included in modelling as included variables are limited to those collected in the Census.

The evaluation team were unable to cost alternative models and methods of service delivery that are outlined in the chapter. This is due to a lack of information to allow costing of alternatives, and in particular, the cost of alternatives to physical centres and full-time models of service delivery.

Finally, the modelling did not take into account economies of scale. For example, savings in the hNO administration associated with expansion beyond the current centre allocation and economies of scale which may be associated with larger headspace centres in high need urban areas. In addition, the evaluation team were unable to evaluate factors such as greater clinical staff salaries in remote locations with small service populations.

## Overall outcomes of investigation into the headspace centre allocation models

This section of the headspace evaluation has provided an analysis of centre expansion under the current model of headspace centre allocation, examined the effectiveness of the current model of centre allocation to provide youth access to services, and discussed alternative methods of achieving national coverage for headspace services. This has been completed in order to address the following two evaluation components:

- Assessment of the overall cost-effectiveness of expanding headspace beyond 100 centres; and
- Estimation of the maximum funding requirements for headspace to achieve national coverage.

We remind readers that these components build on the preceding cost effectiveness section. In addressing both evaluation components shown above, the evaluation team used the following methodological and design features:

- The analyses considered the costs and effects of headspace services in different geographical locations and the current geographic and demographic coverage of headspace.
- The main metric used in considering the effects of headspace expansion was current and potential youth coverage of headspace.
- We estimated the costs of national coverage using the current Departmental costing mechanisms for the establishment of headspace sites based on headspace grant funds and

an estimate of MBS expenses.

- Cost-effectiveness was defined as the cost per young person with access to headspace centre services under the access definition provided by the current centre allocation model.

Part one of this section described the current model of centre allocation as used by the Department. This model allocates headspace centres to SA3s and SA4s across Australia. Implicit in this model is the assumption that all young people residing within each SA3 or SA4 playing host to a headspace centre have access to headspace services. Based on this definition of access, at the conclusion of the 8 rounds of centre expansion which the Department have committed to by the end of 2016, some 80% of Australian young people will have access to headspace centre services.

In order to address the overall cost-effectiveness of expanding headspace beyond 100 centres, the Departmental model of centre allocation was used by the evaluation team to simulate expansion of the headspace centre model to its hypothetical natural conclusion. This provided an estimate of the number of centres and indicative cost of centre based coverage for all young people aged 12–25 years in Australia, using the Department's definition of youth access to centres. This modelling suggested that following the existing eight rounds with an additional two hypothetical rounds of expansion (for 10 rounds in total giving 32 additional centres) would result in 93% of the youth population having access to centre services. While the greatest returns are achieved with the earliest rounds of headspace centre allocation, this expansion to hypothetical round 10 is achieved at a similar level of efficiency to several observed measures for existing rounds seven and eight. From hypothetical round 11 and onwards, there are apparent declines in the return on investment.

The strengths and limitations of the current model of expansion were investigated using empirical data. These analyses identified that expansion of headspace, under the stipulations of the current model, may have inefficiencies and some weaknesses regarding the assumption of access, prioritisation of regions to centre allocation and funding. The ability of centres to provide services appeared to be constrained by the inflexibility of the headspace grant allocation. This analysis suggests consideration should be given to matching grant funding to relevant factors such as youth demand, population size of catchment regions, rural locations and service profiles of individual centres. While the consortia model may address some of the observed centre level variation in funding requirements, the impact of additional funding via these sources was unavailable to the evaluation team. Access to additional data resources such as lead agency and consortia funding for the purpose of future evaluations would substantially improve the interpretation of evaluation observations and outcomes.

Based on the evaluation of the strengths and weaknesses of the current model of headspace expansion, three alternative models were developed and outlined in Part Three. These models addressed specific weaknesses identified in the existing model. These alternative models of centre allocation included a data driven approach to access, demand and capacity; the use of alternative ASGS geographic boundaries; and a hub and spoke model of service delivery. In addition, while outside the scope of the evaluation, alternative methods of service delivery, which deviate from the traditional headspace centre as a means of service delivery, were discussed. An example of this is the expansion of online service delivery via eheadspace which could increase cost-efficiency while reducing barriers to access for young people. Rather than identifying an optimal model of expansion, which is challenging due to data availability, these alternative models of centre allocation aimed to address specific, identified weaknesses in the current model. The most efficient model of allocation would likely involve using a combination of the alternatives described. These alternative models aim to inform further investigation and discussion of a more efficient and effective model of headspace centre expansion which balances costs against youth access to mental health services. Additional scoping and data access would be required to provide robust estimates of the additional number of centres required and the cost of expansion under these models.

In summary, this section of the evaluation described the current model of centre allocation, estimated costs, and calculated the youth population coverage for the eight rounds of centre expansion that the Department has already committed to. The evaluators have:

- Simulated expansion of the current allocation model, and estimated cost and cost-effectiveness for each additional hypothetical round to the natural conclusion of the model. This can be considered to represent National Coverage



- Used the simulation model to determine whether full National Coverage of centres is a cost-effective proposition under the current allocation model. Our analysis suggests expanding beyond a hypothetical Round 10 (for 32 new centres) would result in inefficient allocation of resources
- Examined the strengths and weaknesses of the method and assumptions underpinning the current model of centre allocation used by the Department
- Proposed alternative models of centre allocation and headspace service expansion, which address specific weaknesses in the current model, for consideration by the Department
- Identified the additional scoping and data requirements to provide a more detailed examination of these alternative approaches to expansion of the headspace model, and
- Highlighted the need for consideration of increased flexibility in headspace funding allocation at the centre level and investigation of alternative methods of expansion and modes of service delivery with the aim of balancing costs against improvements in access for young people.

# Appendix C

## Evaluation methodology: supplementary information

The evaluation of headspace used a longitudinal, mixed methods approach. This section provides more information on the multiple methods employed.

### headspace Centres Services Application (hCSA) data

In early 2012, headspace sought and received funding from DoHA to develop a new, fully customised web-based system to collect data (the Data Capture Project).

Development of the new minimum dataset (now referred to as the headspace Centres Services Application or hCSA) began in the second half of 2012. MHAGIC was decommissioned and hCSA became operational in January 2013. The hCSA collects data directly from clients and clinicians at each unit of service. The onus of the data collection is on both the client and clinician, consequently there are occasions of service where no information or only partial information has been collected.

The hCSA data collection includes four separate questionnaires, each of which are presented to the client at different stages of headspace service access. The questionnaires include a first time questionnaire; an every time question set; an outcomes question set; and a client satisfaction question set. An optional follow-up question set also exists, however this has had a low response rate and so has not been analysed for this evaluation.

The hCSA is a valuable source of data and has been used in the evaluation to:

- Provide a profile of who uses headspace services and what services they use.
- Benchmark data to compare the representativeness of the 'headspace treatment' group with all headspace clients and apply fixes where necessary.
- Inform how services provided by headspace centres are funded and any patterns that may exist in funding allocation for particular services.
- Understand the effectiveness of headspace treatment and predictors of positive outcomes through a before and after analyses, which takes advantage of the volume and breadth of information available in the administrative data.
- Informing the effectiveness of headspace through other information sources including client satisfaction reports.

Two measures included in the hCSA data set that have been used in the evaluation to assess the effectiveness of headspace are the Kessler 10 (K10) and the Social and Occupational Functioning Assessment Scale (SOFAS). Specific information in each scale including scoring categorisations used for this evaluation is provided below.

### The Kessler Psychological Distress Scale

The Kessler Psychological Distress Scale (K10) was developed for use in general health surveys, originally for the US National Health Interview Survey, to enable differentiation between cases of serious mental illness and non-cases (Kessler, 2003). While it was initially created to provide

information relating to the prevalence of mental illness and its correlates at a population level (Kessler et al., 2010) it is now widely used by service providers to identify non-specific psychological distress as well as mental health disorders in individuals (Slade et al., 2011; Sunderland et al., 2012). Whilst the Kessler Psychological Distress Scale is not intended to be used as a diagnostic tool, it aims to measure psychological distress, and high scores in the Scale have been found to be associated with psychological disorders (Victorian Government, 2010).

The Kessler Psychological Distress Scale is available in a number of formats; the K10, K10+ and the K6 (Siggins Miller Consultants, 2003). Each are a brief self-report style questionnaire comprised of questions related to how a person has been feeling over the last 30 days, with each question answered, and scored on a 5 point Likert scale ranging from “none of the time” to “all of the time” (Slade & Andrews., 2001; Fassaert et al., 2009; Siggins Miller Consultants, 2003). The K10 is a 10 item self-report questionnaire that is used to measure levels of psychological distress and is scored between 10 and 50. Higher scores indicate higher and more severe distress, while lower scores indicate less distress (Slade & Andrews, 2001). In this evaluation, K10 scores are categorised based on Australian Bureau of Statistics health surveys into low (10-15), moderate (16-21), high (22-29) and very high (30-50). The evaluation has relied heavily on the K10 because it is an outcome measure that is included in both the young people surveys and the hCSA.

### The Social and Occupational Functioning Assessment Scale

The social and occupational functioning of headspace clients was assessed using the Social and Occupational Functional Assessment Scale (SOFAS). This scale assesses how a person’s physical impairment and mental health may be affecting their functionality (Pederson & Karterud, 2012; Romera et al., 2011). Functioning is measured on a scale from 10 (serious functional impairment) to 100 (optimal functioning) with scores of 80 and above representing normal functionality (Romera et al., 2011). Scores around 60 indicate a person may have moderate difficulty in functioning, while scores around 70 represent adequate functioning though with some difficulty (Chanen et al., 2007). SOFAS is rated by headspace service providers based on the following scale:

Enter a score on a scale of 1-100, as follows:	
91-100:	Superior functioning in a wide range of activities
81-90:	Good functioning in all areas, occupational and socially effective
71-80:	No more than a slight impairment in social, occupational, or school functioning
61-70:	Some difficulty in social, occupational or school functioning
51-60:	Moderate difficulty in social, occupational or school functioning
41-50:	Serious impairment in social, occupational, or school functioning
31-40:	Major impairment in several areas such as work or school, family relations
21-30:	Inability to function in almost all areas
11-20:	Occasionally fails to maintain minimal personal hygiene.
1-10:	Persistent inability to maintain minimal personal hygiene
0:	Inadequate information

SOFAS scores are recorded at almost all (88 %) occasions of service.

### Survey of Young People

Three different surveys of young people were conducted as part of the evaluation, each with 2 waves of data collection, conducted at two separate time points to measure change over time;

- A sample of headspace clients comprising the intervention group survey;
- A comparison group of 12-17 year olds using Young Minds Matter: The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing (YMM); and
- A comparison group of 18-25 year olds sourced from a national panel.

Initially it had been intended that each of these 3 surveys would be in the field at more or less the

same time at baseline, and that the follow up would be approximately 9 months later for all three surveys. However, this was not possible to achieve. The difference in timing of the surveys has been taken into account in the outcomes and cost-effectiveness analysis as outlined below.

### Survey of headspace clients

The aim of the longitudinal survey of headspace clients (the intervention group) is to collect information about young people who have accessed headspace services and how these services may have impacted upon their mental health and other relevant outcomes. An initial sample of 1,500 headspace clients was targeted. The survey collection has achieved a first wave sample of 1,582 young people.

Two separate data collection processes were initiated for the Wave 1 data collection. The first data collection conducted by Colmar-Brunton resulted in insufficient response rates for the sample. Following joint efforts by headspace and SPRC to promote survey participation, SPRC launched another data collection round, which resulted in a sufficient Wave 1 sample being collected.

The evaluators conducted analysis on the headspace clients who participated in the survey to determine their representativeness in comparison to the broader headspace client population. This analysis is presented below.

### Representativeness of headspace intervention group

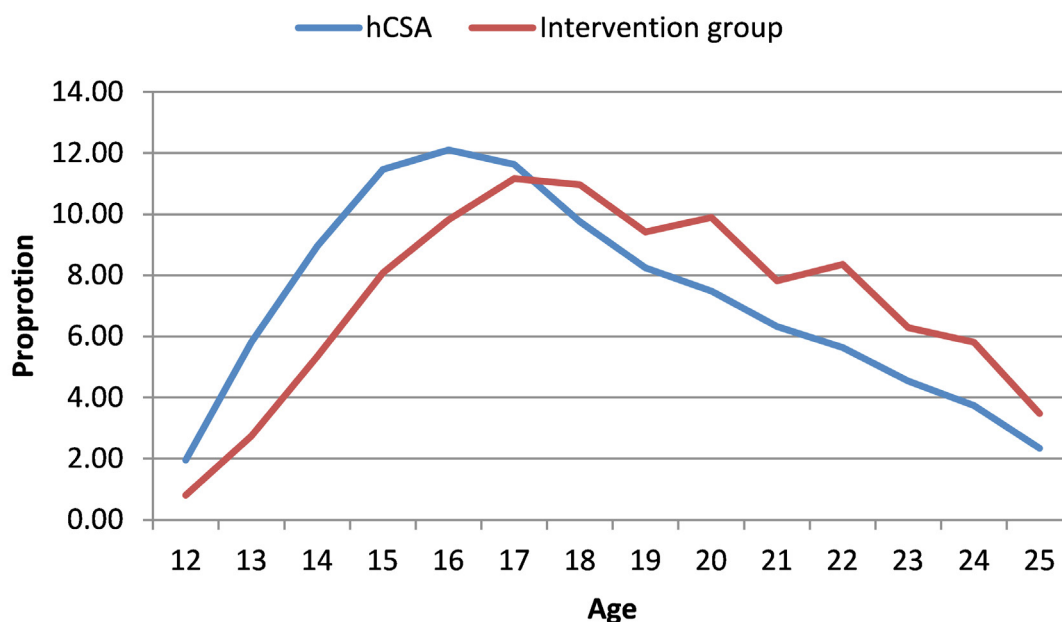
The objective of this analysis is to assess the representativeness of the headspace survey intervention group over the population of all headspace clients observed within the 2013/14 hCSA dataset. The representativeness of the survey group is important so that the results can be generalised to the overall population.

headspace survey participants were matched to the hCSA data and a number of characteristics were assessed and compared. These included demographic and geographical variables, service use and mental health issues and treatment. As the headspace survey intervention group was separated into two data collection cohorts, both groups have been assessed separately and are labelled - intervention group 1 and 2 respectively.

### Demographic variables

We find that individuals are relatively uniformly represented across different ages in the intervention group and the entire population, however the intervention group is more likely to be older than young people in the hCSA data (Figure C1).

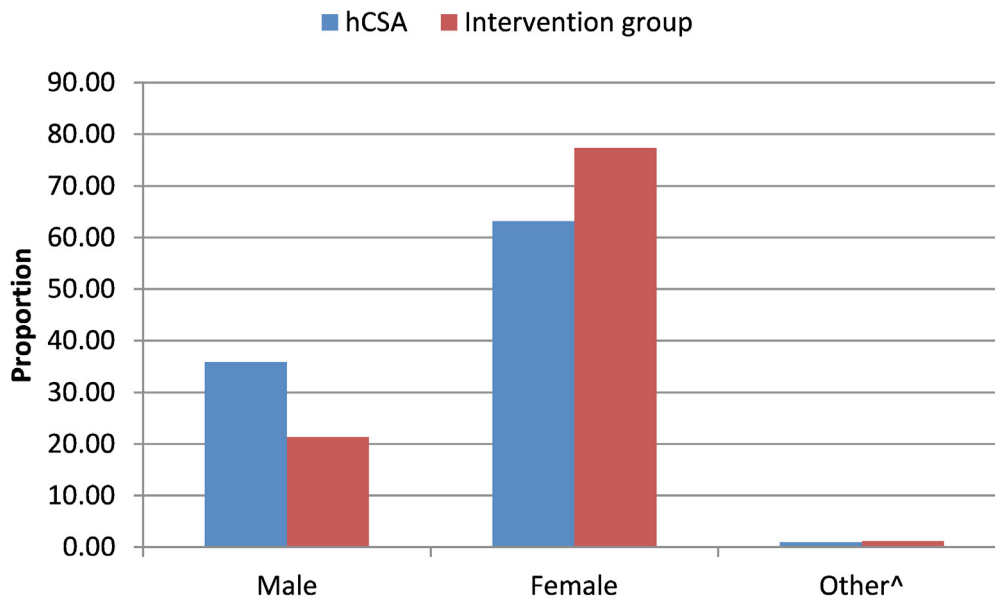
**Figure C1 Age distribution – hCSA and intervention survey group**



Source: Authors calculations from headspace intervention survey data and hCSA data.

Regarding gender, in both groups males are relatively under-represented (with a magnitude of around 10 percentage points) relative to females in the intervention group compared to the entire population.

**Figure C2 Sex distribution – hCSA and intervention survey group**



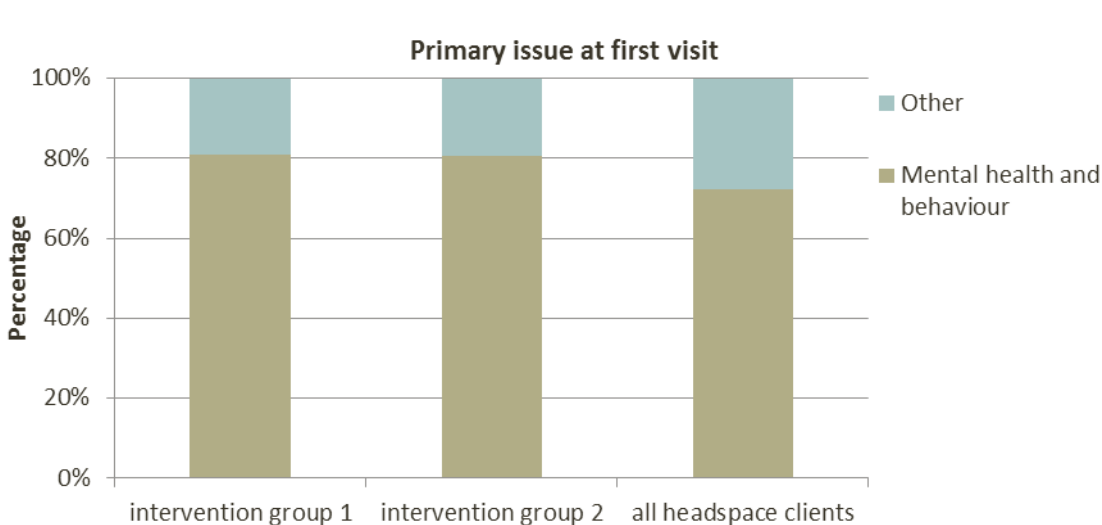
Source: Authors calculations from headspace intervention survey data and hCSA data.

Conversely, native-born Australians, those from native-English speaking as well as from non-Indigenous background are relatively over-represented in the headspace survey intervention group compared to the entire population (results not shown). The distribution of individuals across states is relatively uniform in the intervention group and the entire population as is, to an extent, the degree of disadvantage of the localities where the individuals come from, as captured by SEIFA scores. However, those in the intervention group have a higher representation in major city residential origin group, and a lower representation in outer regional group, compared to the entire population.

### Mental health measures

Mental health and behaviour are recorded as the primary presenting issue at first visit for the majority of clients in headspace intervention groups and in the population as a whole (Figure C3). Just over 80% of those in both intervention groups and around 72% in the entire population present with mental health and behaviour issues at their first visit.

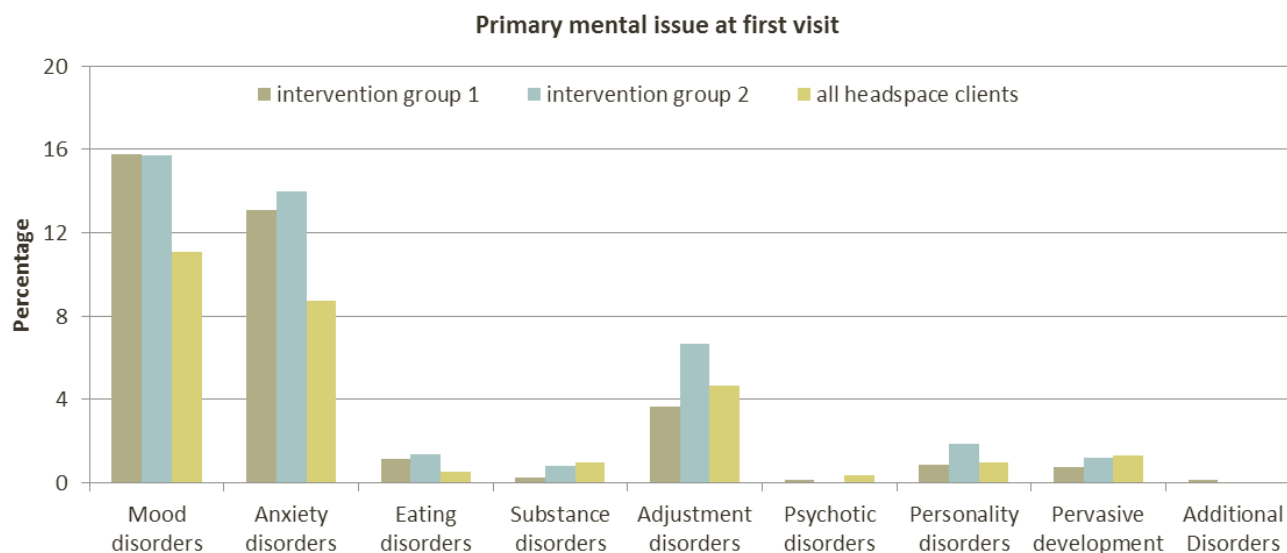
**Figure C3 Primary issues at first visit**



Source: Authors calculations from headspace intervention survey data and hCSA data.

In Figure C4, we examine the type of mental health issue presented with at first visit. The majority of clients in all three groups presented with either mood or anxiety disorders. However, within these groups, the intervention group clients are over-represented relative to the entire population. Adjustment disorders are the third largest category of mental health issues with intervention group 2 clients slightly over-represented relative to the entire population. The distribution of the three groups across other types of mental issues presented at first visit is relatively uniform.

**Figure C4 Primary mental health issue at first visit**



Source: Authors calculations from headspace intervention survey data and hCSA data.

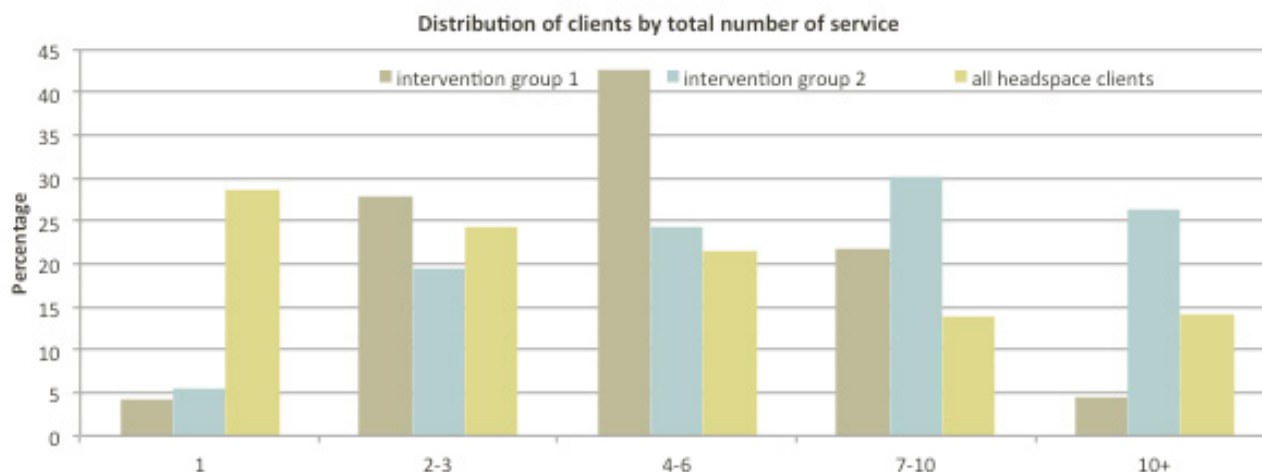
### Service Use

The type of service use for the young people within the headspace survey intervention group will differ to the entire population observed within the hCSA data. This is because a key requirement of entry into the survey was a minimum of two headspace occasions of service and the fact that more than 25% of headspace clients only ever attend headspace once. This will mean that those young people observed in the intervention survey will have higher rates of average service use, which is a positive outcome when the intention of the evaluation is to assess the overall effectiveness of headspace services.

In Figure C5, we consider the distribution of clients by total number of services received during the 2013-2014 financial year. Over one-quarter of all headspace clients had just a single occasion of service, compared to around 5% among those in intervention groups<sup>44</sup>. Conversely, intervention group clients are over-represented, relative to those in the entire population, among those with 4-6 and 7-10 occasions of service. Moreover, over quarter of those in intervention group 2 had 10 or more occasions of service relative to under 15% in the entire population.

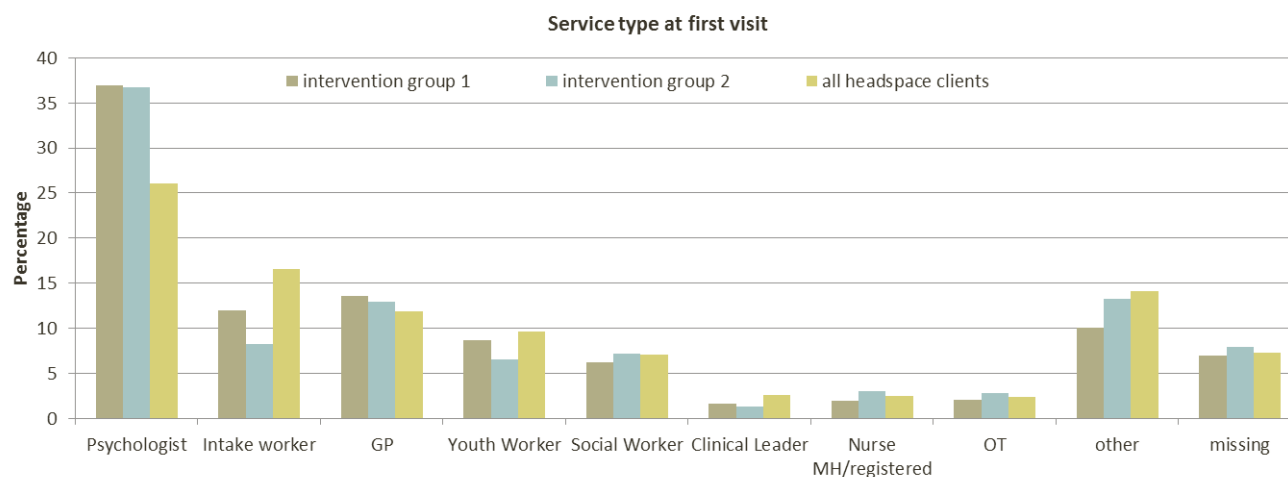
<sup>44</sup> Note that it is likely that some young persons did have more than one occasion of service at a headspace Centre, however, this information may not have been included due to either or both the young person and service provider not recording the occasion of service.

Figure C5 Total number of services received



Looking at the type of service received at the first visit (Figure C6), the majority of clients in all three groups went to see a psychologist, with the share of those who did so in the two intervention groups being around 10 percentage points higher compared to the entire population. On the other hand, a higher share of those in the entire population saw an intake worker on their first visit compared to those in the two intervention groups. The distribution of clients from the three groups across other service type categories is relatively similar.

Figure C6 Service type at first visit



## Summary

In summary, headspace intervention group clients appear to be reasonably representative of the entire population based on their demographic characteristics, mental health issue at presentation, particularly as captured by primary issues. Differences are observed in terms of gender and age, with the headspace intervention group more likely to be older and female when compared with the overall headspace client population. There are certain differences in the patterns of service use (e.g. total number of services received, service type used) between intervention group clients and the entire population, which are explained by the sampling framework and high rate of young people having only one occasion of service

### 'Counterfactual' survey young people aged 12-17 – Young Minds Matter

Young Minds Matter: The Second Australian Child and Adolescent Survey of Mental Health and Wellbeing (YMM) was conducted in 2013/2014 with the aim of providing current information

on the mental health and wellbeing of Australian young people. YMM is a follow up of the first survey conducted in 1998 (Sawyer et al., 2000). YMM aims to provide information regarding the prevalence and nature of mental health problems and disorders in Australian young people, degree of impairment associated with mental health problems, services used by young people and the role of the education sector in providing services for students with mental health problems. YMM was based on a population representative sample of over 6,000 children and young people aged between 4 and 17 years. Information was collected from parents using household based interviewing. If the study child was 11 years or older, and parent and child consent was given, additional information was collected directly from the young person.

#### 'Counterfactual' survey young people aged 18-25 (Colmar-Brunton)

The intention of this component is to capture a diversity of young people by demographic and geographic factors and a reasonable sample of young people experiencing comparable mental health problems to the headspace sample (based on one-in-four 18-25 year-olds experiencing a mental health problem in any given year).

Colmar-Brunton has undertaken the data collection for this comparison group. An initial sample of 2,000 young people aged 18-25 years was targeted. The survey collection achieved a first wave sample of 2,119 young people. Wave 2 has also been completed with a sample size of 1,005. The overall attrition rate of this data collection is 52%, which is higher than originally expected for this age group, who are known to be particularly challenging to survey.

Work is being undertaken to understand any patterns or biases in those who did not complete wave 2, and the project team is assessing ways to compensate for both the level of attrition and those more likely to drop out.

Summary information on young people surveys



Table C1 Information Summary of Young People Surveys

Data Source	Wave	Collected by	Collection period	Sample size <sup>^</sup>	Sampling technique	Attrition	Responding person	Collective mechanism	Notes
headspace client (intervention group)	Wave 1(a)	Colmar Brunton	6 Dec 2013- December 2013-24 April 2014	1,515 (total for 1a, 1b)	Self-selection of recent headspace clients*	N/A	headspace client	Online Survey	
	Wave 1(b)	SPRC	7 May 2014 to 6 June 2014	1,515 (total for 1a, 1b)	Self-selection of recent headspace clients**	N/A	headspace client	Online Survey	SPRC supplementary collection to top-up wave 1 sample
	Wave 2 (a)	SPRC	31 August 2014 - 15 December 2014	1,364 (total for 2a, 2b)	Those who provided a response to Wave 1(a)	TBA	headspace client	Online Survey	
	Wave 2 (b)	SPRC	Data scheduled to be collected 1 December to 15 December 2014	1,364 (total for 2a, 2b)	Those who provided a response to Wave 1(b)	TBA	headspace client	Online Survey	Wave 2b was added to boost intervention group sample size and followed additional survey promotion work with headspace.
12-17 year old comparison (YMM)	Wave 1	Roy Morgan	June 2013-March 2014	2,655	Area-based random sample of 5,500 4-17 year olds. Additional, random oversample of 16-17 year olds.	N/A	Parents and young person (if parent and young person consent given)	Face-to-face interview with parent and self-complete interview with young person	Young people completed questionnaire privately on a tablet computer
	Wave 2	Roy Morgan	May 2014 – Nov 2014	1,686	12-17 year olds who consented to follow-up	30%	Young person	Follow up telephone interview with young person	
18-25 year comparison	Wave 1	Colmar Brunton	6 December 2013 – 17 December 2013	2,119	Participants sourced from commercial access panels. Total of 48,964 email invitations received 2,119 responses***	N/A	Young person	Online Survey	Pilot launch to Opinions Paid panel 29 November 2013, full launch to all panels 6 Dec.
	Wave 2	Colmar Brunton	3 September 2014 – 7 October 2014	936	Email invitations with survey link sent to wave 1 completers	53%	Young person	Online Survey	

## Notes:

<sup>^</sup> The sample size for each survey reflects the number of observations that are potentially in-scope for analyses to inform the headspace evaluation. These observations include both partial and fully completed survey responses. Young people aged 12 are included in the hCSA data and the 'headspace treatment' group, however, information about this age group was not collected from the YMM 12-17 year comparison group.

\*\*Young people were invited to participate in the evaluation of HS during their 2nd and 3rd visit to centres. An invitation automatically appeared on the iPad screen and consenting YP provided their contact details.

\*\*Wave 1(b) included 3 eligibility questions that were not contained in wave 1(a). Questions were: are you aged between 12-25? Have you visited a headspace centre for the first time during the past 4 weeks? Have you already completed the survey and received a \$20 gift card? These questions were included because survey was distributed via email with unique survey link and via URL posted on HS website that contained active link to survey, and posters in headspace centres.

\*\*\*Participants sourced from commercial access panels: Opinions Paid 11,799; MyOpinions 8,777; Rewards Central 19,988 and SSE 8,400 = total of 48,964 email invitations received 2,119 responses (approx. 4%).

**Table C2 Timing differences in survey data collection**

	hs intervention group (a)		hs intervention group (b)		12-17 yr olds (YMM)		18-24 yr olds	
	Period	Duration	Period	Duration	Period	Duration	Period	Duration
<b>Wave 1</b>	6 Dec 2013 - 24 Apr 2014	5 mths	7 May 2014 - 6 June 2014	2 mths	June 2013 - April 2014	11 mths	6 Dec 2013 - 17 Dec 2013	11 days
<b>Wave 2</b>	31 Aug 2014 - 15 Dec 2014	3.5 mths	1 Dec 2014 - 15 Dec 2014	2 weeks	May 2014 - Nov 2014	7 mths	3 Sept 2014 - 7 Oct 2014	1 mth
<b>Time lapse between waves</b>	5-12 mths		6-8 mths		5-11 mths		8-11 mths	

## Data Cleaning and Analysis

This section describes the challenges that were encountered in the process of survey data cleaning. While quality problems were present within single surveys, the need to integrate multiple surveys with different formats added to the complexity of the process of data cleaning. The task of data cleaning involved detecting and removing errors and inconsistencies from data in order to improve its quality and minimise their impact on the analyses. Given the large scale and the complexities of the data cleaning exercise, a number of quality assurance strategies were put in place to minimize the scope for error. These included code walk-throughs to ensure that no errors were present, continuous checking of data outputs and spot checks of individual records.

The following main problems were encountered as part of the data cleaning process:

### Definition of key variables

Defining variables central to the evaluation involved a number of challenges associated with design problems in the surveys. First, information on some of the key variables was incomplete (e.g. only the study status of those at school could be captured in intervention group and 18-25 years old comparison group surveys). As a result, such variables could not be meaningfully utilised in the analysis. Second, some survey questions were included in one of the two waves only. For arguably time-invariant variables, such as postcodes, information from one wave, where possible, was carried over to the next one. However, time-varying variables could not be utilised in such instances (e.g. questions on self-harm and suicidal intentions/attempts in YMM were asked in wave 1 only). Third, information on some variables important for the analysis was not included in surveys and had to be merged from external sources. These included information on remoteness and socio-economic status of respondents' residential areas, where it was assigned from external sources based on the reported postcodes.

### Representativeness of surveys

The representativeness of surveys is essential for generalising the results of the analysis. Survey weights, if included in a survey, are commonly utilised means to achieve representativeness. While the intervention group survey did not include weights, our comparisons across a range of observable characteristics between the survey individuals and total headspace clients (as captured by the hCSA dataset) confirmed that it can be used to make inferences on the headspace population as a whole. Survey weights were provided with both comparison group surveys. YMM survey weights, when applied, led to results supporting the representativeness of its participants over the general population of 12-17 years olds as captured in the 2011 Census data. No such outcome has been achieved for the comparison survey of 18-25 years olds (one potential problem is the use of limited variables (age, state and gender) as benchmarks from which to construct the weights). The results therefore need to be interpreted with this issue taken into account.

### Alignment of surveys

The process of arriving at a single dataset based on multiple surveys involved a number of complexities. The merging of eight surveys required attempts to resolve inconsistencies involving data representations, units, measurement periods, etc. Additionally, correctly identifying individuals across two waves was not a simple task due to some inconsistencies in identifiers that needed to be resolved through alternative approaches, such as matching based on a number of observable characteristics of individuals. The number of observations and variables included in the final merged dataset had to be compromised in some cases due to inability of the evaluation team to satisfactorily deal with some of these issues.

### Treatment groups for survey data analysis (DID method)

Two treatment groups were selected to match to and draw comparisons to the 'headspace treatment' group - young people who received no treatment and young people that received another mental health treatment. The 'headspace treatment' group comprises all persons within the headspace intervention group survey who had not completed their treatment by the first wave of data collection. This group was recruited from headspace centres over a 6 months period from 6 December 2013 to

6 June 2014. The 'no treatment' group is drawn from the comparison surveys and comprises young people who have not sought any substantial headspace treatment and who also did not seek any treatment from any other health professionals between the two survey waves. The 'other treatment' group comprises of young persons within the comparison surveys and includes all those who sought support from a health professional(s) between Waves 1 and 2. A key limitation of this group is that no information about the dose of the other treatment is known. Young people within the comparison surveys that sought a substantive headspace treatment between Wave 1 and Wave 2 were excluded from the analysis. This constitutes 90 observations.

Steps were also taken to match the headspace survey intervention group to administrative (hCSA) data in order to assess the timing of the survey collection against the period of treatment at a headspace centre. This process uncovered 340 observations (32.3%) that had completed their headspace treatment prior to the Wave 1 collection date. These observations were excluded from the analysis.

## Difference-in-difference Method

The objective of the difference-in-difference (DID) method is to assess the changes in young people's mental health, physical health, drug and alcohol use and social inclusion outcomes after using headspace services relative to other comparable young people that did not receive treatment at headspace.

A difference-in-difference approach has been applied, using survey data for headspace treatment and comparison groups that have been matched on a number of different factors. Difference-in-differences estimates are defined as the difference in the average outcome in the headspace treatment group at two points in data collection, that is wave 1 and wave 2, minus the difference in the average outcome in the matched comparison group. Comparison groups have been matched using a propensity score matching (PSM) technique and have been divided into groups that have received no mental health treatment between the survey waves and those that have received treatment other than headspace. Both are described further below.

The differences in outcomes for headspace clients, for matched samples drawn from the no-treatment and other-treatment comparison groups, and for the difference in differences between headspace and either of these two matched comparison groups, are tested for their statistical significance and using effect size measures.

Statistical significance is judged using an orthodox t-test for the mean differences between the headspace treatment group and a propensity-score matched comparison group, and for the difference in the differences between headspace and comparison groups.

Effect sizes can be expressed in a number of ways, with Cohen's d commonly reported as a standard indicator in clinical evaluation. The Cohen effect size measure presents a standardised difference in means across the course of an intervention (ie. the ratio of mean difference to a pooled standard deviation measure). In this regard it relates to classical measures of the significance of mean differences. It is common practice to interpret effect sizes according to the magnitude of the index – the normal 'rule of thumb' is to consider effects as small (0.2) through medium (0.5) to large (0.8) when relating the size of the effects.

## Propensity Score Matching

A complexity of the DID methodology stems from the fact that those in headspace treatment group are often dissimilar in their observed and unobserved characteristics when compared to young people within the comparison surveys. In order to mitigate these differences, a propensity score matching technique has been applied to the datasets.

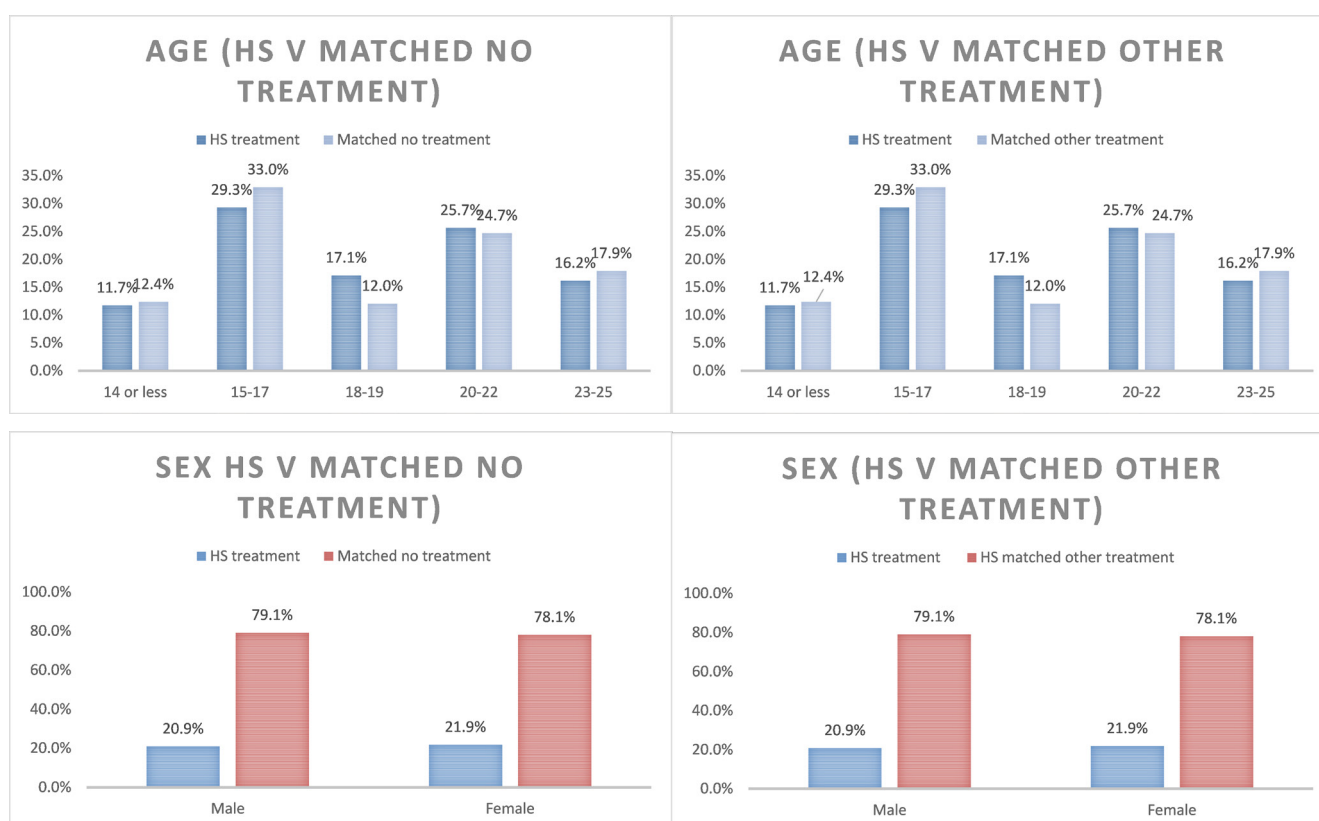
The implementation of propensity score methods requires that a set of characteristics are chosen as the basis for alignment of the headspace treatment with a matched comparison group. It would seem appropriate to match simultaneously on a large number of factors, however, the match on each single characteristic becomes less precise as the number of matching characteristics increases. For the purpose of this evaluation, four characteristics were chosen - age, gender, K10 score and the number of non-functioning days 'out of role' to source a match between the headspace and comparison

groups.

The age and sex distributions below illustrate the closeness of the groups after undertaking propensity score matching. The majority of age groupings are closely aligned between the headspace treatment group and the matched no and other treatment groups. An exception are those aged 18-19 years. A higher representation of 18-19 year olds is present in the headspace treatment group when compared to the other matched treatment groups (17% compared to 12%). This difference is statistically significant.

Alignment of the proportion of males and females between the groups is very precise after propensity score matching. It is recognised that the headspace treatment survey data has a greater representation of females when compared to the overall representation in the headspace administrative data (80% compare to 63%). This needs to be taken into account when seeking to generalise the results to the entire headspace clientele.

**Figure C7 Age and sex distributions of matched groups**



Source: Authors calculations from headspace evaluation survey data.

As with other methods, PSM methods are also limited by an inability to account for unobserved differences between headspace clients and others with similar observed characteristics but who remain outside the headspace program. The PSM does improve to an extent, the identification of headspace effectiveness relative to matched comparison groups.

## Interviews with headspace clients and staff

### Sample and recruitment

Qualitative interviews were conducted between April and June 2013 with 50 young people who were receiving headspace services, and 25 headspace staff from 5 of the 40 operational headspace centres around Australia (that is, 5 headspace staff and 10 young people per site).

The fieldwork sites are not a representative sample of headspace locations around Australia. Site selection was based on a range of primary and secondary factors as outlined below. The primary factors focus on diversity, while the secondary factors aim to minimise the burden on participant sites

and ensure fieldwork efficiency.

Primary factors (the aims is to achieve diversity in):

- Client characteristics: sites that have a higher proportion of young people from Aboriginal and Torres Strait Islander, CALD and Anglo-Celtic backgrounds.
- Site location: 2 urban, 1 regional and 1 outer-regional area in 2-3 States across Australia.
- Site establishment time: sites that have been operational since the first evaluation and sites that have been newly established. Ideally, we would like to include one or two sites that participated in the first evaluation.
- Site models: if possible, we will include sites with different service models.

Secondary factors for site selection:

- Willingness of staff at the proposed sites to participate in/assist the evaluation.
- Capacity of staff at the proposed sites to participate in/assist the evaluation.
- Other events occurring in the sites during the period of fieldwork (e.g. community events, other research within the sites etc).

The five fieldwork sites cover 4 states/territories.

Recruitment for the interviews with young people was managed with the assistance of headspace staff who made first contact with potential participants and asked young people if they would like to participate in an interview for an evaluation. This method complies with our ethical obligation for recruitment to be arm's length. Young people who participated in interviews were given a \$40 Coles/Myer gift voucher in recognition of their time and contribution.

Clinical and non-clinical staff were recruited with the assistance of centre managers who provided contact details for staff members within their centres. Fieldworkers then contacted staff and invited them to participate in an interview. Each centre manager across the five sites was also interviewed.

All but one of the interviews were conducted face-to-face (one interview with a headspace manager was conducted over the telephone). The duration of the interviews ranged from 20 to 60 minutes, with interviews with young people generally shorter than those conducted with staff. Interviews were semi-structured as interview schedules were created to guide the conversation around key themes related to the evaluation questions. Three separate interview schedules were devised: for young people receiving headspace services; for headspace centre managers; and for practitioners delivering headspace services.

Brief demographic information was collected on all young people interviewed. A summary of this data is presented in Figure 1 below. The analysis across a limited range of variables shows that the young people interviewed were broadly representative of the young people in the headspace administrative data (MDS1) in demographic characteristics but were not representative in terms of service engagement.

All young people interviewed were still engaged with headspace services; no young people who had dropped out of headspace services were identified and interviewed. The sample therefore does not reflect the views of young people who have not been satisfied enough with the program to return to the centre more than once. As a result, the data presented throughout this report is unable to explain the rate of single service users of the headspace program.

## Figure C8 Demographic characteristics of young people interviewed

All young people interviewed for the headspace evaluation completed a short demographic survey. The results of this survey are summarised here.

We interviewed roughly equal proportions of young people aged between 12-17 years (n=23) and 18-25 years (n=27). Slightly over half of those interviewed were female (n=28) and the majority were non-Indigenous (n=45). The majority of those interviewed were born in Australia (n=46), with one young person each born in the UK, England, the USA and New Zealand – a result that highlights little cultural diversity, even among those born overseas.

The majority of young people spoke English at home, with just four indicating that they spoke another language – two spoke Greek, one spoke Spanish and one spoke an Aboriginal language. The majority of young people interviewed aged between 12 and 17 years were in full-time education (17 out of 23). Among the 18-25 year old cohort, 10 were looking for work; 7 were engaged in full-time study; 2 in part-time study; and 2 in part-time employment. Two of the young people in the 12-17 year cohort had part-time family care-giving responsibilities. Another 2 in the older cohort had part-time family care-giving responsibilities and 4 had full-time family care-giving responsibilities.

The majority of the younger cohort lived with their parents (n=20), as did over half of the older cohort (n=16). Please note however that these categories are not mutually exclusive and young people were asked to tick all that apply.

Young people were asked to report on their highest level of school completed but these results for the younger cohort (12-17 year olds) are not reported here as most were still in school. The highest level of school completed by 8 of the young people in the 18-25 year cohort was Year 10 or equivalent; a further 3 completed Year 11; and 5 completed Year 12 or equivalent. Three had completed a university qualification and 8 had completed a TAFE, trade certificate or apprenticeship.

The main source of income for young people in the 12-17 years cohort was their parents (n=18). Paid work was the main source of income for 2 young people, while government benefits were the main source of income for just one individual in the 12-17 years cohort. The main source of income for young people in the 18-25 years cohort was government benefits (n=17), followed by paid work (n=5).

The majority of young people interviewed had been attending headspace for over a year (n=23). One young person had been attending for less than a month; 10 had been attending for 1-3 months; 7 for 4-6 months; and 8 for 7-12 months. The length of involvement with headspace indicates that interviews were predominantly conducted with young people who have had high levels of engagement with the service reflecting the recruitment method used. The recruitment process is likely to have some bearing on the positive feedback that the majority of interviewees provided about headspace.

## Analysis of qualitative interviews

All but four interviews were voice recorded and transcribed verbatim. These four interviews were conducted at a coffee shop near the headspace centre and the surrounding noise made recording impractical. These four interviews were not conducted at the headspace centre because they had no space available at the scheduled time. Detailed notes were taken during the interviews and these notes were used in the analysis.

Identifying information was removed prior to analysis. Interviews were analysed with the assistance of QSR NVivo10, a qualitative data analysis software package. To begin, a 'headspace 2013' project was created in NVivo and all interview transcripts were imported into the project folder. Two coding frameworks were then drafted: one for headspace clients, and another for headspace staff. Following hard-copy coding of a small number of transcripts, the frameworks were revised and finalised. The frameworks were then created within NVivo using a unified but hierarchical 'tree node' structure.

All interviews were coded using the coding framework. Each node represents a conceptual category, used to integrate data into themes. Coding therefore enables data to be managed easily by reducing it and linking data across transcripts and related themes. Following the coding process, analytical memos were written that summarised key data within each node. Further, a number of queries were run to identify frequencies and relationships across nodes. Through this intensive process of searching through data and writing up results, key findings emerged and are presented throughout this report.

## Centre Managers Survey

An online survey was administered to all managers at the 40 operational headspace sites that were established during Rounds 1-3. The survey asked managers to identify the types of practitioners operating at the centre, the capacity of the staff, and the range and approximate numbers of services offered. The survey asked managers to rate their satisfaction with the support received by centres, and to provide their opinion on the effectiveness of headspace services. The survey sought information about the governance of each centre, including managers' satisfaction with their lead agency and consortium partners. Finally, the survey included a section on perceived sustainability of headspace, asking managers to rate the importance of various factors.

The online survey template was created using KeySurvey, a survey software program. The survey was launched following the receipt of contact names and email addresses for all headspace centres opened during Rounds 1-3 (n=40). The survey was sent to the sample of survey managers on 6 June and a reminder email was sent to all non-respondents 1 week later. A final reminder email was sent to non-respondents a day before the advertised survey closing date, 17 June. At closing, 57.5% of managers (n=23) had responded to the email invitation and had submitted completed surveys. While this response rate is lower than desired, the average response rate for studies of organisations (that is, seeking information about the organisation from individual representatives) is around 35% (Baruch & Holton, 2008).

Following recommendations from the headspace Technical Advisory Group and Evaluation Executive Committee, an email was sent to non-participant centre managers to indicate that the survey would be re-opened on 15th of August for a period of 15 days. This resulted in a further 6 managers completing the survey, bringing the total of respondents to 29 out of 40 – a response rate of 72.5%.

headspace centres from across Australia, located in urban, regional and remote areas, and established in all specified rounds (1-3) are represented among survey respondents (n=29). Survey responses were received from managers of centres located in all states and territories, except for Tasmania. Table C3 provides a description of the range of sites whose managers completed the survey.

**Table C3 Profile of headspace Centres whose managers completed the survey**

<b>State</b>	
NSW	9
Vic	7
Qld	4
WA	4
SA	3
ACT	1
NT	1
<b>Remoteness</b>	
Major Cities	15
Inner Regional	8
Outer Regional	5
Very Remote	1
<b>Round</b>	
1	8
2	15
3	6



The KeySurvey software system includes an analysis and reporting function that details frequencies and other details for all responses. This function was used to generate an analysis report. Further analysis was conducted by exporting the survey data to excel where an analyst developed graphs and tables to highlight key findings. The survey contained some non-compulsory open-ended questions and the small amount of textual data contained herein was exported to NVivo and thematically analysed through coding.

## Survey of Professional Stakeholders Affiliated with headspace

The Survey of Professional Stakeholders was included in the evaluation to examine a number of features of collaborative practice specified by the Department in RFQ DoHA 093-1213 and on which limited administrative data are available including:

- The type and extent of connections and linkages between headspace centres, other government funded programs, and the broader service system;
- The facilitators and barriers of effective and efficient collaborative practice;
- The impact of collaborative practice on other service providers;
- The transition of clients from headspace to adult services; and
- Whether and how headspace has improved the skill and confidence of general practitioners in providing youth mental healthcare.

The survey was designed to be conducted as an online survey and as a Computer Assisted Telephone Interview (CATI), however, only one participant used CATI. The survey was also designed to be completed by a diversity of practitioners from different organisational types (for example, government agencies, NGOs, private organisations) and sectors (such as education, primary healthcare, mental health care) as there were multiple pathways through the survey depending on answers provided. The survey items were based on specified evaluation requirements.

The survey was distributed and implemented using KeySurvey, a software system supported by UNSW. This system enables survey launch through invitations emails containing a unique survey link, and through blanket distribution of the survey URL. Prior to implementation, the evaluators piloted the survey with a small number of consortium organisations and general practitioners located near headspace centres (n=15). The pilot launch was undertaken to assess participants' understanding of survey questions and system operations. We received four responses to the pilot launch and one question was modified as a result.

The survey was conducted online over a 2 month period from 9 September to 4 November, 2014. Survey participants were recruited using two methods: sending email invitations to identified contacts in headspace lead agencies and consortium organisations; and advertising the survey.

After 5 weeks of survey promotion, a total of 207 professionals had responded to the survey. This result is somewhat disappointing and reflects the fact that service providers are often short of free time and need to prioritise their activities, and that no incentive was offered to boost respondent numbers.

headspace National Office does not have a database containing contact details for the partner organisations that make up each headspace centre's consortium. This would have been valuable to use as a sampling frame, and without this information it is not possible to calculate a response rate for stakeholders' organisations, or to estimate the validity of responses.

Despite efforts of the evaluators to encourage stakeholder organisations to participate in the survey, we received a poor response to requests to lead agencies to provide consortium contact details, as well as to complete the survey. In circumstances where we did not receive contact details for consortium organisations, we sent an invitation with the survey URL to the lead agency and asked them to forward to their consortium organisations. This method was implemented only because we did not receive responses from all lead agencies. While we are unable to confirm this, it is likely that the majority of consortium organisations that participated in the survey are those where a nominated manager received a direct email invitation. This suggests that we received the majority of survey responses from lead agencies and consortium organisations that are working together well - or at least better than the consortiums where lead agencies did not provide contact details. This is

noted here as contextual information that helps to explain some of the caution that we have taken in interpreting the meaning of survey findings.

Another limitation of this study is that survey respondents do not represent a sample of the total population of professionals in the mental health and service provision systems.

## Parents and Carers Study

The Parents and Carers Study was added to the evaluation to examine the views of parents and carers of young people with mental health, emotional and/or behavioural concerns about how the young person they support accessed and used headspace; whether and how headspace helped or hindered the young person; the needs of parents and carers in supporting young people; and parents/carers own involvement with headspace. The specific research questions that the study sought to answer were:

- What role do parents/carers play in facilitating or hindering young people's access to and engagement with headspace and other mental health services?
- What are parents/carers perceptions of the impact of headspace on the young person?
- How could the headspace service model be adapted to help meet the needs of parents/carers in supporting young people?
- How do the experiences of parents and carers who had been in contact with headspace compare with those of parents whose young people had received other mental health services?

The Study involved two research methods:

- an online survey of parents/carers of young people with mental health concerns; and
- focus groups and telephone interviews with parents/carers.

The research methods were complementary as the focus groups were used to further examine some of the key findings from the online survey. Each method is described below.

### The online survey

The online survey was launched on the 1st of June 2014 and data collection concluded on the 30th of September 2014. Within this time, valid responses were received from a total of 226 parents and/or carers of young people with mental health concerns.

A number of methods were used to recruit participants to the online survey. A link to the survey was posted on the parents and carers section of the headspace website, and on Facebook group pages of two organisations related to youth mental healthcare in Australia (beyondblue and the Butterfly Foundation). In addition, posters and flyers advertising the study and containing the survey URL were sent to all headspace centres for display and distribution from reception areas. These methods were successful in ensuring that a large number of parents and carers heard about the study – as 1,016 people clicked onto the link. However, the majority of these people did not submit a completed survey.

The survey was designed and implemented using Key Survey, an international web-based survey creation and management system that is supported by the University of New South Wales. The system allows you to run standard and more complex reporting of survey items and to export survey data. To analyse the survey, data from all complete and incomplete responses were exported to SPSS, a statistical analysis software package, where the dataset was cleaned in preparation for analysis. The analysis performed using SPSS was informed using an analysis plan that listed required descriptive statistics and cross tabulations for key research questions. The results of this analysis are presented throughout this report.

### Focus group and individual interviews

Focus groups with parents and carers were held between August and October 2014, at five headspace sites across Australia. The fieldwork sites were chosen to ensure fieldwork efficiency and to minimise participant burden. The chosen sites are from urban and regional locations and serve

different client groups. Participants were recruited through two major avenues. Firstly, parent/carers who took part in the online survey and who lived in one of the fieldwork sites were asked at the end of the survey if they wanted to participate in a focus group. If respondents to the survey indicated that they were happy to participate, they were contacted by a researcher and invited to join the focus group in their area. Some participants were also recruited through headspace centres. Centres at the seven identified sites were sent flyers advertising the interviews and parents either contacted evaluators directly if they wanted to participate, or consented to having their contact details forwarded to evaluators.

Five focus group interviews were conducted. Focus groups were not conducted in two sites identified as suitable for fieldwork as we were unable to recruit participants from one site, and at another site, no one turned up on the scheduled evening. We conducted telephone interviews with 3 additional parents, and so a total of 38 parents/carers took part in interviews.

All interviews were recorded, transcribed in full and analysed using a thematic approach. This entailed identifying, analysing and reporting themes within the data. The themes within the data were constructed using a coding framework which was developed following analysis of survey data and modified following the first focus group interview. All data was double coded independently by two researchers to ensure consistency in the analysis and discussion of interpretation.

### Limitations of the study

Due to the recruitment methods used for both the online survey and the focus groups, the respondents should not be considered a representative sample of parents and carers of young people with mental health concerns or of headspace service users. Rather, the aim of the study was to inform evaluation findings related to process issues such as young people's access and engagement with headspace; and ways to enhance parent/carers' interaction with centre services. It is likely that a number of parents and carers participated in the study because they had had a particularly negative or positive experience with headspace and/or other mental health service providers and they wanted to have their say. Nevertheless, information provided about 'extreme cases' is valuable as stories of best and poor practice can offer great insight into how service can be improved to benefit all.

# Appendix D

## Centre listing rounds 1-4

Round	State	Centre Name
1	SA	Edinburgh North
1	VIC	Barwon
1	NSW	Campbelltown
1	NSW	Gosford
1	WA	Albany
1	NSW	Wollongong
1	NSW	Coffs Harbour
1	VIC	Elsternwick
1	NT	Darwin
1	VIC	Sunshine
2	ACT	Canberra
2	NT	Alice Springs
2	NSW	Camperdown
2	VIC	Morwell
2	QLD	Hervey Bay
2	WA	Fremantle
2	QLD	Southport
2	NSW	Maitland
2	WA	Broome
2	NSW	Mount Druitt
2	SA	Murray Bridge
2	VIC	Glenroy
2	TAS	Launceston
2	NSW	Bathurst
2	VIC	Frankston
2	NSW	Wagga Wagga
2	SA	Berri
2	VIC	Warrnambool
2	QLD	Warwick
2	QLD	Townsville
3	VIC	Bendigo
3	QLD	Inala
3	QLD	Cairns
3	VIC	Collingwood
3	TAS	Hobart

Round	State	Centre Name
3	SA	Noarlunga
3	QLD	Nundah
3	NSW	Parramatta
3	WA	Osborne Park
3	NSW	Nowra
4	VIC	Ballarat
4	WA	Bunbury
4	TAS	Devonport
4	QLD	Ipswich
4	QLD	Mackay
4	VIC	Knox
4	VIC	Dandenong
4	WA	Midland
4	NSW	Newcastle
4	NSW	Penrith
4	NSW	Port Macquarie
4	VIC	Shepparton
4	QLD	Maroochydore
4	NSW	Chatswood
4	NSW	Tamworth
4	SA	Port Augusta

# Appendix E

## Additional tables for Chapter 3: Access and Engagement with Centres

**Table E1 Demographic characteristics of headspace clients by age group, 2013/14 financial year**

Characteristics		HS clients age groups				Australian Youth Population	
		12-17 %	18-25	12-25 %      N		12-25 N      %	
<b>TOTAL</b>		<b>23,029</b>	<b>21,166</b>	<b>44,195</b>		<b>3,992,042</b>	
<b>Gender</b>	Male	34.5	39.7	37.2	14,816	2,038,302	51.1
	Female	65.5	59.2	62.8	25,022	1,953,740	48.9
<b>Sexuality</b>	LGBTI male	5.3	6.6	5.9	2,345	NEA	NEA
	Non-LGBTI male	29.2	33.6	31.3	12,463	NEA	NEA
	LGBTI female	14.1	14.5	14.3	5,683	NEA	NEA
	Non-LGBTI female	51.5	45.4	48.5	19,324	NEA	NEA
<b>Country of birth</b>	Australia	93.7	91.9	92.8	37,461	3,106,396	82.0
	Overseas	6.3	8.1	7.2	2,905	680,470	18.0
<b>Indigenous status</b>	Aboriginal	8.4	6.3	7.4	2,970	138,447	3.7
	Torres Strait Islander	0.4	0.3	0.4	150	8,090	0.2
	Both	0.4	0.3	0.4	148	6,030	0.2
	Non Indigenous	90.8	93.1	91.9	37,106	3,791,035	96.0
<b>Language other than English (LOTE)</b>	English only	93.7	93.2	93.4	37,713	3,060,062	80.7
	LOTE	6.3	6.8	6.6	2,645	731,708	19.3
<b>Culturally and Linguistically Diverse</b>	English Lang & AUS Born	89.2	88.0	88.6	35,763	2,787,973	69.8
	Other Lang & AUS Born	4.5	3.9	4.2	1,691	318,422	8.0
	English Lang & Overseas Born	4.5	5.2	4.8	1,950	272,089	6.8
	Other Lang & Overseas Born	1.9	2.9	2.4	954	613,552	15.4
<b>Security of living arrangements</b>	Secure	93.0	83.3	88.3	35,489	NEA	NEA
	Homeless/insecure housing	7.0	16.7	11.7	4,711	NEA	NEA

Characteristics		HS clients age groups				Australian Youth Population	
		12-17 %	18-25	12-25 %	N	12-25 N	%
<b>State</b>	NSW	31.6	30.6	31.1	13,953	1,249,190	31.3
	VIC	23.5	26.5	25.0	11,208	995,267	24.9
	QLD	21.7	17.9	19.9	8,931	822,356	20.6
	SA	6.6	4.9	5.8	2,594	289,311	7.2
	WA	7.3	7.5	7.4	3,306	429,338	10.8
	TAS	4.7	6.7	5.7	2,553	87,608	2.2
	NT	1.9	3.0	2.4	1,097	44,711	1.1
	ACT	2.7	2.9	2.8	1,247	73,629	1.8
<b>SEIFA (quintiles)</b>	1 (Most disadvantaged)	17.7	15.7	16.7	7,499	777,109	19.7
	2	22.3	19.8	21.1	9,446	781,427	19.8
	3	23.8	23.7	23.8	10,665	788,066	20.0
	4	21.8	21.8	21.8	9,763	792,275	20.1
	5 (Most advantaged)	14.4	19.1	16.7	7,469	805,858	20.4
<b>Remoteness</b>	Major city	57.8	60.0	58.8	26,417	2,853,575	71.6
	Inner Regional	30.3	28.3	29.3	13,167	703,267	17.7
	Outer Regional	10.6	8.8	9.7	4,345	337,927	8.5
	Remote	1.3	3.0	2.1	932	51,139	1.3
	Very Remote	0.1	0.1	0.1	28	37,200	0.9
<b>Participation</b>	Studying only	70.9	23.8	48.1	17,807	901,934	30.5
	Working only	1.6	20.1	10.6	3,906	1,018,477	34.5
	Studying and working	19.2	23.1	21.1	7,794	719,214	24.3
	Not studying or working	8.3	33.0	20.2	7,483	315,756	10.7
<b>K10</b>	Low	12.7	9.0	10.9	4,390	1,739	36.4
	Moderate	16.6	13.0	14.8	5,968	1,395	29.2
	High	27.3	27.1	27.2	10,942	931	19.5
	Very high	43.4	50.9	47.0	18,900	709	14.9

Note: NEA = No equivalent Available

Data Source: Authors calculations from hCSA and other data sources. The majority of population level statics have been derived from the 2011 Australian Census. Distributions of K10 scores are from survey data collected for this evaluation.

**Table E2 Satisfaction Survey results for headspace clients, 2013/14 financial year**

	Strongly agree 1	Agree 2	Neutral 3	Disagree 4	Strongly disagree 5
<b>A. Satisfaction with headspace centre</b>					
Felt comfortable	40.0	49.5	8.9	1.0	0.7
Easy to get to	35.6	51.2	9.9	2.6	0.8
Attend at times that suited me	33.9	49.4	11.4	4.4	1.1
<b>B. Satisfaction with headspace staff</b>					
Staff listened	47.1	46.0	5.7	0.5	0.7
Staff involved me in decisions	36.8	47.5	14.2	0.9	0.6
Views and worries taken seriously	44.2	45.6	8.7	0.8	0.7
Able to raise concerns	39.2	47.6	11.4	1.1	0.8
<b>C. Satisfaction with the help headspace provided you</b>					
Help for things I wanted to get help with	27.2	51.3	20.1	1.1	0.4
Mental health improved	19.7	38.1	38.0	3.5	0.8
Other aspects of my life improved	17.2	38.8	39.8	3.6	0.7
Deal more effectively with my problems	18.4	41.8	35.6	3.6	0.6
Know more about my mental health	19.3	43.4	32.8	3.9	0.7

	Strongly agree 1	Agree 2	Neutral 3	Disagree 4	Strongly disagree 5
<b>D. General satisfaction and feedback</b>					
Generally satisfied	33.8	54.2	11.0	0.6	0.3
Would suggest to a friend	48.7	41.7	8.3	0.5	0.4

Data Source: Authors calculations from hCSA.

headspace clients are invited to fill in a satisfaction survey at their 2nd, 5th, 11th and 16th visits. In total 22,614 headspace clients provided 34,696 responses to questions with most data collected at the 2nd and 5th visits.

### Cell sizes for specified figures and tables

The figures and tables presented in chapters 3 and 4 were based upon analysis of hCSA data as indicated. As a population sample, tests of statistical significance do not apply, however, to assist in the interpretation of results, the evaluators provide below the cell sizes for specified figures and tables.

**Table E3 Cell Sizes for Figure 3.3 - Average K10 score at presentation by age, sex-and sexuality, headspace clients 2013/14**

Age at registration	Non-LGBTI Female	Non-LGBTI Male	LGBTI Female	LGBTI Male	Total
12	262	254	101	87	<b>704</b>
13	969	671	297	155	<b>2092</b>
14	1747	907	432	158	<b>3244</b>
15	2259	1148	547	172	<b>4126</b>
16	2315	1267	627	186	<b>4395</b>
17	2218	1279	614	205	<b>4316</b>
18	1828	1122	536	191	<b>3677</b>
19	1389	1026	485	222	<b>3122</b>
20	1181	884	405	209	<b>2679</b>
21	1044	819	322	133	<b>2318</b>
22	883	737	287	135	<b>2042</b>
23	732	570	225	109	<b>1636</b>
24	584	476	171	80	<b>1311</b>
25	335	280	110	61	<b>786</b>

Note: Not all young people record their age, gender, sexuality and K10 scores within the hCSA data. Young people aged less than 12 or above 25 have not been included.



**Table E4 Cell Sizes for Figure 3.4 Average SOFAS scores at presentation by age and gender, headspace clients 2013/14**

Age at registration	Female	Male
12	379	370
13	1,316	873
14	2,222	1,104
15	2,908	1,346
16	2,999	1,508
17	2,835	1,510
18	2,340	1,327
19	1,860	1,278
20	1,587	1,129
21	1,362	971
22	1,172	894
23	960	695
24	758	568
25	471	348

Note: Not all young people record their age within the hCSA data. Not all service providers provide a SOFAS score. Young people aged less than 12 or above 25 have not been included.

**Table E5 Cell sizes for Figure 3.5 Average SOFAS scores at presentation by age and gender-sexuality group, headspace clients 2013/14**

Age at registration	Non-LGBTI Female	Non-LGBTI Male	LGBTI Female	LGBTI Male	Total
12	270	271	109	99	<b>749</b>
13	1,011	708	305	165	<b>2,189</b>
14	1,771	942	451	162	<b>3,326</b>
15	2,340	1,163	568	183	<b>4,254</b>
16	2,341	1,315	658	193	<b>4,507</b>
17	2,204	1,296	631	214	<b>4,345</b>
18	1,800	1,131	540	196	<b>3,667</b>
19	1,380	1,046	480	232	<b>3,138</b>
20	1,175	915	412	214	<b>2,716</b>
21	1,047	827	315	144	<b>2,333</b>
22	884	756	288	138	<b>2,066</b>
23	733	585	227	110	<b>1,655</b>
24	577	485	181	83	<b>1,326</b>
25	353	284	118	64	<b>819</b>

Note: Not all young people record their age, gender and sexuality within the hCSA data. Not all service providers provide a SOFAS score. Young people aged less than 12 or above 25 have not been included.

# Appendix F

## Supplementary analyses for Chapter 4: Outcomes of headspace Clients

This appendix includes analysis undertaken to examine the outcomes of headspace clients, that has been excluded from Chapter 4 above.

### Indigenous status

The evaluation team compared changes in K10 scores between Indigenous and non-Indigenous headspace clients over the course of their engagement with headspace. Calculations are based on the change in K10 between the first and last visit to headspace, separately for females (Figure F1) and males (Figure F2)<sup>45</sup>.

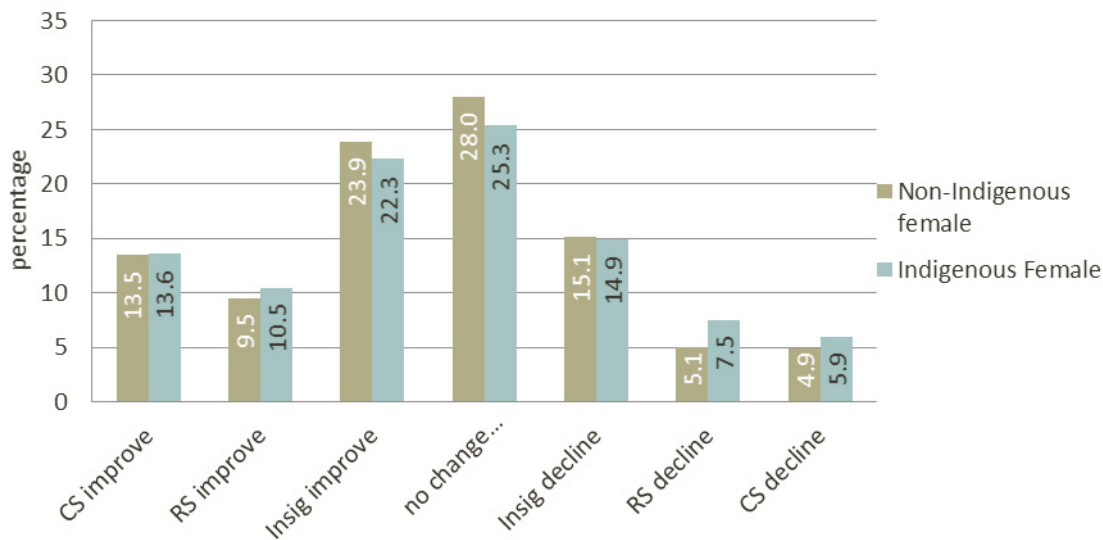
As reported in Figure F1, the rates of clinical improvement for Indigenous and non-Indigenous females are very similar at 13.6% and 13.5% respectively. Combining with the percentage of those who improve reliably (RS improve) but not clinically, we see significant improvement in K10 of 24.1% for Indigenous young women and 23% for non-Indigenous young women. It should be noted that the rate of statistically significant decline in K10 is somewhat higher for Indigenous females, at 13.4%, compared with 10% for the non-Indigenous group. Indeed, this combined rate is higher than for any other group comparison in our evaluation analysis.

Around 12.3% of Indigenous males improve clinically over the course of their time with headspace – a rate around 1.6 percentage points lower than for non-Indigenous males (Figure F2). The rates of significant decline are similar between the two groups, at 8.4% and 8.0% respectively. Similarities between rates of change for Indigenous and non-Indigenous males could reflect the development of tailored programs in headspace centres with a relatively high Indigenous client base.

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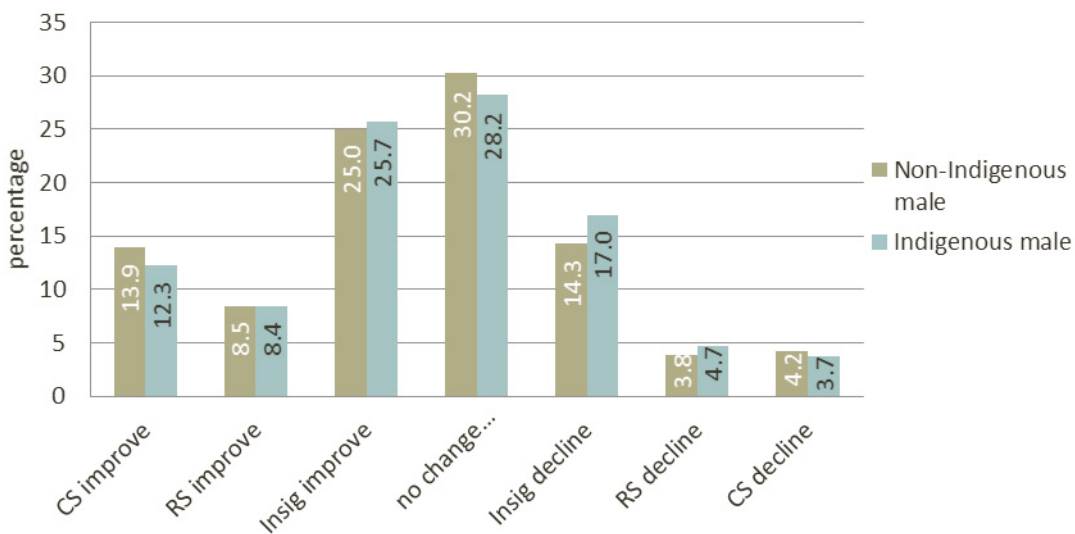
<sup>45</sup> There is some debate on the use of K10 as a measure of mental health functioning among Indigenous peoples, especially around the degree to which the component indicators for K10 are appropriate for Indigenous individuals, families and communities. The alternative K5 measure rewords and excludes certain questions regarding feelings of worthlessness, and has been proposed as a more culturally appropriate measure of psychological distress for Indigenous populations (Jorm, Bourchier, Cvetkovski and Stewart, 2012). The evaluation team recognises the issue, but this analysis retains K10 as a psychological distress measure for the purpose of comparability of indicators.

**Figure F1 Changes in K10 score between first and last headspace treatment: FEMALE clients, by Indigenous status**



Source: Authors' calculations from hCSA data.

**Figure F2 Changes in K10 score between first and last headspace treatment: MALE clients, by Indigenous status**

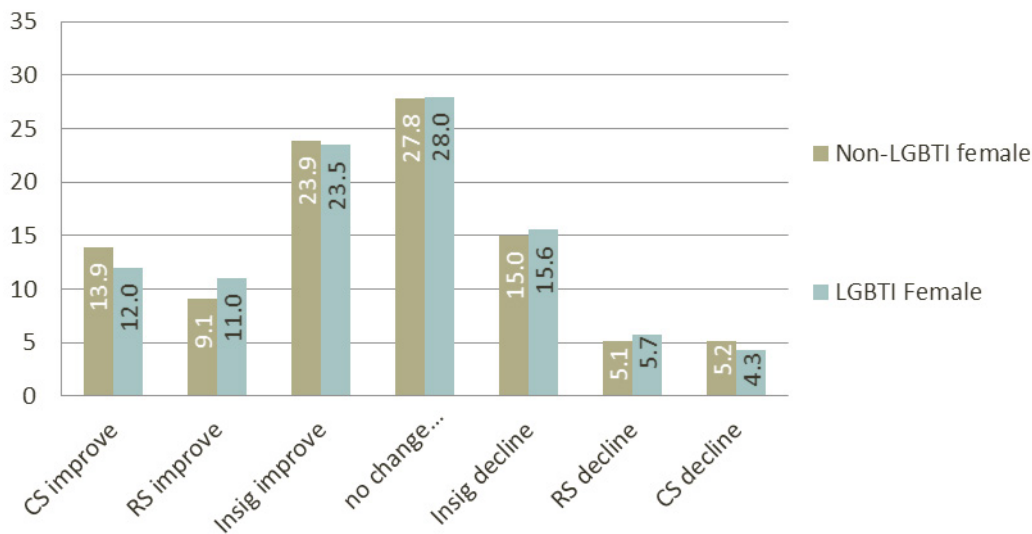


Source: Authors' calculations from hCSA data.

## Gender and sexual identity (LGBTI) status

There are some differences in the rates of improvement by sexual identity, with 12% of LGBTI females improving clinically over the course of their headspace treatment compared with 13.9% for the non-LGBTI group – a difference of 1.9% (Figure F3). It is worth noting that LGBTI females present at headspace centres with a higher K10 on entry - 31.6 compared with 29.4 for non-LGBTI females. This may reflect that LGBTI females enter headspace with more complex mental health needs, giving rise to more gradual responses to treatment. That said, the combined proportions of clinical and reliable improvements between LGBTI and non-LGBTI females, at 23%, are a very close match.

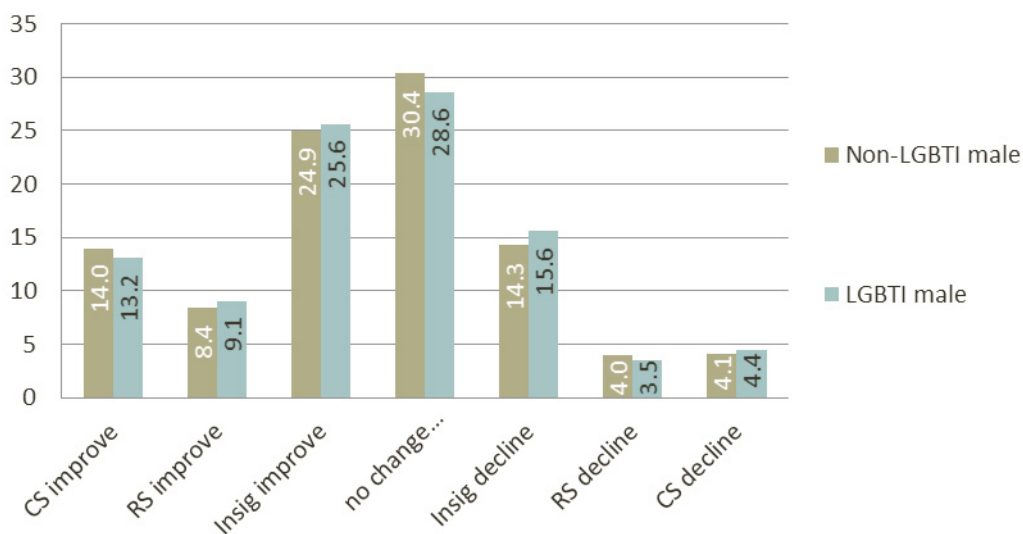
**Figure F3 Changes in K10 score between first and last headspace treatment: FEMALE clients, by sexual identity (LGBTI) status**



Source: Authors' calculations from hCSA data.

Figure F4 shows that the rates of clinical improvement for LGBTI males, at 13.2%, are a closer match to non-LGBTI males (14.0%). The percentages of LGBTI and non-LGBTI young men that show either a clinical or reliable improvement are nearly identical - 22.3% compared with 22.4%.

**Figure F4 Changes in K10 score between first and last headspace treatment: MALE clients, by sexual identity (LGBTI) status**



Source: Authors' calculations from hCSA data.

## Socioeconomic status

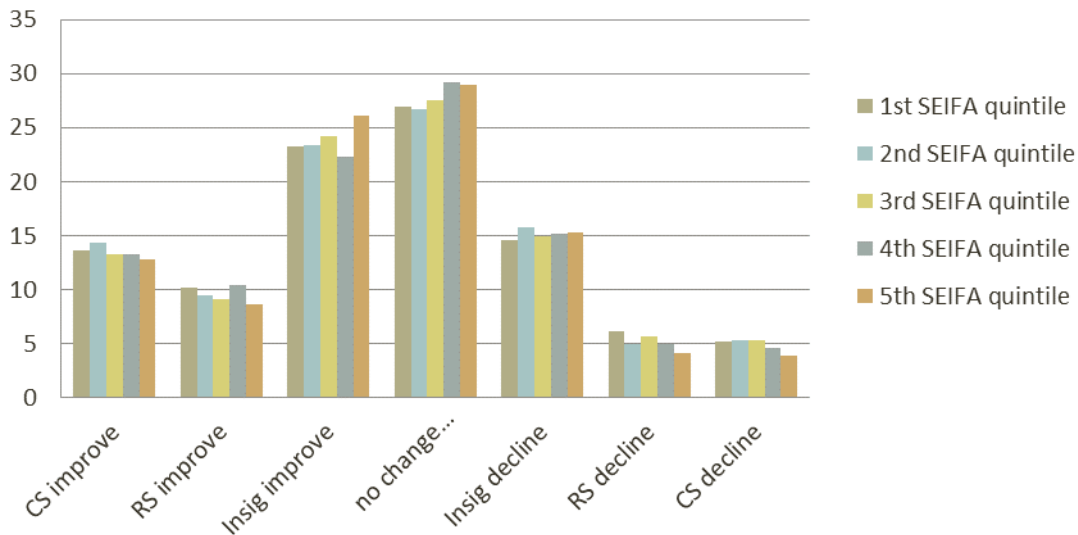
The next set of calculations examines whether there exists a socio-economic gradient in rates of improvement in mental health functioning among headspace clients. Young people are grouped into quintiles using the Socio-Economic Indexes for Areas (SEIFA) index, with the first SEIFA quintile representing the lowest category of socio-economic advantage.

Figure F5 looks at the socio-economic profile of clinical and reliable change for females engaged in headspace. The patterns across SEIFA reveal that the first two quintiles show a slightly higher rate of clinical improvement – 13.6% for the first quintile and 14.4% for the second – than for the top

three SEIFA quintiles. A slightly declining trajectory of improvement by SEIFA is also apparent among females who show a reliable but not clinical improvement in psychological distress over the course of their headspace treatment. Rates of decline are relatively small and show a flatter trajectory across SEIFA groups.

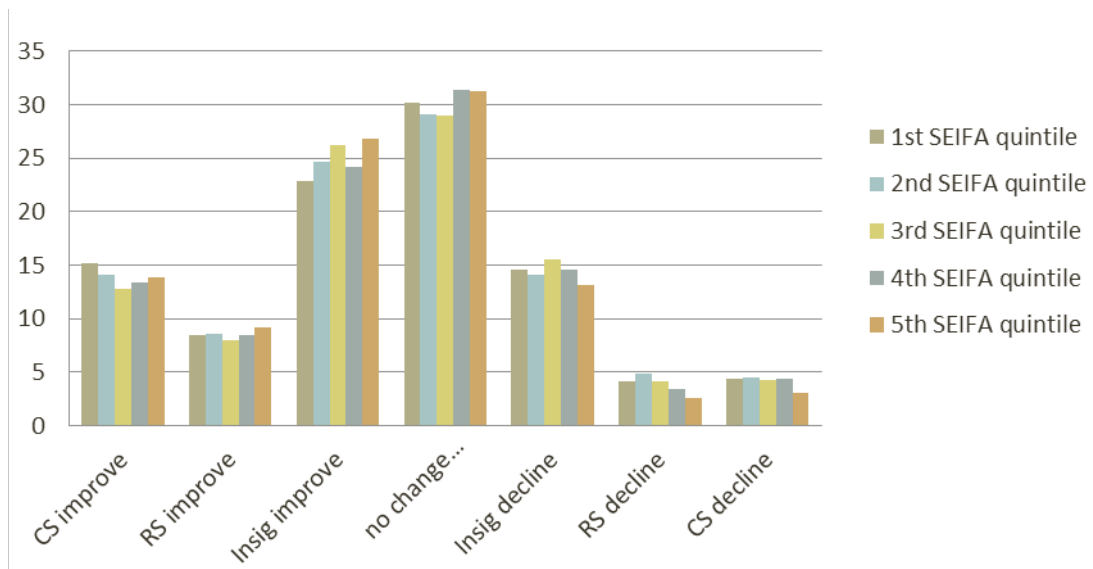
The socio-economic pattern for males – although slight – appears to follow a U-shaped trajectory (Figure F6). Around 23.7% of young men in the first SEIFA quintile show a clinical or reliable improvement in psychological distress. This rate falls to 20.8% for males in the third SEIFA quintile, and rises to 23.0% for the highest (fifth) SEIFA quintile. A greater proportion of young people in higher SEIFA groups exhibit small (insignificant) improvements in K10.

**Figure F5 Changes in K10 score between first and last headspace treatment: FEMALE clients, by SEIFA**



Source: Authors' calculations from hCSA data

**Figure F6 Changes in K10 score between first and last headspace treatment: MALE clients, by SEIFA**



Source: Authors' calculations from hCSA data.

## Remoteness

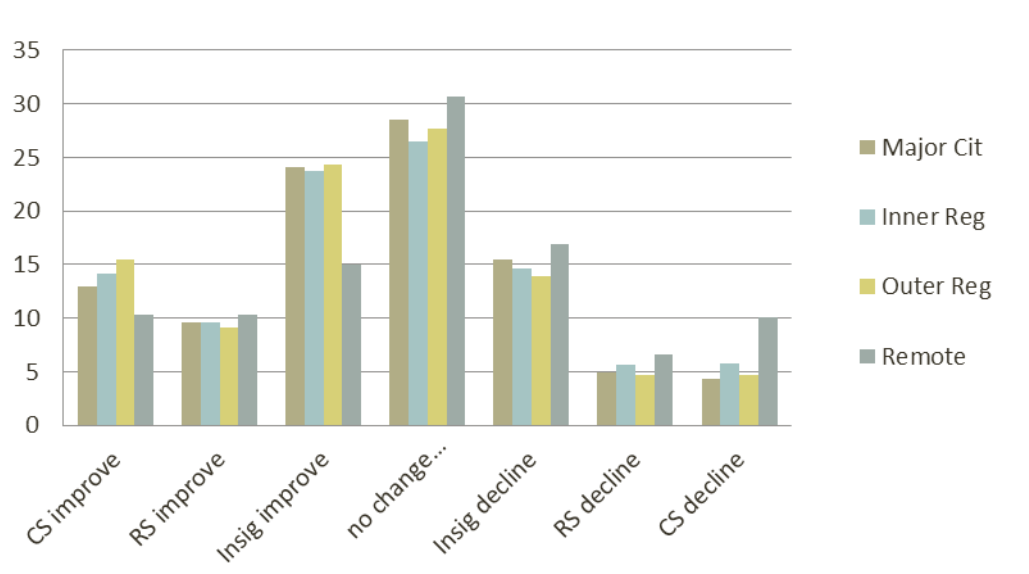
The evaluation also looked at rates of improvement in mental health functioning for headspace clients according to geographical remoteness, using the ARIA (Accessibility/Remoteness Index of Australia) classification. Headspace clients were grouped into four categories of remoteness – major cities, inner regional, outer regional and remote/very remote – to examine the extent of geographical

differences in K10 outcomes.

Around 90% of the population of headspace clients live in major cities or inner regional areas, with headspace centres too located predominantly in those two geographies. This does mean that a notable proportion (around 24%) of young persons who live in outer regional areas visit headspace centres in inner regional locations.

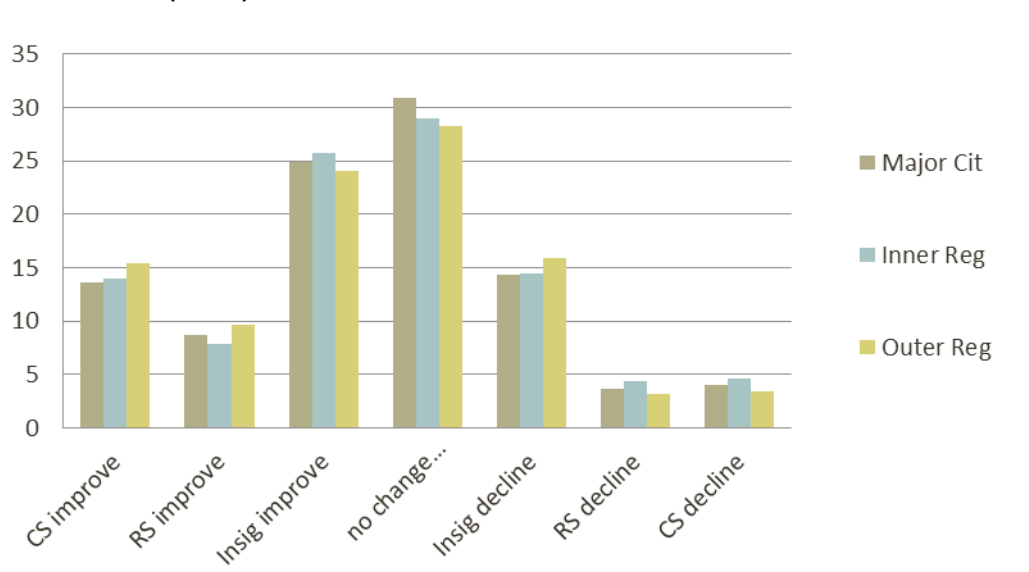
The rate of clinical improvement in K10 is highest for those people living in outer regional areas, at 15.4% for females (Figure F7) and 15.1% for young men (Figure F8). The population of headspace clients living in remote or very remote areas is very low, compared to those in cities and inner/outer regional area. Despite this, it is important to note the contrast in the rates of significant decline in mental health function for young women living in remote or very remote areas, at 10%, relative to those in more populated areas. We see far fewer young men than young women from remote/very remote areas visiting headspace centres, which makes it difficult to draw reliable comparisons.

**Figure F7 Changes in K10 score between first and last headspace treatment: FEMALE clients, by remoteness (ARIA) index**



Source: Authors' calculations from hCSA data.

**Figure F8 Changes in K10 score between first and last headspace treatment: MALE clients, by remoteness (ARIA) index**



Notes: Remote and very remote regions excluded from chart for male headspace clients, due to small sample sizes.  
 Source: Authors' calculations from hCSA data.

## Occasion of service intervals at headspace centres

Figure F9 illustrates the proportion of headspace clients who show a clinically (CS) or reliably (RS) significant improvement in K10 for different occasions of service (OoS) intervals. The analysis differentiates the rates of clinical or reliable improvement both by age and gender, and by a series of OoS intervals – specifically comparing K10 between the first and third OoS, the first and sixth OoS, the first and tenth OoS, and finally between the first and last OoS in a single episode of treatment.

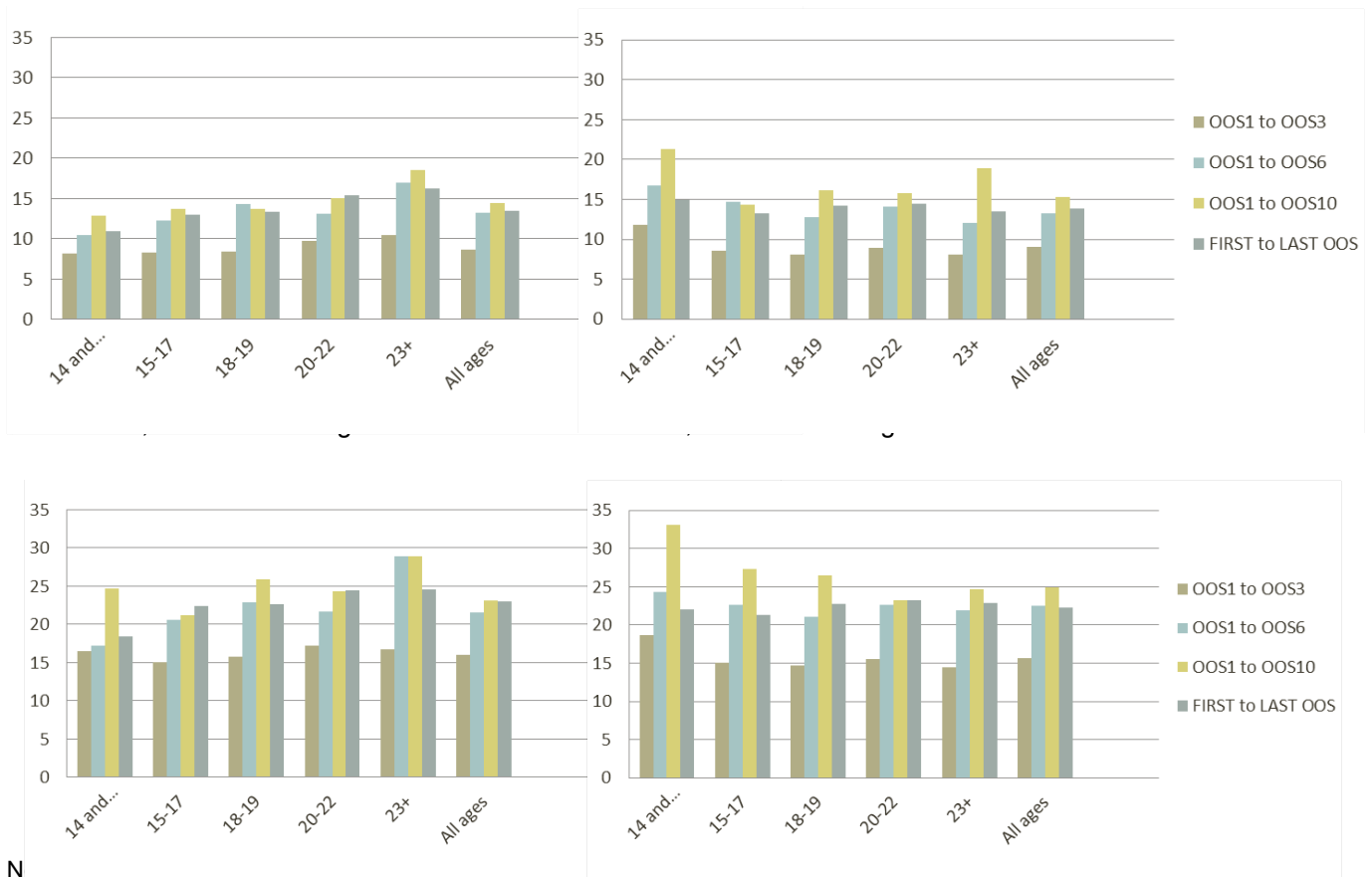
Female headspace clients enter into a program of treatments with typically a higher presenting K10 score than for males, and often remain within the system for a longer period of time. Females show a higher level of clinically and reliably significant improvement as they get older. For example, the proportion of young women aged 14 and under who clinically improve in K10 terms is around 8% by the third visit relative to entry, rising to 12.6% by the tenth visit (see Figure F9). For young women aged 23 and over, the rate of clinical K10 improvement rises from 10% at the third visit to nearly 18% by the tenth. Combining rates of clinical and reliable improvements (Figure F9), the percentage of females aged 23 and over rises from 16% by the third visit to nearly 29% at the tenth.

Around 12% of young men aged 14 and under show a clinical improvement by the third visit, with this figure rising to 22% by the tenth visit (Figure F9). When clinical and reliable improvements are combined together for young men (Figure F9), we see around a quarter to have improved significantly in terms of psychological distress.

**Figure F9 Proportion of headspace clients showing clinically (CS) or reliably (RS) significant change in K10, by age and occasion of service (OoS) interval**

i. Females, CS change

ii. Males, CS change



N K10 change for each OoS interval is generated only for those clients where there is an observed K10 at both OoS in the difference (for example, the average difference in K10 between OoS1 and OoS6 is calculated only for those headspace clients who have their K10 recorded on both the first and sixth visits).

Source: Authors' calculations from hCSA data.

The trajectory of clinically and reliably significant improvements in K10 by age is relatively flat for

males, but generally shows a steeper rate of clinical improvement in mental health functioning as the number of headspace visits rises. This is especially the case for the youngest cohort of young men who received headspace treatment. Around 12% of males aged 14 and under show a clinical improvement by the third visit, with this figure rising to 22% by the tenth visit. When clinical and reliable improvements are combined together for young men we see around a quarter to have improved significantly in terms of psychological distress.

These patterns are likely to reflect the cumulative impact of occasions of service on K10 outcomes as reported in the Client Outcomes chapter of this evaluation report. However, the temptation to interpret the patterns of change in K10 by OoS interval as a response to increased treatment 'dose' should be resisted. Those who receive more occasions of service may well have complex psychological and behavioural issues, and therefore require an extended treatment program to improve their psychological condition.

#### Cell sizes for specified figures and tables

Where indicated, figures and tables presented in Chapter 4 were based upon analysis of hCSA data as indicated. As a population sample, tests of statistical significance do not apply, however, to assist in the interpretation of results, the evaluators provide below the cell sizes for specified figures and tables.



**Table F1 Cell sizes for Figure 4.2 Cumulative average change in K10 scores - by the primary issue the young person presented with at initial consultation and total number of visits**

Primary Issue	Visit Number									
	2	3	4	5	6	7	8	9	10	
<b>Mental health and behaviour</b>	3,925	15,678	3,097	2,484	8,101	1,582	1,002	1,138	3,360	
<b>Physical health</b>	184	517	115	76	215	51	29	30	98	
<b>Sexual health</b>	128	430	70	41	147	26	15	15	43	
<b>Vocational assistance</b>	63	253	57	39	96	29	9	17	28	
<b>Alcohol or other drugs</b>	128	429	79	60	170	33	21	29	61	
<b>Situational</b>	575	2,331	422	322	1,095	218	118	120	395	

**Table F2 Cell sizes for Table 4.3, Figure 4.3 and Figure 4.4. Changes in K10 score between first and last headspace treatment: by age and gender**

	CS improve	RS improve	Insig improve	no change (<2 K10pts)			RS decline	CS decline	Total
				CS improve	RS improve	Insig improve			
<b>Females</b>									
up to 14	306	210	751	786	465	165	122	<b>2,805</b>	
15-17	809	584	1,476	1,697	994	335	308	<b>6,203</b>	
18-19	381	265	650	857	406	136	163	<b>2,858</b>	
20-22	445	263	713	780	434	132	124	<b>2,891</b>	
23+	265	136	424	445	228	68	68	<b>1,634</b>	
<b>All</b>	<b>2,207</b>	<b>1,569</b>	<b>3,902</b>	<b>4,565</b>	<b>2,479</b>	<b>856</b>	<b>813</b>	<b>16,391</b>	
<b>Males</b>									
up to 14	231	100	402	449	211	54	56	<b>1,503</b>	
15-17	396	193	680	833	393	116	146	<b>2,757</b>	
18-19	225	136	371	457	263	66	66	<b>1,584</b>	
20-22	275	169	470	581	274	74	70	<b>1,913</b>	
23+	140	114	298	347	145	32	35	<b>1,111</b>	
<b>All</b>	<b>1,226</b>	<b>753</b>	<b>2,221</b>	<b>2,667</b>	<b>1,286</b>	<b>344</b>	<b>371</b>	<b>8,868</b>	
<b>Total</b>	<b>3,455</b>	<b>2,453</b>	<b>6,325</b>	<b>7,477</b>	<b>3,891</b>	<b>1,274</b>	<b>1,183</b>	<b>26,058</b>	

Table F3 Cell sizes for Figure 4.5 Average K10 score by visit number and total number of occasions of service

Total Occasions of Service	Occasion of Service Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-2 visits	13,339	1,498	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-5 visits	10,148	2,187	9,280	2,240	1,128	0	0	0	0	0	0	0	0	0	0	0
6-9 visits	7,169	1,508	6,412	1,244	1,244	5,612	1,453	806	577	0	0	0	0	0	0	0
10-14 visits	3,958	1,253	3,566	860	664	2,961	616	386	615	2,598	736	388	308	284	0	0
15+ visits	1,801	718	1,623	483	432	1,364	290	180	227	1,129	267	134	140	226	987	243

Table F4 Cell sizes for Figure 4.6

OoS1 to OoS3				
Females		Males		
	CS improve	RS improve	CS improve	RS improve
up to 14	204	167	148	75
15-17	414	339	212	125
18-19	178	182	99	82
20-22	219	177	134	103
23+	131	89	66	60
All ages	1144	956	634	470
OoS1 to OoS6				
up to 14	133	73	89	42
15-17	317	228	156	83
18-19	168	100	70	55
20-22	170	102	98	70
23+	115	91	53	47
All ages	913	597	463	300
OoS1 to OoS10				
up to 14	71	48	36	23
15-17	141	77	64	43
18-19	64	61	34	27
20-22	75	48	47	24
23+	50	39	32	15
All ages	380	268	199	123
First to Last OoS				
up to 14	330	186	231	100
15-17	809	584	396	193
18-19	342	304	225	136
20-22	428	280	275	169
23+	256	145	140	114
All ages	2207	1569	1226	753

Table F5 Cell sizes for Figure 4.11

	Total	Considered suicide ideation in at W1 (n)	Considered suicide ideation at W2 (n)
Improved (clinically sig.)	130	77	38
Improved (reliably sig.)	64	46	39
Improved (insig.)	218	126	86
No change (less than 2 K10 points)	222	142	106
Declined (insig.)	139	84	75
Declined (reliably sig.)	30	18	24
Declined (clinically sig.)	38	21	19

Table F6 Cell sizes for Figure 4.14 Cumulative average of individual SOFAS changes by gender and total number of visits

Gender	Occasion of Service Number														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Male	16,698	13,887	11,599	9,750	8,202	6,804	5,712	4,809	3,985	3,355	2,817	2,345	1,969	1,645	1,362
Female	9,620	7,761	6,326	5,201	4,266	3,521	2,859	2,344	1,949	1,617	1,323	1,099	877	730	623
<b>Total</b>	<b>26,318</b>	<b>21,648</b>	<b>17,925</b>	<b>14,951</b>	<b>12,468</b>	<b>10,325</b>	<b>8,571</b>	<b>7,153</b>	<b>5,934</b>	<b>4,972</b>	<b>4,140</b>	<b>3,444</b>	<b>2,846</b>	<b>2,375</b>	<b>1,985</b>

Table F7 Cell sizes for Figure 4.15 Cumulative average of individual SOFAS differences by gender-sexuality and total number of visits

Gender-sexuality	Visit Number															
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Non-LGBT Female	12,871	10,670	8,876	7,429	6,199	5,112	4,263	3,590	2,973	2,478	2,051	1,716	1,412	1,184	973	
Non-LGBT Male	8,099	6,503	5,295	4,323	3,512	2,891	2,327	1,896	1,567	1,299	1,055	882	694	574	488	
LGBT Female	3,827	3,217	2,723	2,321	2,003	1,692	1,449	1,219	1,012	877	766	629	557	461	389	
LGBT Male	1,521	1,258	1,031	878	754	630	532	448	382	318	268	217	183	156	135	
<b>Total</b>	<b>26,318</b>	<b>21,648</b>	<b>17,925</b>	<b>14,951</b>	<b>12,468</b>	<b>10,325</b>	<b>8,571</b>	<b>7,153</b>	<b>5,934</b>	<b>4,972</b>	<b>4,140</b>	<b>3,444</b>	<b>2,846</b>	<b>2,375</b>	<b>1,985</b>	

Table F8 Cell sizes for Figure 4.16 Cumulative average of change in individual SOFAS scores - by the primary issue at initial consultation and total number of visits

Primary Issue	Visit Number									
	2	3	4	5	6	7	8	9	10	
Mental health and behaviour	22592	18676	15612	13067	10915	9059	7513	6262	5180	
Physical health	478	371	290	236	192	154	134	122	104	
Sexual health	550	380	261	200	142	114	94	70	62	
Vocational assistance	433	309	239	197	167	137	111	82	69	
Alcohol or other drugs	752	518	391	302	234	190	150	125	97	
Situational	3512	2783	2220	1801	1486	1158	930	762	629	
Other	260	225	185	165	141	120	102	89	68	

**Table F9 Cell sizes for Table 4.5 Transition in SOFAS classification bands from the first (row) to the third occasion of service (column)**

SOFAS at visit 1	SOFAS at visit 3					Total
	1-20	21-40	41-60	61-80	81-100	
No.	No.	No.	No.	No.	No.	No.
1-20	-	-	-	-	-	49
21-40	-	161	397	183	-	755
41-60	-	265	3,905	3,732	207	8,118
61-80	14	97	2,785	9,108	1,020	13,024
81-100	-	-	189	914	503	1,611
<b>Total</b>	<b>36</b>	<b>538</b>	<b>7,286</b>	<b>13,953</b>	<b>1,744</b>	<b>23,557</b>

Notes: Cells report percentages of young people who transition between bands of SOFAS score during the visit interval. Calculations are based on 23,577 young persons for whom scores are observed over the two visits in the interval. Cells that constitute less than 0.5% of the population are marked '-'.

**Table F10 Cell sizes for Table 4.6 Transition in SOFAS classification bands from the first (row) to the sixth occasion of service (column)**

SOFAS at visit 1	SOFAS at visit 3					Total
	1-20	21-40	41-60	61-80	81-100	
No.	No.	No.	No.	No.	No.	No.
1-20	-	-	12	14	-	33
21-40	-	63	251	137	-	459
41-60	-	121	1,951	2,558	151	4,786
61-80	-	59	1,590	5,030	650	7,335
81-100	-	-	92	517	208	820
<b>Total</b>	<b>17</b>	<b>250</b>	<b>3,896</b>	<b>8,256</b>	<b>1,014</b>	<b>13,433</b>

Notes: Cells report percentages of young people who transition between bands of SOFAS score during the visit interval. Calculations are based on 23,577 young persons for whom scores are observed over the two visits in the interval. Cells that constitute less than 0.5% of the population are marked '-'.

**Table F11 Cell sizes for Figure 4.17 Transition in SOFAS classification bands from first to last occasion of service by gender- sexuality**

	Non-LGBT	Non-LGBT	LGBT Female	LGBT Male	Total
	Female	Male			
Decline two bands	180	130	58	25	396
Decline one band	2,106	1,306	659	264	4,327
No change	7,621	4,583	2,180	859	15,245
Improve one band	3,561	2,335	1,119	442	7,439
Improve two bands	360	277	124	43	792

**Table F12 Cell sizes for Table 4.7 Transition in SOFAS classification bands from the first (row) to the last occasion of service by gender and sexuality**

	Non-LGBT Female	Non-LGBT Male	LGBT Female	LGBT Male	Total
Decline four bands	-	-	-	-	-
Decline three bands	14	9	4	3	28
Decline two bands	180	130	58	25	396
Decline one band	2,106	1,306	659	264	4,327
No change	7,621	4,583	2,180	859	15,245
Improve one band	3,561	2,335	1,119	442	7,439
Improve two bands	360	277	124	43	792
Improve three bands	28	17	4	-	57
Improve four bands	-	-	-	2	-

**Table F13 Cell sizes for Figure 4.18 Proportion of young people who transitioned in SOFAS classification bands from first to last occasion of service by total number of visits**

	1-2 visits	3-5 visits	6-9 visits	10-14 visits	15+ visits	Total
Decline two bands	60	164	101	54	43	436
Decline one band	721	1,669	1,216	679	515	4,794
No change	2,544	6,098	4,453	2,257	1,447	16,809
Improve one band	875	2,695	2,340	1,340	893	8,124
Improve two bands	82	262	252	148	140	872

# Appendix G

Supplementary material for national expansion analysis

## Youth headspace access by funding round and state

**Table G1 Round 1 (10 centres) – established 2007**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	141,120	141,120	1,105,457	88.68
Victoria	993,359	213,783	213,783	779,576	78.48
Queensland	820,217	0	0	820,217	100.00
South Australia	288,762	76,106	76,106	212,656	73.64
Western Australia	428,209	9,263	9,263	418,946	97.84
Tasmania	87,341	0	0	87,341	100.00
Northern Territory	44,441	24,652	24,652	19,789	44.53
ACT	73,462	0	0	73,462	100.00
<b>Australia</b>	<b>3,982,368</b>	<b>464,924</b>	<b>464,924</b>	<b>3,517,444</b>	<b>88.33</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G2 Round 2 (20 centres) – established 2009**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	149,128	290,248	956,329	76.72
Victoria	993,359	137,602	351,385	641,974	64.63
Queensland	820,217	64,614	64,614	755,603	92.12
South Australia	288,762	11,173	87,279	201,483	69.77
Western Australia	428,209	75,485	84,748	343,461	80.21
Tasmania	87,341	15,840	15,840	71,501	81.86
Northern Territory	44,441	7,639	32,291	12,150	27.34
ACT	73,462	73,462	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>534,943</b>	<b>999,867</b>	<b>2,982,501</b>	<b>74.89</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.



**Table G3 Round 3 (10 centres) – established 2011**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	89,780	380,028	866,549	69.51
Victoria	993,359	114,060	465,445	527,914	53.14
Queensland	820,217	108,384	172,998	647,219	78.91
South Australia	288,762	61,402	148,681	140,081	48.51
Western Australia	428,209	94,502	179,250	248,959	58.14
Tasmania	87,341	39,191	55,031	32,310	36.99
Northern Territory	44,441	0	32,291	12,150	27.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>507,319</b>	<b>1,507,186</b>	<b>2,475,182</b>	<b>62.15</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G4 Round 4 (16 centres) – established 2013**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	173,111	553,139	693,438	55.63
Victoria	993,359	252,606	718,051	275,308	27.71
Queensland	820,217	30,338	203,336	616,881	75.21
South Australia	288,762	5,235	153,916	134,846	46.70
Western Australia	428,209	59,558	238,808	189,401	44.23
Tasmania	87,341	7,200	62,231	25,110	28.75
Northern Territory	44,441	0	32,291	12,150	27.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>528,048</b>	<b>2,035,234</b>	<b>1,947,134</b>	<b>48.89</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G5 Round 5 (15 centres) – established 2013**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	254,739	807,878	438,699	35.19
Victoria	993,359	67,252	785,303	208,056	20.94
Queensland	820,217	115,743	319,079	501,138	61.10
South Australia	288,762	38,229	192,145	96,617	33.46
Western Australia	428,209	0	238,808	189,401	44.23
Tasmania	87,341	0	62,231	25,110	28.75
Northern Territory	44,441	0	32,291	12,150	27.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>475,963</b>	<b>2,511,197</b>	<b>1,471,171</b>	<b>36.94</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G6 Round 6 (16 centres) – to be established by 2015**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	121,881	929,759	316,818	25.42
Victoria	993,359	21,259	806,562	186,797	18.80
Queensland	820,217	132,420	451,499	368,718	44.95
South Australia	288,762	53,165	245,310	43,452	15.05
Western Australia	428,209	99,059	337,867	90,342	21.10
Tasmania	87,341	0	62,231	25,110	28.75
Northern Territory	44,441	0	32,291	12,150	27.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>427,784</b>	<b>2,938,981</b>	<b>1,043,387</b>	<b>26.2</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G7 Round 7 (10 centres) – to be established by December 2015**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	60,463	990,222	256,355	20.56
Victoria	993,359	88,643	895,205	98,154	9.88
Queensland	820,217	51,331	502,830	317,387	38.70
South Australia	288,762	10,662	255,972	32,790	11.36
Western Australia	428,209	9,749	347,616	80,593	18.82
Tasmania	87,341	0	62,231	25,110	28.75
Northern Territory	44,441	0	32,291	12,150	27.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>220,848</b>	<b>3,159,829</b>	<b>822,539</b>	<b>20.65</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G8 Round 8 (5 centres) – to be established by December 2016**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	14,604	1,004,826	241,751	19.39
Victoria	993,359	15,666	910,871	82,488	8.30
Queensland	820,217	14,197	517,027	303,190	36.96
South Australia	288,762	0	255,972	32,790	11.36
Western Australia	428,209	0	347,616	80,593	18.82
Tasmania	87,341	0	62,231	25,110	28.75
Northern Territory	44,441	0	32,291	12,150	27.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>44,467</b>	<b>3,204,296</b>	<b>778,072</b>	<b>19.54</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G9 Additional youth population covered by established and planned headspace centres (Round 1 – 8)**

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
New South Wales (n = 1,246,577)	headspace Campbelltown	1	48,815	3.92
	headspace Coffs Harbour	1	13,837	1.11
	headspace Gosford	1	54,311	4.36
	headspace Gosford <sup>1</sup>	6	0	0.00
	headspace Wollongong	1	24,157	1.94
	headspace Bathurst	2	9,215	0.74
	headspace Bathurst <sup>1</sup>	2	0	0.00
	headspace Camperdown	2	49,549	3.97
	headspace Maitland	2	12,161	0.98
	headspace Mt Druitt	2	60,313	4.84
	headspace Wagga Wagga	2	17,890	1.44
	headspace Nowra	3	14,380	1.15
	headspace Parramatta	3	75,400	6.05
	headspace Chatswood	4	62,024	4.98
	headspace Newcastle	4	30,359	2.44
	headspace Penrith	4	56,431	4.53
	headspace Port Macquarie	4	10,650	0.85
	headspace Tamworth	4	13,647	1.09
	headspace Brookvale	5	35,902	2.88
	headspace Hurstville	5	95,224	7.64
	headspace Lismore	5	12,261	0.98
	headspace Liverpool	5	74,210	5.95
	headspace Miranda	5	37,142	2.98
	headspace Bankstown <sup>2</sup>	6	0	0.00
	headspace Bondi Junction	6	43,510	3.49
	headspace Burwood	6	43,837	3.52
headspace Dubbo	6	11,940	0.96	
headspace South Canberra	6	9,817	0.79	
headspace Tweed Valley	6	12,777	1.02	
headspace Castle Hill	7	41,502	3.33	
headspace Griffith	7	8,810	0.71	
headspace Orange	7	10,151	0.81	

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
	headspace Broken Hill	8	3,541	0.28
	headspace Goulburn	8	11,063	0.89
	<b>Total New South Wales</b>		<b>1,004,826</b>	<b>80.62</b>
<b>Victoria (n = 993,359)</b>	headspace Elsternwick	1	64,062	6.45
	headspace Geelong	1	32,685	3.29
	headspace Geelong <sup>1</sup>	1	0	0.00
	headspace Geelong <sup>1</sup>	1	0	0.00
	headspace Sunshine	1	117,036	11.78
	headspace Central West Gippsland	2	13,905	1.40
	headspace Central West Gippsland <sup>1</sup>	2	0	0.00
	headspace Frankston	2	46,636	4.69
	headspace Glenroy	2	62,036	6.25
	headspace Warrnambool	2	15,025	1.51
	headspace Bendigo	3	17,190	1.73
	headspace Collingwood	3	96,870	9.75
	headspace Ballarat	4	19,753	1.99
	headspace Dandenong	4	132,475	13.34
	headspace Knox	4	89,081	8.97
	headspace Shepparton	4	11,297	1.14
	headspace Craigieburn <sup>2</sup>	5	0	0.00
	headspace Hawthorn	5	67,252	6.77
	headspace Werribee <sup>2</sup>	5	0	0.00
	headspace Albury Wodonga	6	11,832	1.19
	headspace Mildura	6	9,427	0.95
	headspace Narre Warren <sup>2</sup>	6	0	0.00
	Headspace Swan Hill	7	6,243	0.63
	headspace Greensborough	7	82,400	8.30
	headspace Bairnsdale	8	6,082	0.61
	headspace Gramplains	8	9,584	0.96
	<b>Total Victoria</b>	<b>5</b>	<b>910,871</b>	<b>91.70</b>

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population	
Queensland (n = 820,217)	headspace Hervey Bay	2	8,177	1.00	
	headspace Southport	2	11,906	1.45	
	headspace Townsville	2	38,284	4.67	
	headspace Warwick	2	6,247	0.76	
	headspace Cairns	3	17,799	2.17	
	headspace Inala	3	56,179	6.85	
	headspace Nundah	3	34,406	4.19	
	headspace Ipswich <sup>2</sup>	4	0	0.00	
	headspace Mackay	4	21,488	2.62	
	headspace Maroochydore	4	8,850	1.08	
	headspace Brisbane City	5	48,680	5.94	
	headspace Mt Isa	5	6,634	0.81	
	headspace Redcliffe	5	38,949	4.75	
	headspace Rockhampton	5	21,480	2.62	
	headspace Indooroopilly	6	38,489	4.69	
	headspace Toowoomba	6	27,983	3.41	
	headspace Woolloongabba	6	65,948	8.04	
	headspace Caboolture <sup>2</sup>	7	0	0.00	
	headspace Capalaba	7	38,198	4.66	
	headspace Gladstone	7	13,133	1.60	
headspace Bundaberg	8	14,197	1.73		
<b>Total Queensland</b>			<b>517,027</b>	<b>63.04</b>	
South Australia (n = 288,762)	headspace Edinburgh North	1	76,106	26.36	
	headspace Edinburgh North <sup>1</sup>	1	0	0.00	
	headspace Edinburgh North <sup>1</sup>	1	0	0.00	
	headspace Edinburgh North <sup>1</sup>	1	0	0.00	
	headspace Edinburgh North <sup>1</sup>	1	0	0.00	
	headspace Berri	2	11,173	3.87	
	headspace Murray Bridge <sup>2</sup>	2	0	0.00	
	headspace Noarlunga	3	61,402	21.26	
	headspace Port Augusta	4	5,235	1.81	
	headspace Woodville	5	38,229	13.24	
	headspace Norwood	6	53,165	18.41	
	headspace Limestone Coast	7	10,662	3.69	
	<b>Total South Australia</b>			<b>255,972</b>	<b>88.64</b>

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
<b>Western Australia (n = 428,209)</b>	headspace Albany	1	9,263	2.16
	Fremantle headspace	2	68,604	16.02
	headspace Broome	2	6,881	1.61
	headspace Osborne Park	3	94,502	22.07
	headspace Bunbury	4	17,547	4.10
	headspace Midland	4	42,011	9.81
	headspace Joondalup <sup>2</sup>	5	0	0.00
headspace Rockingham <sup>2</sup>	5	0	0.00	
headspace Armadale	6	90,391	21.11	
headspace Kalgoorlie	6	8,668	2.02	
headspace Geraldton	7	9,749	2.28	
<b>Total Western Australia</b>			<b>347,616</b>	<b>81.18</b>
<b>Tasmania (n = 87,341)</b>	headspace Launceston	2	15,840	18.14
	headspace Launceston <sup>1</sup>	4	7,200	8.24
	headspace Hobart	3	39,191	44.87
<b>Total Tasmania</b>			<b>62,231</b>	<b>71.25</b>
<b>Northern Territory (n = 44,441)</b>	headspace Darwin	1	24,652	55.47
	headspace Alice Springs	2	7,639	17.19
<b>Total Northern Territory</b>			<b>32,291</b>	<b>72.66</b>
<b>Australian Capital Territory (n = 73,462)</b>	headspace Canberra	2	73,462	100.00
	<b>Total Australian Capital Territory</b>		<b>73,462</b>	<b>100.00</b>
<b>Australia (n = 3,982,368)</b>			<b>3,204,296</b>	<b>80.46</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G10 Round 9 (16 centres) – hypothetical centre allocations based on current centre expansion model**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	105,123	1,109,331	137,246	11.01
Victoria	993,359	0	944,300	49,059	4.94
Queensland	820,217	122,415	646,635	173,582	21.16
South Australia	288,762	10,026	265,998	22,764	7.88
Western Australia	428,209	56,084	389,433	38,776	9.06
Tasmania	87,341	8,359	70,590	16,751	19.18
Northern Territory	44,441	0	36,291	8,150	18.34
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>302,007</b>	<b>3,536,040</b>	<b>446,328</b>	<b>11.21</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G11 Round 10(16 centres) – hypothetical centre allocations based on current centre expansion model**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	58,527	1,164,661	81,916	6.57
Victoria	993,359	0	964,410	28,949	2.91
Queensland	820,217	72,967	700,720	119,497	14.57
South Australia	288,762	0	270,467	18,295	6.34
Western Australia	428,209	7,952	411,652	16,557	3.87
Tasmania	87,341	0	79,186	8,155	9.34
Northern Territory	44,441	0	39,961	4,480	10.08
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>139,446</b>	<b>3,704,519</b>	<b>277,849</b>	<b>6.98</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.



**Table G12 Round 11(16 centres) – hypothetical centre allocations based on current centre expansion model**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	34,964	1,201,035	45,542	3.65
Victoria	993,359	22,315	977,365	15,994	1.61
Queensland	820,217	42,568	754,977	65,240	7.95
South Australia	288,762	0	279,952	8,810	3.05
Western Australia	428,209	0	420,833	7,376	1.72
Tasmania	87,341	5,493	82,510	4,831	5.53
Northern Territory	44,441	7,670	39,961	4,480	10.08
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>113,010</b>	<b>3,830,095</b>	<b>152,273</b>	<b>3.82</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G13 Round 12(16 centres) – hypothetical centre allocations based on current centre expansion model**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	17,511	1,229,905	16,672	1.34
Victoria	993,359	20,911	989,061	4,298	0.43
Queensland	820,217	47,201	798,996	21,221	2.59
South Australia	288,762	10,639	285,413	3,349	1.16
Western Australia	428,209	0	423,763	4,446	1.04
Tasmania	87,341	0	86,703	638	0.73
Northern Territory	44,441	3,133	43,094	1,347	3.03
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>99,395</b>	<b>3,930,397</b>	<b>51,971</b>	<b>1.31</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G14 Round 13(15 centres) – hypothetical centre allocations based on current centre expansion model**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,577	5,429	1,235,334	11,243	0.90
Victoria	993,359	10,583	981,711	11,648	1.17
Queensland	820,217	13,901	816,079	4,138	0.50
South Australia	288,762	12,125	288,762	0	0.00
Western Australia	428,209	15,227	426,879	1,330	0.31
Tasmania	87,341	6,427	82,510	4,831	5.53
Northern Territory	44,441	0	43,094	1,347	3.03
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>63,692</b>	<b>3,947,831</b>	<b>34,537</b>	<b>0.87</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G15 Round 13(15 centres) – hypothetical centre allocations based on current centre expansion model**

State	State youth population <sup>a</sup>	Additional coverage	Total coverage	Youth not covered	Percentage not covered
New South Wales	1,246,544	7,350	1,246,544	33	0.00
Victoria	993,359	11,648	993,359	0	0.00
Queensland	820,217	4,138	820,217	0	0.00
South Australia	288,762	0	288,762	0	0.00
Western Australia	428,209	4,446	428,209	0	0.00
Tasmania	87,341	4,831	87,341	0	0.00
Northern Territory	44,441	1,347	44,441	0	0.00
ACT	73,462	0	73,462	0	0.00
<b>Australia</b>	<b>3,982,368</b>	<b>33,760</b>	<b>3,982,335</b>	<b>33</b>	<b>0.00</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

Table G16 Additional youth population covered in hypothetical Rounds 9 to 14 by round

Round	Region	State	Additional youth (n) captured	Percentage of state youth population	Percentage of Australian youth population
9	Logan - Beaudesert	Queensland	60,003	7.32	1.51
	Moreton Bay - South	Queensland	31,874	3.89	0.80
	Sydney - Ryde	New South Wales	31,254	2.51	0.78
	Perth - Inner	Western Australia	31,128	7.27	0.78
	Lake Macquarie - East	New South Wales	20,531	1.65	0.52
	Ormeau - Oxenford	Queensland	17,120	2.09	0.43
	Kiama - Shellharbour	New South Wales	15,502	1.24	0.39
	Lower Hunter	New South Wales	15,375	1.23	0.39
	Mandurah	Western Australia	14,267	3.33	0.36
	Dapto - Port Kembla	New South Wales	12,889	1.03	0.32
	Pilbara	Western Australia	10,689	2.5	0.27
	Eyre Peninsula and South West	South Australia	10,026	3.47	0.25
	South Coast	New South Wales	9,572	0.77	0.24
	Burnie - Ulverstone	Tasmania	8,359	9.57	0.21
	Charters Towers - Ayr - Ingham	Queensland	7,428	0.91	0.19
	Far North	Queensland	5,990	0.73	0.15
	10	Lake Macquarie - West	New South Wales	12,448	1
Nerang		Queensland	11,954	1.46	0.30
Albury		New South Wales	11,224	1	0.28
Port Stephens		New South Wales	11,169	0.9	0.28
Richmond Valley - Coastal		New South Wales	10,917	0.88	0.27
Caloundra		Queensland	10,782	1.31	0.27
Gold Coast - North		Queensland	9,589	1.17	0.24
Cairns - North		Queensland	8,106	0.99	0.20
Wheat Belt - North		Western Australia	7,952	1.86	0.20
Burnett		Queensland	7,415	0.9	0.19
Darling Downs (West) - Maranoa		Queensland	7,193	0.88	0.18
Kempsey - Nambucca		New South Wales	7,022	0.56	0.18
Bowen Basin - North		Queensland	6,239	0.76	0.16
Tablelands (East) - Kuranda		Queensland	5,981	0.73	0.15
Inverell - Tenterfield		New South Wales	5,747	0.46	0.14
Innisfail - Cassowary Coast		Queensland	5,708	0.7	0.141

Round	Region	State	Additional youth (n) captured	Percentage of state youth population	Percentage of Australian youth population
11	Broadbeach - Burleigh	Queensland	9,829	1.2	0.25
	Robina	Queensland	9,603	1.17	0.24
	Nambour - Pomona	Queensland	9,088	1.11	0.23
	Coolangatta	Queensland	8,361	1.02	0.21
	Upper Goulburn Valley	Victoria	8,251	0.83	0.21
	Gippsland - South West	Victoria	8,147	0.82	0.20
	Armidale	New South Wales	8,065	0.65	0.20
	Clarence Valley	New South Wales	7,788	0.62	0.20
	Taree - Gloucester	New South Wales	7,752	0.62	0.19
	Lithgow - Mudgee	New South Wales	7,220	0.58	0.18
	Glenelg - Southern Grampians	Victoria	5,917	0.6	0.15
	Central Highlands (Qld)	Queensland	5,687	0.69	0.14
	North East	Tasmania	5,493	6.29	0.14
	Bourke - Cobar - Coonamble	New South Wales	4,139	0.33	0.10
	Katherine	Northern Territory	4,000	9	0.10
	Daly - Tiwi - West Arnhem	Northern Territory	3,670	8.26	0.09
	Buderim	Queensland	8,641	1.05	0.22
	Sunshine Coast Hinterland	Queensland	7,366	0.9	0.18
	Surfers Paradise	Queensland	7,181	0.88	0.18
	Gympie - Cooloola	Queensland	7,152	0.87	0.18
Darling Downs - East	Queensland	7,119	0.87	0.18	
Wellington	Victoria	7,107	0.72	0.18	
Wangaratta - Benalla	Victoria	7,086	0.71	0.18	
Southern Highlands	New South Wales	7,066	0.57	0.18	
Heathcote - Castlemaine - Kyneton	Victoria	6,718	0.68	0.17	
Maryborough	Queensland	6,560	0.8	0.16	
Fleurieu - Kangaroo Island	South Australia	6,170	2.14	0.15	
Upper Murray exc. Albury	New South Wales	6,075	0.49	0.15	
Mid North	South Australia	4,469	1.55	0.11	
Moree - Narrabri	New South Wales	4,370	0.35	0.11	
Outback - South	Queensland	3,182	0.39	0.08	
East Arnhem	Northern Territory	3,133	7.05	0.08	
12					

Round	Region	State	Additional youth (n) captured	Percentage of state youth population	Percentage of Australian youth population	
13	Augusta - Margaret River - Busselton	Western Australia	6,453	1.51	0.16	
	Campaspe	Victoria	6,237	0.63	0.16	
	Mudgeeraba - Tallebudgera	Queensland	5,684	0.69	0.14	
	Barossa	South Australia	5,461	1.89	0.14	
	Upper Hunter	New South Wales	5,429	0.44	0.14	
	Noosa	Queensland	5,022	0.61	0.13	
	Moirá	Victoria	4,346	0.44	0.11	
	Lower North	South Australia	3,349	1.16	0.08	
	Meander Valley - West Tamar	Tasmania	3,324	3.81	0.08	
	Yorke Peninsula	South Australia	3,315	1.15	0.08	
	Whitsunday	Queensland	3,195	0.39	0.08	
	Manjimup	Western Australia	3,116	0.73	0.08	
	West Coast	Tasmania	3,103	3.55	0.08	
	Wheat Belt - South	Western Australia	2,930	0.68	0.07	
	Esperance	Western Australia	2,728	0.64	0.07	
	14	Creswick - Daylesford - Ballan	Victoria	3,879	0.39	0.10
		Great Lakes	New South Wales	3,860	0.31	0.10
		Maryborough - Pyrenees	Victoria	3,471	0.35	0.09
		Snowy Mountains	New South Wales	3,175	0.25	0.08
		Barwon - West	Victoria	2,761	0.28	0.07
Huon - Bruny Island		Tasmania	2,531	2.9	0.06	
Gold Coast Hinterland		Queensland	2,479	0.3	0.06	
Tumut - Tumbarumba		New South Wales	2,174	0.17	0.05	
Lower Murray		New South Wales	2,001	0.16	0.05	
Central Highlands (Tas.)		Tasmania	1,662	1.9	0.04	
Port Douglas - Daintree		Queensland	1,659	0.2	0.04	
Loddon - Elmore		Victoria	1,537	0.15	0.04	
Barkly		Northern Territory	1,347	3.03	0.03	
Gascoyne		Western Australia	1,330	0.31	0.03	
South East Coast	Tasmania	638	0.73	0.02		
<b>Total</b>			<b>752,054</b>		<b>18.88</b>	

Note: Centre allocation was prioritised by weighted youth population. However, figures included in the table refer to the unweighted youth population within each area. Therefore, some areas with comparatively smaller populations, which are in rural and remote areas and / or highly disadvantaged areas, have been assigned in wave 9 prior to the allocation of centres to areas with larger youth populations.

Table G17 Additional youth population covered by hypothetical centres by state (Round 9 – 14)

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
<b>New South Wales (n = 1,246,577)</b>				
	Sydney - Ryde	9	31,254	2.51
	Lake Macquarie - East	9	20,531	1.65
	Lower Hunter	9	15,375	1.23
	Kiama - Shellharbour	9	15,502	1.24
	Dapto - Port Kembla	9	12,889	1.03
	South Coast	9	9,572	0.77
	Lake Macquarie - West	10	12,448	1.00
	Albury	10	11,224	0.90
	Port Stephens	10	11,169	0.90
	Richmond Valley - Coastal	10	10,917	0.88
	Kempsey - Nambucca	10	7,022	0.56
	Inverell - Tenterfield	10	5,747	0.46
	Clarence Valley	11	7,788	0.62
	Bourke - Cobar - Coonamble	11	4,139	0.33
	Armidale	11	8,065	0.65
	Taree - Gloucester	11	7,752	0.62
	Lithgow - Mudgee	11	7,220	0.58
	Upper Murray exc. Albury	12	6,075	0.49
	Moree - Narrabri	12	4,370	0.35
	Southern Highlands	12	7,066	0.57
	Upper Hunter	13	5,429	0.44
	Great Lakes	14	3,860	0.31
	Snowy Mountains	14	3,175	0.25
	Lower Murray	14	2,001	0.16
	Tumut - Tumbarumba	14	2,174	0.17
	<b>Total New South Wales</b>		<b>232,764</b>	<b>18.67</b>

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
<b>Victoria (n = 993,359)</b>				
	Upper Goulburn Valley	11	8,251	0.83
	Gippsland - South West	11	8,147	0.82
	Glennelg - Southern Grampians	11	5,917	0.60
	Wellington	12	7,107	0.72
	Wangaratta - Benalla	12	7,086	0.71
	Heathcote - Castlemaine - Kyneton	12	6,718	0.68
	Campaspe	13	6,237	0.63
	Moira	13	4,346	0.44
	Maryborough - Pyrenees	14	3,471	0.35
	Creswick - Daylesford - Ballan	14	3,879	0.39
	Barwon - West	14	2,761	0.28
	Loddon - Elmore	14	1,537	0.15
	<b>Total Victoria</b>		<b>65,457</b>	<b>6.60</b>
<b>Queensland (n = 820,217)</b>				
	Logan - Beaudesert	9	60,003	7.32
	Moreton Bay - South	9	31,874	3.89
	Ormeau - Oxenford	9	17,120	2.09
	Far North	9	5,990	0.73
	Charters Towers - Ayr - Ingham	9	7,428	0.91
	Darling Downs (West) - Maranoa	10	7,193	0.88
	Nerang	10	11,954	1.46
	Cairns - North	10	8,106	0.99
	Burnett	10	7,415	0.90
	Caloundra	10	10,782	1.31
	Tablelands (East) - Kuranda	10	5,981	0.73
	Innisfail - Cassowary Coast	10	5,708	0.70
	Bowen Basin - North	10	6,239	0.76
	Gold Coast - North	10	9,589	1.17
	Broadbeach - Burleigh	11	9,829	1.20
	Nambour - Pomona	11	9,088	1.11
	Robina	11	9,603	1.17
	Central Highlands	11	5,687	0.69
	Coolangatta	11	8,361	1.02
	Gympie - Cooloola	12	7,152	0.87

State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
	Darling Downs - East	12	7,119	0.87
	Buderim	12	8,641	1.05
	Maryborough	12	6,560	0.80
	Surfers Paradise	12	7,181	0.88
	Sunshine Coast Hinterland	12	7,366	0.90
	Outback - South	12	3,182	0.39
	Mudgeeraba - Tallebudgera	13	5,684	0.69
	Whitsunday	13	3,195	0.39
	Noosa	13	5,022	0.61
	Port Douglas - Daintree	14	1,659	0.20
	Gold Coast Hinterland	14	2,479	0.30
	<b>Total Queensland</b>		<b>303,190</b>	<b>36.98</b>
<b>South Australia (n = 288,762)</b>	Eyre Peninsula and South West	9	10,026	3.47
	Mid North	12	4,469	1.55
	Fleurieu - Kangaroo Island	12	6,170	2.14
	Yorke Peninsula	13	3,315	1.15
	Barossa	13	5,461	1.89
	Lower North	13	3,349	1.16
	<b>Total South Australia</b>		<b>32,790</b>	<b>11.36</b>
<b>Western Australia (n = 428,209)</b>	Perth - Inner	9	31,128	7.27
	Pilbara	9	10,689	2.50
	Mandurah	9	14,267	3.33
	Wheat Belt - North	10	7,952	1.86
	Augusta - Margaret River - Busselton	13	6,453	1.51
	Esperance	13	2,728	0.64
	Wheat Belt - South	13	2,930	0.68
	Manjimup	13	3,116	0.73
	Gascoyne	14	1,330	0.31
	<b>Total Western Australia</b>		<b>80,593</b>	<b>18.83</b>



State (youth population) <sup>a</sup>	headspace	Round	Additional youth captured	Percentage of state youth population
<b>Tasmania (n = 87,341)</b>	Burnie - Ulverstone	9	8,359	9.57
	North East	11	5,493	6.29
	West Coast	13	3,103	3.55
	Meander Valley - West Tamar	13	3,324	3.81
	Huon - Bruny Island	14	2,531	2.90
	Central Highlands	14	1,662	1.90
	South East Coast	14	638	0.73
<b>Total Tasmania</b>			<b>25,110</b>	<b>28.75</b>
<b>Northern Territory (n = 44,441)</b>	Katherine	11	4,000	9.00
	Daly - Tiwi - West Arnhem	11	3,670	8.26
	East Arnhem	12	3,133	7.05
	Barkly	14	1,347	3.03
	<b>Total Northern Territory</b>		<b>12,150</b>	<b>27.34</b>
<b>Australia (n = 3,982,368)</b>			<b>752,054</b>	<b>18.88</b>

<sup>a</sup> population is as at the 2011 Census of Population and Housing.

**Table G18 Forecast funding requirements of centre expansion under current allocation model to its hypothetical geographic conclusion, 2014 dollars**

Financial year	Fully operational sites at start of year	Additional sites	Cumulative total sites	headspace grant cost fully operational sites	headspace roll-out cost additional sites	hNO costs	MBS costs (fully operational centres only)	Total cost	Notes
2013-14	56	14	70	\$47,152,000	\$11,200,000	\$6,720,000	\$6,720,000	\$71,792,000	56 fully operational sites (rounds 1-4), plus 14 round 5 sites (Mt Isa not operational yet)
2014-15	70	17	87	\$58,940,000	\$13,600,000	\$7,830,000	\$8,400,000	\$89,292,000	plus 16 round 6 sites, plus Mt Isa
2015-16	87	10	97	\$73,254,000	\$8,000,000	\$8,730,000	\$10,440,000	\$101,006,000	plus 10 round 7 sites
2016-17	97	5	102	\$81,674,000	\$4,000,000	\$9,180,000	\$11,640,000	\$107,106,000	plus 5 round 8 sites
2017-18	102	16	118	\$85,884,000	\$12,800,000	\$10,620,000	\$12,240,000	\$122,252,000	plus 16 round 9 sites
2018-19	118	16	134	\$99,356,000	\$12,800,000	\$12,060,000	\$14,160,000	\$139,180,000	plus 16 round 10 sites
2019-20	134	16	150	\$112,828,000	\$12,800,000	\$13,500,000	\$6,080,000	\$156,108,000	plus 16 round 11 sites
2020-20	150	16	166	\$126,300,000	\$12,800,000	\$14,940,000	\$18,000,000	\$173,036,000	plus 16 round 12 sites
2021-22	166	15	181	\$139,772,000	\$12,000,000	\$16,290,000	\$19,920,000	\$189,068,000	plus 15 round 13 sites
2022-23	181	15	196	\$152,402,000	\$12,000,000	\$17,640,000	\$21,720,000	\$204,938,000	plus 15 round 14 sites
2023-24	196	-	196	\$165,032,000	-	\$18,816,000	\$23,520,000	\$207,368,000	196 fully operational sites

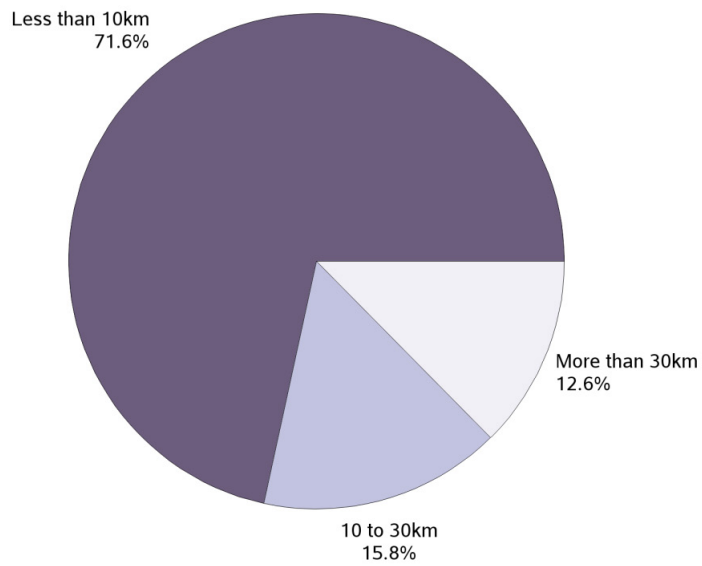
<sup>1</sup> Each centre is costed at the headspace centre average annual funding allocation of \$842,000

<sup>2</sup> In the first year of operation a centre is allocated \$350,000 for fit out and \$450,000 for part-year services. In subsequent years each centre is funded on average \$842,000 p/a

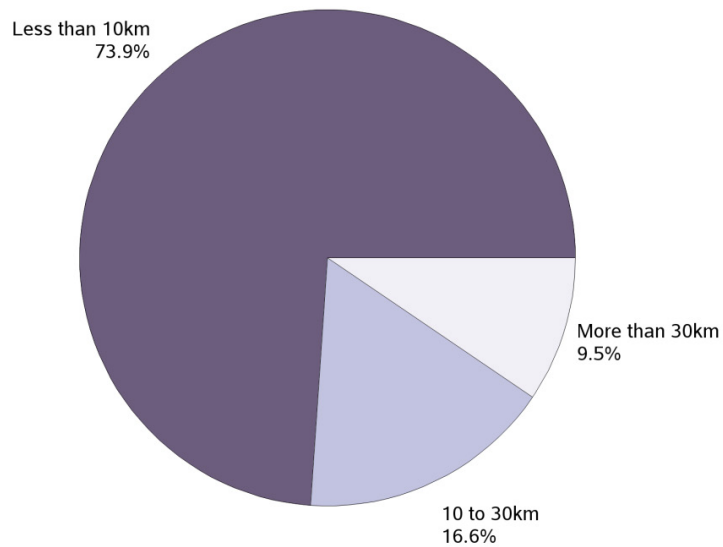
<sup>3</sup> hNO costs of \$96,000 per centre for central administration of the service model

<sup>4</sup> MBS costs were estimated to be \$119,009 per centre per year based on MBS data provided by DoH. This figure has been rounded to \$120,000 for the purpose of forecast funding requirements.

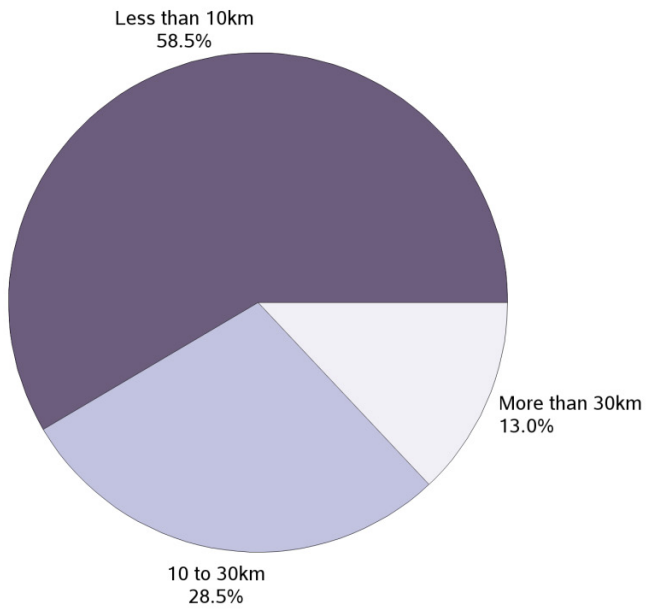
**Figure G1 Percentage of 12-25 year olds within 10km, 10-30km and more than 30 km from nearest headspace centre (round 1-8), New South Wales**



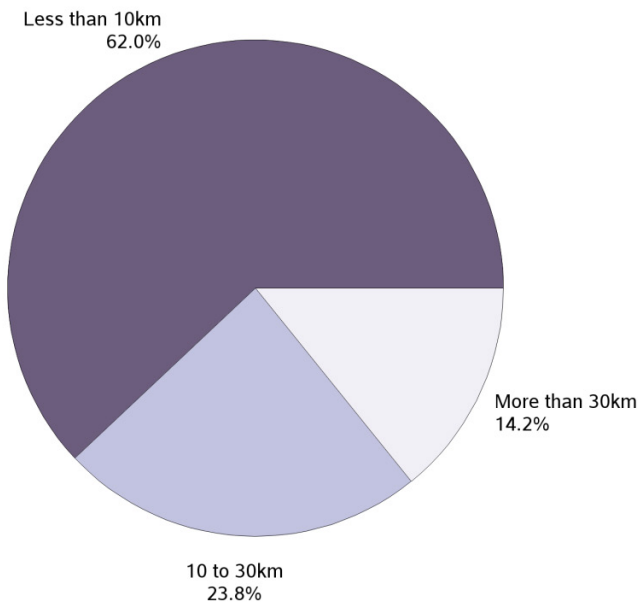
**Figure G2 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Victoria**



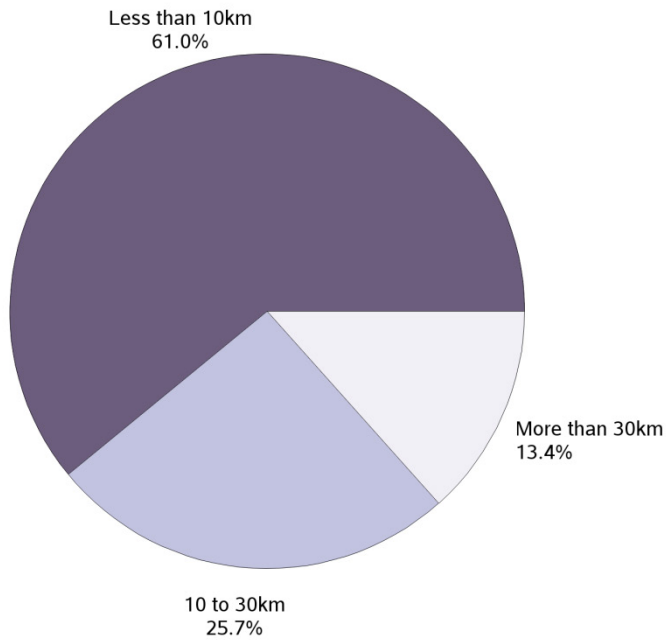
**Figure G3 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Queensland**



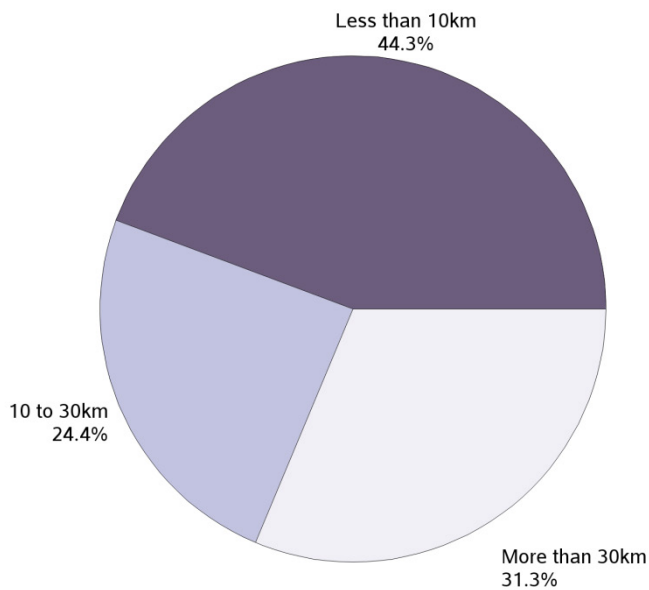
**Figure G4 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), South Australia**



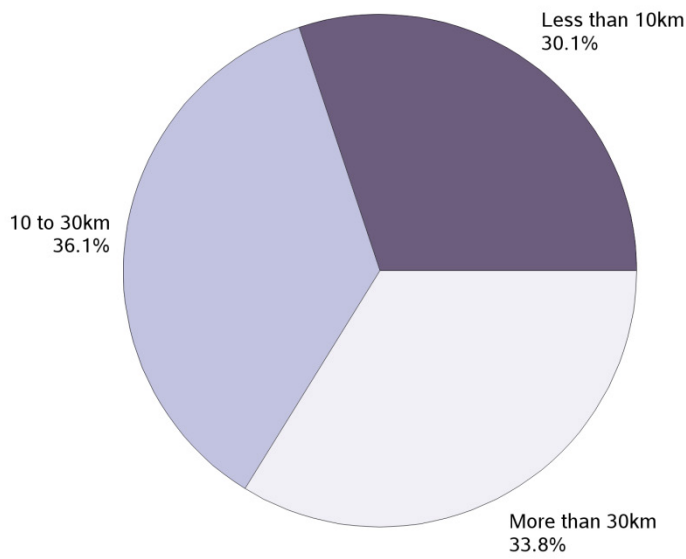
**Figure G5 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Western Australia**



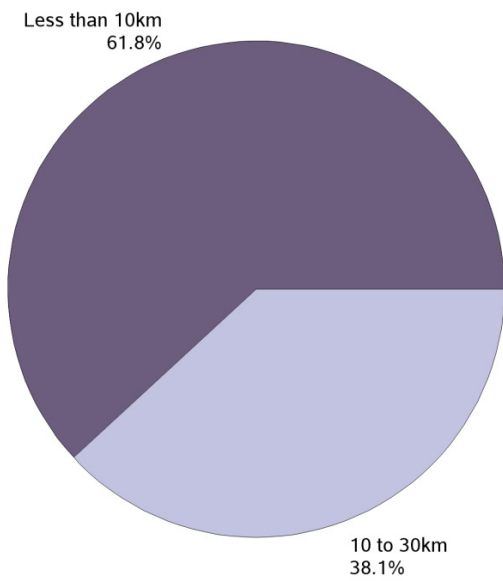
**Figure G6 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Tasmania**



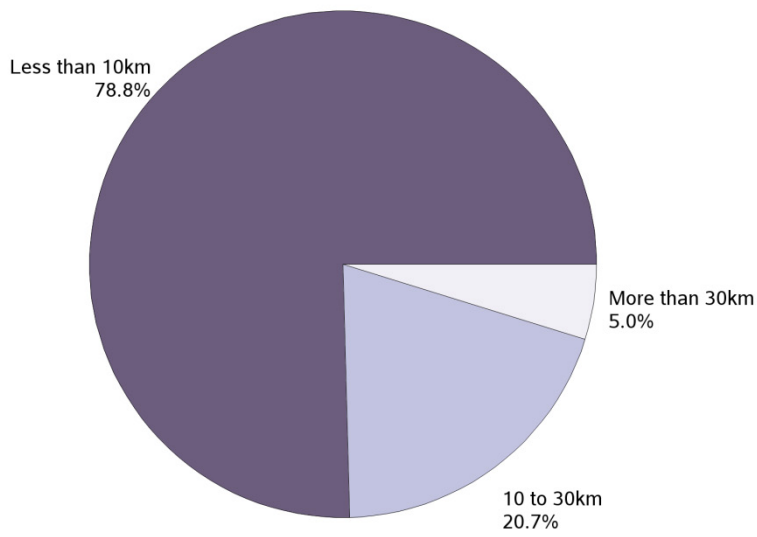
**Figure G7 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Northern Territory**



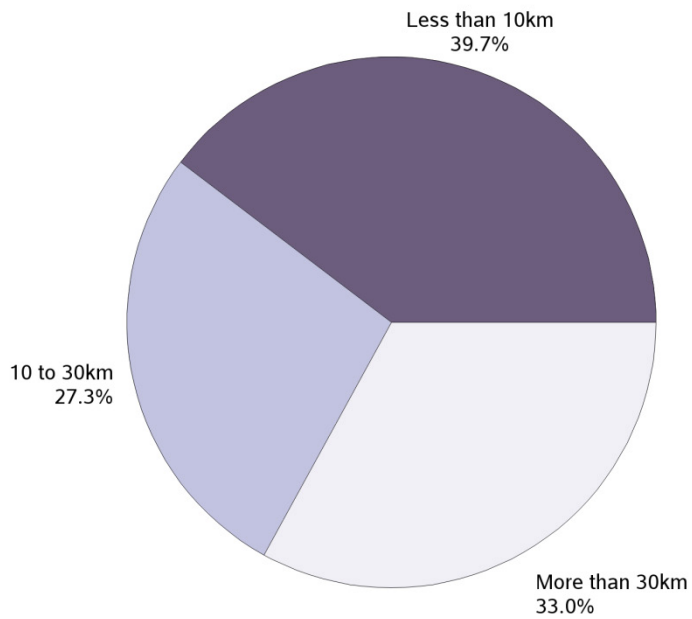
**Figure G8 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), ACT**



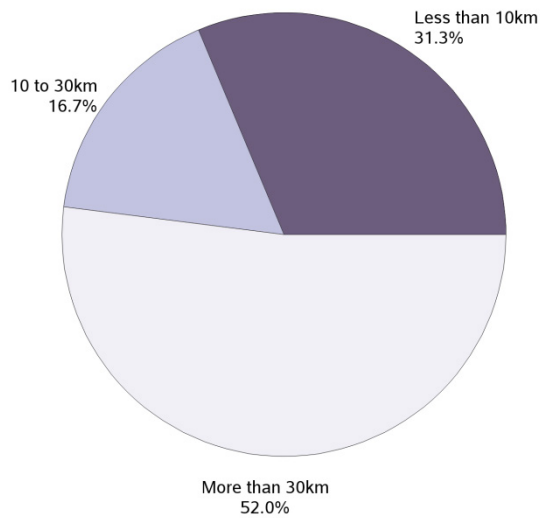
**Figure G9 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Major cities**



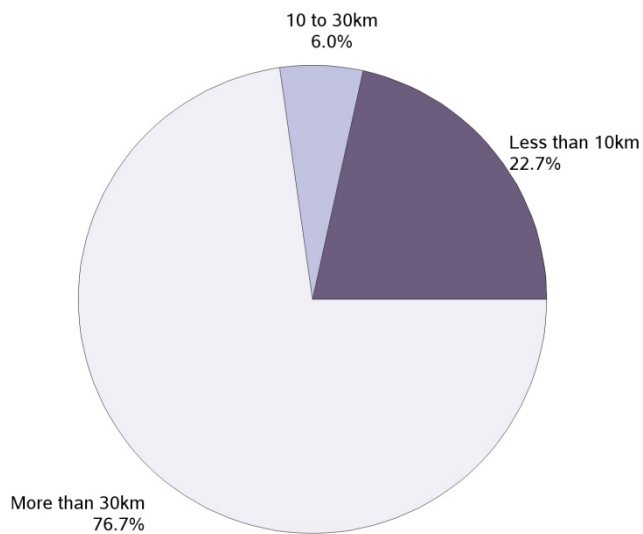
**Figure G10 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Inner Regional Australia**



**Figure G11 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Outer Regional Australia**

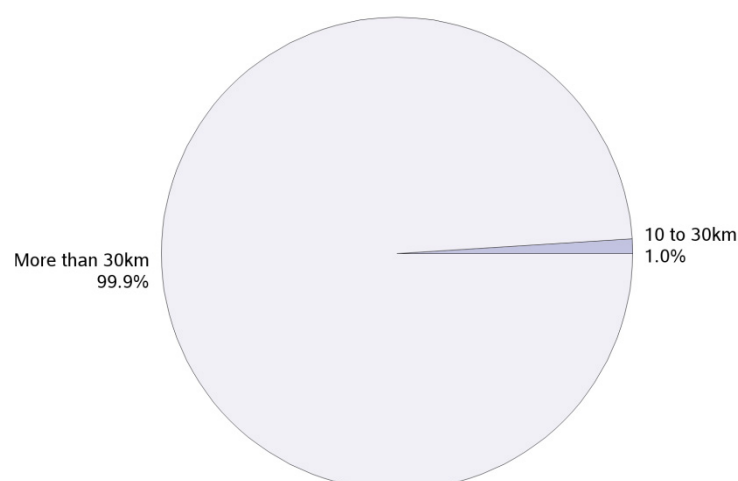


**Figure G12 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Remote Australia**





**Figure G13 Percentage of 12-25 year olds within 10km, 10 to 30km, and more than 30km from nearest headspace centre (Round 1 to 8), Very remote Australia**



**Table G19 Australians 18-25 years by distance to nearest headspace centre by Round 1-9, and state**

State		Persons 12-25 years			
		Distance to nearest headspace centre			Total
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	
New South Wales	Number	938,867	162,078	145,632	1,246,577
	Per cent	75.3	13.0	11.7	100.0
Victoria	Number	733,776	165,223	94,360	993,359
	Per cent	73.9	16.6	9.5	100.0
Queensland	Number	537,581	177,959	104,677	820,217
	Per cent	65.5	21.7	12.8	100.0
South Australia	Number	183,106	68,738	36,918	288,762
	Per cent	63.4	23.8	12.8	100.0
Western Australia	Number	292,752	81,565	53,892	428,209
	Per cent	68.4	19.0	12.6	100.0
Tasmania	Number	38,729	21,288	27,324	87,341
	Per cent	44.3	24.4	31.3	100.0
Northern Territory	Number	13,381	16,060	15,000	44,441
	Per cent	30.1	36.1	33.8	100.0
Australian Capital Territory	Number	45,429	28,023	10	73,462
	Per cent	61.8	38.1	0.0	100.0
Australia	Number	2,783,621	720,934	477,813	3,982,368
	Per cent	69.9	18.1	12.0	100.0

**Table G20 Australians 18-25 years by distance to nearest headspace centre by Round 1-10, and state**

State		Persons 12-25 years			
		Distance to nearest headspace centre			Total
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	
New South Wales	Number	957,791	157,068	131,718	1,246,577
	Per cent	76.8	12.6	10.6	100.0
Victoria	Number	733,831	165,168	94,360	993,359
	Per cent	73.9	16.6	9.5	100.0
Queensland	Number	583,027	139,054	98,136	820,217
	Per cent	71.1	17.0	12.0	100.0
South Australia	Number	178,924	68,711	41,127	288,762
	Per cent	62.0	23.8	14.2	100.0
Western Australia	Number	292,752	81,565	53,892	428,209
	Per cent	68.4	19.0	12.6	100.0
Tasmania	Number	38,729	21,288	27,324	87,341
	Per cent	44.3	24.4	31.3	100.0
Northern Territory	Number	13,381	16,060	15,000	44,441
	Per cent	30.1	36.1	33.8	100.0
Australian Capital Territory	Number	45,429	28,023	10	73,462
	Per cent	61.8	38.1	0.0	100.0
Australia	Number	2,843,864	676,937	461,567	3,982,368
	Per cent	71.4	17.0	11.6	100.0

**Table G21 Australians 18-25 years by distance to nearest headspace centre by Round 1-11, and state**

State		Persons 12-25 years			
		Distance to nearest headspace centre			Total
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	
New South Wales	Number	970,222	164,987	111,368	1,246,577
	Per cent	77.8	13.2	8.9	100.0
Victoria	Number	737,815	171,412	84,132	993,359
	Per cent	74.3	17.3	8.5	100.0
Queensland	Number	595,120	139,325	85,772	820,217
	Per cent	72.6	17.0	10.5	100.0
South Australia	Number	178,924	68,711	41,127	288,762
	Per cent	62.0	23.8	14.2	100.0
Western Australia	Number	293,307	81,642	53,260	428,209
	Per cent	68.5	19.1	12.4	100.0
Tasmania	Number	38,729	21,288	27,324	87,341
	Per cent	44.3	24.4	31.3	100.0
Northern Territory	Number	13,381	16,060	15,000	44,441
	Per cent	30.1	36.1	33.8	100.0
Australian Capital Territory	Number	45,429	28,023	10	73,462
	Per cent	61.8	38.1	0.0	100.0
Australia	Number	2,872,927	691,448	417,993	3,982,368
	Per cent	72.1	17.4	10.5	100.0

**Table G22 Australians 18-25 years by distance to nearest headspace centre by Round 1-12, and state**

State		Persons 12-25 years			
		Distance to nearest headspace centre			Total
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	
New South Wales	Number	976,324	170,313	99,940	1,246,577
	Per cent	78.3	13.7	8.0	100.0
Victoria	Number	744,279	186,508	62,572	993,359
	Per cent	74.9	18.8	6.3	100.0
Queensland	Number	605,802	135,994	78,421	820,217
	Per cent	73.9	16.6	9.6	100.0
South Australia	Number	187,096	70,371	31,295	288,762
	Per cent	64.8	24.4	10.8	100.0
Western Australia	Number	292,752	81,565	53,892	428,209
	Per cent	68.4	19.0	12.6	100.0
Tasmania	Number	38,729	21,288	27,324	87,341
	Per cent	44.3	24.4	31.3	100.0
Northern Territory	Number	13,381	16,060	15,000	44,441
	Per cent	30.1	36.1	33.8	100.0
Australian Capital Territory	Number	45,429	28,023	10	73,462
	Per cent	61.8	38.1	0.0	100.0
Australia	Number	2,903,792	710,122	368,454	3,982,368
	Per cent	72.9	17.8	9.3	100.0

**Table G23 Australians 18-25 years by distance to nearest headspace centre by Round 1-13, and state**

State		Persons 12-25 years			
		Distance to nearest headspace centre			Total
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	
New South Wales	Number	979,362	173,633	93,582	1,246,577
	Per cent	78.6	13.9	7.5	100.0
Victoria	Number	745,441	187,755	60,163	993,359
	Per cent	75.0	18.9	6.1	100.0
Queensland	Number	612,799	131,501	75,917	820,217
	Per cent	74.7	16.0	9.3	100.0
South Australia	Number	191,135	73,287	24,340	288,762
	Per cent	66.2	25.4	8.4	100.0
Western Australia	Number	298,847	84,490	44,872	428,209
	Per cent	69.8	19.7	10.5	100.0
Tasmania	Number	38,729	17,509	31,103	87,341
	Per cent	44.3	20.0	35.6	100.0
Northern Territory	Number	13,381	16,060	15,000	44,441
	Per cent	30.1	36.1	33.8	100.0
Australian Capital Territory	Number	45,429	28,023	10	73,462
	Per cent	61.8	38.1	0.0	100.0
Australia	Number	2,925,123	712,258	344,987	3,982,368
	Per cent	73.5	17.9	8.7	100.0

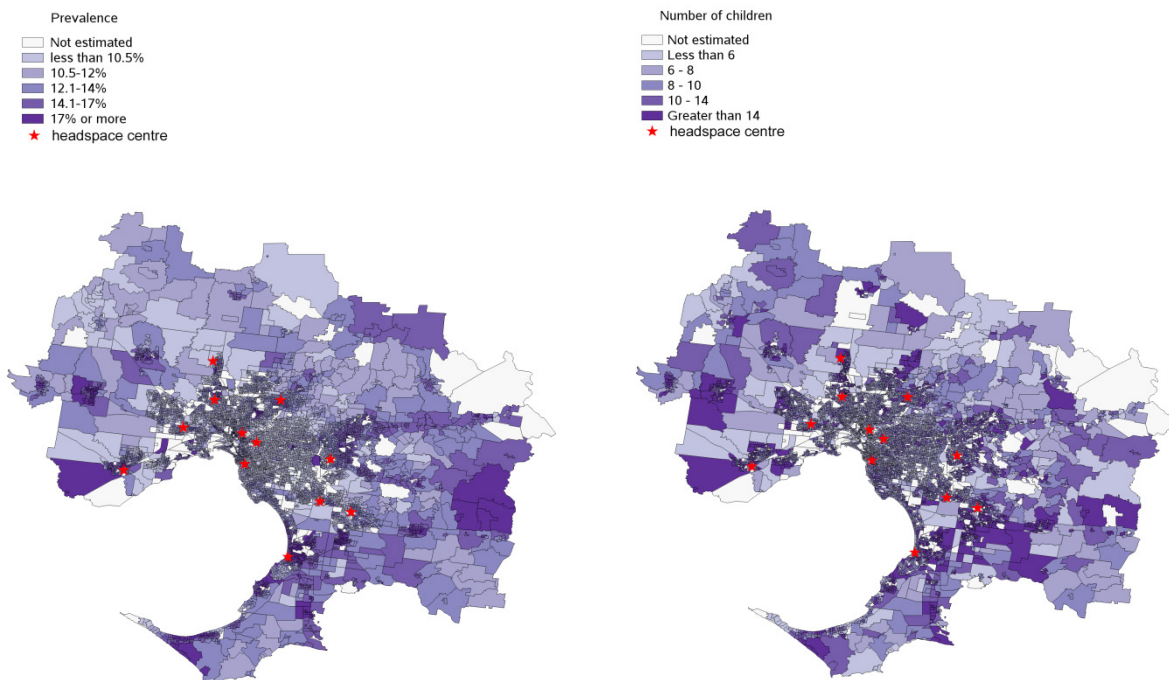
**Table G24 Australians 18-25 years by distance to nearest headspace centre by Round 1-14, and state**

State		Persons 12-25 years			
		Distance to nearest headspace centre			Total
		Less than 10 kilometres	10 - 30 kilometres	30 kilometres or more	
<b>New South Wales</b>	Number	980,698	175,245	90,634	<b>1,246,577</b>
	Per cent	78.7	14.1	7.3	<b>100.0</b>
<b>Victoria</b>	Number	748,419	190,061	54,879	<b>993,359</b>
	Per cent	75.3	19.1	5.5	<b>100.0</b>
<b>Queensland</b>	Number	615,459	131,524	73,234	<b>820,217</b>
	Per cent	75.0	16.0	8.9	<b>100.0</b>
<b>South Australia</b>	Number	191,135	73,287	24,340	<b>288,762</b>
	Per cent	66.2	25.4	8.4	<b>100.0</b>
<b>Western Australia</b>	Number	301,954	85,154	41,101	<b>428,209</b>
	Per cent	70.5	19.9	9.6	<b>100.0</b>
<b>Tasmania</b>	Number	46,775	27,511	13,055	<b>87,341</b>
	Per cent	53.6	31.5	14.9	<b>100.0</b>
<b>Northern Territory</b>	Number	14,993	16,080	13,368	<b>44,441</b>
	Per cent	33.7	36.2	30.1	<b>100.0</b>
<b>Australian Capital Territory</b>	Number	45,429	28,023	10	<b>73,462</b>
	Per cent	61.8	38.1	0.0	<b>100.0</b>
<b>Australia</b>	Number	2,944,862	726,885	310,621	<b>3,982,368</b>
	Per cent	73.9	18.3	7.8	<b>100.0</b>

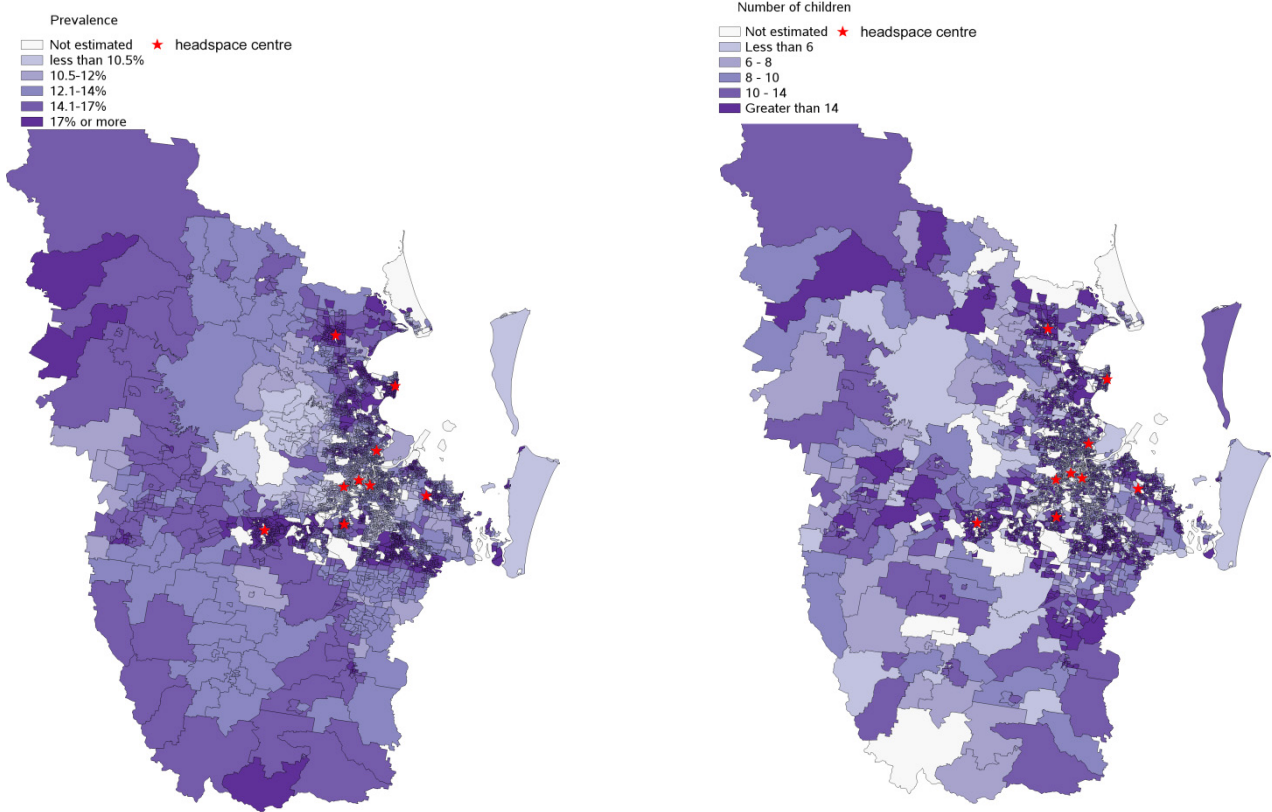
## Synthetic small area estimates of youth at risk of a mental health disorder

The following figures provide the proportion and number of young people aged 12 – 17 years who are estimated to be at risk of a mental health disorder at the small area level (SA1). Differences are evident in the areas which have a high proportion of at risk youth and areas with a higher number of at risk youth. These differences are more pronounced in non-metropolitan areas which tend to have higher predicted levels of at risk youth, as a proportion of their population, but small youth populations.

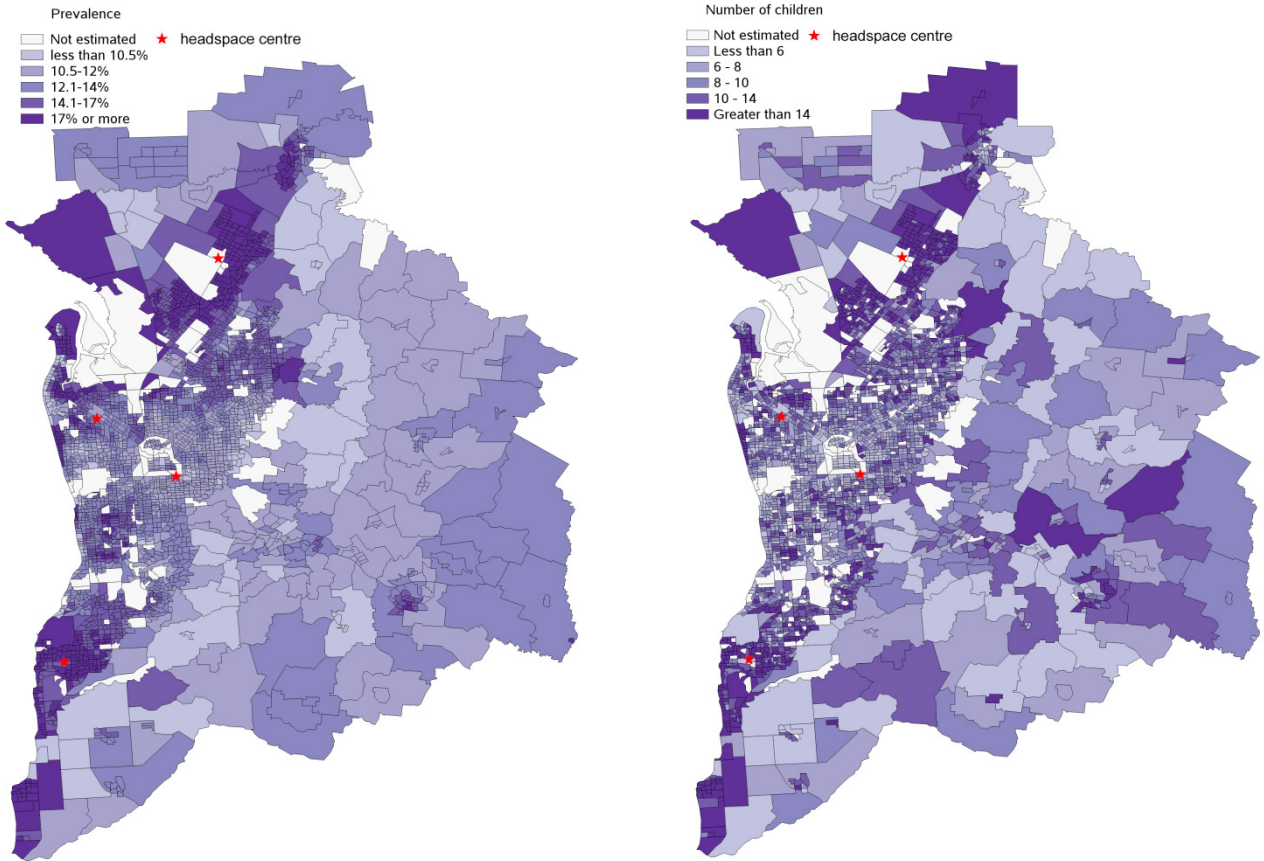
**Figure G14 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Melbourne**



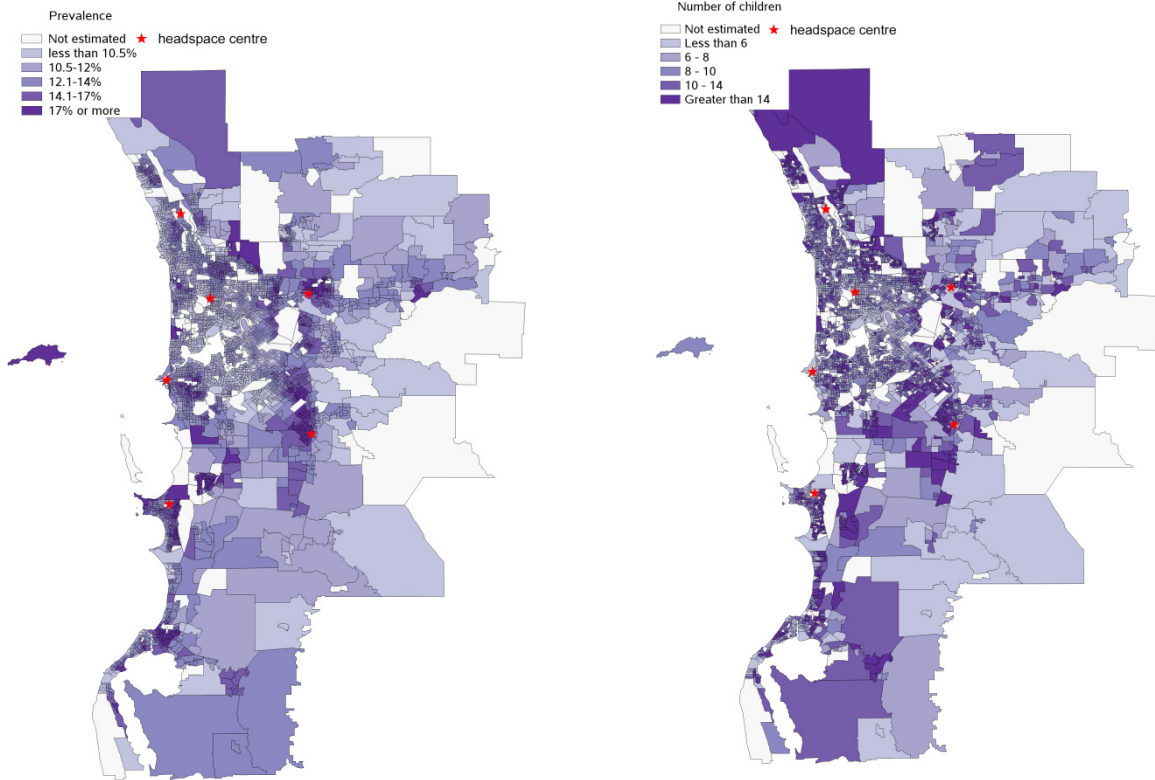
**Figure G15 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Brisbane**



**Figure G16 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Adelaide**

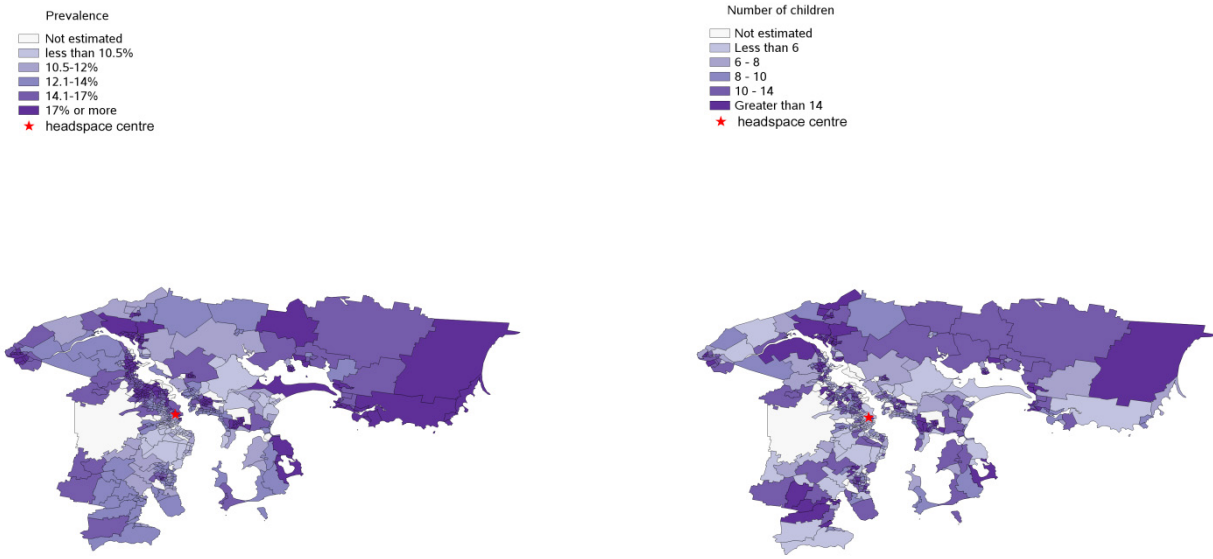


**Figure G17 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Perth**

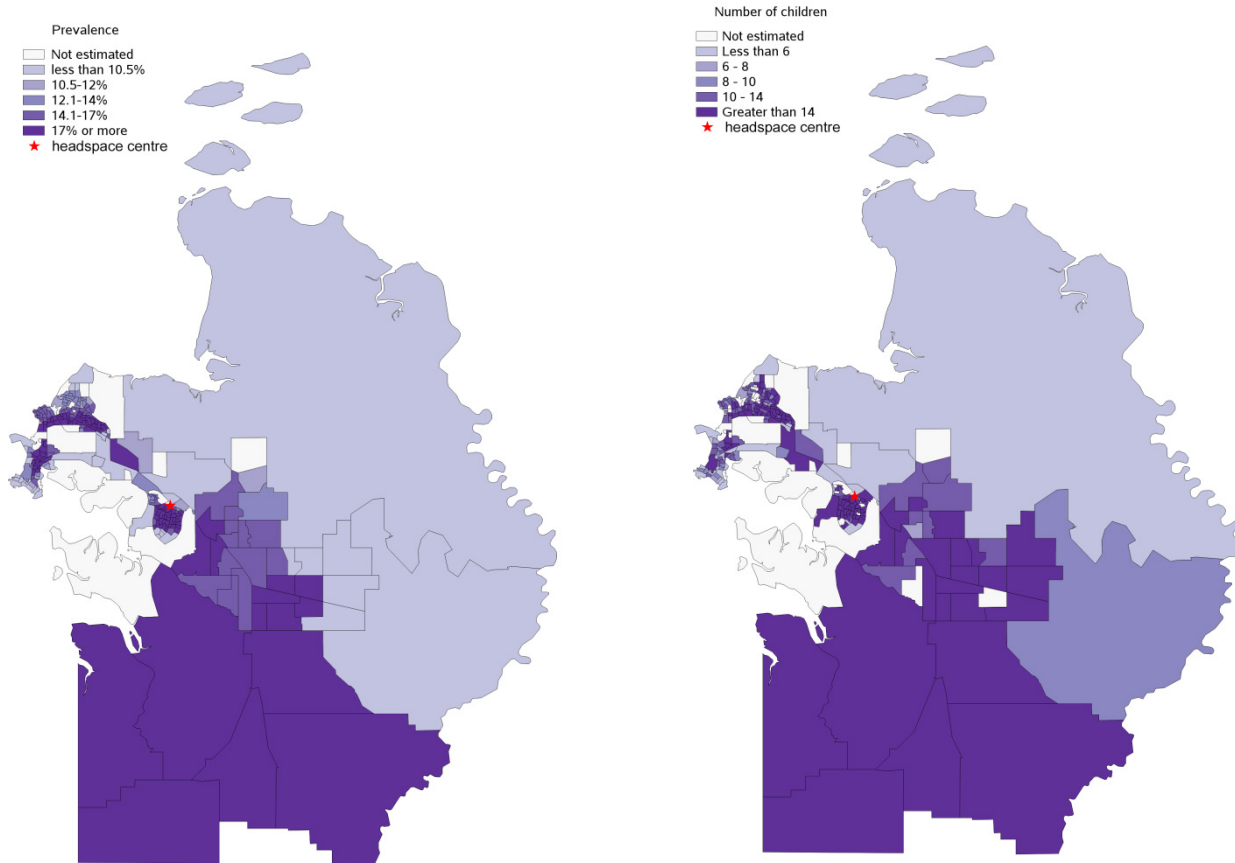




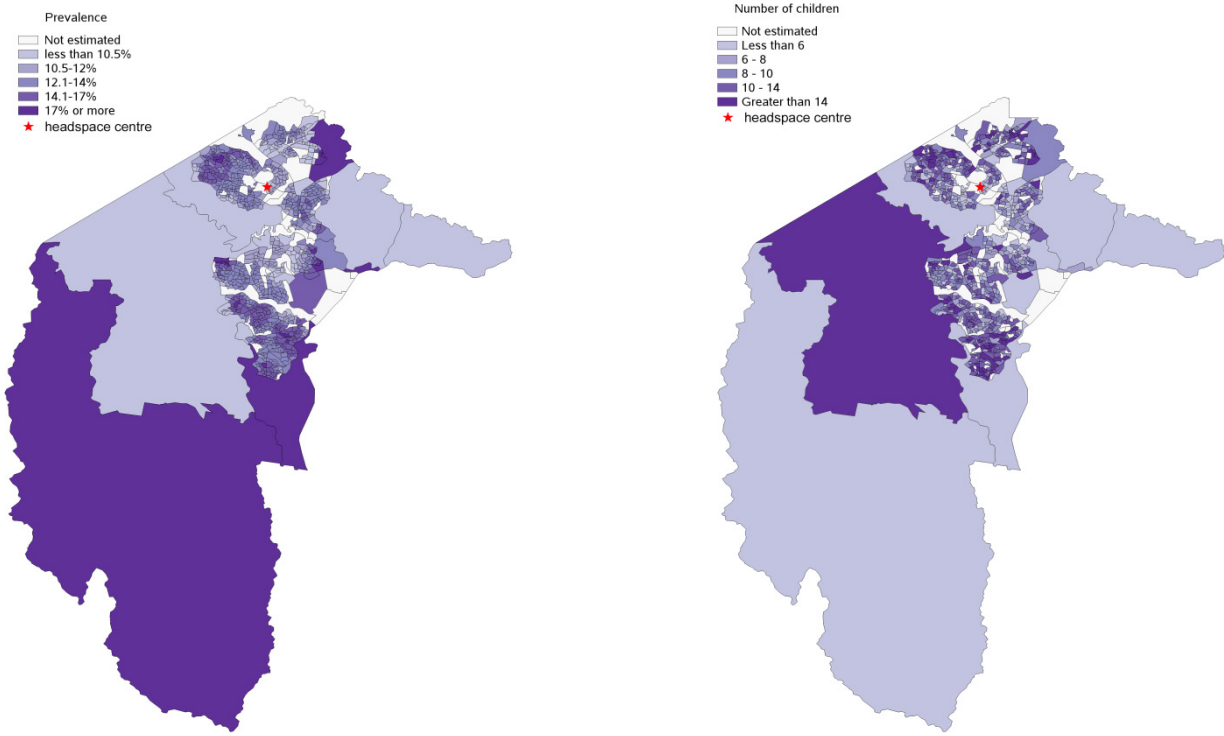
**Figure G18 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Hobart**



**Figure G19 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in Darwin**



**Figure G20 Estimated prevalence and number of 12–17 years at risk of a mental health disorder in the Australian Capital Territory**

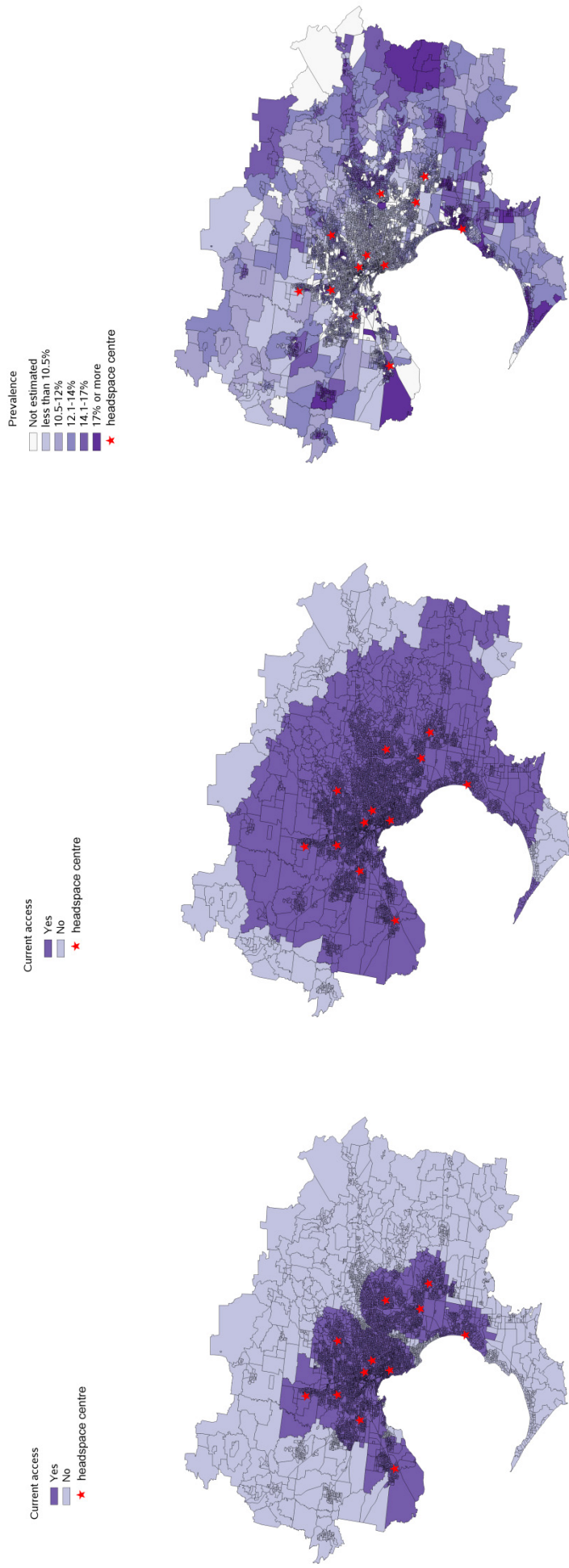


### Synthetic small area estimates of youth at risk of a mental health problem

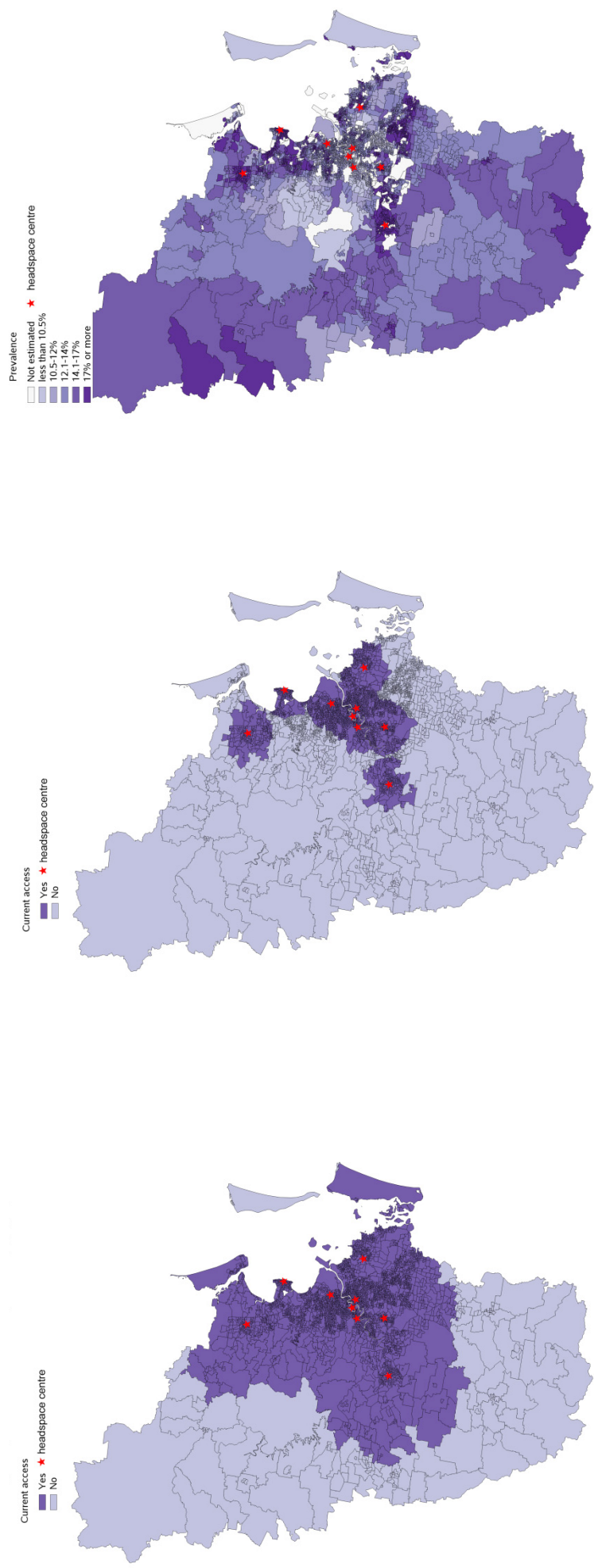
The following figures illustrate the SA1s within 10 and 30km of an existing headspace centre and the estimated prevalence of youth at risk of mental health problems for each capital city. Distance calculations were based on the geocoded location of the headspace centre and the centroid of each SA1. Prevalence estimates are based on synthetic small area estimates.

These maps demonstrate that there is a substantial difference in current youth coverage based on the geographic definition of access used. Further, in many cities, the areas which are less likely to have access to services, based on their geographic proximity to current services, tend to have a higher prevalence of youth at risk of mental health problems. These data highlight inequities in the current allocation of services.

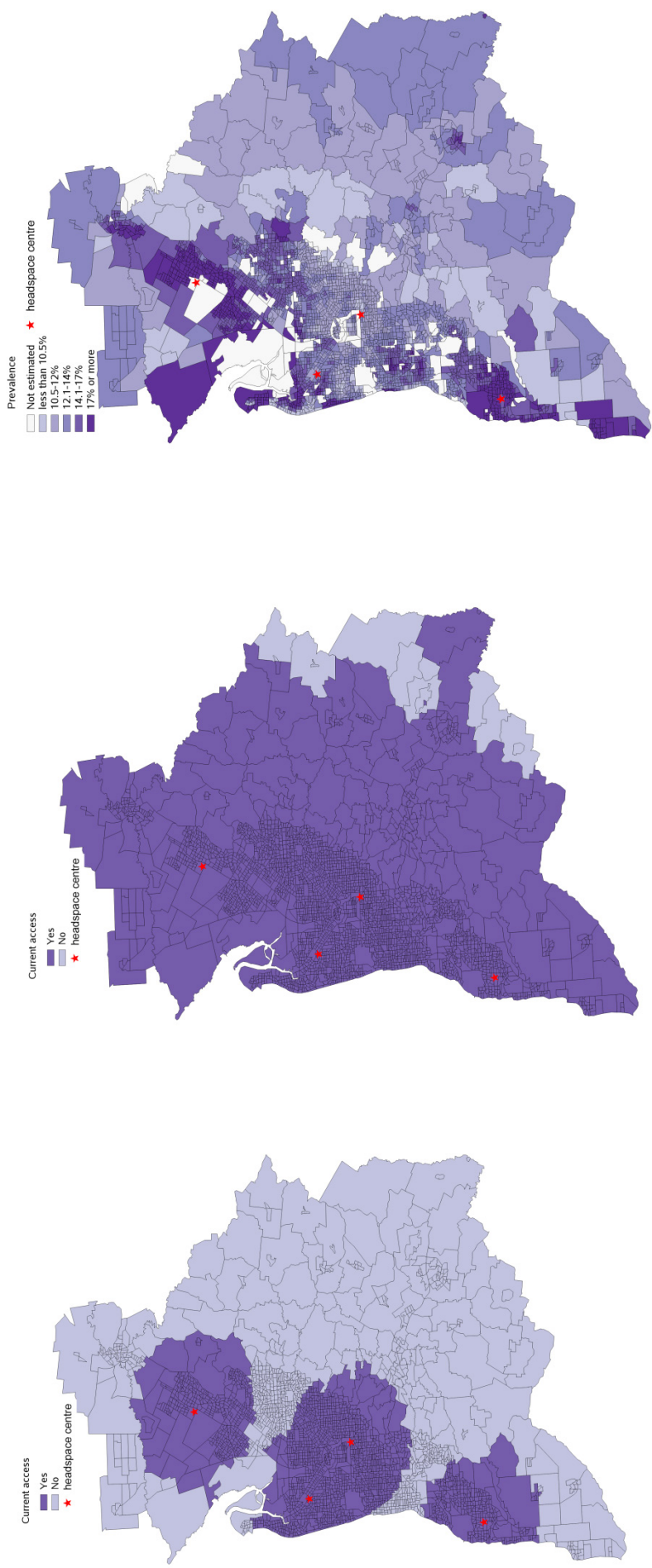
**Figure G21 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Melbourne**



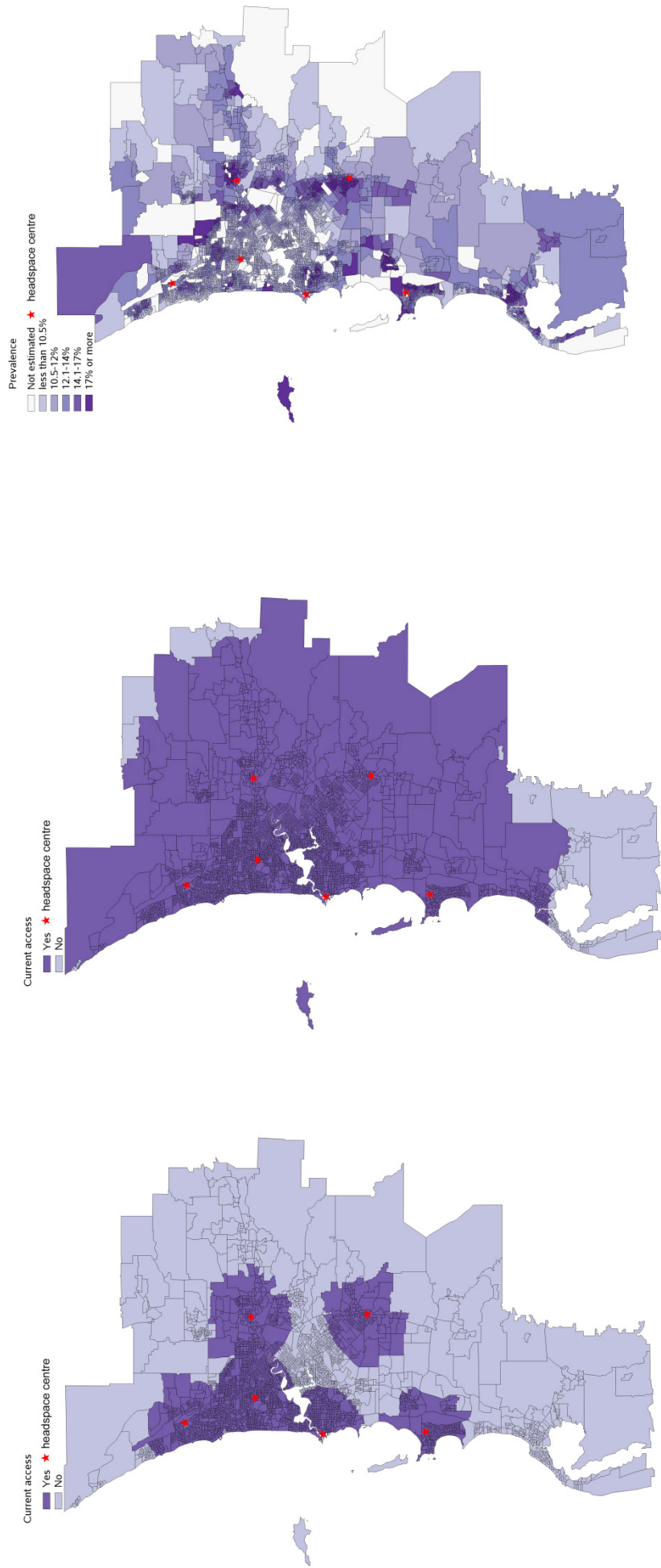
**Figure G22 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Brisbane**



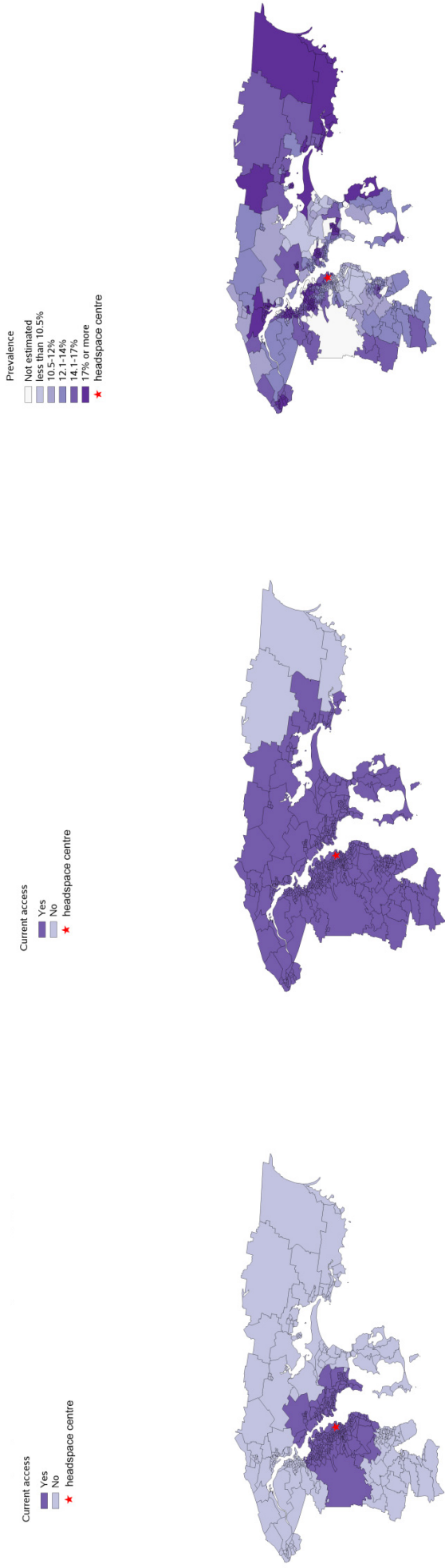
**Figure G23 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Adelaide**



**Figure G24 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Perth**

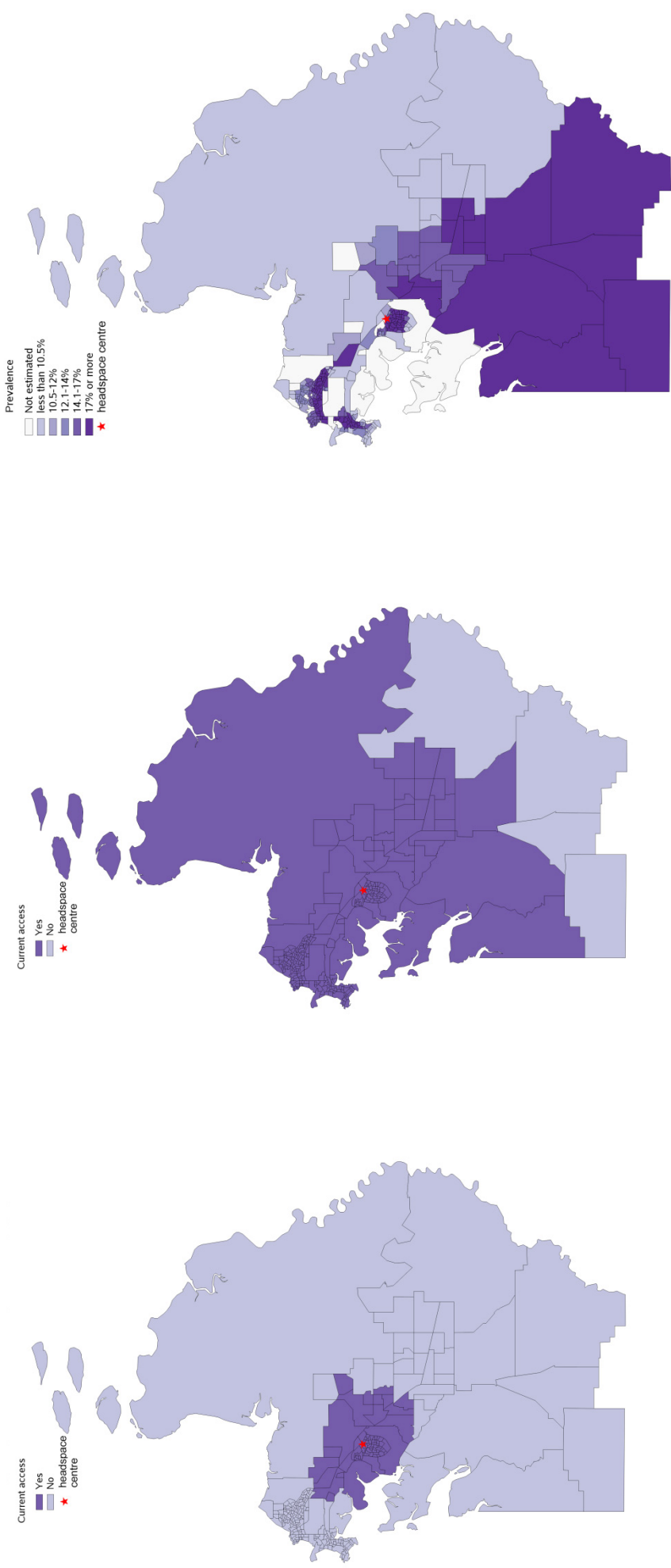


**Figure G25 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Hobart**

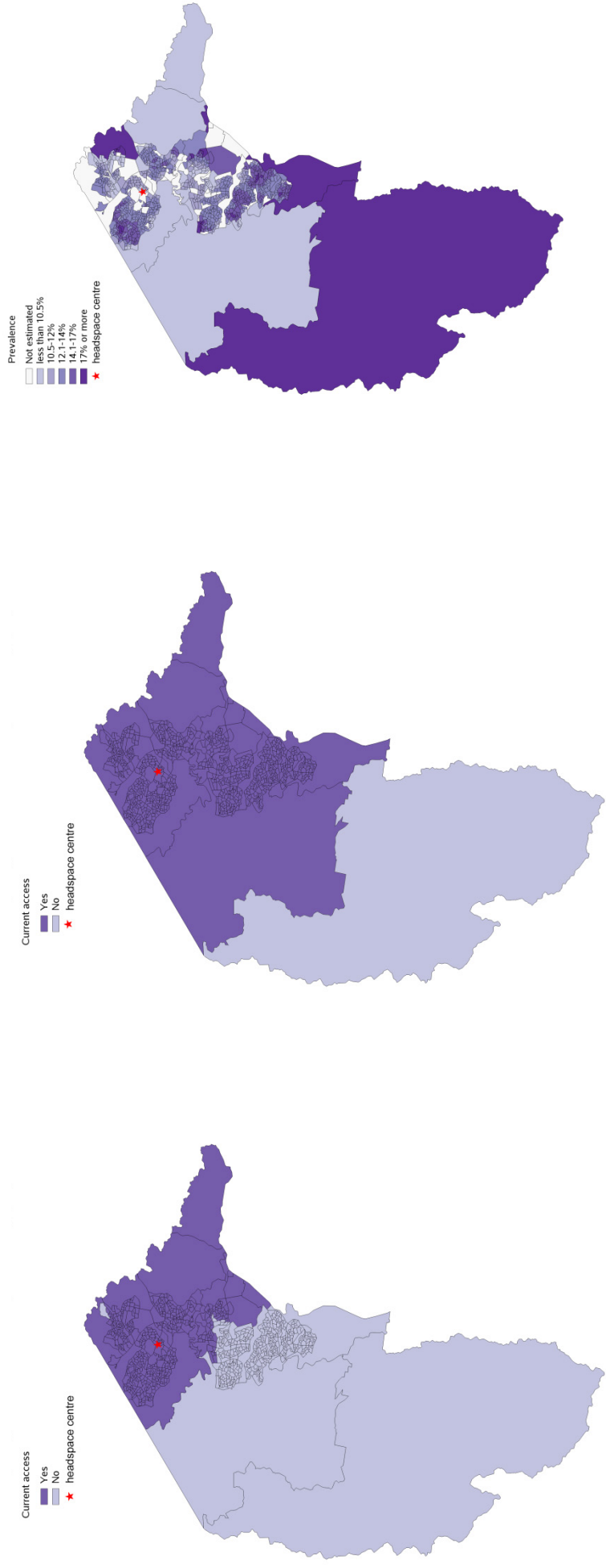




**Figure G26 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, Greater Darwin**



**Figure G27 SA1s within 10km and 30km of a Round 1 - 8 headspace centre and estimated prevalence of youth at risk of mental health problems, ACT**



**Table G25 Centres allocated in Rounds 9 and 10 based on the current weighting algorithm**

<b>SA3 / SA4 name</b>	<b>State</b>
<b>Albury</b>	New South Wales
<b>Dapto - Port Kembla</b>	New South Wales
<b>Inverell - Tenterfield</b>	New South Wales
<b>Kempsey - Nambucca</b>	New South Wales
<b>Kiama - Shellharbour</b>	New South Wales
<b>Lake Macquarie - East</b>	New South Wales
<b>Lake Macquarie - West</b>	New South Wales
<b>Lower Hunter</b>	New South Wales
<b>Port Stephens</b>	New South Wales
<b>Richmond Valley - Coastal</b>	New South Wales
<b>South Coast</b>	New South Wales
<b>Sydney - Ryde</b>	New South Wales
<b>Bowen Basin - North</b>	Queensland
<b>Burnett</b>	Queensland
<b>Cairns - North</b>	Queensland
<b>Caloundra</b>	Queensland
<b>Charters Towers - Ayr - Ingham</b>	Queensland
<b>Darling Downs (West) - Maranoa</b>	Queensland
<b>Far North</b>	Queensland
<b>Gold Coast - North</b>	Queensland
<b>Innisfail - Cassowary Coast</b>	Queensland
<b>Logan - Beaudesert</b>	Queensland
<b>Moreton Bay - South</b>	Queensland
<b>Nerang</b>	Queensland
<b>Ormeau - Oxenford</b>	Queensland
<b>Tablelands (East) - Kuranda</b>	Queensland
<b>Eyre Peninsula and South West</b>	South Australia
<b>Mandurah</b>	Western Australia
<b>Wheat Belt - North</b>	Western Australia
<b>Perth - Inner</b>	Western Australia
<b>Pilbara</b>	Western Australia
<b>Burnie - Ulverstone</b>	Tasmania

**Table G26 Centres allocated in hypothetical Rounds 9 and 10 when allocation is prioritised by the number of children at risk of a mental health condition**

<b>SA3 / SA4 name</b>	<b>State</b>
Armidale	New South Wales
Clarence Valley	New South Wales
Dapto - Port Kembla	New South Wales
Kiama - Shellharbour	New South Wales
Lake Macquarie - East	New South Wales
Lake Macquarie - West	New South Wales
Lower Hunter	New South Wales
Port Stephens	New South Wales
Richmond Valley - Coastal	New South Wales
South Coast	New South Wales
Sydney - Ryde	New South Wales
Taree - Gloucester	New South Wales
Upper Murray exc. Albury	New South Wales
Bowen Basin - North	Queensland
Broadbeach - Burleigh	Queensland
Buderim	Queensland
Burnett	Queensland
Cairns - North	Queensland
Caloundra	Queensland
Coolangatta	Queensland
Far North	Queensland
Gold Coast - North	Queensland
Gympie - Cooloola	Queensland
Logan - Beaudesert	Queensland
Moreton Bay - South	Queensland
Nambour - Pomona	Queensland
Nerang	Queensland
Ormeau - Oxenford	Queensland
Sunshine Coast Hinterland	Queensland
Perth - Inner	Western Australia
Pilbara	Western Australia
Wheat Belt - North	Western Australia

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