

**A qualitative exploration of coordinators' and carers' perceptions of the Healthy Eating, Active Living (HEAL) programme in residential care.**

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## **RUNNING HEAD: Perceptions of Healthy Eating, Active Living in OOHC**

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## **Abstract**

Internationally, there are few studies that have trialled structured intervention programmes designed to prevent excessive weight gain or combat existing overweight/obesity for young people living in out-of-home care. The Healthy Eating Active Living (HEAL) programme was designed to address this limitation and is, to our knowledge, the first programme that simultaneously encourages young people and their carers to engage in a healthy lifestyle [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. This is the second of two papers presenting the HEAL evaluation. The aim of this study was twofold: first, to explore the experiences and opinions of key stakeholders regarding the intervention programme, and second, to understand the key enablers and barriers to successful implementation of the HEAL programme in residential care. Twenty-two carers and 10 programme coordinators participated in semi-structured interviews. Findings demonstrated that HEAL was considered a valuable adjunct to the residential care programme, and was successful in raising awareness about the importance of leading a healthy lifestyle. Positive behaviour change among the young people and carers' dietary, physical activity, and sleeping habits, and development of independent living skills was described. Barriers to implementation included leadership support and professional development of carers. Recommendations are made to improve implementation, particularly around the importance of increasing stakeholder 'buy-in'.

### **Key Practitioner Messages:**

- There is a need to address the lifestyle habits of young people in residential care.

- Raising awareness is an important first step, but must be supplemented with supportive environmental change to enable lasting, healthy outcomes.
- Carer capabilities need to be strengthened so that they can effectively manage challenging behaviours, yet still address the lifestyle habits of young people in care.
- Stakeholder ‘buy-in’ and a programme champion are critical to implementation of healthy lifestyle programmes in residential care [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN].

**Key words:**

*Out-of-home care, young people, healthy eating & physical activity.*

## **Introduction**

Young people living in residential out-of-home care (OOHC) are at increased risk of overweight and obesity (Cox *et al.*, 2014). The vulnerability of this population group, coupled with the long-term consequences of excess weight, highlights the need to create healthy-living promoting environments. Although health has been identified as a priority area and included in various standards documents (Department of Families, Housing, Community Services and Indigenous Affairs, 2010; National Institute for Health and Care Excellence, 2013; Scottish Government, 2005), and government guidance issued in the UK (Department for Education and Department of Health, 2015; Department of Health, 2009; Scottish Government, 2011), currently anti-obesity programmes targeting children in OOHC are rare [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN] (Greyber *et al.*, 2013; Greyber *et al.*, 2015). The Healthy Eating, Active Living (HEAL) study responds to this need, and is the first Australian study to evaluate a structured healthy lifestyle intervention in the residential OOHC setting (Skouteris *et al.*, 2013). The HEAL study resulted from a small pilot in one community service organisation (Berry Street) in Victoria in 2010. This pilot highlighted the importance of including the voice of all stakeholders (residential carers, team leaders, executive managers, and young people) in programme development, and stakeholders were engaged to co-design the HEAL study. Our quantitative evaluation of HEAL was hampered by the transient nature of young people in residential care, and the low response rates from the young people. Evaluation of the HEAL programme also included interviewing residential carers and HEAL programme

coordinators at the completion of the programme. The purpose of this paper was to explore their daily experiences and opinions of the HEAL intervention programme, and to better understand the key enablers and barriers to successful implementation of the HEAL programme in residential care.

## **Method**

### ***Design***

A randomised trial was conducted to evaluate the efficacy of the HEAL programme implemented in residential OOH units across three major OOH community service organisations (CSOs) and the (former) Department of Human Services' (DHS) Hurstbridge Farm in Victoria, Australia in 2012-14. Ethics approval was obtained from the Deakin University Ethics Committee and the (former) DHS Research Coordinating Committee.

### ***Study intervention***

A detailed description of the intervention has been published elsewhere (Skouteris *et al.*, 2013). Briefly, HEAL is a 12-month programme which provides information and practical opportunities for young people in residential OOH to improve their health and wellbeing. HEAL coordinators met face-to-face with each young person to develop an individual health plan [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN] that focused on fostering a healthy lifestyle in relation to eating and physical activity habits; health goals were set by the young person. Additional activities were offered to help keep the young people motivated including cooking sessions, planting a vegetable garden, and sports challenges. HEAL

coordinators also provided carers with professional development, resources and support to facilitate positive behaviour change among the young people. Residential carers were expected to help foster a healthy living culture within the residential unit, especially in relation to positive role modelling, encouragement, and instrumental behaviours (e.g., providing opportunities for physical activity).

### ***Implementation Model***

There were two different implementation models of HEAL [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. At Berry Street, dedicated HEAL coordinators were appointed who did not work in the residential care units (external model). These were part-time positions (20 hours per week), with HEAL coordinators working with up to four units at any one time. Hurstbridge Farm also used an external model, with one coordinator working across two units (located on the same property). At The Salvation Army Westcare and Wesley Mission Victoria, a residential care worker already employed in the unit was appointed as the HEAL coordinator (internal model). HEAL was an additional portfolio which was incorporated into their existing role. No dedicated time was specifically allocated to the position and coordinators worked only in their unit.

### ***Procedure***

Following completion of the HEAL programme, residential carers and coordinators were contacted and invited to be interviewed. Consent for completing and taping the interview was confirmed at the beginning of the interview. Semi-structured interview guides were used, which included both open- and closed-ended questions [PUBLISHER

– THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. Interview timing, aim, approach, and length is summarised in Table 1.

**[Insert Table 1 here]**

### ***Data Analysis***

The data were analysed with a view to gaining a contextualised understanding of: (1) the experiences and opinions of carers and HEAL coordinators regarding the intervention programme; (2) the support, resources and barriers to creating a healthy home environment for young people living in OOHC; and (3) necessary programme adaptations to ensure a healthy eating, active living culture is embedded in residential OOHC. Consistent with a framework analysis approach, relevant themes were generated from the interviews rather than an *a priori* approach (Ritchie *et al.*, 2003). Segments of text were identified where participants described their perception and understanding of the messages, and were then coded in a systematic way in NVivo (NVivo qualitative data analysis software; QSR International Pty Ltd. Version 10, 2014). Quotes were coded according to theme-based nodes. Three authors (RC, BW, JF) read the transcripts and identified an agreed system for coding themes and content for each message. Any discrepancies were resolved by discussion, (inter-rater agreement for carer interviews was 95% and coordinators 84%). Data were then analysed for recurrent themes through an iterative process and an integrated summary across interviewees created for each message, with cross-referencing to original transcripts.

## **Results**

Four major themes emerged from the interviews with carers and HEAL coordinators

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MARGIN]: (1) Necessity of the HEAL programme – there is a need for healthy lifestyle programmes in OOH; (2) Any healthy change is a good change – what worked in implementation; (3) Room for improvement – challenges faced in implementation; and (4) Building organisational capacity – ensuring sustainability. Quotes are verbatim comments from participants (RCW=residential care worker and HC=HEAL coordinator). Additional supporting quotes are summarised in Table A1 in the online Supporting Information. A total of 42\* carers involved in the intervention arm of HEAL were invited to take part in the interviews, and 17 agreed. (\*This number reflects the number of intervention carers who completed the full 12-month programme (6-months intensive HEAL intervention and 6-months maintenance.) Fifteen carers provided demographic data (66.7% females; mean age=39.7 years, SD=11.3). The average employment time in the OOH unit was 53 months (SD=34.96) and 80 per cent had either a certificate or diploma level education. The majority of carers smoked (60%). A total of 22 HEAL coordinators were involved in the HEAL programme - Berry Street (external model,  $n=8$ ), Hurstbridge Farm (external model,  $n=1$ ), The Salvation Army Westcare (internal model,  $n=8$ ), Wesley Mission Victoria (internal model,  $n=5$ ), and 10 participated in this study. Twelve coordinators were not interviewed because they left the position prior to data collection. Coordinators in the current study ranged in age (26-53 years), and nine were female.

***Necessity of the HEAL programme.***

There was overwhelming agreement from both residential carers and coordinators of the need to address the eating and/or physical activity habits of the young people in their care, with three central sub-themes emerging:

*1. Low levels of awareness/knowledge about healthy lifestyle choices.*

When asked specifically about the young people's lifestyle habits prior to implementation of the HEAL programme, all carers commented that the eating and physical activity habits of the young people could be improved. Carers frequently commented that young people generally lacked awareness, knowledge, and understanding of the importance of leading a healthy lifestyle [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN], especially eating well and being physically active:

*'They [young people] don't have a great knowledge of healthy eating and what they should be eating and what is a healthy amount of exercise.'* [RCW7]

*2. Background of disadvantage.*

The carers emphasised the young people's vulnerable backgrounds and home environments prior to entering OOHC as a means of explaining their poor health literacy. Common explanations offered by carers included poor parental modelling, parental substance use, disruptive home environments, and food being associated with the trauma of abuse and/or disturbed attachment. For example, one carer commented:

*‘Healthy eating is the least of their [parents’] issues. There is also a lot of thought that goes into preparing healthy food and facilities to store healthy food – resources families may not have. You need to go shopping and buy fruit and vegies and this may not be a priority for drug affected or addicted parents.’ [RCW13]*

Additionally, coordinators noted that many young people enter OOHC with pre-existing, food-related issues, and these were often linked with their past experiences. Common examples included hoarding, bingeing, stealing or hiding food, and a tendency to overeat. It was also apparent that the majority of young people have a preference for ‘junk’ food, and this was often associated with lifetime exposure to an ‘unhealthy’ food environment.

### *3. Leading a healthy lifestyle is not a priority.*

A number of carers suggested that, prior to the HEAL programme, establishing healthy lifestyle habits for the young people in OOHC residences was not always a priority [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. Carers described how managing everyday routines in OOHC residences was their highest priority, especially crisis management, and often there was little time or energy left to encourage the young people to build and maintain healthy behaviours. Not surprisingly, the management of critical incidents also impacted implementation of HEAL. Coordinators talked about carers having to contend with aggression, substance abuse, and criminal behaviour, and that a large percentage of their time is consumed managing these types of behaviours. HEAL activities, such as planning a healthy meal

or going outside to be active, were sidelined when these crises occurred. One coordinator had concerns about carers in her units often using food to help manage difficult behaviours. For example, using junk food to diffuse a situation:

*'If there's an argument, they're like, "ok, let's go for a drive". But a drive ends up at the KFC [Kentucky Fried Chicken] drive-through getting a slushy and then the slushy turns into a slushy and food. And this is after dinner, so right before bed.'* [HC 1]

***Any healthy change is a good change – what worked in implementation.***

Residential carers and coordinators talked optimistically about the programme's impact

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MARGIN], and unanimously agreed that any healthy shift in a young person's lifestyle habits, as a result of participating in the HEAL programme, was highly valued. While not all changes were maintained for the duration of the programme, both groups noticed a shift in previously ingrained behaviours (of both young people and carers). Five sub-themes emerged.

*1. Raising awareness.*

Carers frequently commented that even if behavioural changes were not achieved, implementation of the HEAL programme resulted in a general shift in awareness around the importance of leading a healthy lifestyle. This was viewed as a valuable, initial step along the change continuum:

*'...there's been more awareness of good health and exercise since we've had the HEAL programme. Whereas before we were just, I guess it wasn't as structured.'* [RCW15]

For coordinators, the most significant change reported was increased staff awareness  
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MARGIN], with carers becoming more conscious of the types of food/drinks they were providing to young people. Increased awareness led to changes in the OOH environment including: provision of healthier food and/or beverages, an increase in the type and/or frequency of activities being offered to young people, and improved role modelling by the residential carers.

## *2. Healthier habits.*

Carers were asked to describe any changes they had observed in the young people's eating habits since the beginning of the programme. Carers described both a reduction in 'unhealthy' habits, as well as an uptake of 'healthier' ones [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. The carers themselves mostly initiated and enacted these changes. For example, staff eliminated or reduced the availability of 'unhealthy' snacks (e.g., lollies, chocolates, chips), encouraged smaller serving sizes, restricted the availability of highly processed, convenience foods (e.g., frozen meals and snacks), offered less sugary drinks (e.g., soft drinks or juices), and used leaner cuts of meats in the main meals. A number of carers observed that these changes were not isolated to the young people; their units had also

made changes regarding the types of foods they and other staff would eat whilst on shift.

*'There is more fruit and less snack type foods. We have moved away from chips and lollies and more on the healthier side. More cooked meals and lunches...we are still doing this now.'* [RCW14]

Coordinators focused their discussion on improved physical activity, noting that many young people were eager to get involved in the activities that were presented to them through the HEAL programme. Novel activities and purchasing equipment for the unit(s) were used to increase physical activity levels, while simultaneously building rapport and engaging the young people in the programme content more broadly. For example:

*'Sailing. We did a couple of overnight trips doing dolphin swims...we did rock climbing, trampolining...we had a couple of young people enrol in hockey and gym. The young people who were actively involved in the gym after the HEAL programme promoted that, are still going now. Lots of swimming...'* [HC 2]

Over the course of the programme, many units began to incorporate physical activity into their weekly routines [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN], with a number of young people engaging in regular exercise programmes. Coordinators also indicated the programme contributed to the development of skills that are likely to support independent living post-care, as well

as knowledge about leading a healthy lifestyle. For example, an increased number of young people demonstrated initiative by contributing to weekly menu plans and meal preparation.

### 3. *Modelling is key.*

Carers and coordinators talked about a positive flow-on effect from role modelling of physical activity, with the young people more inclined to engage in exercise when invited to join in with the carers or coordinators. Both groups highlighted the social benefits of co-participation, commenting that doing physical activity together provides an opportunity to spend quality time with the young people [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. A variety of physical activities they and the young people had engaged in as a result of the HEAL programme were discussed, including: organised sports (i.e. football and rugby), attending the gym together, personal training, swimming, walking, bike riding, dodge ball, and trampolining. Two carers felt that the HEAL programme gave them leverage to start a conversation with a young person about eating healthy or being more active, for example:

*‘Personally it was a good opportunity for me to make an excuse to get the kids out. I would say, “C’mon we have to go do something, it’s part of the programme”. I used it as an excuse to get the kids to get out of the house. And I would take them to the gym, which was good for me, ‘cause I got to go to the gym too.’* [RCW14]

#### *4. Importance of relationships*

Another key theme that emerged was the importance of a strong relationship between carers and the young people, as a means to initiate and encourage change. In particular, carers discussed how a strong relationship helped them engage young people in conversations and/or activities, increased the likelihood that they would feel motivated to model staff behaviours, and made it easier to broach issues the young person may be facing. One carer talked about young people in OOH often being mistrustful of adults, and therefore building a strong relationship increases the likelihood that they will respond positively to suggestions around improving their health. Similarly, if the coordinator was able to establish good rapport with a young person, they were more likely to be receptive to the programme. Conversely, weaker relationships reduced the likelihood of the young person engaging. HEAL coordinators felt that when they did engage, the young people enjoyed the specialised attention [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN], without record keeping:

*‘Sometimes it's as simple as just talking to someone that isn't going to file note everything they say and do a handover...’ [HC10]*

#### *5. Connection to Community*

Carers and coordinators capitalised on opportunities presented by HEAL to connect the young people with the wider community. Each described how the programme helped the young people become more engaged in the community, either through activities run

across different OOHC residences or by connecting them with external organisations/services - each young person participating in the programme was offered a free 6-month YMCA gym membership. Building these connections facilitated positive social interaction and improved their confidence.

***Room for improvement - Challenges faced in implementation.***

Both participant groups discussed the limitations of implementing HEAL into the OOHC sector. These include:

*1. Building key players' 'buy-in'*

Carers highlighted the need for better programme 'buy-in' from key stakeholders both within their unit and the broader organisation. They generally felt that not all carers, team leaders and/or managers actively endorsed the programme. This was perceived as a barrier to successful uptake and maintenance of the programme. Carers also talked about difficulties implementing HEAL when there were no formal consequences for not participating or actively engaging in the programme. This often resulted in varied staff engagement within the unit, that is some people were inconsistent in their reinforcement of programme objectives with the young people, and impacted others ability to initiate and sustain changes:

*'...Good ideas would come in but wouldn't end up being the norm. And then the kids would push and someone caves. And then everyone has to cave, because it seems like it's not working.'* [RCW5]

Carers also highlighted that young person 'buy-in' is important for long-term maintenance of the programme objectives [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. In particular, carers spoke about two main issues in relation to engaging the young people in the programme content: (1) Although the HEAL programme is intended to be implemented using positive encouragement, incentives and reinforcement, not as a command and control approach with consequences for not complying, carers found it difficult because there were no repercussions for a young person not wanting to comply with their suggestions around changing their eating and/or physical activity habits; and (2) staff were discouraged from persisting with programme messages if it was perceived that doing so would be detrimental to their relationship with the young person. This is not dissimilar to coordinators who were unable to engage all young people in the programme content for a range of complex reasons, including social withdrawal (i.e., young person isolating themselves from carers and other young people in the unit), frequent absconding, engaging in criminal behaviour, heavy substance use or a combination of each. The high turnover of young people (and carers) across different units also impacted the coordinators' ability to initiate and maintain relationships [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN], and encourage programme participation:

*'It's hard to make changes in adults that haven't been through trauma, like let alone kids that are so blocked off or disengaged.'* [HC10]

For young people, other programme implementation challenges noted by coordinators included: (1) a lack of practical skills to translate their intentions into action (e.g., young people in OOHC have often missed typical opportunities in childhood for skill development, e.g. learning to swim or ride a bike); (2) difficulties forming relevant/realistic goals and sticking to them over a period of time; and (3) in some cases difficulties accepting authority and following rules, with the programme being perceived as a means of ‘*rebellling*’ and resisting rules (a trait that is characteristic of the teenage years).

## *2. Carers are role models*

Carers and coordinators observed differences among carers’ ability to be role models for young people. Carers who had an interest in their own health and wellbeing embraced being a role model [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN] and tended to show more initiative in terms of engaging the young people. However, carers could also work against the aims of HEAL by modelling ‘unhealthy’ habits. This was mostly attributed to some carers having low levels of health literacy, failing to recognise why it is important to focus on improving the young people’s health (in the face of other challenging behaviours), misperceptions about what would be considered ‘healthy’ (e.g., carers mistakenly believed that their unit was already healthy), and lacking the necessary skills to model a healthy lifestyle:

*‘Ultimately up to the staff, if they don’t do it in their own lives why would they do it differently at work.’ [HC8]*

Greater engagement was observed among carers who would actively seek out opportunities to get the young people exercising, and were constantly encouraging them to ‘*get moving*’. Carers in these units were also more likely to access programme resources, to ask coordinators for advice and work collaboratively to improve their unit’s healthiness. Similarly, carers who provided consistent support to the young person to participate in activities (i.e., ensuring transportation to the venue, staff availability and continually providing encouragement), had the most success. Conversely, if carers were not committed to the programme, were hesitant to participate or were inconsistent, this was also reflected in the young people’s attitudes and behaviours towards the programme [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN, i.e. ‘If carers were not committed... this was also reflected in the young people’s attitudes and behaviours towards the programme’], and long-term change was not established.

### ***Building organisational capacity – ensuring sustainability***

Carers and coordinators gave detailed feedback on how the HEAL programme could be improved to enhance the overall success of the intervention.

#### ***1. Creating a health champion.***

Carers’ opinions were sought on which was the best delivery model for HEAL: a dedicated or specialist HEAL role (external model) or a carer (internal model). All but two carers believed that having an external HEAL coordinator who embodied and promoted key programme messages, and worked alongside unit staff to embed the HEAL

programme into standard practice, would be the best way to achieve the programme objectives [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN, i.e. ‘All but two carers believed that having an external HEAL coordinator... would be the best way to achieve the programme objectives’]. Suggested reasons for this included: (1) an external person is more able to focus on changes that could be made in a particular unit (given it was their primary role); (2) carers are already over-extended and therefore have limited time to implement an additional programme, for example, carers are often occupied with the daily routines of the residential care units (i.e., transportation, maintaining the cleanliness and order of the unit, following up young people who have absconded); (3) high staff turnover impacts consistency; (4) carers often have more immediate priorities (i.e., managing crisis and keeping the young people safe); and (5) an external coordinator was viewed as having more ‘authority’ to implement changes.

Despite most advocating for a dedicated HEAL role, having a staff member within the unit take on the programme as an additional portfolio was still valued. Suggested benefits of this approach included having greater knowledge about the young people, the residential units, and the organisation. One carer remarked:

*‘If the programme closes or whatever I am sure there would be other staff willing to take it on...we are more conscious of what we are doing and what we are feeding our young people anyway now.’ [RCW5]*

Coordinators agreed that the programme had the greatest impact when they were able to identify a HEAL ‘champion’ in their unit(s) [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. These carers were described as being passionate about the programmes objectives, proactive, and promoted the programme when the HEAL coordinator was away from the unit:

*‘So if there’s more health conscious people in the unit, they’re definitely more onside with the HEAL stuff, and will push it further, which has helped.’ [HC 1]*

## *2. Making the HEAL programme sustainable*

Although the carers were able to recognise a number of positive programme outcomes, there were mixed responses in regards to whether the changes were sustained throughout the duration of the programme or would be maintained post-intervention. Some carers were confident that any changes made were still in place. Others indicated that they were unable to achieve lasting changes. This was mostly explained by the young people’s variable engagement (i.e., what is currently going on in their lives, and individual client complexities). It was clearly evident, however, that carers saw great value in the programme content:

*‘I thought it was a good opportunity to get something going in terms of healthy eating and activity which is something we have always looked to pursue. I dare say all residential programmes should have something like that.’ [RCW14]*

A number of carers made suggestions for improving the programme. These were mostly around tailoring the programme to fit the unique context of residential care. Specific examples provided by the carers included: fresh fruit/vegetable boxes, cookbooks, meal plans, vouchers for sporting organisations/activities, and access to gyms. Other suggestions included having male and female HEAL coordinators, and increasing the number of people trained to deliver the programme content (to facilitate increased one-on-one engagement with the young people and positive role modelling).

For coordinators, they generally felt that for all carers to be able to deliver the programme effectively, they too needed training in the programme content. Although this varied across staff groups, there was a sense that carers' health literacy could be quite poor [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN], and therefore carers would benefit from developing their understanding of why it is important to lead a healthy lifestyle, both for the young people and themselves.

Coordinators stressed that education alone is not sufficient. Additional training needs to be: (1) interactive, (2) include strategies on how to engage the young people in health activities and empower them to make positive behaviour changes, (3) include strategies for broaching sensitive topics, and (4) focus on their power as a role model. Additional suggestions to help prioritise health outcomes, included: (1) formalising the expectation that young people are regularly involved in activities that promote their health and/or

wellbeing; (2) incorporating HEAL into each young person's care plan; and (3) building a 'healthy eating, active living' philosophy into carers' position descriptions.

### **Discussion**

The findings from in-depth interviews with HEAL coordinators and carers show that the HEAL programme was a valuable adjunct to the residential OOHC programme [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]: not only did HEAL raise awareness of weight-related behaviours but it also initiated behaviour change to improve these behaviours among young people and their carers. Importantly, the findings describe the challenges carers face to improving lifestyle behaviours in this setting, and the barriers faced by coordinators implementing an intervention in a highly disadvantaged population of young people. Young people in OOHC are characterised by histories of abuse, neglect, concomitant trauma, and attachment disturbance, and one cannot underestimate the impact this can have on a young person's physical and mental wellbeing, and developmental needs (Victorian Auditor General, 2014). Subsequently, the efficacy of the HEAL programme must be understood in the context of the young people's histories of trauma and attachment disturbance, as well as the statutory group home living, where a young person is living with multiple professional carers.

Unlike the UK (Department of Health, 2009; Scottish Government, 2011), currently there is no practice guidance about the food or physical activity environments provided for young people in residential care in Australia [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. HEAL is the first Australian

programme to actively focus on, and prioritise healthy lifestyle habits for young people in OOHC; at a minimum, HEAL raised awareness of the importance of leading a healthy lifestyle and helped young people and carers to initiate small changes within their unit. These changes were mainly introduced by the HEAL coordinators and carers, through new 'rules' around foods purchased and prepared for the young people, and/or role modelling and encouraging physical activity. An important finding was identifying barriers associated with different levels of programme engagement, or 'buy-in' across OOHC residences. Understanding reasons for low engagement is essential to inform and adapt the programme delivery. Importantly, HEAL was not a mandatory programme and was delivered in real world conditions among society's most disadvantaged youth. While there was some resistance by young people to behaviour change, carer 'buy-in' shaped the level of programme success [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. Potential explanations for low 'buy-in' to the programme include low engagement of carers, team leaders and/or senior management and some confusion about their role in the programme. This was compounded by a high turnover of staff and young people, additional workload, external delivery mode (i.e., reliance on HEAL coordinator and/or resistance to an additional person bringing their own ideas/suggestions for change), and having to consider their own lifestyle behaviours.

There is a growing body of evidence which recognises that adopting participatory approaches (i.e., researchers and key stakeholders working in partnership to jointly

design the intervention content and evaluation) increases engagement (Australian Research Alliance for Children and Youth, 2009; Mendel *et al.*, 2008). This type of participatory approach was used to develop the content and delivery of the HEAL programme, using feedback provided from a small pilot evaluation (which included residential carers and 20 young people). The findings of the qualitative interviews, however, revealed that HEAL would have benefited from adopting a more rigorous and systematic participatory approach [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN] to: (1) ensure the needs of the people most affected by the organisational change were considered, and reflected in decisions made regarding possible solutions; (2) build trust and promote a sense of ownership in the carers and young people; (3) increase the relevance and sustainability of the HEAL intervention; and (4) foster stakeholder commitment to research-based system change.

Given that only five young people agreed to participate in post-intervention interviews, and their interview data were limited due to polarised responses (i.e., their responses were mostly perfunctory, single word answers - yes/no) and limited ability to elaborate on their ideas, analysis of qualitative data only focused on carer and HEAL coordinator perceptions and experiences of HEAL. We offered AUD \$30 gift vouchers to the young people to acknowledge their time to be interviewed and thank them for participating; the interviews were to be conducted by a person with social welfare experience, not by a researcher. Despite our efforts to include the voice of the young people, they made it very clear to us that their preference was not to be interviewed. Low engagement in the

interview process is not surprising given this sample of young people are often asked to be surveyed, and to discuss their life circumstances for research (McDowall, 2013). Hence, their right to not take part in research and, therefore, their voice was respected. It is important that future research focuses on co-designing strategies to support young people's participation [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN], including identifying the best way to obtain meaningful data (Daly, 2009).

In addition to recognising the importance of participatory research, it is essential that all carers receive comprehensive training and support to implement new programme(s) introduced in this setting. For HEAL specifically, coordinators indicated that carer capabilities need to be strengthened so that they can effectively and safely manage challenging behaviours, yet still address the lifestyle habits of young people in care. In Australia, this could be addressed through the development of wider system-type strategies, i.e., development of government-issued practice guidance on health for this population. Given that carers and HEAL coordinators also identified a high prevalence of problematic eating and food-related behaviour (emotional eating, compulsive eating, overeating, binge eating, and stealing or hoarding food), in order to help carers become more responsive to the needs of young people in care, practice guidance around healthy eating and physical activity must be contextualised within a trauma-informed framework of understanding [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN].

Certainly there is a clear theoretical rationale for addressing the healthy eating and physical activity habits of young people in OOHC. Both '*Food For Thought*' (Punch *et al.*, 2009), developed by a team of sociologists and social workers from Stirling University, and the *Children and Residential Experiences: Creating Conditions for Change (CARE)* practice model (Holden, 2009), outline how food and physical activity can be a powerful means of demonstrating trust, care, predictability, flexibility and attuned parenting, and can be used to facilitate communication, build relationships, autonomy and a sense of control. Hence, training, resourcing and supporting carers to positively influence a young person's eating and/or physical activity habits provides an opportunity to: (1) improve their skills and motivation to respond appropriately, and therapeutically to young people's pain-based behaviour; and (2) prepare young people for a healthy future by using food and activity to normalise their experiences and promote socially acceptable behaviours.

### **Conclusions and recommendations for future research.**

The aim of these two papers was to report on the evaluation of Australia's first programme to address weight and weight-related behaviours of young people living in OOHC. Young people in OOHC are amongst society's most disadvantaged population groups and their care typically focuses on crisis events rather than unhealthy lifestyle behaviours. The evaluation of HEAL was based on mixed methods where carers and young people completed questionnaires and participated in semi-structured interviews. The transient nature of the OOHC workforce and young people was a barrier to

collecting information [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN]. Further, completing the questionnaires was a challenge for most young people, which contributed to missing data issues and may have influenced the null intervention effects reported in paper one (Cox *et al.*, 2016). The difficulties completing questionnaires reinforced the need to re-visit evaluation methods, including questionnaire design. A better understanding of how the programme was working was determined through semi-structured interviews. This method was successful with carer's and coordinators and provided rich information on how to gain better traction in this sector and how to engage stakeholders who implement the programme. Participants viewed HEAL as a necessary adjunct to the residential care programme, and were able to describe a number of positive outcomes as a result of participating in the programme activities. Programme champions and carer buy-in, through involvement and professional development, were linked to better programme outcomes [PUBLISHER – THE PRECEDING UNDERLINED WORDS ARE FOR THE MARGIN].

Importantly, these findings form part of a quality improvement process to inform future programmes. In particular, it is essential that carers are up-skilled to go beyond being a 'good' parent and implement interventions that promote normal developmental growth. This includes helping carers recognise the potential for ordinary day-to-day interactions around food and exercise to assist young people to develop skills and competencies that will improve their quality of life. Furthermore, to ensure the programme is integrated into usual care, that is, programme ownership is transferred from the developers to the

participating agencies in a way that ensures programme effects are sustained, it is integral that a systematic implementation strategy is developed. A summary of lessons learnt and recommendations to ensure effective implementation and sustainment of the HEAL intervention are summarised in Table A2 in the online Supporting Information.

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Table 1 *Summary of interview procedure*

	<b>Carers</b>	<b>HEAL Coordinators</b>
<b>Sample size</b>	<i>n</i> =22	<i>n</i> =10
<b>Socio-demographic characteristics</b>	Sex, date-of-birth, time spent working in residential care, smoking status, and educational attainment.	Sex, date-of-birth.
<b>Interview timing</b>	Conducted over a three month period post-intervention <sup>a</sup>	Interview schedule 1 <sup>b</sup> : Conducted immediately after active intervention (6 months), prior to starting the maintenance phase of the intervention.  Interview schedule 2 <sup>c</sup> : Conducted immediately post-intervention.
<b>Aim of interviews</b>	Carers were asked specific questions related to: (1) establishment and/or maintenance of healthy lifestyle habits; (2) barriers to creating a healthy eating and active living environment in residential care, and (3) suggestions for future programme development. See Supplementary File A3 in the online Supporting Information for interview schedule.	Coordinators were asked specific questions related to: (1) factors that impacted young person/carer engagement; (2) changes observed; (3) components of the programme that worked well/did not work well; and (4) what programme modifications are needed to ensure any changes are sustained post-programme. See Supplementary File A4 and A5 for interview schedules in the online Supporting Information.
<b>Interview approach</b>	Semi-structured <sup>d</sup>	Semi-structured <sup>d</sup>
<b>Length of interview</b>	15-20 minutes <sup>e</sup>	20-45 minutes <sup>e</sup>
<b>Interview completed by</b>	Authors RC and BW	Author RC

<b>Transcription</b>	Interviews were transcribed verbatim and checked for quality by two authors (RC, BW).	Interviews were transcribed verbatim and checked for quality by two authors (RC, JF).
<b>Coding completed by</b>	Authors RC and BW, inter-rater agreement between the coders was 95%.	Authors RC and JF, inter-rater agreement between the coders was 84%.

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<sup>a</sup>Timing of interviews was dependent on when interviews could be scheduled with the participants.

<sup>b</sup>Interviews took place after the first 6 months of active implementation: external HEAL coordinators,  $n=6$ ; internal HEAL coordinators,  $n=4$ .

<sup>c</sup>Four coordinators (external model of delivery only) also participated in a second interview, which took place 12 months post-intervention (i.e., after active implementation + maintenance); these interviews were conducted after the coordinators had starting working with the wait-list control units.

<sup>d</sup>Probing questions were added where appropriate; carers and coordinators were asked to elaborate or provide examples to support their responses.

<sup>e</sup>Open-ended questions invited carers and coordinators to speak at leisure about their experiences and perspectives, therefore interview length differed across participants, depending on how expansive carers and coordinators were with their response