Nursing in Scotland

Glasgow & Clyde Weight Management Service

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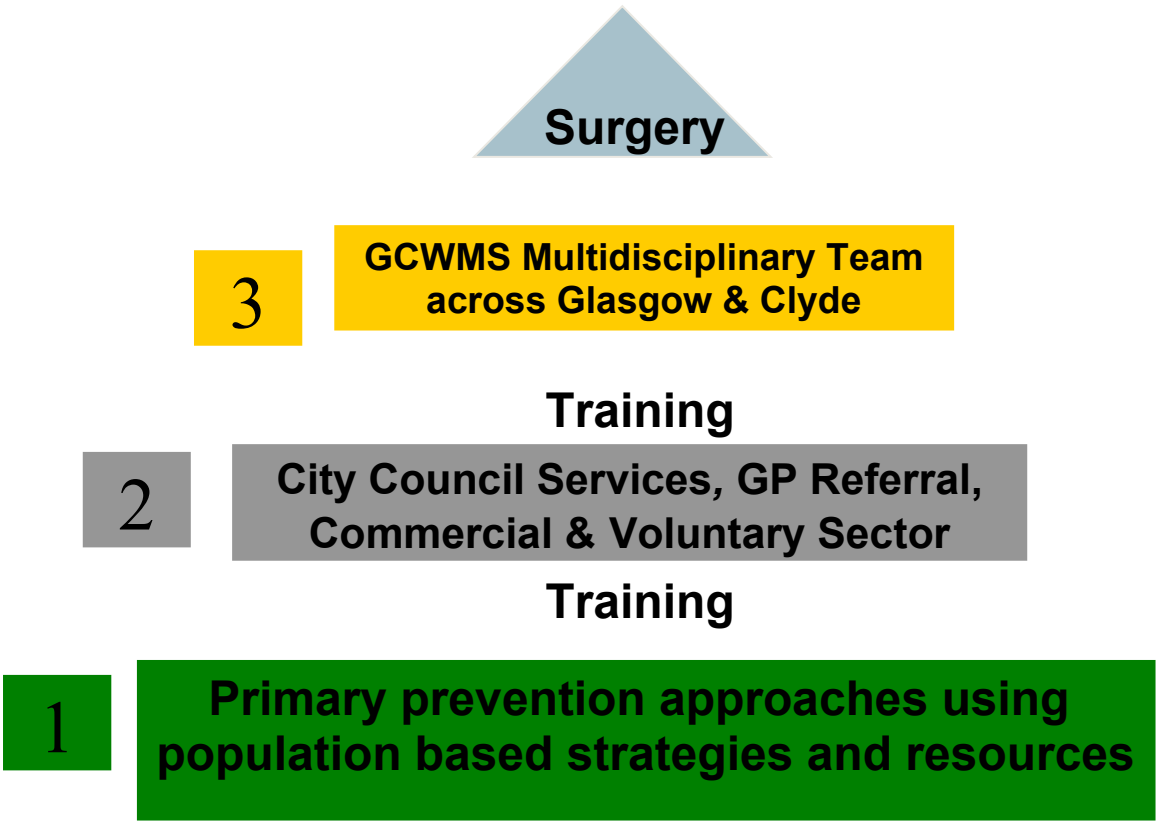
The Scottish Health Survey (2003) reported that one in five Scottish adults were obese, which equated to 191000 Glaswegians. More recently the 2008 Foresight report estimates that in 2050 in the UK more than 60% of males and 50% of females will be clinically obese. Without action this would have a cost of £49.9 billion per year. To address this issue NHS Greater Glasgow & Clyde (NHS GGC) developed the 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.

Service Aims

GCWMS has established a 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 govern anti-obesity prescribing and provide a care pathway for bariatric surgery. GCWMS also provide consultation and training to primary care and community based services, to create an integrated care pathway for patients.

Service Framework



BMI Range
3 ≥35 or ≥30 with comorbidities
2 ≥25 to 35
1 ≥18.5 to 24.9

Referral Criteria

All GPs and hospital doctors within NHS GGC can refer into the service with a patient's consent. GCWMS accept referrals for people aged over 18 years with a BMI over 35 kg/m^2 or over 30kg/m^2 with additional reasons for intervention (ARI). ARI include being between 18 and 25 years of age, iatrogenic weight gain or awaiting a surgical procedure. The referrer must complete the referral paperwork including medical history and medications.

Assessment Process

Following referral patients must opt in for an initial assessment. They will then be sent a set of screening questionnaires regarding mood, readiness to change and quality of life, to be completed and brought to the initial assessment. The initial assessment will include a review of the questionnaires, motivation, diet and weight history, activity levels and the existing problems associated with the patient's weight. A Physiotherapy or Clinical Psychology assessment may be indicated, due to issues raised during the initial assessment. Following completion of the appropriate assessments a patients options will be discussed with them and if eligible, they will be directed towards the most appropriate arm of the Weight Management Programme.

The Weight Management Programme

The Weight Management Programme delivers intervention over three phases, predominantly in a group format (see Box 1). Phases 1 and 2 are delivered by dietitians in consultation with other team members. Phase 1 is a nine session, lifestyle intervention delivered over 18 weeks. Each session has three components: diet, physical activity and psychology. Phase 2 affords patients the option of losing more weight via further lifestyle intervention, a low calorie diet or pharmacotherapy. Phase 3 focuses on maintenance of weight loss over 13 months. Due to the importance of physical activity when maintaining weight loss (National Obesity Forum, 2008), Phase 3 is delivered by physiotherapists.

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	Cognitive Behaviour Therapy
	Motivational enhancement
	Disordered eating
Phase 2 Further Weight Loss or Maintenance	
	Lifestyle Intervention
	Pharmacotherapy
	Discharge
Phase 3 Weight Maintenance	
	Level 2 services (see Table 1)
	Discharge
Bariatric Surgery	

Diet

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 based on The eatwell plate (Food Standards Agency, 2008).

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, under GP guidance, 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.

Bariatric Surgery

GCWMS protocols for surgery 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. Eligible patients undertake information sessions to ensure that they are fully informed and a period of assessment by a clinical psychologist and a dietitian. Psychological evaluation of patients prior to surgery is recommended in national and international guidelines. The purpose is to identify those emotional, cognitive and behavioural factors that may influence weight loss and make recommendations to improve outcome.

Following psychological assessment patients are seen by a dietitian for a dietary assessment. Patients 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, they may not be eligible for bariatric surgery, but will be offered weight maintenance sessions within the programme. Patients who demonstrate compliance are 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. GCWMS also provide lifelong post operative support via monthly groups facilitated by a dietitian and psychologist.

Physical Activity

Physiotherapists lead on the physical activity and exercise components of the programme. They conduct physiotherapy assessments and therapy sessions regarding exercise prescription and treatment of musculoskeletal conditions. Physiotherapists also run exercise classes for our patients. The maintenance phase of the programme is also led by physiotherapists, as are the blood pressure monitoring clinics.

Psychological Approach

The psychological component of the programme is evidence based and underpinned by cognitive behaviour therapy (CBT) principles as recommended by SIGN (1996). Clinical psychologists have designed the psychological elements of the programme and provide staff training, supervision and consultation. Box 2 summarises the CBT principles within the programme. Patients can also access individual therapy for eating and weight related distress and issues that may interfere with their ability to implement and adhere to the necessary lifestyle changes. Clinical Psychologists also run group based treatment for clinically significant disordered eating in conjunction with the typical Phase 1 weight management programme. Research and service development are additional roles.

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 (Table 2). This number is predicted to increase by 140 per month, as the weight management service becomes available to all people within NHS GGC.

Table 2. Summary Data, October 2008

	BMI ≥30-35	**BMI ≥35**
Referrals	3605	6334
Monthly Average	400	
Male	26%	29%
Female	74%	71%
Average Age (Years)	47	48
Range (Years)	18 – 89	18 – 88
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 ≥5 kg over the course of Phase 1. Of those patients who complete Phase 1, approximately 40% are 'Successful' in terms of weight loss, however there is a wide range of weight change as shown in Table 3. GCWMS outcomes are favourably comparable with other weight management programmes such as Counterweight (www.counterweight.org).

Table 3. Group Outcome Data, October 2008

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 developing rapidly. The major development 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 appointing system. 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 the public and health professionals.

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