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The Implementation of the Counterweight Programme in Scotland, UK

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Abstract

Background: The Counterweight Programme is a proven model for the management of obesity in the UK, evaluated over 5 years (2000-2005) and demonstrating clinical and cost effectiveness. To make the Counterweight Programme available to all Health Boards, the Scottish Government commissioned it in three phases during the period 2006-2008. The first two phases linked the Counterweight Programme to funding for a targeted primary care prevention programme of health checks and subsequent follow up action, aimed at reducing the incidence of cardiovascular disease in areas of high social deprivation; the third phase was commissioned independent of other interventions.

Aim: To assess the implementation of the Counterweight Programme in 13 Health Boards in Scotland and compare 12 month outcomes with published Counterweight data.

Methods: Patients with a BMI $\geq 30\text{kg/m}^2$, or BMI $\geq 28\text{kg/m}^2$ with at least one co-morbidity, were screened for the Counterweight Programme. Patients were asked to attend nine structured weight management appointments with a trained Counterweight Programme practitioner over a 12 month period. Weight change data were collected locally at each appointment. Central analysis and reporting took place four times a year.

Results: 6715 patients from 184 general practices, 16 pharmacies and one centralised community-based service in 13 Health Boards, with a mean BMI of 37 kg/m^2 were enrolled in the Counterweight Programme. Twenty six percent had a BMI $\geq 40\text{kg/m}^2$. Attendance for patients at 3, 6 & 12 months follow-up was 55%, 37% and 28%. Of those who attended at 12 months 35.2% had maintained a weight loss of $\geq 5\%$ compared to 30.7% in the original evaluation.

Conclusions: Evaluation of the Counterweight Programme in Scotland demonstrated consistency in characteristics of patients enrolled into the programme. There was

evidence of higher loss to follow up in a population not routinely engaging with primary care but evidence of greater weight losses among those who attended.

Keywords: Weight management, attendance, translational research, obesity, primary care

Introduction

Obesity prevalence in Scotland continues to increase: approximately 27% of men and women are obese¹ and the Foresight Report estimates that by 2050, 60% of men and 40% of women in the UK could be clinically obese.²

The Counterweight Programme is a structured weight management programme available to patients with BMI $\geq 30\text{Kg/m}^2$ or $\geq 28\text{Kg/m}^2$ with an associated obesity-related disease. Counterweight methodology³, outcomes and health economics have been published previously.^{4,5,6}

The implementation of the Counterweight Programme in Scotland was commissioned in three phases by the Scottish Government in the period 2006-2008. Commissioning in the first two phases was alongside Keep Well, a targeted primary prevention programme of health checks and subsequent follow up action, aimed at reducing the incidence of cardiovascular disease in areas of high social deprivation in Scotland.⁷ Keep Well, an anticipatory care programme, aimed to provide healthcare services to patients who would not normally present to their doctor but would be considered to have a high risk of disease. It was aimed at patients aged 45-64 years old from the 15% most deprived areas of Scotland who were not routinely engaging with general practice. Areas were categorised using the Scottish Index of Multiple Deprivation (SIMD), which divides Scotland into 6505 small areas (datazones) ranging from the most to the least deprived, using a set indicators of deprivation inclusive of income, employment and health amongst others.⁸

After the first two phases had progressed in six Health Board areas, the Scottish Government commissioned phase three in 2008 to a further seven Health Board areas in Scotland. This third phase was not linked to any other programme.

Methods

In phases one and two the Counterweight Programme was positioned alongside Keep Well for practice recruitment and screening of patients. Individuals were invited to attend for a comprehensive health check covering lifestyle and clinical problems associated with cardiovascular disease. Depending on risk factors identified and patient motivation, referral was made to appropriate support services or interventions. General Practitioners received additional funding to resource the requirements of the Keep Well health check. Within this resource, some Health Board areas chose to incentivise general practice for patients attending Counterweight appointments. In phase three the Counterweight Programme implementation involved routine general practice with no payment, as was the case in the original evaluation.³

Eight Counterweight Specialists (dietitians specialising in weight management) led and facilitated programme implementation in the 13 Health Boards. This process was led by the National Co-ordinator and governed by the Counterweight National Board that includes seven national opinion leaders in the area of obesity.

The Counterweight Specialists worked with the Health Boards to identify how best the Counterweight Programme should be implemented in each area. Counterweight Specialists attended regular strategic meetings with public health and dietetic leads,

collaborating with local strategies where they existed, and where they didn't, working with local dietetic departments to complement existing services.

Counterweight Specialists recruited practices, and conducted training and mentoring of practitioners: primary care nurses, pharmacy assistants, health care assistants, and health coaches (generic healthcare staff employed to deliver lifestyle interventions), who were identified to deliver the programme. An eight hour training programme for Counterweight practitioners was provided. Their role was to deliver patient education on lifestyle change, and transfer behaviour change skills and strategies. Counterweight specialists mentored practitioners until they achieved set competencies and were confident to deliver the Programme. The Counterweight Programme was mainly delivered in general practice but one Health Board chose to do it within a pharmacy setting, and another favoured community-based implementation of the programme. In the different settings the Counterweight programme provision was still servicing requirements of the local general practices. Dietitians from each Health Board area were trained as Counterweight Clinicians, to assist in the Counterweight Programme implementation and sustainability.

Patients with BMI $\geq 30\text{Kg/m}^2$, or $\geq 28\text{Kg/m}^2$ with an associated obesity-related disease, were screened for cardiovascular disease risk factors, and given the opportunity to attend the Counterweight Programme. Patients were encouraged to attend every two weeks, over three months, then three quarterly support visits, totalling nine appointments in 12 months.^{3,4} There are 18 patient education booklets for written support to complement the education provided at the appointments. Annual weight monitoring was encouraged to coincide with chronic disease management annual reviews, which patients received at their General Practitioner (GP) surgery. The Counterweight Specialist was responsible for

programme implementation in each Health Board area, and for fullness and accuracy of data recorded by the Counterweight practitioners.

Data analysis, reporting and statistics were managed and reported by an independent team at the University of Glasgow. Data were collected using established databases and analysis systems. A combination of manual and electronic methods was used and Counterweight activity was reported at national, Health Board and practice level.

Results

Of patients eligible for Counterweight through the Keep Well Programme screening, one in five (20%) went on to be enrolled in the programme. 6715 patients with a mean BMI of 37 kg/m² were enrolled in the Counterweight Programme by 184 general practices, 16 pharmacies and one centralised community-based service in 13 Health Boards. Twenty six percent of patients had a BMI \geq 40kg/m² and 3.9% had a BMI \geq 50kg/m² (Table 1).

Attendance at 3,6 &12 months was 55%, 37% and 28% at 3, 6 &12 months compared to 55%, 39% & 45% at these intervals in the original evaluation (Table 2). Attendance in phase 1 at 12 months was 26.2% (95% CI 24.6-27.9), attendance in phase 2 was 32.9% (27.2-39.1) and attendance in phase 3 was 42.1% (36.3-47.7).

35.2% of patients who attended follow-up at 12 months had maintained a weight loss of \geq 5% at 12 months compared to 30.7% in the original evaluation (Table 3). 10.0% of all patients eligible for 12 month follow up had maintained a weight loss of \geq 5% at 12 months compared to 13.9% in the original evaluation (Table 4). Mean weight loss at 12 months was 3.7kg (95% CI 3.3kg-4.4kg), compared with 3.0kg in the original evaluation (3.5kg to 2.4kg).

Discussion

In its national implementation in Scotland, Counterweight has achieved similar results to its earlier trial phase. Weight loss among attenders has been significantly better than previously reported but because of greater losses to follow-up, overall weight loss among eligible patients has been poorer. Counterweight is the largest weight management programme in primary care in Scotland with an extensive data set on patient engagement and weight change outcomes. Programme adoption was influenced by Government policy and political drive to tackle obesity through central commissioning to make it available to all Health Board areas in Scotland.

Over a ten year period evidence from the original evaluation of the Counterweight Programme conducted in 56 general practices in the UK has been enhanced using continuous improvement methodology involving closed loop audit. Historically only a small percentage of people seeking or receiving treatment for their overweight or obesity access evidence-based services.⁹ However in Scotland over 6000 patients have accessed the Counterweight Programme to date. Although this represents a small percentage of the 27% of the population who are obese, enrolment into the Counterweight Programme has doubled year on year. As a result of continual evaluation and reporting of outcomes, the Scottish Government has continued to support the implementation of the Counterweight Programme in each Health Board area. It is predicted that the continued presence of this evidence based weight management programme, will continue to see a rise in the number of patients enrolled.

Baseline characteristics of patients recruited into the programme were very similar to the original evaluation⁵, with a mean BMI of 37kg/m² reflecting a population at great risk of associated clinical conditions¹⁰ and burden on NHS resource.¹¹ Over a quarter of the patients had a BMI of >40kg/m² and in this implementation there were 30% more patients with a BMI>50 kg/m² as compared with enrolment in the original evaluation⁵. This may reflect engagement with areas of higher social deprivation where obesity (and more severe grades of obesity) is a more significant problem.¹² This highlights the need for clinically effective weight management services in general practice in the UK, to limit the increasing burden of obesity on secondary and tertiary care services in the NHS.

Despite no general practice incentive in the UK to deliver weight management, take-up of the Counterweight Programme was high suggesting the effectiveness of the Scottish Government commissioning services, and the support offered by the established Counterweight structures and team members in the implementation process.

Counterweight appears to have allowed available resource to be used for direct patient intervention rather than, the cumbersome, time consuming and expensive alternative of individual areas developing their own local programmes.

Programme uptake varied across the Health Board areas. Factors influencing uptake included the availability of Keep Well resource to support activity, availability of local weight management programmes and the influence of local weight management strategy. In relation to the Keep Well programme, Health Boards were provided with resource to support implementation of this targeted primary prevention programme of health checks and subsequent follow up action in this largely new to practice population. How the resource was used was decided by local stakeholders. Incentive for delivery of

Counterweight available up front appeared to be more successful in terms of patients recruitment than retrospective reimbursement based on patient numbers entering the programme. This may be worthy of further investigation. In some areas where alternative local weight management programmes were already in operation, Counterweight dovetailed effectively to optimise weight management coverage. Other areas chose to replace activity entirely with the Counterweight Programme while a very limited number preferred to focus on the locally developed programmes. Future qualitative research will investigate the factors influencing this variation in the Counterweight Programme uptake.

Central funding of the Counterweight Programme was aimed at enabling Health Boards' areas to access this effective programme and, once established, to sustain the model through existing Health Board resource. This vision has been adopted in some areas, with the programme being built into local obesity strategy while other areas have viewed the work as a "short-term" project due to fixed term funding. The Scottish Intercollegiate Guidelines Network (SIGN) has developed a national clinical guideline for the management of obesity,¹³ however there is no national weight management strategy.

Robust evaluation of any weight management programme should be based upon outcomes at 3, 6 and importantly 12 months, as a minimum. Here, the twelve month follow up rate is lower than in the original evaluation of the programme (28% compared with 45%). One explanation could be that unlike the original implementation of the Counterweight Programme which focused on providing a structured approach to weight management for patients already engaged with and attending general practice, often with

associated clinical problems, for which the GP would receive payments, this iteration was positioned for those not routinely engaging with general practice.

Our data suggest that attendance improved in each successive phase of Health Board involvement. Possible reasons for this may be due to changes in the case-mix of patients referred to the Counterweight Programme. Phase 1, and to some degree phase 2, were dominated by Keep Well populations. These comprise individuals from deprived localities not routinely engaging with general practice and who would have been referred to the Counterweight Programme as part of an anticipatory model of care. Evidence exists for poorer general practice attendance in areas of high social deprivation.^{14,15} Other reasons for variation in attendance rates may relate to differences in data collection, in particular occasions for opportunistic recording of weight loss at 12 months.

Weight change in the Counterweight Programme continued to show highly worthwhile outcomes even when delivered here as an anticipatory care scheme. The percentage of patients achieving a clinically beneficial weight loss of 5% or more was slightly lower at 3 and 6 months compared to the original evaluation. However for those who provided data at 12 months, outcomes were as good or better with 35.5% compared to 30.7% in the original evaluation achieving 5% loss or more. Improved weight change outcomes in the attending population may reflect improvements made following qualitative research of the original evaluation. These included;- improved clarity about the programme structure, content and weight loss goals, introduction of lapse management earlier into the programme, and personalising the programme to suit patients needs.¹⁶

Activity continues to try and improve the Counterweight model. We are working to increase the uptake of the Counterweight Programme for adults in primary care which includes developing the Programme for families and a more intensive programme using a Low Energy Liquid Diet Programme.

Conclusions

The Counterweight Programme continues to demonstrate consistent outcomes in larger scale implementation in UK primary care. However barriers remain around weight management delivery in the primary care setting.

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It is with great sadness that the Counterweight Team acknowledges the death of Professor David Hole on the 26/03/07. Professor Hole was instrumental in the original evaluation of the Counterweight Programme, and in the early stages of this work.

Declaration

Ethical approval: Not applicable

Conflicts of interest: None

Table 1 – Patient Characteristics

	Established practice 2006-2010		Original evaluation 2000-2005	
General Practices	184		56	
Pharmacies	16		-	
Centralised community based service	1		-	
Number of patients	6715		1906	
Mean BMI (kg/m ²), (s.d.)	37.0	(6.2)	37.1	(6.0)
Mean age, (s.d)	53.0	(10.4)	49.0	(13.5)
% Women	74.3		77.0	
% BMI>40 kg/m ²	25.8		25.4	
% BMI>50 kg/m ²	3.9		3.0	

Table 2 - Attendance

Visit	Attendance %	
	Established practice 2006-2010	Original evaluation 2000-2005
3 months	55	55
6 months	37	39
12 months	28	45

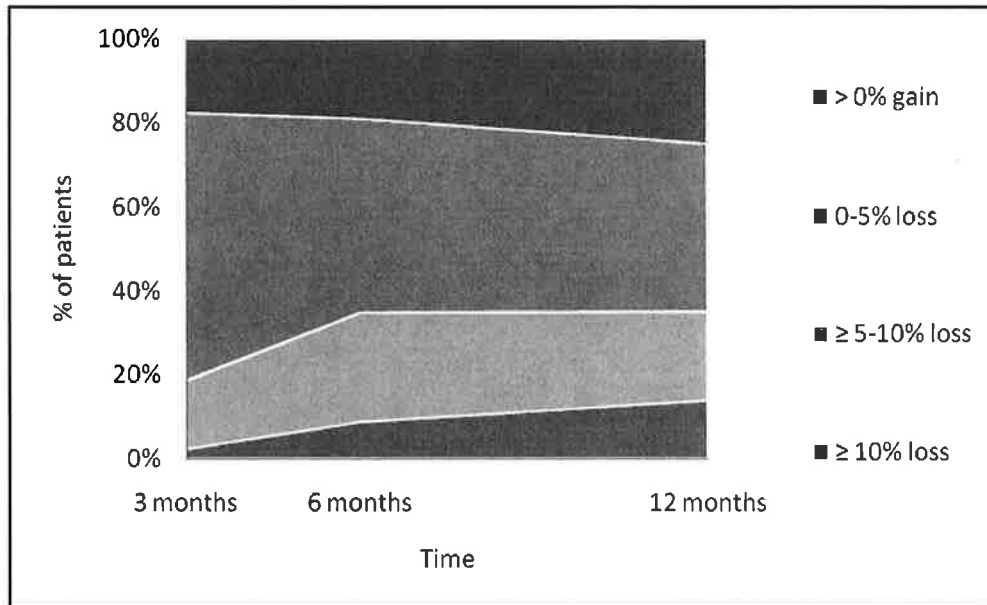
Table 3 - Weight Loss In Attenders

Visit	lost \geq 5%: % (95% CI)	
	Established practice 2006-2010	Original evaluation 2000-2005
3 months	18.6 (16.9 to 20.5)	26.1 (23.1 to 29.3)
6 months	34.9 (32.2 to 37.7)	38.0 (34.0 to 42.1)
12 months	35.2 (32.2 to 38.4)	30.7 (27.2 to 34.4)

Table 4 - Weight Loss In All Eligible Patients

Visit	lost $\geq 5\%$: %	
	Established practice 2006-2010	Original evaluation 2000-2005
3 months	10.2 (9.2 to 11.3)	14.2 (12.5 to 16.2)
6 months	12.8 (11.7 to 14.0)	14.7 (12.9 to 16.6)
12 months	10.0 (9.0 to 11.0)	13.9 (12.2 to 15.8)

Figure 1 - Weight Loss In Attenders



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