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Appendix 3

This appendix was part of the submitted manuscript and has been peer reviewed. It is posted as supplied by the authors.

Appendix to: Hetrick SE, Bailey AP, Smith KE, et al. Integrated (one-stop shop) youth health care: best available evidence and future directions. *Med J Aust* 2017; 207 (10 Suppl). doi: 10.5694/mja17.00694.

Appendix 3. Outcomes 3: Symptom, functioning, satisfaction and other outcomes

Service	Study	Clinical Outcomes (reported by service users)		Satisfaction/Appropriateness of Service (reported by service users unless otherwise indicated)	Other Outcomes
		% Improvement	Outcome Specifics		
Jigsaw	(48, 49)	68% 12-16 yrs; 62% 17-25 yrs.	The Clinical Outcome Routine Evaluation (CORE) questionnaires were introduced part way through evaluation period; 709 completed them at baseline and 315 at their last session. In this subsample (n=315), in those aged 17 to 25, 62% showed a reliable & clinically significant improvement on the CORE 10 and 68% of 12 to 16 year olds showed a reliable improvement on the YP-CORE.	NR	NR
	(47)	NR	NR	NR	NR
	(50)	NR	NR	NR	NR
Irish Youth One Stop Shops	(51)	88% overall: 67% help fully; 21% help partially.	88% said the organisation had been able to help when they presented with a problem (67% able to help fully and 21% able to help partially). Users of the service reported improved confidence (94%); improved self-esteem (93%); understanding the implications of actions (89%); and, improved awareness of health services (92%)	Users reported a high level of satisfaction with the helpfulness of staff (94%), help with issues or problems (88%), confidentiality of the service (86%) and service location (85%). The lowest level of satisfaction, albeit still a majority (69%), was recorded for opening hours. 98% agreed that staff treated them with respect, 93% agreed that the service was young people friendly, 90% agreed that staff understood their issues. Being able to access support in a friendly, non-judgemental environment, where they felt valued was key.	Services noted as unique and indispensable.
The Well Centre	(52)	NR	NR	NR	NR
Youthspace	(53, 55)	NR	NR	Authors: 'very high level of user satisfaction'; Compared with CMHT, Youthspace had reduced 'did not attend' rates (5% vs 28%).	Compared with CMHT, Youthspace offered a faster contact (2 days vs 12), quicker first assessment (16 days vs 45 days). 67% reported making continued use of maintenance techniques provided through Youthspace intervention 12 months on from discharge
	(54)	57.6% improved; 33.6% stayed the	12-months after being seen at Youthspace, overall mental health and wellbeing improved for 57.6 %, remained the same for 33.6% and worsened for 8.8% of service users (% improved	NR	No significant change in employment, education and training status 12-months on. Qualitative outcomes: Two service users

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		same; 8.8% worsened.	compared to 1 year ago for following domains: Mental health 64%, interest in others 52%, energy levels 60%, deal with problems 68%, feel confident 60%, loved, cared for and supported 48%, interest in new things 64%, sleep 48%, appetite 48%).		reported "I had no help until Youthspace even though I had been seen by a community team before" and "90% of my improvement has been because of Youthspace"
The Junction	(56)	NR	NR	Service User focus group (n=7): reported overall satisfaction with the service provided; noted it was friendly, accessible, acceptable and appropriate.	NR
NZ Youth One Stop Shops (YOSS)	(59)	94% (n=252)	94% of clients (n=252) and 89% of stakeholders (n=106) surveyed felt that YOSS is effective.	Young people using YOSS report that they like the services, and that services are accessible, appropriate and acceptable. The top reasons young people use Youth One Stop Shops relate to cost, service flexibility and confidentiality, convenient location and perceptions of non-judgmental, welcoming and safe staff who know about youth related issue. Maori clients surveyed reported that they thought the YOSS was effective or very effective at providing them with access to the health services that they need. They reported that the reasons they used the YOSS's were the staff, location and youth friendliness of the service. Having access to a range of services in one place where stigma was reduced due to non-mental health signage was important.	Some YOSS clients (14% of those who participated in the Communio survey) said that without the YOSS they would not access any health care.
	(58)	94% of mild-mod clients; 97% clients with complex needs.	94% of those initially assessed as 'OK, some challenges' (OK), 'at risk' (AR) or 'seriously at risk' (a scale developed by the service), and 97% of those with complex needs, improved or were steady over the short-term. These findings were consistent irrespective of gender and ethnic groups.	Kapiti YOSS was noted to be an accessible service (free, integrated services, everything in one place); a quality service (strong leaders, staffed by people skilled at working with young people and experts in their field); a safe place (confidential, client centred and consent based); a positive and comfortable youth space (provides good information, good food, staffed by young people); a place of aroha (staffed by people who genuinely like young people); a place that honours and respects young people (positive youth development frameworks, holistic, strengths based approach).	Half (n=12) of the young people interviewed said they 'would not' or 'probably would not' have gone somewhere else to seek support with their health issue. Reasons given for not seeking support elsewhere included that they would have encountered difficulties such as cost or would not have been able to talk as freely as they do at KYS.
	(57)	NR	NR	NR	NR

Service	Study	Clinical Outcomes (reported by service users)		Satisfaction/Appropriateness of Service (reported by service users unless otherwise indicated)	Other Outcomes
		% Improvement	Outcome Specifics		
	(60)	Not avail.	Not avail.	Christchurch YOSS: Vast majority of attending young people found the service accessible, appropriate, and acceptable.	Christchurch YOSS: Most common reason for attending (77%) being 'no cost' and 30% saying that they would not have gone anywhere else if the service didn't exist.
	(cited in 57)	Not avail.	Not avail.	Not avail.	Rotorua's YOSS: 400 visits per month; with no drop in the numbers attending GPs suggesting this service was accessed by an underserved group.
Your Choice	(61)	NR	Clients showed a significant reduction in the Strengths and Difficulties Questionnaire (from 15.6 to 12.3; n=373), a significant improvement in functioning on the Children's Global Assessment of Functioning (from 62.7 to 72.7; n=512), and a significant improvement on the Substance Abuse Choices Scale (from 4.2 to 2.9; n=314).	Service users felt well informed, were satisfied with the choice they had in service provider, the speed at which appointments were made and with the friendliness and skills of service providers. Participants and their families/whānau reported that the interventions were safe and appropriate, with perceived increased skill development around coping and communication.	NR
CHAT (Community Health Assessment Team)	(62)	NR	NR	NR	NR
SPOT (Supporting Positive Opportunities with Teens)	(63)	NR	NR	NR	NR
Adolescent Health Service	(64)	NR	NR	NR	NR
Rural Clinic for Young People	(65)	NR	NR	NR	NR
YStop (Youth Stop)	(66)	NR	NR	NR	NR

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KYDS Youth Development Service	(67)	NR	NR	NR	NR
headspace, National Youth Mental Health Foundation	(71)	47% (n=12,233)	Between group comparison: Those treated at headspace had a significantly greater reduction in psychological distress on the Kessler (K10) when compared with both the 'other treatment' (effect size *d* = -0.16) and 'no treatment' (effect size *d* = -0.11) matched groups over time. Mean reduction was 2.3 points, from 28.8 at assessment to 26.5. headspace Cohort: K10 scores decreased for 47% (n=12,233): 13.3% clinically significant reduction, 9.4% reliable reduction, 24.3% insignificant reduction. 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. Suicidal ideation reduced significantly. For those who experienced improvement in K10 scores, suicidal ideation dropped (for clinically significant improvement 59.2% to 29.4%; for reliable improvement from 71.0% to 61.0% for insignificant improvement 57.8% to 39.4%); for those who did not experience any change in K10 suicidal ideation still dropped from 64.0% to 47.8%. There were small drops in those who had insignificant declines in K10 scores (60.4% to 54.0%), and those who had clinically significant declines (55.3% to 48.9%); and for those who had a reliable decline in K10 scores suicidal ideation increased from 60% to 79.4%. A similar pattern was seen for self-harm, which decreased in all groups except those who experienced a reliable decline in K10 scores (clinically significant improvement 44.8% to 20.1%; reliable improvement from 62.0% to 43.7%; insignificant improvement 47.0% to 26.2%; no change 39.9% to 30.6%; insignificant decline 48.9% to 42.8%; reliable decline 55.3% to 57.9%, clinically significant decline 47.3% to 42.6%)	Young people and families were extremely satisfied. headspace clients reported a high degree of satisfaction, with 88% (of n=22,614) reporting to be satisfied and a similar number indicating that they would recommend headspace to a friend. Access and engagement were supported by 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).Young people indicated that individual relationship with their headspace practitioner formed the core of their experience with headspace and was fundamental to improved outcomes. Stigma was noted as a barrier to accessing services	Local communities highly value their headspace services having advocated for them and were appreciative of their contributions. Centres must be complemented by more specialised expert care with longer tenure to achieve major improvements in outcome.
	(75, 91)	92% overall.	92% of young people interviewed reported that their mental health had improved since coming to headspace. 81% of 12–17 year olds and 58% of 18-25 year olds reported improved relationships with family; 79.2% of 12-17 year olds and 47.8% of 18-25 year olds reported improved ability to engage in	Young people interviewed perceived the headspace centre environment as youth-friendly because of the colourful walls, the non-clinical environment, the comfortable lounges and the activities; they liked the informal set up of the services; they felt in control and informed; and they	NR

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		% Improvement	Outcome Specifics		
			education; 54% of young people reported improved physical health.	were highly satisfied with and valued their relationships with service providers	
	(76)	NR	NR	Service users believe headspace has successfully implemented a youth-friendly service model that is accessible, acceptable and appropriate. Location in community, access to public transport, affordability and easy referral were endorsed as appropriate, but opening hours were a limitation. Services were acceptable in terms of minimal waiting times, staff, protection of privacy and confidentiality. Services were rated as appropriate in terms of the multiple services provided in the same familiar environment.	NR
	(84)	60% improved psychological distress or functioning.	36% had significant improvements in psychological distress (K10; mean change of 3 points) and 13% deteriorated; 37% had significant improvements in functioning (Social and Occupational Functioning Scale); 20% had a decline in functioning. 60% improved in psychological distress or functioning. Improvement was predicted by greater distress at baseline (OR, 1.03; 95% CI, 1.02–1.04), lower psychosocial functioning at baseline (OR, 0.94; 95% CI, 0.94–0.95), and by attending more service sessions (OR, 1.16; 95% CI, 1.10–1.22).	NR	NR
	(85)	NR	NR	NR	38.9% of clients had waited less than one week for their first appointment, 41.2% for 1–2 weeks, 14.6% for 3–4 weeks, and only 5.3% had waited more than 4 weeks.
	(81, 90)	NR	NR	Satisfaction with headspace was high and increased over time with ongoing engagement, which mitigated the effects of client and centre characteristics, which impacted on satisfaction earlier on (gender, age, waiting time, presentation issue, higher distress and lowered functioning, and number of visits). Young people were particularly satisfied with headspace staff. Note that males, homeless young people, those with physical symptoms and substance use and those who attended more sessions were less likely	NR

Service	Study	Clinical Outcomes (reported by service users)		Satisfaction/Appropriateness of Service (reported by service users unless otherwise indicated)	Other Outcomes
		% Improvement	Outcome Specifics		
				to complete the satisfaction scale.	
	(86)	NR	NR	NR	NR
	(79)	NR	NR	NR	NR
	(68, 69)	NR	Symptomatic and functional improvements were observed equally across all groups (i.e. stage 1a, 1b): psychological distress main effect for time was significant [$F(1.84,510.64) = 6.80$, $p = .002$] and functioning main effect for time was significant [$F(1.93,619.75) = 5.97$, $p = .003$]. Given lower levels of distress and higher functioning in stage 1a patients, they exited the service with fewer symptoms and higher functioning than 1b clients, who remained symptomatically and functionally impaired.	NR	NR
	(87)	NR	NR	NR	NR
	(88)	NR	NR	NR	NR
	(70)	NR	NR	NR	NR
	(77)	NR	NR	NR	NR
	(78)	42% no depression; 27% remitted.	For young people who used headspace, at 12 months follow-up: 42% had no depression, 27% were remitted from depression, 20% had persistent depression, and 10% had a new onset. Developing depression was not a significant predictor of becoming NEET and vice versa: remitted depression did not make a person more likely to reengage in employment or education.	NR	NR
	(72)	NR	NR	NR	NR
	(73)	NR	NR	School counsellors facilitated service access; services near public transport facilitated access; initial barriers to service included wait lists and lack of awareness of service; no out-of-pocket expense facilitated access, however only 12 sessions were available at no cost so for those who needed more sessions there were barriers.	NR

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	(83)	NR	NR	NR	Large number and wide range of centre activity. Heterogeneity of activities due to diversity of communities in which centres were located, and the local needs of these communities.
	(74)	NR	NR	Supportive friends and family facilitated service access; relationships with professionals facilitated continuing care; youth friendly environments were welcoming.	NR
	(89)	NR	NR	NR	NR
	(80)	NR	NR	Young people reported on a number of areas that were important to their experience with headspace: - Accessibility: a youth friendly environment (friendly, welcoming staff, the look/feel of the centre, stigma free, safe and comfortable); location and physical accessibility (close to public transport); One-stop-shop concept (access multiple services under one roof, do not have to re-tell story, 'walk in the door' without a referral, coordination of services - MH, PH, AOD, VOC/ED - either under one roof or by referral). This was viewed as important as many were unaware of how the health system works, headspace helped them navigate a complex system and was an easy point of access. - Barriers to access: stigma, concerns about confidentiality, restricted opening hrs and long wait times; - Youth Participation: at the organisation level (finding out from young people what they want); participation in their own care (valued being included in their treatment and care plans, feeling of empowerment and ownership of their treatment).	NR
	(82)	NR	NR	Over 12000 service users completed a satisfaction survey with ratings across 5 subscales, General Satisfaction, Satisfaction with Help Received, Satisfaction with Staff, Satisfaction with Service and Overall Satisfaction. -Young Men, 4119 (34%): very high levels of satisfaction, similar for females.	Young people across the marginalised groups reported that the following factors facilitated their access and engagement with a headspace service: Openness and acceptance by staff and service, confidentiality, good rapport and trust with

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				-LGBTIQ, 1811 (15.9%): very high levels of satisfaction, similar for non-LGBTIQ young people. -Aboriginal and Torres Strait Islander, 816 (6.7%): very high levels of satisfaction, similar non-Indigenous young people. -CALD backgrounds, 762 (7%): very high levels of satisfaction, similar for non-CALD young people. -Using Alcohol and Other Drugs, 662 (5.2%): very high levels of satisfaction, similar for non-users. -Homeless, 226 (1.8%): very high levels of satisfaction, similar for non-homeless young people.	staff, targeted messaging, strong relationships with families/communities, flexible and culturally respectful approach to intake and treatment, welcoming environment (e.g. displays of Indigenous art work, LGBTIQ flag), Non-clinical environments (e.g. outdoor spaces), support with transport, positive initial contact with headspace, short wait times extended opening hours, drop-in and outreach service, collocation and links with other services i.e. one-stop-shop, support navigating the system, availability of preferred worker demographic (i.e. choice of male/female), low cost/free service. Barriers to access and engagement mostly reflected when these factors were not present.
Foundry	(unpublished data)	77% mental health; 70% work, school, training; 68% physical health; 56% substance use.	77% reported that the services they have received have definitely or somewhat helped to improve their mental health; 70% reported that the services they had received had definitely or somewhat helped to improve their work, school or other employment/education related activities; 68% reported that the services they have received have definitely or somewhat helped to improve their physical health. 56% reported that the services they have received have definitely or somewhat helped to reduce their substance use.	Staff made me feel comfortable asking for help with my health concerns: 85%; Quality of Service was rated as excellent or very good by 85%; 76% rated the quality of care they received as excellent or very good. 88% said it was definitely or somewhat true that they had enough privacy and 93% said it was definitely or somewhat true that they felt safe; 95% said the centre was youth friendly. 90% said they would recommend the service to a friend.	NR
Maisons des Adolescents	(92)	NR	Young people reported that MDAs contributed to their well-being; professionals reported that MDAs provide responses to individual situations and help to prevent the deterioration of these individual situations and are therefore having a direct effect on the field of health services.	Reported that ‘for our young people who are unwell, the MDA is ‘the’ solution; for some parents, the MDA is the only place they can find the 'key to their young person’s unease'; ‘it’s a program that works because it’s not ‘stamped psych'. It was highlighted that access without referral was a key feature along with youth-friendly opening hours and noted that outreach would be an important component to be able to include if funding permitted.	NR

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		% Improvement	Outcome Specifics		
ACCESS Open Minds*	(93)	NR	The following clinical outcomes will be evaluated at the initial evaluations, and in follow ups if youth are still receiving services (month 1, 3, 6 9, 12, 24): Psychological distress (K10); Suicidality (C-SSRS); Severity of symptoms (CGI-YMH); Substance use and misuse (CUAD); Mental Health and Health (SRH & SRMH); Internalizing, Externalizing, Substance use, Issues relating to crime or violence (GAIN-SS); wait times for initial evaluation and initiation of care; pathways to care (help seeking attempts). The following functional outcomes will be evaluated at the initial evaluations, and in follow ups if youth is still receiving services (month 1, 3, 6 9, 12, 24): 1. Personal Goals (GBO); 2. Quality of Life (WHO-QOL); 3. Resilience (CYRM); 4. Social, Occupational and Educational Functioning (SOFAS).	The following satisfaction related outcomes will be evaluated at the initial evaluations, and in follow ups if youth is still receiving services (month 1, 3, 6 9, 12, 24): -Session feedback (SRS) -Service Satisfaction (OPOC) -Continuity of Care (COC)	Issues to be investigated: 1. youth and family/carer engagement in services 2. Quality of care received (youth's expectations and preferences) 3. Pathways to care 4. Services and institutional change (how are services being used and how are they coping with transformation and the focus on youth and family engagement) 5. Values and culture (how are they being integrated into services)
Integrated Collaborative Care Team (ICCT)*	(46)	NR	Functioning will be assessed using the Columbia Impairment Scale; clinical improvement will be assessed using the Strengths and Difficulties Questionnaire, GAIN SS and Adolescent Alcohol and Drug Involvement; caregiver burden will be assessed by the Burden Assessment Scale, and economic evaluation will include the Assessment of Quality of Life-6D45.	Ontario Perception of Care Tool for Mental Health and Addictions; Youth Efficacy/Empowerment Scale and Family Empowerment Scale.	NR

CMHT = Community Mental Health Team
NEET = Not in Education, Employment or Training
NR = not reported
* = Ongoing or planned evaluation