

Is the Counterweight Program a feasible and acceptable option for structured weight management delivered by practice nurses in Australia? A mixed-methods study

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Abstract. Nurse-led weight management programs, like the Counterweight Program in the United Kingdom, may offer a way for Australian general practices to provide weight management support to adults who are overweight or obese. During Counterweight, nurses provide patients with six fortnightly education sessions and three follow-up sessions to support weight maintenance. This study examined the feasibility, acceptability and perceived value of the Counterweight Program in the Australian primary care setting using a mixed-methods approach. Six practice nurses, from three general practices, were trained and subsidised to deliver the program. Of the 65 patients enrolled, 75% ($n = 49$) completed the six education sessions. General practitioners and practice nurses reported that the training and resource materials were useful, the program fitted into general practices with minimal disruption and the additional workload was manageable. Patients reported that the program created a sense of accountability and provided a safe space to learn about weight management. Overall, Counterweight was perceived as feasible, acceptable and valuable by Australian practice staff and patients. The key challenge for future implementation will be identifying adequate and sustainable funding. An application to publically fund Counterweight under the Medicare Benefits Schedule would require stronger evidence of effectiveness and cost-effectiveness in Australia.

Additional keywords: general practice, obesity, overweight, primary care.

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Introduction

Australia has one of the highest rates of overweight and obesity (63%) among developed nations (Australian Institute of Health and Welfare 2014). Overweight and obesity are associated with an increased risk of a range of chronic conditions (National Health and Medical Research Council 2013) and place a substantial burden on the Australian healthcare system (Colagiuri *et al.* 2010). There is a need to identify effective obesity management interventions. Allied health professionals, specialist physicians and bariatric surgeons all have a role to play in obesity management. However, given its prevalence, less intensive, intermediate-level services are also needed to reduce the potentially overwhelming demand on specialist providers. In the United Kingdom (UK), where the commissioning of health services is well established, guidelines for the commissioning of lifestyle-based weight management services recommend programs that achieve a 60% completion

rate, where at least 30% of participants achieve a weight loss of 5% or more (National Institute for Health and Care Excellence 2014).

The regularity of general practice attendance by Australian adults means that the primary care team is well placed to identify and manage obesity (Department of Health 2014). For the patient, general practice provides a reputable, convenient, familiar and accessible setting with the opportunity for long-term follow up and support. There is evidence that nurse-led programs are effective in providing risk assessment, patient education, counselling and obesity management in primary care (Counterweight Project Team 2008, 2012; Wood *et al.* 2008; Sargent *et al.* 2012; Karnon *et al.* 2013) and that patients report high levels of satisfaction with nurses providing chronic disease management (Halcomb *et al.* 2015). However, international evidence suggests that the perceived self-efficacy and legitimacy of GPs and practice nurses in providing weight

What is known about the topic?

- The Counterweight Program is an evidence-based, structured, practice nurse-led weight management program that has been successfully implemented in the United Kingdom.

What does this paper add?

- The Counterweight Program was demonstrated to be a feasible, acceptable and valued option for weight management care in Australian general practice from the perspective of practice staff and patients.

management care is impeded by a lack of obesity-specific training (Nolan *et al.* 2012; Henderson 2015).

The Counterweight Program was launched in the UK in 2000. It provides a structured, evidence-based model for managing obesity in adults that can be delivered by practice nurses as part of routine clinical care (Counterweight Project Team 2008, 2012). In the program, practice nurses are trained and supported to deliver weight management care to their patients. Prior to patient enrolment, practice nurses and patients discuss the program’s aims and requirements, and consider the patients’ readiness to make weight-related lifestyle changes using Prochaska and DiClemente’s Stage of Change model (Prochaska *et al.* 1992). During the program, patients receive six fortnightly education sessions on healthy lifestyle and behaviour modification techniques. Topics include: healthy eating, food labelling, alcohol, eating habits, emotional drivers, physical activity, recovering from short-term lapses and long-term weight maintenance. Follow-up sessions are provided at 6, 9 and 12 months to support weight-loss maintenance (Fig. 1).

Australian primary care is predominantly funded by fee-for-service payments provided under the Medicare Benefits Schedule (MBS), which is part of the national public health insurance scheme. Prior to receiving funding under the MBS, new services require careful evaluation of their costs and benefits. However, before the significant investment of time and resources required to establish the cost-effectiveness of Counterweight in Australia, the program’s transferability needed to be explored. This paper reports on a mixed-methods study to explore the feasibility, acceptability and perceived value of the Counterweight Program

to Australian practice nurses, GPs, practice managers and patients.

Methods

Setting

The study was conducted from September 2014 to September 2015 in Adelaide, South Australia. Qualitative and quantitative methods were used to evaluate the Counterweight Program and its processes (Fig. 2). In particular, the study examined: whether the program could be implemented in Australian general practice given existing activities and constraints, and the financial reimbursements required to support program delivery (feasibility); whether the aims, content and delivery methods of the intervention were perceived to be appropriate (acceptability); and whether the program was perceived as useful, important and offered a means to address an unmet need (perceived value).

The Northern Health Network (NHN) and their predecessor, the Northern Adelaide Medicare Local (NAML), collaborated on the project. Ethical approval was obtained from the Human Research Ethics Committee at the University of Adelaide.

The feasibility study had a limited time frame and budget. It was calculated that three practices and 15–25 patients per practice were the maximum number that could be recruited and funded in the time available, and would be sufficient to provide insight into the feasibility, acceptability and perceived value of the program. General practices were recruited by a short presentation at a NHN education event for GPs and practice nurses. Six practices expressed an interest, and three were selected to participate based on the eligibility criteria (use of electronic medical records and employment of at least two practice nurses) and the order in which they responded.

Practices received reimbursement for delivering the Counterweight Program and for nurses’ time during training sessions. Sessions one and two (expected duration 30 min) were reimbursed at a fee of A\$25, whereas sessions three to six (expected duration 20 min) were reimbursed at a fee of A\$20. Options for funding the delivery of the Counterweight Program were discussed with the NHN (to clarify the amount) and with participating providers (to ensure an appropriate payment method).

The NHN provided local support to the practices, assisting with patient recruitment and data collection, and supporting ongoing delivery of the program following the completion of the study.

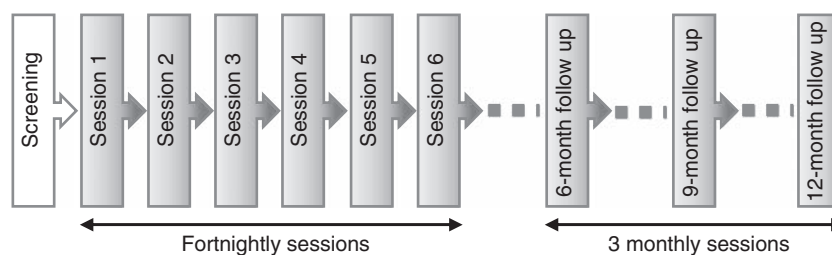


Fig. 1. Structure of the Counterweight Program: sessions delivered to patients.

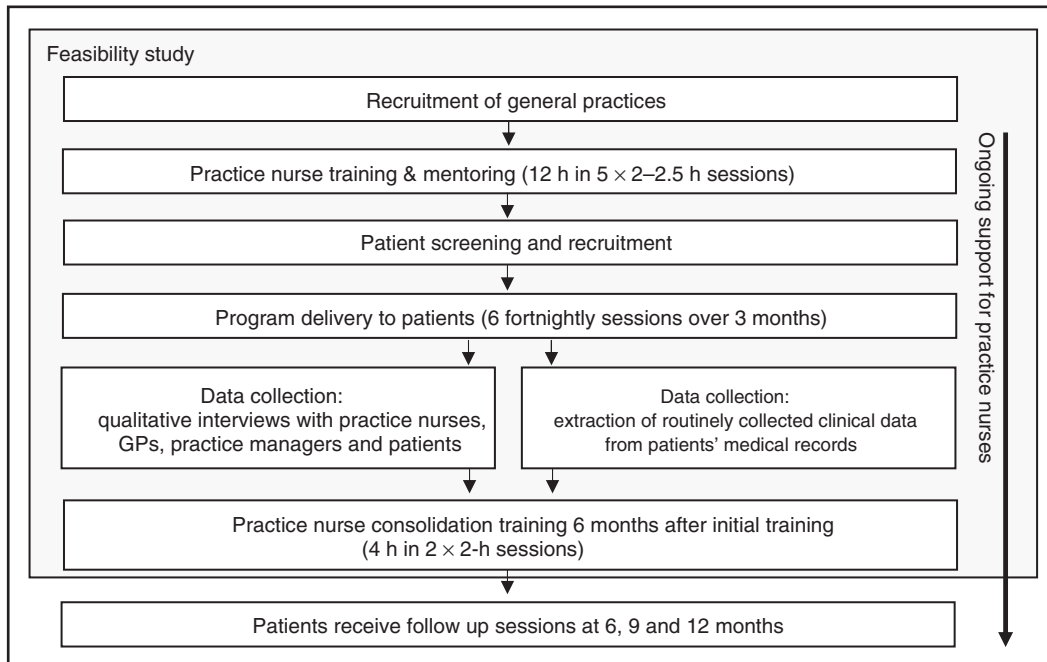


Fig. 2. Flow chart of the feasibility study and Counterweight Program delivery.

Practice nurse training and resource materials

Practice nurses received 12 h of interactive, online training from an experienced, UK-based, Counterweight dietitian. The training sessions were scheduled early or late in the day (at 0730 or 1930 hours) to accommodate time zone differences between the UK-based trainer and Australian nurses. Practices received reimbursement for the time nurses participated in training. Ongoing support was provided, as needed, by email or telephone. After 6 months, the nurses received four additional hours of training to consolidate their knowledge.

Nurses were provided with a training manual that included information on the assessment, causes, health consequences and treatment of obesity. Patients received a folder with educational inserts added at each Counterweight session. To promote consistency and enhance the quality of intervention delivery, nurses used a quick reference guide alongside the patient resource folder to guide each Counterweight session.

Patient screening, recruitment and program delivery

Once trained, the nurses discussed the Counterweight Program with potentially eligible patients who attended the practice for routine care. GPs also referred potentially eligible patients to the nurse. To be eligible to enrol in the Counterweight Program, patients needed to have a body mass index (BMI) greater than 25 kg m^{-2} and be ready to make weight-related behaviour changes. Additionally, patients needed to be aged 18 years and over, have regularly attended the general practice (three visits in the previous 12 months), not have reduced their weight by 10 kg or more in the previous 12 months and be able to communicate in English (as resource materials were only available in English). Practices were asked to recruit 15–25 patients into the study,

which was determined to be sufficient to assess the feasibility of the recruitment processes, indicate program completion rates and inform the planned qualitative analyses.

Nurses then delivered the six fortnightly education sessions and the follow-up appointments to the enrolled patients.

Quantitative data collection and analysis

During enrolment, patients provided consent for routinely collected data recorded in their general practice medical records to be extracted by the research team. Demographic characteristics, comorbidities, Counterweight session attendance and measurements of height and weight were extracted. Baseline characteristics and program completion rates were calculated using Stata, ver. 14.1 (StataCorp, College Station, TX, USA).

Qualitative data collection and analysis

To explore the program's feasibility, acceptability and perceived value, in-depth, semi-structured interviews were conducted with practice staff and patients between May and September 2015.

All practice nurses delivering the program, all practice managers and a sample of GPs from participating practices were invited to be interviewed. Practice nurses and managers were asked to suggest GPs with a range of engagement and attitudes towards the program (both positive and negative) for interview. Interviews were conducted either by telephone or face-to-face in a private room at the practice. Reimbursement was offered to offset the time away from professional obligations (A\$40 for practice nurses and managers; A\$75 for GPs).

Patients in the feasibility study indicated on their consent form if they were willing to be contacted about further research on the program. Willing patients were invited to be interviewed by a

letter with a follow-up telephone call. The invitation was issued a minimum of 3 months after program enrolment. Purposive sampling was used to recruit 12–20 patients across all three general practices, with a range of ages, genders and number of Counterweight sessions attended (e.g. complete attendance at the initial six sessions or early program disengagement). Depending on the patients' preference, interviews were conducted by telephone or face-to-face in a private room at the offices of the NHN. During the interviews, patients were asked about their past experiences of weight loss and weight gain, and their experience of the Counterweight Program. Patient interviewees were offered A\$15 to offset travel and time costs.

All interviews were conducted by J. Gray (see Appendix 1 for interview guides). They were audio recorded and transcribed by a professional service. J. Gray reviewed transcripts and recordings to ensure accuracy of the transcript. Under a pragmatic epistemology, the analysis focussed on the explicit, stated meaning of the data. Thematic analysis (Braun and Clarke 2006) was used to develop themes from the data. NVivo 10 for Windows (QSR International Pty Ltd, Melbourne, Vic., Australia) was used for data management. J. Gray undertook the initial coding of all transcripts. E. A. Hoon reviewed and coded selected transcripts. Regular discussions between J. Gray and E. A. Hoon explored, challenged and redefined the emerging themes. Feedback from the broader research team clarified the salience and contextualised the themes.

Results

Participant characteristics

Three general practices participated in the study. Two practices had more than five GPs and were located in metropolitan regions of low socioeconomic status, and one practice had a single GP and was located in a non-metropolitan region of medium socioeconomic status. Two nurses from each practice were trained to deliver Counterweight. The nurses' background in weight management varied. Some had very little experience or training, others had attended multiple lifestyle modification training programs or had been responsible for diabetic education within their practice.

Across the three practices, 65 patients were enrolled within 3 months (Table 1). Patients were predominantly female (82%), lived in an area of low socioeconomic status (72%) and 55% had two or more comorbidities. The mean BMI of enrolled patients was 38 kg m^{-2} (s.d.: 7.6, range: 25–58). The initial six Counterweight sessions were completed by 75% of patients ($n = 49$), with patients taking between 68 and 197 days to reach session six (median: 83 days).

All six practice nurses, all three practice managers, four GPs and 18 patients agreed to be interviewed about their experience of the program. Thematic saturation was reached in interviews with practice nurses, practice managers and patients, but was unable to be reached in interviews with GPs. The spread of patient interviewees across practices and nurses reflected the spread for all enrolled patients. On average, patient interviews were conducted 2.7 months (s.d.: 1.8) from the last Counterweight session attended (range 12 days to 7 months). Similar to the characteristics of all enrolled patients, interviewees were predominately female (83%), had a mean age of 55 years

Table 1. Patient characteristics at baseline

For comparison, the baseline characteristics of participants in the UK observational study of Counterweight (Counterweight Project Team 2008) were: $n = 1906$, mean age = 49.4 years (95% CI: 48.8–50.0), female = 77%, mean BMI = 37.1 (95% CI: 36.8–37.4) and proportion with two or more comorbidities = 48.1%. For comparison, the baseline characteristics of participants in the Scottish observational study of Counterweight (Counterweight Project Team 2012) were: $n = 6715$, mean age = 53.0 years (95% CI: 52.9–53.1), female = 74%, and mean BMI = 37.0 (95% CI: 36.9–37.1). Socioeconomic status was based on residential postcode using the Socioeconomic Indexes for Areas (SEIFA) (Australian Bureau of Statistics 2013). Low status includes SEIFA deciles 1–3, medium 4–7, and high 8–10. Comorbidities included bipolar disorder, depression, anxiety, schizoaffective disorder, diabetes, hyperlipidaemia, hypertension, ischaemic heart disease, myocardial infarction, hypothyroid, osteoarthritis and obstructive sleep apnoea. Mental health conditions included bipolar disorder, depression, anxiety and schizoaffective disorder. CI, confidence interval

	<i>n</i> (%)	Mean (95% CI)
Total participants	65	
Gender (female)	53 (81.5)	
Age (years)		53.5 (49.9–57.2)
Weight (kg)		100.3 (94.5–106.0)
BMI (kg m^{-2})		37.5 (35.6–39.4)
Socioeconomic status		
Low	47 (72.3)	
Medium	15 (23.1)	
High	3 (4.6)	
Comorbidities		
None	15 (23.1)	
1 only	12 (18.5)	
2 or more	36 (55.4)	
Missing	2 (3.1)	
Diabetes	22 (33.9)	
Mental health condition	25 (38.5)	

(s.d. 17.2) and most lived in an area of low socioeconomic status (78%). Compared to all those enrolled, a higher proportion of interviewees had completed the six sessions (89% compared to 75%) and lost 5% or more of their baseline weight (44% compared to 28%).

Feasibility

The online training, with its interactive classroom environment, was well received by the nurses. Some nurses experienced technical issues but were able to resolve these with the support of the trainers. The convenience of the online training was emphasised, particularly by nurses who would normally need to travel long distances to attend training events. The timing of the training sessions (early or late in the day) was perceived as manageable but 'not ideal' (Table 2, Quotation 1); however, scheduling training during work hours would also have been problematic for the nurses.

Practice staff reported that Counterweight fitted into the practice with minimal disruption (Table 2, Quotation 2). Both nurses and practice managers felt that the additional workload for the nurses was manageable, provided the appointments were distributed across the week and not clustered on a single day. GPs reported the program did not affect their workload (Table 2, Quotation 3).

Table 2. Themes with illustrative quotations from interviews with practice staff and patients

Feasibility	
Quotation 1	... it was early in the day for us and it was quite late at night for them so it was not ideal for either party but it was infrequent enough that it didn't really matter, and interesting and engaging enough that it was worthwhile going in and doing that [Nurse].
Quotation 2	... it just slotted into the practice [Practice Manager].
Quotation 3	I consulted as per normal but the bonus was that they [patients] could see our nurse for the program [GP].
Quotation 4	... it doesn't have unrealistic expectations for someone who's busy... It's not like every week at 6:30 you will be here and you will do this [Patient].
Quotation 5	... [patients are] very conscious about money around here... there are some people that would pay [for the patient resources], but I think the majority, we'd have an issue saying it costs you \$20 for a book... [Practice Manager].
Quotation 6	Obviously we'll have to work out a viable financial model. It can work within the chronic disease management program... For those that haven't got the chronic diseases then we're stuck [Practice Manager].
Quotation 7	Government health [department] buy-in, you know, MBS item numbers, that's what's really needed [Nurse].
Acceptability	
Quotation 8	... the inserts were quite engaging and easy to read and understand with the patients... I didn't really have to explain much to the patients. They didn't come back and say, 'I didn't understand this bit when I read that.' [Nurse].
Quotation 9	... it's not a diet, it's just giving you the guidelines and the right way to go [Patient].
Quotation 10	... they ask. They don't actually say, 'You shouldn't do this.' But they get you to question yourself and you give them the answer [Patient].
Quotation 11	... [the nurse is] non-judgemental and I've had realistic goals and realistic support [Patient].
Quotation 12	... being able to go to my doctors and do it is just so much easier because I have so many [other] appointments to go to [Patient].
Quotation 13	It has good foundations in as much it comes out of the medical profession, rather than having some supposed pretty-faced male or female on the TV screen saying this is the real fad diet of the century [Patient].
Quotation 14	... you already have a relationship with your general practice so you can talk to them, you can go back to them [Patient].
Perceived value	
Quotation 15	... there is a need for it, definitely. We have quite a few overweight patients and a lot of diabetic patients [Nurse].
Quotation 16	The doctors really got on board because I think they feel that they can't do much in a 10 minute appointment time [Nurse].
Quotation 17	I think without the program it's more haphazard [and depends on] what the doctor wants to do, how much time is there, what sort of appointment the patient is coming for [GP].
Quotation 18	It was the opportunity to have a structured approach for our patients... [Nurse].
Quotation 19	We encouraged people to go in the program and I think after a while we were hoping that it would become standard really. If we can continue it will be great... [GP].
Quotation 20	... we did see results, so it's encouraging. But always with weight loss it's a long-term thing. Certainly the results initially are quite encouraging [GP].
Quotation 21	It would be nice to see how it goes over the next 5 years. Ten years would be lovely. I don't see these changes as being worth anything for a few weeks. It's whether the people make the lifestyle changes and maintain them for the rest of their lives [GP].
Quotation 22	... because you're having that one-on-one with the patients... I had some other issues coming out. They were comfortable talking to me, and they had some deep-rooted things that probably led to their weight gain... you weren't just dealing with the weight program then, you had to try and maybe have other referrals to other groups. Or let the doctors know that perhaps the patient needed some help in other ways [Nurse].
Quotation 23	It's having somebody to answer to... [Patient].
Quotation 24	... knowing that there's someone that's going to be monitoring me [Patient].
Quotation 25	They told us about weight loss pills. They talked about a few other things. Then they brought up the Counterweight Program and we just thought that would be more realistic, more than a quick fix [Patient].
Challenges	
Quotation 26	I've found it harder to stay on track [since shifting to longer gaps between visits], and I've found it harder to keep the food diary [Patient].
Quotation 27	... the fortnightly meetings to begin with were really good, and I've kept on with monthly follow-ups because I found I just needed that reinforcement... [Patient].
Quotation 28	I think people have really good intentions... [but] real life gets in the way. We had several people not continue or drop out just because they were really motivated and said this seems like a great idea – they came to a couple of visits and then it just sizzled for them. I don't know any other way that you can measure people's intention to follow through other than what we did [by using the screening questions] [Nurse].
Quotation 29	... checking and making sure that people were keeping their appointments and if they had drifted, to have that time to ring them up and get them back on track if that was what they wanted to do [Nurse].
Quotation 30	... that's when I fell off the wagon with the Counterweight [when work commitments increased]... I couldn't even go to the fortnightly appointment because I literally did not have the time [Patient].

Although some patients found it easy to regularly attend the fortnightly appointments, others required additional flexibility due to work and other commitments. This flexibility

was facilitated by the one-to-one delivery of the program and the relatively small number of appointments required; that is, nine appointments over 12 months, compared to weekly sessions

required by other weight management programs (Table 2, Quotation 4).

Practice staff indicated that the biggest challenge to continuing to deliver the Counterweight Program was finding adequate and sustained funding. It was suggested that asking patients to pay could create a barrier to engaging them (Table 2, Quotation 5), or alternatively, it might help identify those who are strongly motivated. Practices indicated they would require some reimbursement for session delivery to make Counterweight sustainable and to be able to allocate significant nurse time to the program (Table 2, Quotations 6, 7).

Acceptability

The content of the program and the resource materials provided for nurses and patients were considered useful and appropriate (Table 2, Quotation 8), requiring only minor changes to adapt the content to the Australian context (e.g. reference to Australian rather than UK guidelines for dietary intake, physical activity and alcohol consumption).

Patients described how the Counterweight Program created a safe space for them to explore their weight, learn about weight management and to make changes towards a healthier lifestyle. The broad definitions of success, the non-judgemental and non-prescriptive approach, and the delivery of the program in their general practice helped to create this safe space.

The program was seen as being non-prescriptive and 'not a diet' (Table 2, Quotation 9). Patients appreciated being offered information, guidelines and suggestions on how to shift towards a healthier lifestyle. In particular, they valued being able to work with the nurse to problem-solve challenges they were experiencing rather than being told what they should or should not do (Table 2, Quotation 10). The non-judgemental approach of the nurses meant that patients felt they could openly discuss difficulties and seek support during challenging times, including when they plateaued, put on weight or 'fell off the wagon' (Table 2, Quotation 11). Some patients described the sense of having a champion: someone who was on their side, cheering them on and recognising when they achieved something. This was supported by the broad definitions of success used by the program – emphasising the value of small weight losses or keeping weight stable (not gaining), setting realistic goals and focussing on creating a healthier lifestyle rather than weight loss alone.

Patients considered the practice to be their regular general practice before enrolment in Counterweight, thus they had an established relationship with the practice, even if they had not met the practice nurse. Regardless of whether they knew the nurse before starting the program, patients described how having the program delivered in general practice made it more comfortable, trustworthy, accessible and convenient for them (Table 2, Quotations 12–14). They trusted the education provided because it was recommended and delivered by the general practice staff. For most patients, having the program in general practice positioned it as part of their broader medical care, which had already been entrusted to the general practice. Combined with the non-judgemental support from the nurses, the delivery through general practice reinforced the

sense that if a patient needed additional help they could always ask for it.

Perceived value

Practice staff recognised that many of their patients had a high BMI and could benefit from a program like Counterweight (Table 2, Quotation 15). Both GPs and nurses recognised that GPs often had limited time within routine appointments to provide weight management advice to patients (Table 2, Quotations 16, 17). Training nurses to deliver Counterweight allowed the practice to offer a structured weight-management program, without placing additional workload on the GPs (Table 2, Quotation 18). One GP pointed to the 'fine line between criticism and advice', suggesting that offering a coordinated program helped patients remain receptive, rather than feeling lectured by the GP.

GPs were pleased with the feedback they received from patients and the results they saw. All GPs were keen to see the program become part of standard care; however, they were clear that further evidence of effectiveness was needed, particularly over the longer term (Table 2, Quotations 19–21). All nurses expressed an interest in continuing to deliver the program.

Many nurses reported that the extended, one-to-one time with patients during Counterweight sessions allowed them to become aware of deeper issues that were affecting the patients' lives, health and capacity to manage their weight. These issues could be raised with the GP and the patients referred for further support (Table 2, Quotation 22).

Patients described how the regular, fortnightly visits created a sense of accountability and helped to build and sustain their motivation for behaviour change (Table 2, Quotations 23, 24). They emphasised that the program was not a 'quick fix' but provided information and strategies that empowered them to shift towards a healthier lifestyle and manage their weight (Table 2, Quotation 25). Some patients spoke of encouraging friends and family members to enrol in the program, whereas others spoke of informally sharing the knowledge they had gained.

Challenges

For some patients, moving from the fortnightly visits to the 3-monthly follow ups created a challenge (Table 2, Quotations 26, 27). They keenly felt the reduced support and found it harder to sustain their motivation and recover from lapses. Having a very brief, monthly check-in assisted with this transition. In contrast, other patients felt this gap less acutely, and some described becoming accountable to themselves for achieving the goals they had set.

Some of the nurses questioned the usefulness of the screening questions. They recognised that some patients could give positive answers and have the best of intentions, but once enrolled were not able to engage with or complete the program (Table 2, Quotation 28). For some of these patients, the nurses recognised that 'real life gets in the way' leading to program drop-out, but there was also a concern that others might be seeking a 'quick fix' or lacking sufficient motivation.

Nurses identified that it was important to allocate time to maintaining a recall register and following up with patients who missed Counterweight appointments (Table 2, Quotation 29). Follow-up telephone calls allowed nurses to talk with patients who may have 'drifted' and to help 'get them back on track' if the patient was interested in doing so.

Although many of the patients who left the program early were not willing to talk with us, those who did pointed to conflicting commitments; for example, increased hours at work, a changed work schedule or the need to care for family members (Table 2, Quotation 30). These patients expressed a desire to return to the program but were unsure if it was still available to them (which may be why they were willing to be interviewed). One patient described how telephone calls from the nurse to check if she was coming back helped her return after a lengthy gap.

Discussion

The reported study demonstrated the feasibility, acceptability and perceived value of the Counterweight Program for nurse-led management of obesity in an Australian primary healthcare setting. Participating practices were able to enrol patients, and program completion was high with 75% of patients completing the initial 3 months. This is compared to a 55% completion rate in the UK evaluation of Counterweight (Counterweight Project Team 2008) and the 60% completion rate recommended in the National Institute for Health and Care Excellence (NICE) commissioning guidelines (National Institute for Health and Care Excellence 2014). The study was designed to evaluate the feasibility, acceptability and perceived value of the program. The study did not include a sample size calculation or a control group, both of which would be required to generate evidence on weight change outcomes and determine effectiveness. However, it is reassuring to note that 28% of all enrolled patients (39% of completers) reduced their weight by 5% or more at 3 months, which is comparable with those participating in Counterweight in the UK where 14% (95% CI: 12.5–16.2) of enrollees lost 5% or more at 3 months (26% of completers, 95% CI: 23.1–29.3) (Counterweight Project Team 2008).

The qualitative evaluation found that the Counterweight Program provided nurses with relevant training, support and materials, and fitted into general practices with minimal disruption. By providing obesity-specific training, the program enhanced the perceived self-efficacy and legitimacy of nurses and removed a barrier to their involvement in providing weight management care (Nolan *et al.* 2012; Henderson 2015).

Patients saw the program as a non-judgemental, non-prescriptive way to learn about weight management in an environment that was convenient, accessible and trusted. Given the stigma and discrimination often experienced by patients who are overweight or obese (Puhl and Heuer 2009; Malterud and Ulriksen 2011; Spahlholz *et al.* 2016), the finding that the program created a safe space for patients to explore weight-related issues with their healthcare provider is an important one.

The perceived value of the program went beyond weight management outcomes. The additional time spent with patients during program delivery enabled nurses to identify and seek

to address deeper, previously unrecognised issues that were affecting patients' health and wellbeing.

Several challenges were identified by the study. These challenges did not, however, negate the feasibility of the program. Rather, the issues raised tended to be typical issues for any weight management program; for example, patient motivation and sustained attendance (Moroshko *et al.* 2011).

Limitations of the study included the enrolment of only three general practices, and that the practices were self-selecting. However, self-selection would also be expected if the program was rolled out more broadly. We were unable to reach thematic saturation in interviews with GPs; however, common themes still arose and have been discussed. The patients interviewed may have been more likely to report a positive experience of Counterweight compared to all enrolled patients, given their high completion rates and the higher proportion achieving a weight loss of 5% or more from baseline. However, the interviewees had experienced a range of weight change outcomes (from no loss to significant loss) and a range of perspectives were obtained.

Current options for weight management support in Australian primary care include the provision of care by general practice staff, or referral to allied health providers, community programs or telephone counselling. Under existing MBS funding, patients with chronic conditions (including patients with obesity who have co-morbidities or multiple risk factors) are eligible for a GP Management Plan (GPMP), which includes five subsidised allied health visits. However, these five visits are often insufficient to meet all the care needs of patients and to provide care consistent with best-practice guidelines; for example, weight management guidelines produced by the Dietitians Association of Australia (Cant 2010). This is particularly the case for patients with obesity and complex comorbidities who require care across multiple allied health specialties.

The Healthy Eating Activity & Lifestyle (HEAL) Program was a community-based healthy lifestyle program funded until June 2013 under the Commonwealth's Healthy Communities Initiative (HCI) (Hetherington *et al.* 2015). The program continued beyond the end of HCI funding; however, even with a low fee per participant, program enrolments fell from 1755 in 2012 to 320 in the first 6 months of 2014 (J. Borodzicz, pers. comm., 24 November 2014). The experience of the HEAL Program illustrates the need to plan for the long-term sustainability of new programs.

The Australian practice nurse workforce remains an underutilised resource (Hoare *et al.* 2012). Funding mechanisms have the power to direct and expand the nurse's role; for example, under a GPMP, MBS service payments enable five visits to a practice nurse for chronic disease management (Halcomb *et al.* 2008; Pearce *et al.* 2011; McInnes *et al.* 2017). Additional service payments to promote practice nurse involvement in obesity management have been suggested (Afzali *et al.* 2014), as without adequate funding, practice nurse time is likely to be directed to other, more financially rewarded priorities (Nolan *et al.* 2012).

This study replicated potential MBS service payments to fund program delivery by practice nurses, which were acceptable to practices. Following completion of the study, some participating practices continued to deliver Counterweight using the five nurse visits funded under a GPMP. However, this has restricted patient

eligibility and offers only limited session funding. It is likely to limit the wider uptake and sustainability of the program. An application to the Medical Services Advisory Committee (MSAC) to fund the Counterweight Program through new, more appropriate MBS item numbers would require stronger evidence on the effectiveness and cost-effectiveness of the program.

Conclusions and implications

General practice has a role to play in supporting patients who are overweight or obese, but there are currently no widely implemented weight management programs in general practice in Australia. The Counterweight Program had been implemented in the UK and may provide an effective and cost-effective option in Australia. This study has demonstrated that the Counterweight Program is feasible, acceptable and perceived as valuable by Australian general practice staff and patients. Funding limitations were identified as the biggest challenge to continued program delivery. The existing evidence may support limited investment in the program, but stronger evidence of effectiveness in Australia is required to enable MBS funding for widespread and sustainable program delivery.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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References

- Afzali HHA, Karnon J, Beilby J, Gray J, Holton C, Banham D (2014) Practice nurse involvement in general practice clinical care: policy and funding issues need resolution. *Australian Health Review* **38**(3), 301–305. doi:10.1071/AH13187
- Australian Bureau of Statistics (2013) Census of population and housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011. (ABS: Canberra, ACT, Australia) Available at http://www.abs.gov.au/AUSS_TATS/abs@.nsf/DetailsPage/2033.0.55.0012011?OpenDocument [Verified 1 February 2017].
- Australian Institute of Health and Welfare (2014) 'Australia's Health 2014.' (AIHW: Canberra, ACT, Australia)
- Braun V, Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* **3**(2), 77–101. doi:10.1191/1478088706qp063oa
- Cant R (2010) Today's profession: views and practices of private practice dietitians re Medicare Chronic Disease Management program. *Nutrition & Dietetics: the Journal of the Dietitians Association of Australia* **67**(2), 77–83. doi:10.1111/j.1747-0080.2010.01423.x
- Colagiuri S, Lee CM, Colagiuri R, Magliano D, Shaw JE, Zimmet PZ, Caterson ID (2010) The cost of overweight and obesity in Australia. *The Medical Journal of Australia* **192**(5), 260–264.
- Counterweight Project Team (2008) Evaluation of the Counterweight Programme for obesity management in primary care: a starting point for continuous improvement. *The British Journal of General Practice* **58** (553), 548–554. doi:10.3399/bjgp08X319710
- Counterweight Project Team (2012) The implementation of the Counterweight Programme in Scotland, UK. *Family Practice* **29**, i139–i144. doi:10.1093/fampra/cm074
- Department of Health (2014) 'Annual Medicare Statistics – Financial Year 2007–2008 to 2013–14.' (Commonwealth of Australia: Canberra, ACT, Australia)
- Halcomb EJ, Davidson PM, Salamonsen Y, Ollerton R, Griffiths R (2008) Nurses in Australian general practice: implications for chronic disease management. *Journal of Clinical Nursing* **17**, 6–15. doi:10.1111/j.1365-2702.2007.02141.x
- Halcomb EJ, Salamonsen Y, Cook A (2015) Satisfaction and comfort with nursing in Australian general practice. *Collegian* **22**(2), 199–205. doi:10.1016/j.colegn.2014.09.003
- Henderson E (2015) Obesity in primary care: a qualitative synthesis of patient and practitioner perspectives on roles and responsibilities. *The British Journal of General Practice* **65**(633), e240–e247. doi:10.3399/bjgp15X684397
- Hetherington SA, Borodzic JA, Shing CM (2015) Assessing the real world effectiveness of the Healthy Eating Activity and Lifestyle (HEALTM) program. *Health Promotion Journal of Australia* **26**(2), 93–98. doi:10.1071/HE14031
- Hoare KJ, Mills J, Francis K (2012) The role of Government policy in supporting nurse-led care in general practice in the United Kingdom, New Zealand and Australia: an adapted realist review. *Journal of Advanced Nursing* **68**(5), 963–980. doi:10.1111/j.1365-2648.2011.05870.x
- Karnon J, Afzali HHA, Gray J, Holton C, Banham D, Beilby J (2013) A risk adjusted cost-effectiveness analysis of alternative models of nurse involvement in obesity management in primary care. *Obesity* **21**(3), 472–479. doi:10.1002/oby.20100
- Malterud K, Ulriksen K (2011) Obesity, stigma, and responsibility in health care: a synthesis of qualitative studies. *International Journal of Qualitative Studies on Health and Well-being* **6**(4), 8404. doi:10.3402/qhw.v6i4.8404
- McInnes S, Peters K, Bonney A, Halcomb E (2017) The influence of funding models on collaboration in Australian general practice. *Australian Journal of Primary Health* **23**(1), 31–36. doi:10.1071/PY16017
- Moroshko I, Brennan L, O'Brien P (2011) Predictors of dropout in weight loss interventions: a systematic review of the literature. *Obesity Reviews* **12**(11), 912–934. doi:10.1111/j.1467-789X.2011.00915.x
- National Health and Medical Research Council (2013) 'Clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia.' (NHMRC: Melbourne, Vic., Australia)
- National Institute for Health and Care Excellence (2014) Managing overweight and obesity in adults – lifestyle weight management services: NICE public health guidance 53. (NICE: London, UK) Available at www.nice.org.uk/guidance/ph53 [Verified 1 February 2017]
- Nolan C, Deehan A, Wylie A, Jones R (2012) Practice nurses and obesity: professional and practice-based factors affecting role adequacy and role legitimacy. *Primary Health Care Research and Development* **13**, 353–363. doi:10.1017/S1463423612000059
- Pearce C, Phillips C, Hall S, Sibbald B, Porritt J, Yates R, Dwan K, Kljakovic M (2011) Following the funding trail: financing, nurses and teamwork in Australian general practice. *BMC Health Services Research* **11**, 38. doi:10.1186/1472-6963-11-38
- Prochaska JO, Diclemente CC, Norcross JC (1992) In search of how people change. *The American Psychologist* **47**(9), 1102–1114. doi:10.1037/0003-066X.47.9.1102

- Puhl RM, Heuer CA (2009) The stigma of obesity: a review and update. *Obesity (Silver Spring)* **17**(5), 941–964. doi:[10.1038/oby.2008.636](https://doi.org/10.1038/oby.2008.636)
- Sargent GM, Forrest LE, Parker RM (2012) Nurse delivered lifestyle interventions in primary health care to treat chronic disease risk factors associated with obesity: a systematic review. *Obesity Reviews* **13**, 1148–1171. doi:[10.1111/j.1467-789X.2012.01029.x](https://doi.org/10.1111/j.1467-789X.2012.01029.x)
- Spahlholz J, Baer N, König H-H, Riedel-Heller S, Luck-Sikorski C (2016) Obesity and discrimination – a systematic review and meta-analysis of observational studies. *Obesity Reviews* **17**, 43–55. doi:[10.1111/obr.12343](https://doi.org/10.1111/obr.12343)
- Wood DA, Kotseva K, Connolly S, Jennings C, Mead A, Jones J, Holden A, De Bacquer D, Collier T, De Backer G, Faergeman O (2008) Nurse-coordinated multidisciplinary family based cardiovascular disease prevention programme (EUROACTION) for patients with coronary heart disease and asymptomatic individuals at high risk of cardiovascular disease: a paired cluster-randomised controlled trial. *Lancet* **371**, 1999–2012. doi:[10.1016/S0140-6736\(08\)60868-5](https://doi.org/10.1016/S0140-6736(08)60868-5)

Appendix 1. Interview questions

Interview guide for practice nurses:

1. Checklist before start of interview

- Regarding information sheet, consent form, independent contacts form
 1. **Voluntary** participation – you can choose to skip a question and return to it later, not answer a question, or to end the interview at any time
 2. **Confidential** – your name won't be in any reports, your information will be stored securely
 3. Permission to **audio record**
 4. Ensure **consent form** is completed
- Please feel free to ask any questions you have during the interview

I would like to get information on your experiences and opinions of the Counterweight Program and the pilot study. . .

2. So how did you find it?
3. About you

- How long have you been involved in **nursing in general practice**? With this practice?
 - How long have you been with **this general practice**?
 - What is your **role** within the general practice?
- Do you have any particular **interest in weight management**?
 - What **role do you think general practice should play** in weight management?
 - Prior to the Counterweight Program, what support/management **would you offer** to a patient who was concerned about their weight, or when you were concerned about their weight? (overweight, obese, with or without comorbidities?)
 - Had you done any **other weight management training** before Counterweight? If so, what?
 - Are you familiar with the National Health and Medical Research Council (NHMRC) **clinical practice guidelines** for the management of overweight and obesity in adults in Australia? If yes, do you use them? How?

4. Participation decision

- Were you **part of the practice's decision to participate** in the pilot study?
 - If yes:
 - What aspects of the Counterweight program were **appealing** to your practice?
 - What **aspects of the study were important in enabling** your practice to participate?
 - Did you have any **concerns** about the study?
 - Anything you know now that you would have **liked to have known** at the beginning?
 - If no:
 - **How were you introduced** to the program? (e.g. GP information session within the practice? Received written information on the program? A nurse or practice manager spoke with you?)

5. Nurse training

- Overall, how did you find the **training** for the Counterweight Program?
- Regarding **organisation**
 - What do you think of the way the training sessions were **organised**?
 - How did you find the **online environment**? Did you have any issues with **connecting/equipment**?
 - How did the sessions fit with the **practice schedule**? **Timing** of sessions (AM or PM, in or out of hours)? **Length** of sessions (2–2.5 h)? **Intensity/spacing** of sessions (spaced weekly or multiple sessions in 1 week)?
 - Were you given sufficient **lead-in time** to organise?
 - Do you think the **reimbursement amount (\$900)** was insufficient, sufficient or too much to cover nurse training time?
- Regarding **content and materials**
 - What was your impression of the training **content**?
 - Was there anything that particularly **stood out** for you?
 - Anything you particularly liked or valued? **Disliked? Struggled** with?
 - What was your impression of the Counterweight **materials**: For nurses (manual, flip book)? For patients (screening leaflet, folder)?
 - Is there anything you think needs **changing** to make the materials more suitable for Australia?
 - Was there anything you **didn't feel worked** for your patients (e.g. Australian context)?
- Was there anything your patients **struggled to understand**?
 - Regarding **support**
 - Did you feel **comfortable/confident** delivering the program after the training?
 - Did you feel you were **offered adequate ongoing support**?
 - Did you use the ongoing support provided by Counterweight dietitians?
 - Did you use the support provided by the chronic disease liaison officer at the Northern Adelaide Medicare Local (NAML)?

6. Recruitment

- Overall, how did you find the **recruitment processes**?
 - Did you refer patients to the program? If yes. . .
 - **How?** e.g. discussion at routine appointment?
 - Approximately **how many patients** did you refer? (e.g. **patients per week**)
 - Did **GPs refer** patients to the program? If yes. . .
 - **How?** e.g. discussion at routine appointment, referral to you, provide with information sheet and screening leaflet, discuss readiness to change?
 - Approximately how many patients were referred by GPs? (e.g. **patients per week per GP**)

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Appendix 1. (continued)

Interview guide for practice nurses (Cont.):

-
- Did you send out **invitation letters** to patients? If yes...
 - **How many** letters were you comfortable sending at one time?
 - How many phone calls/requests for appointments did you get **from each** mail out?
 - Do you know if **reception staff** received queries about the program? Phone calls?
 - Are you aware of any patients who were **unhappy to have received** the invitation letter?
 - Were you concerned about the **time taken for screening patients/enrolling them**?
 - Overall (from all sources), how many patients was it **feasible to recruit/screen each week**?
 - Regarding **patient recruitment materials**
 - What was your impression of the **patient recruitment materials** (i.e. the information sheet, consent form, screening leaflet).
 - Were they **easy** for patients to understand?
 - Did they **engage** patient's interest?
 - Was there additional information that **should have been included** (common questions)?
 - Regarding **patient enrolment and consent**
 - How did you find **obtaining written consent** for the study at the start of the first appointment?
 - Was the enrolment process/**checklist easy to follow**?
 - Did copying and **posting** the consent form back to us work okay?
- 7. Program delivery**
- How did **delivering** the program go?
 - How many patients was it **feasible to have enrolled at one time** (workload)?
 - How did you find the **fortnightly** timing of appointments?
 - What was the **average time spent** on each appointment (for sessions 1 and 2; for sessions 3 to 6)? Was there any **additional administration time** around each appointment?
 - Were you **happy with** the amount of time spent delivering the program? (e.g. training, screening, program delivery)
 - Were you aware of any issues regarding **no-shows/non-attendance** without cancellation?
 - Were you aware of any issues regarding **storage** of Counterweight patient materials (boxes of patient folders and inserts)?
 - What were your **overall perceptions** of the program?
 - Were you comfortable with the **goals/aims** of the program? (e.g. goal of 5–10% weight loss)
 - Were your **patients** comfortable with the goals and aims of the program?
 - Did the program **meet your needs**?
 - Do you think the program met the **needs of your patients**?
 - Were there any **concerns** that you had about the program?
 - Is there anything you think should have been **done differently**?
 - Is there any information you felt was **missing** from the program?
 - Regarding **data collection**
 - Were there any issues with **recording the data required**?
 - **Coding appointments** as Counterweight related?
 - **Recording** weight, height and waist circumference?
- 8. Session payments**
- Now that you have experienced the program and what it requires to deliver, what is your **perception of the session payments**? (\$25 for sessions 1 and 2, and \$20 for sessions 3 to 6)
 - Was this **adequate** for the time/effort/training required?
 - **Without these** payments, would it be feasible/attractive to deliver Counterweight? How would you do it?
 - What if the payments were **\$12 per session** (i.e. similar to MBS item number 10997 for chronic disease management by a nurse for a patient with a GPMP)?
 - What about the **follow-up appointments** (approximate duration of 10 min)? What funding would you require for them?
- 9. Practice integration**
- How do you think the **program fits** with your general practice?
 - Was it **supported? Integrated? Valued**?
 - Did it **meet the needs** of your general practice?
 - How did it fit within your **existing referral pathways/treatment options** for weight management?
- 10. Ongoing delivery of Counterweight?**
- Do you think your practice will **continue to deliver** the program after the study?
 - Would you **like them to**?
 - What **support** do you think is needed to continue to deliver the program? (e.g. from **Counterweight?** From **NAML?** Within the **practice?**)
- 11. Study involvement and research processes**
- Were you aware of any of the **other study processes**? (e.g. data extraction, payments) If yes...
 - Do you have any **feedback** on the process? Easy/disruptive? Could have been done an easier way?
- 12. Regarding future research (if they were involved in the practice's decision to participate)**
- **In the future** we are looking to do a large scale randomised control trial (RCT). I would like your thoughts on the following...
-

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Appendix 1. (continued)

Interview guide for practice nurses (Cont.):

- In the RCT there would be a **control group and an intervention group**. Practices would be **randomly** placed into each group. This means that not all practices would receive the intervention (Counterweight program).
 - How would that **influence your decision to participate?** (e.g. if 1 in 2 received, if 2 in 3 received)
- All **patients would need to be recruited before** the practice knew if it was going to receive the Counterweight program or be in the control group.
 - How would that **influence your decision** to participate?
- Do you think it would be valuable to include a **practice audit** on recording of weight and height information?
- Do you think it would be valuable to offer a **training session for GPs on NHMRC guidelines** for the management of overweight and obesity?

13. Can you suggest GPs to interview within your practice?

14. Finishing the interview

Thank you very much for your time and the information you have shared with me. If you have anything else you would like to add, please feel free to phone or email me.

1. Is there **anything else** you think it is important for me to know?
2. Would it be **okay for me to contact you** if I need to clarify something that we've spoken about today? Yes or no
3. Would you like to receive a copy of the **interview transcript?** Yes or no
4. Would you like to receive a summary of the **final report** (later this year)? Yes or no

Interview guide for general practitioners:

1. Checklist before start of interview

- Regarding information sheet, consent form, independent contacts form
 1. **Voluntary** participation – you can choose to skip a question and return to it later, not answer a question, or to end the interview at any time
 2. **Confidential** – your name won't be in any reports, your information will be stored securely
 3. Permission to **audio record**
 4. Ensure **consent form** is completed
- Please feel free to ask any questions you have during the interview

I would like to get information on your experiences and opinions of the Counterweight Program and the pilot study. . .

1. What was your overall perception of the program?

2. About you

- How long have you been with **this general practice?**
 - What is your **role** within the general practice (e.g. Owner? Primary GP? GP?)
- Do you have any particular **interest in weight management?**
 - What **role** do you think general practice should play in weight management?
 - Prior to the Counterweight program, **what support/management would you offer** to a patient who was concerned about their weight, or when you were concerned about their weight? (overweight, obese, with or without comorbidities?)
 - Are you familiar with the **NHMRC clinical practice guidelines** for the management of overweight and obesity in adults in Australia? If yes, do you use them? How?

3. Participation decision

- Were you part of the practice's **decision to participate** in the pilot study?
 - If yes:
 - What aspects of the Counterweight program were **appealing** to your practice?
 - What aspects of the study were **important in enabling** your practice to participate?
 - Did you have any **concerns** about the study?
 - If no:
 - How were you **introduced** to the program? (e.g. GP information session within the practice? Received written information on the program? A nurse or practice manager spoke with you? Someone from NAML spoke with you?)

4. Patient recruitment and program delivery

- How were you **involved with delivery** of the Counterweight Program?
 - Did you **refer patients** to the program? If yes. . .
 - **How** did you refer? (e.g. send the patient to talk with nurse? Offer screening leaflet & information sheet? Discuss readiness to change?)
 - **Approximately how many** patients did you refer? (e.g. patients per week)
 - Were any of your patients **enrolled** in the program?
 - Were you **satisfied** with the **process?**
 - Were you satisfied with the **results/actual** patient outcomes achieved?
 - What were your **overall perceptions** of the program?
 - Are you comfortable with the **goals/aims** of the program? (e.g. goal of 5–10% weight loss)
 - Were you comfortable with the program's **methods** (as reported back to you by patients/nurses/information sessions)?
 - How did it fit within your **existing referral pathways/treatment options** for weight management?
 - Were you happy with the **amount of (nurse) time spent on the program?** (e.g. training, screening and program delivery)
 - Were there any **concerns** that you had about the program?
 - Is there anything you think should have been **done differently?**
 - Is there any information you felt was **missing** from the program?

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Appendix 1. (continued)

 Interview guide for general practitioners (Cont.):

5. Session payments (with nurses)

- What do you think of **session payments** (\$25 for sessions 1 and 2; \$20 for sessions 3 to 6)?
 - Are they **adequate** for the time required?
 - Do you think the program would be **viable/appealing** without them?

6. Ongoing delivery

- Do you think your practice will **continue to deliver** the program after the study?
 - Would you **like them to**?
 - What **support** do you think is needed to continue to deliver the program? (e.g. from Counterweight? From NAML? Within the practice?)

7. Study processes

- Were you aware of any of the **study processes**? (e.g. practice **recruitment**, **patient recruitment** (letters compared to referrals), data **collection** (by nurses during program delivery), data **extraction**, **payments**?) If yes...
 - Do you have any **feedback** on the process? Was it easy? Disruptive? Could it have been done an easier way?

8. Regarding future research (If they were involved in the practice's decision to participate)

- **In the future, we are looking to do a large-scale randomised control trial (RCT). I would like your thoughts on the following...**
 - In the RCT, there would be a **control group and an intervention group**. Practices would be randomly placed into each group. This means that not all practices would receive the intervention (Counterweight program).
 - How would that **influence your decision** to participate? (e.g. if 1 in 2 received, if 2 in 3 received)
 - All patients would need to be **recruited before the practice knew** if it was going to receive the Counterweight program or be in the control group.
 - How would that **influence your decision** to participate?
 - Do you think it would be valuable to include a **practice audit** on recording of weight and height information?
 - Do you think it would be valuable to offer a **training session** for GPs on NHMRC guidelines for the management of overweight and obesity? (as a Royal Australian College of General Practitioners (RACGP)-accredited activity). Would you be likely to be interested if allocated RACGP education points?

9. Finishing the interview

1. Is there **anything else** you think it is important for me to know?
2. Would it be **okay for me to contact you** if I need to clarify something that we've spoken about today? Yes or no
3. Would you like to receive a copy of the **interview transcript**? Yes or no
4. Would you like to receive a summary of the **final report** (later this year)? Yes or no

Thank you very much for your time and the information you have shared with me.

If you have anything else you would like to add, please contact me by phone or email.

 Interview guide for practice managers:

1. Checklist before start of interview

- Regarding information sheet, consent form, independent contacts form
 1. **Voluntary** participation – you can choose to skip a question and return to it later, not answer a question, or to end the interview at any time
 2. **Confidential** – your name won't be in any reports, your information will be stored securely
 3. Permission to **audio record**
 4. Ensure **consent form** is completed
- Please feel free to ask any questions you have during the interview

I would like to get information on your experiences and opinions of the Counterweight Program and the pilot study...

2. About you

- How long have you been with **this general practice**?
 - How do you see **your role** within the practice?

3. Participation decision

- Were you **part of the practice's decision to participate** in the pilot study?
 - If yes:
 - What aspects of the Counterweight program were **appealing** to your practice?
 - What **aspects of the study were important** in enabling your practice to participate?
 - Did you have any **concerns** about the study?
 - Anything you know now that you would have **liked to have known** at the beginning?
 - If no:
 - How were you introduced to the program? (e.g. meeting with a researcher within the practice? Received written information on the program? A nurse or GP spoke with you about the program?)

4. Nurse training

- Were you **aware of the time taken** for the practice nurses to undertake the Counterweight training?
 - How did this fit with the practice schedule? Intensity of sessions? Timing of sessions?
 - Were you given sufficient lead-in time to organise?
 - Was the **reimbursement amount** (\$900) insufficient, sufficient or too much to cover nurse training time?

5. Patient recruitment

- Were you aware of the patient recruitment **processes**?
 - Did you feel the recruitment processes were **easy/disruptive** to the practice?
-

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Appendix 1. (continued)

Interview guide for practice managers (Cont.):

- Were you concerned about the **time taken by the nurses for screening** patients/enrolling them?
 - Do you know if **reception staff received queries** about the program? Phone calls?
 - Are you aware of **any issues** relating to nurse referral, GP referral, sending invitation letters?
- 6. Program delivery**
- What was your **overall impression** of the program delivery?
 - Did you have any concerns about **workload** for the nurses? (e.g. number of patients? Timing/spacing of appointments? Average time spent on each appointment? Any administration time around each appointment?)
 - Were you aware of any issues regarding:
 - **Recording** patients' appointment attendance?
 - **No-shows/non-attendance** without cancellation?
 - **Storage** of Counterweight patient materials (boxes of patient folders)?
- 7. Session payments**
- Now that you have experienced the program and what it requires to deliver, what is your perception of the **session payments**? (\$25 for sessions 1 and 2, and \$20 for sessions 3 to 6)
 - Was this **adequate** for the time/effort/training required?
 - **Without these** payments, would it be feasible/attractive to deliver Counterweight? How would you do it?
 - What if the payments were **\$12 per session** (i.e. similar to MBS item number 10997 for chronic disease management by a nurse for a patient with a GPMP)?
 - What about the **follow-up appointments** (approximate duration of 10 min)? What funding would you require for them?
- 8. Practice integration**
- How do you think the **program fits** with your general practice?
 - Was it supported? Integrated? Valued?
 - Did it meet the needs of your general practice?
- 9. Ongoing delivery**
- Do you think your practice will **continue to deliver** the program after the study?
 - Would you **like them to**?
 - What **support** do you think is needed to continue to deliver the program? (e.g. From Counterweight? From NAML? Within the practice?)
- 10. Study involvement and research processes**
- What was your **overall impression of the research study** and its processes?
 - Were you aware of any **issues relating to**:
 - **Data collection** (e.g. recording weight by nurses)?
 - **Data extraction**?
 - Making the **payments** for participation and for each Counterweight session?
 - Is there anything that **should have been done differently**? Were the processes easy/disruptive?
- 11. Regarding future research (If they were involved in the practice's decision to participate)**
- **In the future**, we are looking to do a large-scale randomised control trial (RCT). I would like your thoughts on the following. . .
 - In the RCT, there would be a **control group and an intervention group**. Practices would be randomly placed into each group. This means that not all practices would receive the intervention (Counterweight program).
 - How would that influence your decision to participate? (e.g. if 1 in 2 received, if 2 in 3 received)
 - All **patients would need to be recruited before** the practice knew if it was going to receive the Counterweight program or be in the control group.
 - How would that influence your decision to participate?
 - Do you think it would be valuable to include a **practice audit** on recording of weight and height information?
 - Do you think it would be valuable to offer a **training session for GPs** on NHMRC guidelines for the management of overweight and obesity?
 - Would GPs be likely to be interested if allocated RACGP education points?

Thank you very much for your time and the information you have shared with me.

If you have anything else you would like to add, please contact me by phone or email.

Interview guide for patients:

Checklist

- Regarding information sheet, consent form, independent contacts form
 1. **Voluntary** participation – you can choose to skip a question and return to it later, not answer a question, or to end the interview at any time
 2. **Confidential** – your name won't be in any reports; your information will be stored securely
 3. Permission to **audio record**
 4. Ensure **consent form** is completed
- Please feel free to ask any questions you have during the interview.

Part 1. Demographic data

(continued next page)

Appendix 1. (continued)

Interview guide for patients (Cont.):

I wanted to start with some general questions about you.

- Could you tell me your **age**?
- **Household composition:**
 - How many **people** do you share your home with?
 - Do you have a live-in **partner**?
 - Do you care for **children** under 18 years? If yes, how many?
- Do you **work**? If yes, full-time? Part-time? Shift work?

Part 2. Your weight history

I would like to start by asking about your experiences of your weight, and then later on I'll ask about your experience of the Counterweight Program.

We often have **stories that we tell about our life, our health and our life experiences**. These stories help us understand and make sense of what has happened. I'm really interested in hearing the stories that people have about their weight – about how it unfolded and what it has meant to them.

- In your own words, could you tell me **the story of your weight?** (history and experiences of your weight)
- Probing questions:
 - When did you **first notice** your weight was increasing or feel like you might have an issue with your weight?
 - Are there things that you feel have **influenced** your weight, either up or down?
 - How has your weight **influenced your life** or life experiences?
 - If you think about the things you do day to day (going out, shopping, spending time with friends and family, stuff you do with your kids) are there things you do or don't do because of your weight?
 - Has your weight affected how you interact with other people?
 - Some of the studies that have looked at weight have found that it can sometimes affect people's confidence or how they value themselves. Do you feel like this has happened for you?
 - Does your weight worry you or get you down? Does it play on your mind?
 - Have you tried to **reduce** your weight in the past?
 - If yes, what kinds of things have you **tried**? How did it go? Why did you stop doing it?
 - If no, why was that?
- Follow up questions:
 - Had you **spoken with your GP or nurse** about your weight before the Counterweight Program?
 - If yes, how did that go? What sort of information and support did your GP/nurse give you?
 - If no, why was that?

Part 3. Your experience of the Counterweight Program

We've talked about the story of your weight, now I would like to ask you about your experience of the Counterweight Program.

- What was your **overall experience** of the program?
- Follow-up questions:
 - **How long** were you involved with the program? How many **sessions** did you go to?
 - Were you comfortable with the **goals/aims** of the program? (e.g. goal of 5–10% weight loss)
 - Did the program meet **your needs**? Did you find it useful?
 - Did you have any **successes** with the program?
 - Were there things that made it **easier to stay** involved?
 - Did you have any **problems or difficulties** with the program?
 - Was there anything that made it **challenging** to stay involved?
 - Did it **change the way you think** about weight and weight reduction?
 - What are your thoughts on having a weight management program in your **general practice**?
 - For those who did not complete the 6 sessions:
 - Sometimes a program just isn't a good fit for people, or other things come up in their lives and it gets harder to stay involved. That's part of life. We would like the program to help people stay involved whenever possible. Is there anything that you think might have been helpful, either for you or for other people?
- Enrolling in the program
 - How did you first **find out about** the program? (e.g. GP, nurse, leaflet)
 - What was it that helped you make the **decision to try it**?
- The Counterweight sessions and patient folder
 - How did you find the fortnightly **timing** of appointments?
 - Was there too much/enough **information** in each session?
 - What did you think of the Counterweight **folder** (show example)?
- Probing questions:
 - Did you find you were **using the folder**?
 - Was there anything you found particularly **helpful**?
 - Anything you didn't like or **didn't find useful**?
 - Anything that you **struggled** with?
- What next?
 - For those who have completed the 6 sessions:

(continued next page)

Appendix 1. (continued)

Interview guide for patients (Cont.):

- Are you happy with **where you are now**, after the six sessions?
- Where will you go **from here**?
- What kind of **support** do you feel you'll need?
- For those who did not complete the 6 sessions:
 - Where will you go **from here**?
 - What **support** do you feel you need?

Part 4. Finishing the interview

Thank you very much for your time and the information you have shared with me.

If you have anything else you would like to add, please contact me by phone or email.

1. Is there **anything else** you think it is important for me to know?
 2. Would it be **okay for me to contact you** if I need to clarify something that we've spoken about today? Yes or no
 3. Would you like to receive a copy of the **interview transcript**? Yes or no
 4. Would you like to receive a summary of the **final report** (later this year)? Yes or no
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