British Dietetic Association-Dietetics Today

Glasgow & Clyde Weight Management Service

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(BDA Called Joint Approach to Weight Management)

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The Scottish Health Survey (2003) reported that one in five Scottish adults were obese, which equated to 191000 Glaswegians. More recently the 2008 Foresight report estimates that in 2050 in the UK more than 60% of males and 50% of females will be clinically obese. Without action this would have a cost of £49.9 billion per year. To address this growing problem NHS Greater Glasgow & Clyde (NHS GGC) developed a steering group that included acute, community and local authority services, leading to the launch of Glasgow and Clyde Weight Management Service (GCWMS) in 2004.

GCWMS is a gold standard, award winning service, recently receiving the NHS Diamond Healthy Lifestyle Award and receiving the National Obesity Forum Best Practice Award for excellence in weight management in 2006.

The service is multi-disciplinary, comprising of dietitians, psychologists, physiotherapists, technical instructors and administrative support. Staff numbers have increased three fold since its inception. Nine dietitians work in partnership with community dietitians to deliver this specialist service in local community venues across Greater Glasgow & Clyde.

Service Aims

GCWMS has established a weight management pathway of care, from prevention through to the management of morbid obesity which is evidence based and equitable across NHS GGC. The service offers evidence based treatment approaches based on SIGN (1996) guidelines.

The service has a clear governance framework and referral pathway which optimises existing resources. Service protocols also govern anti-obesity prescribing and more recently provide a care pathway for bariatric surgery across NHS GGC. As reported in Table 1 GCWMS operate at Level 3, treating people with a BMI over 35 kg/m^2 or over 30 kg/m^2 with additional reasons for intervention. Additional reasons for intervention include being aged 18–25 years, pre surgical weight loss, mobility issues, iatrogenic weight gain or certain cultural backgrounds with a waist circumference that significantly increases health risks. GCWMS contributes to the development of both level 1 and 2 services (Table 1) also, providing consultation and training to create an integrated care pathway for patients.

Table 1. Service Framework

Level	BMI (kg/m^2)	Intervention
1	>18.5-24.9	Primary Prevention Health Promotion
2	>25-35	Community and Council Services
3	>35 or >30 ARI*	GCWMS Surgery via GCWMS

* Additional Reasons for Intervention

The Weight Management Programme

The weight management programme, using a multi-component approach, (SIGN 1996, NICE 2006) delivers intervention over three phases, predominantly in a group format (see Box 1). Phases 1 and 2 of the programme are predominantly delivered by dietitians with support and consultation from other members of the team. Phase 1 is a nine session, lifestyle intervention delivered over 18 weeks. Each session has three components: diet, physical activity and psychology, all delivered by the clinician facilitating the group. Phase 2 affords patients the option of losing more weight, via a new Personalised Dietary Prescription (see below), a low calorie diet or pharmacotherapy. Phase 2 consists of three monthly sessions, predominantly facilitated by a dietitian. Phase 3 or the Maintenance Phase which focuses on maintenance of weight loss is delivered by physiotherapists. This is due to the importance of physical activity to maintain weight loss (National Obesity Forum, 2008). The Maintenance Phase consists of 13 monthly sessions.

Box 1. Programme Overview

Phase 1 Lifestyle Intervention	
	Personalised Dietary Prescription
	600 kcal Deficit Diet
	Portion Exchange System
Activity	Increase incidental lifestyle activity
	Increase scheduled activity
Psychology	Behaviour Modification
	Motivational enhancement
	Disordered eating
	Cognitive Behaviour Therapy
Phase 2 Further Weight Loss or Maintenance	
	Lifestyle Intervention
	Pharmacotherapy
	Discharge
Phase 3 Weight Maintenance	
	Level 2 services (see Table 1)
	Discharge
Bariatric Surgery	

Dietary Component of the Programme

The dietetic component of the programme utilises a Personalised Dietary Prescription (PDP). The PDP is a portion and calorie controlled eating plan that facilitates achievable and sustainable weight loss of 0.5 kg– 1 kg per week via a controlled 600 calorie deficit diet. Total energy expenditure is calculated using the WHO (1985) equations for basal metabolic rate, combined with an activity factor adapted from WHO (1985). The PDP is designed based on The eatwell plate (Food Standards Agency, 2008). A recent departmental audit (December, 2007) of patient perceptions of the PDP, revealed that it is easy to understand and easy to use.

Pharmacotherapy

Pharmacotherapy is offered in Phase 2 of the programme to patients who have not lost >5 kg since beginning Phase 1, as an adjunct to dietary and lifestyle change. The two medications used within the service are Orlistat (Xenical™) and Sibutramine (Reductil™). Information is provided regarding the modes of action, benefits, limitations and any contraindications of the drug to ensure that an informed decision is made. Literature is also provided alongside information regarding the relevant support programmes i.e. MAP and Change for Life. Within service protocols, patients are asked to indicate their drug preference. The service then contacts the patient's GP to commence prescribing. GCWMS monitor blood pressure, pulse and weight for those patients prescribed Sibutramine and weight only if on Orlistat. Protocols are followed with regards to weight loss outcomes, side effects and

any other areas which may indicate that medication needs to be discontinued. The pharmacotherapy lead dietitian ensures protocols, resources and evidence based practice is followed and resources are available for the team. Pharmacotherapy clearly has a role in the management of obesity but even when drug treatment is initiated the role of lifestyle intervention remains central to its management (DOM UK, 2007).

Bariatric Surgery

All GCWMS protocols for surgery have been agreed in consultation with NHS GGC Surgeons and are the only route to bariatric surgery in the area. All patients with a BMI over 40 kg/m^2 or over 35 kg/m^2 with co morbidities, who fail to lose 5 kg following completion of Phases 1 and 2, incorporating pharmacotherapy, low calorie diet and lifestyle change can be considered for surgery. A lead dietitian co-ordinates all surgery patients.

Patients who are eligible for surgery attend a weight loss surgery information session to ensure that they are fully informed about surgery. After this session patients can opt to be considered for surgery and attend the GCWMS Surgical Assessment Clinic. Patients are initially assessed by a clinical psychologist followed by a dietitian. Psychological evaluation of patients prior to surgery is recommended in national and international guidelines. The purpose of this is not necessarily to approve or deny surgery, but to identify those emotional, cognitive and behavioural factors that may influence weight loss and make recommendations to improve outcome This assessment may lead to individual therapy for identified issues or it may be that that attendance at the pre-surgery or post-surgery groups is all that is additionally recommended.

Following psychological assessment patients are seen by a dietitian for a dietary assessment. Patients eligible for surgery need to demonstrate compliance with the post operative advice. Compliance is measured by a two week 1000 kcal per day diet that is similar to the post operative diet. Expected weight loss is determined by the energy deficit of the diet and their previous dieting and weight loss history. Patients are made aware that that if they are unable to comply with the diet (weight loss is one measure of compliance, but their overall experience of the diet will be discussed with the dietitian), they may not be eligible for bariatric surgery, but will be offered weight maintenance sessions within the programme. Patients who have demonstrated a level of compliance will be referred to the surgical team for review.

Patients deemed suitable for bariatric surgery by the surgeon are invited to attend the GCWMS pre-surgery preparation groups. These are held monthly and consist of dietary, physical activity and psychological advice that will help prepare them for surgery. Post surgery patients see the dietitian fortnightly whilst adjusting to the different diet, this gradually reduces over time. Further individual psychological support is provided if required. GCWMS offer lifelong post operative support to all patients via monthly post surgery support groups which are attended by a dietitian and psychologist.

Physiotherapy

Physiotherapists lead on the physical activity and exercise components of the programme. They perform generic assessments regarding suitability for the service (performed by all three disciplines), conduct physiotherapy assessments and therapy sessions regarding exercise prescription and treatment of musculoskeletal conditions. Physiotherapists also run exercise classes for our patients four times a week. The maintenance phases of the programme are also led by physiotherapists, as are the blood pressure monitoring clinics.

Psychological Approaches

The psychological component of the programme is evidence based and underpinned by cognitive behaviour therapy (CBT) principles as recommended by SIGN (1996). Clinical psychologists within the service have designed the psychological elements of the programme and provide staff training and support accordingly. Box 2 summarises some of the CBT principles within the programme. In addition to the psychological components of the weight management programme, patients are able to access other psychological services including individual therapy for eating and weight related distress. Psychological issues that may interfere with a patient's ability to implement and adhere to the necessary lifestyle changes are also addressed. Clinical Psychologists also run group based treatment for clinically significant disordered eating in conjunction with the typical Phase 1 weight management programme. Supervision, research, service development and consultation are further roles of the clinical psychologists within the service.

Box 2. CBT Approaches to Weight Management

Self monitoring (food intake, physical activity, mood)
Goal Setting
Stimulus Control
Assertiveness
Understanding Eating
Lifestyle Habits
Increasing Physical Activity
Planning & Problem Solving
Cognitive Restructuring
Relapse Prevention

Outcome Data

The service receives on average 400 referrals per month from GPs and hospital doctors. This number is due to increase as the weight management service becomes available to all people within NHS GGC as of October 2008. Table 2 summarises the referral rate and patient demographics.

Table 2. Summary Data, July 2008

	BMI ≥30-35	**BMI ≥35**
Referrals	3370	6002
Monthly Average	400	
Male	26%	29%
Female	74%	71%
Average Age (Years)	47	48
Range (Years)	18 – 89	18 – 87
Type 2 Diabetes	10%	22%
BMI Range (kg/m^2)	30-35	35-99
Average BMI (kg/m^2)	34	44

In line with SIGN (1996) guidance a patient is deemed to obtain a 'Successful' outcome if they lose at least 5 kg over the course of Phase 1. As shown in Table 3 approximately half of the patients who begin Phase 1 complete it. Of those who complete Phase 1, 39% in the lower BMI range and 42% in the higher range are 'Successful' in terms of weight loss, however there is a wide range of weight change as shown in Table 3. This data equates to a one in four success rate with lifestyle intervention only. GCWMS outcomes are favourably comparable with other weight management programmes such as the evidence based primary care weight management programme; Counterweight (www.counterweight.org).

Table 3. Group Outcome Data

Phase 1	**BMI ≥30-35≥**	**BMI ≥35**
% Attend ≥4 Sessions	43%	58%
% Successful Weight Loss	39%	42%
Range of Weight Change	- 12.2 kg – +3.8 kg	-22 kg – +6 kg

Future Directions

GCWMS is growing and developing at a rapid pace. The major development most recently has been the roll out of the service to the Clyde area, which will increase the number of referrals significantly. Due to this growth we are moving towards an electronic referral and appointments system. We have recently piloted a Disordered Eating Group which is group based treatment for Binge Eating Disorder alongside weight management. The provisional outcome data has been positive, with successful treatment of the Binge Eating Disorder and weight loss comparable to a typical Phase 1 group. Research is also underway to assess Quality of Life outcomes in addition to weight loss at the end of Phase 1. The team also hope to develop a website over the coming months for patients and health professionals.

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