

The rewards and challenges of setting up a Tier 3 adult weight management service in primary care

Carly Anna Hughes

The NHS Commissioning Board has recommended the introduction of medical, multidisciplinary, multicomponent weight management services (Tier 3 services) for obese patients requiring specialised management, including assessment for bariatric surgery. Unfortunately, these have not yet been commissioned in many areas. Barriers identified include obesity being a low commissioning priority, therapeutic nihilism, medical workload constraints, a lack of trained staff, financial barriers to developing new services, and challenges of evaluation. A particular challenge is the lack of long-term funding and the complex tendering processes used in some areas. However, patients value these services, and the sparse academic literature shows encouraging results. Nonetheless, more robust evaluation of these services, including additional outcome measures and longer follow-up after discharge, is required to demonstrate cost-effectiveness to the NHS.

Two years ago, the NHS Commissioning Board (2013) and the NHS England and Public Health England (PHE) Working Group (2013) defined a tiered system of weight management services and recommended the introduction of Tier 3 multidisciplinary weight management services for severe obesity. The NICE (2014) clinical guidance on obesity (CG189) also included Tier 3 services as an integral part of the bariatric surgery pathway, and the Royal College of Surgeons England and the British Obesity and Metabolic Surgery Society (2014) have produced a commissioning guide for Tier 3 services. However, commissioning of these services is limited at present.

This article discusses the rewards and challenges of providing a Tier 3 service in a primary care setting, and offers some suggestions to improve the implementation of the NICE and NHS commissioning guidelines.

Development of primary care-based services

Historically, most multidisciplinary medical weight

management services have been delivered in secondary care by endocrinologists or specialists, often attached to bariatric surgery units (Royal College of Physicians [RCP], 2013). Whilst these specialist units are essential to manage the most complex patients, the majority of obese people can be managed safely and effectively by appropriately trained staff in the community. This is more convenient for the patients and may be more cost-effective for the NHS.

The development and organisation of multidisciplinary weight management services delivered in the community is documented in the literature by Morrison et al (2012) and Jennings et al (2014). Senior et al (2013) documented results of the Rotherham Institute of Obesity (RIO), which was one of the first GP-led services delivered in primary care, initiated in 2010 and funded by Public Health Rotherham. It remains an exemplar and won an Excellence in Commissioning award.

Inspired by the RIO model, a Tier 3 service was developed in Norfolk in 2011. The Fakenham Weight Management Service (FWMS) was supported by RIO and local endocrinologists in

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Article points

1. Barriers to implementing a Tier 3 weight management service include a low commissioning priority, lack of time to design and set up the service, lack of trained healthcare providers with a special interest in obesity and the start-up costs of additional services and equipment.
2. The Fakenham Weight Management Service has overcome many of these barriers and has been shown to be effective and popular with its users.
3. Given the medical complexity of many Tier 3 service users, outcome comparisons with Tier 2 services may be inappropriate, and commissioners should be aware that modest weight reduction, if accompanied by reductions in comorbidities, may well represent a significant clinical improvement.

Key words

- Primary care
- Tier 3 services
- Weight management

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Box 1. Focus group comments.

- “When I first started I could hardly walk – only 50 yards. Now I can walk 300–400 yards... if this project has done nothing else it has helped me to walk.”
- “I am now doing 3 miles’ walking a day; before, I could hardly walk down the road.”
- “I am addicted to Nordic walking, it is far better than antidepressants... my mental health has improved, it has changed my life.”
- “The psychologist was very friendly and helpful, changed my relationship with food and helped me recognise triggers to my eating. I feel more confident and in control. It also helped my family too, this service is amazing.”

Box 2. Case history.

- Self-employed male, age 55 years, with a history of not attending medical appointments and poor drug regimen adherence. Initially only interested in bariatric surgery.
- Initial weight 142 kg (BMI, 41.5 kg/m²); HbA_{1c} 75 mmol/mol (9.0%).
- Medical history: type 2 diabetes (duration >10 years); obstructive sleep apnoea (receiving continuous positive airway pressure but using it intermittently); chronic leg ulcer; endocrine investigations for Cushing syndrome negative.
- Medication: insulin 200 units twice daily, liraglutide, gliclazide, perindopril and simvastatin.
- Dietary and activity history: chaotic eating pattern; he often missed breakfast and ate high-fat convenience foods and energy-dense snacks; he also used insulin erratically. He took no regular exercise and spent hours driving for his job.
- Intervention: standard programme plus one-off individual session with exercise specialist, a dietitian appointment and four individual sessions with a psychological therapist; he also saw the bariatric physician on four occasions about his medical issues, and he was encouraged to become actively involved in his diabetes care.
- Results: he took control of his eating, changing to regular healthy meals and planning healthy snacks to carry in his car. He increased his walking to 2 miles per day, his leg ulcer healed and he then started regular swimming.
- Final weight 114 kg: loss of 28 kg (20% of initial weight).
- Final BMI 33.2 kg/m²; HbA_{1c} 53 mmol/mol (7.0%).
- Insulin dose reduced to 35 units daily; sleep apnoea resolved.
- He did not want bariatric surgery at that point, and is attending the monthly support group to assist with weight maintenance.

a psychological therapist, a health trainer, a weight management advisor and a specialist medical physical activity therapist. The core clinical group also includes a consultant endocrinologist, a clinical psychologist, a public health specialist and three patient representatives.

The intervention is detailed in *Figure 1*. The service has been evaluated in detail, using the National Obesity Observatory Standard Evaluation Framework, by Jennings et al (2014).

Rewards of providing the service

Focus groups of FWMS participants have shown that they value the multicomponent service highly (*Box 1*; Jennings et al, 2014). Many of the participants have been stigmatised by society, and even by the medical profession, in the past (UK Health Forum, 2015). Complex psychological conditions and a history of abuse are common. Participants may have little self-confidence and poor self-esteem. Therefore, engaging with them, listening to their stories and offering medical and psychological support is essential. Given time and expert help, it is common to see them blossom and make permanent changes in lifestyle (*Box 2*), with excellent weight loss and clinical benefits.

The relationship between weight loss, emotional wellbeing and health-related quality of life (QoL) is documented by Wright et al (2013) from the Glasgow and Clyde Weight Management Service. Many patients are able to reduce or stop their antidepressants, antihypertensive or diabetes medications.

The results from the FWMS demonstrated a weight loss of 5% of initial weight in 73% of completers of the 1-year programme (which had a completion rate of 52%), and a loss of 10% of initial weight in 27%. There were also significant improvements in HbA_{1c}, blood pressure, QoL, diet quality and physical activity. *Table 1* gives a brief summary of the outcomes of participants who completed the programme.

It is also intellectually stimulating to manage the complex comorbidities of obesity, and to try and optimise medical fitness for bariatric surgery in those who choose that option. It is encouraging to see that, of the people referred to the FWMS for consideration of surgery, only 50% are eventually referred to a bariatric surgeon and over 25% lose enough weight to improve comorbidities and avoid surgery.

Norwich. The service was funded by an award from the East of England NHS innovation scheme to cover training and set-up costs, as well as the NHS Norfolk Primary Care Trust and the fledgling North Norfolk Clinical Commissioning Group (CCG), which then took over the ongoing funding after the demise of the Primary Care Trust.

The FWMS multicomponent intervention is based on the NICE CG43 and CG189 guidelines (NICE, 2006; 2014), and the National Obesity Forum (NOF, 2005) Toolkit. The staff meet at weekly multidisciplinary team meetings and comprise two doctors with bariatric physician training, two specialist obesity nurses, a dietitian,

Challenges of setting-up and running a primary care-based service

Obesity may not be recognised as a local commissioning priority

The NHS commissioning guidelines recommend that local CCGs commission Tier 3 services but, nationally, CCGs have been slow to do so (NHS England and PHE Working Group, 2013). A local GP or public health obesity champion may be required to try and persuade CCGs to prioritise this service. PHE (2015) have published some useful slides and a factsheet on the evidence for tackling obesity on the National Obesity Observatory website.

The NHS reorganisation has encouraged CCGs to put Tier 3 services out to competitive tender. This process is time-consuming and expensive for the potential provider and favours commercial organisations with greater financial resources but possibly less clinical expertise. It is important that the service specification includes detailed guidelines on what the service provides. This should include a full multidisciplinary team, the capacity to deliver lifestyle interventions, assessments for pharmacotherapy and bariatric surgery, psychological interventions and very-low-calorie diets for appropriate patients, as detailed in NICE CG189.

In some areas, Tier 3 services were previously funded by public health, and there may be difficulties in negotiating ongoing funding if there is conflict between CCGs and public health on the use of resources. At present, CCGs are not responsible for commissioning Tier 4 bariatric surgery services, and this may be a barrier to providing seamless bariatric pathways. The proposed move towards having CCGs commission both Tier 3 and Tier 4 services in the future may encourage joined-up thinking (NHS England and PHE Working Group, 2013).

The CCG should also define the service specification and the entry criteria for the service, including BMI range, age range and any exclusion criteria. There may be local circumstances requiring particular interventions, such as single-sex groups for cultural reasons.

Setting up a Tier 3 service

Clinician time to design and set up the service

In both primary and secondary care, clinicians are extensively committed to service delivery, and finding protected time to design a new service

Table 1. Outcomes of participants who completed the 1-year programme (n=117 of 230).

Outcome	At baseline (mean; standard deviation)	At 12 months (mean; standard deviation)	P value for change
Weight (kg)	126.5 (29.6)	115.5 (27.8)	<0.001
BMI (kg/m ²)	44.1 (7.8)	41 (4.6)	<0.001
Fruit and vegetable intake (portions per day)	4.2 (2.1)	6.4 (1.7)	0.006
Physical activity index	3.4 (1.0)	2.8 (1.2)	<0.001
QoL (five-level EQ-5D)	2.0 (0.8)	1.7 (0.7)	<0.001
QoL (EQ-5D visual analogue scale)	55.6 (21.7)	73.7 (18.6)	<0.001
HbA _{1c} (mmol/mol)	57.8 (15.3)	53.7 (14.1)	<0.001
Systolic blood pressure	131 (13.7)	122 (11.2)	<0.001
Diastolic blood pressure	76 (9.3)	71.3 (7.5)	<0.001

EQ-5D: EuroQol five-dimensional QoL questionnaire; QoL: quality of life.

is difficult. This is especially true if there is no funding to support development time and no guarantee of long-term funding. This time needs to be included and costed when drawing up plans to bid to provide a service.

Recruiting and training staff

There is no pool of pre-existing trained specialist obesity nurses or GPs with a special interest in obesity. Time and funding is required to train the staff using accredited courses, such as the Specialist Certification of Obesity Professional Education (SCOPE) courses (available at: www.worldobesity.org/scope) or the Obesity and Malnutrition e-learning course from the Royal College of GPs (RCGP; available at: <http://elearning.rcgp.org.uk>). As many patients have complex medical problems requiring polypharmacy, medical staff are essential for comprehensive assessment and treatment, as are staff who are skilled in behaviour change techniques. Medical staff may be reluctant to train for a new role unless there is a realistic prospect of long-term employment in that area. Consultant endocrinologists or metabolic specialists may do outreach work in the community setting but, currently, there is no clear pathway to develop obesity specialists (RCP, 2013).

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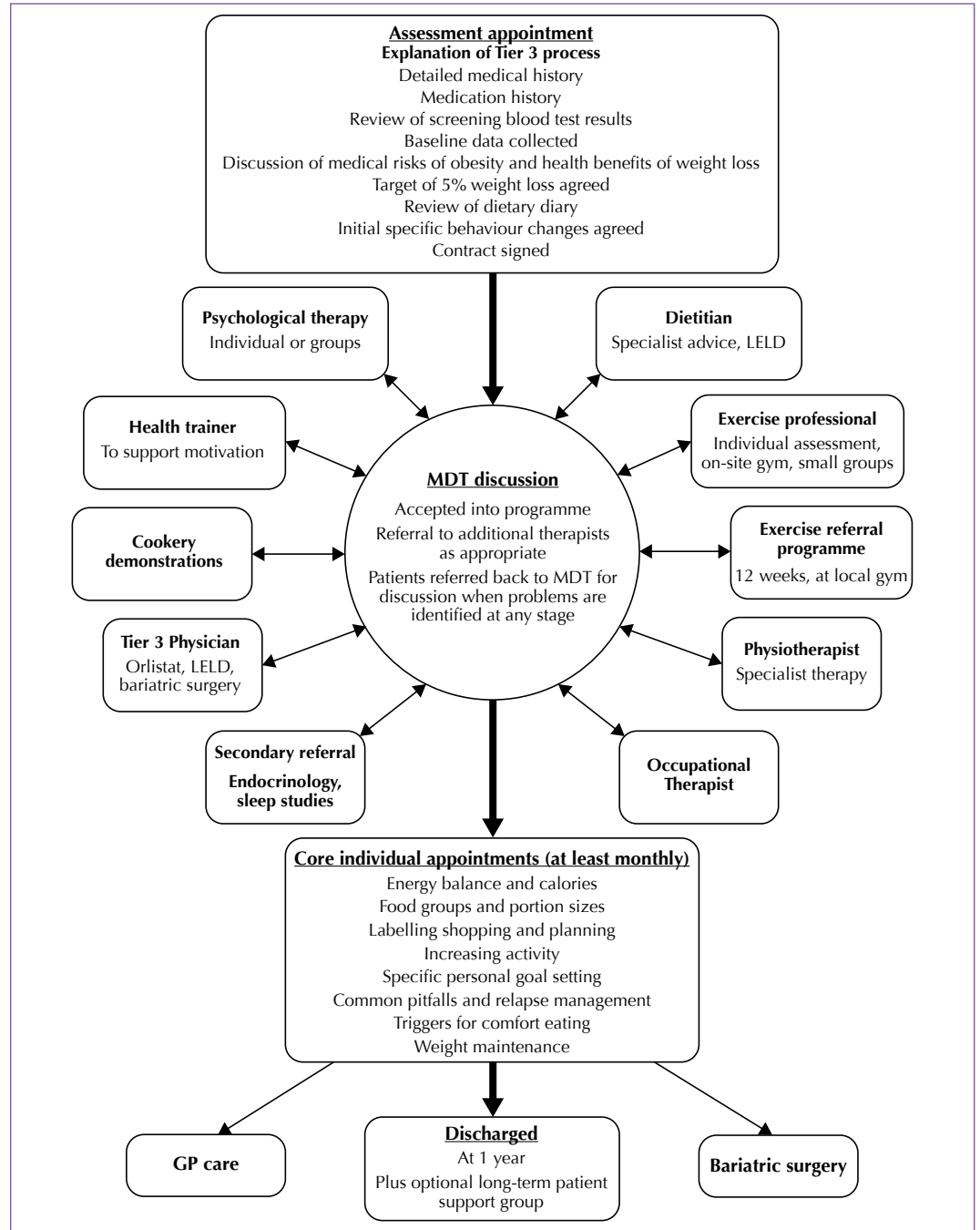


Figure 1. Model of care of a community-based, Tier 3 weight management service. LELD: low-energy liquid diet; MDT: multidisciplinary team.

Designing the clinical protocol

It is important that the protocol be developed and owned by the whole team that is going to deliver the service, and this takes time. RIO shared its protocol with the FWMS, and this was amended after discussion with local endocrinologists to include the development of shared protocols for the

use of low-energy liquid diets and guidelines on when to refer for endocrine investigation.

Each service will have unique opportunities and challenges; for example, some can offer in-house sleep studies to screen for obstructive sleep apnoea, whereas others may refer patients for this service.

Finding a suitable site

RIO and the FWMS are both based at GP surgeries that meet Care Quality Commission (CQC) standards, have specialist equipment, appropriate facilities (including disabled toilets that are able to support people with a heavy weight) and good car parking and public transport links. A community hospital might also be suitable. If a non-NHS site is used, it will be subject to NHS health and safety regulations and CQC inspection. It is an advantage to have phlebotomy facilities on site and to have access to NHS computerised medical records.

Choosing which additional services should be available on site

RIO and the FWMS both have on-site gyms, but this is not essential. However, a physiotherapist or exercise professional with experience of complex patients with severe obesity and disabilities is essential. Physical therapists require a safe environment to assess the patient, as well as appropriate equipment. It is important to establish links with local leisure services and public health initiatives for physical activity, and to direct patients to the appropriate services.

Capital costs of equipment

Specialist bariatric scales, including wheelchair scales capable of weighing up to 300 kg, will be required. Bariatric couches and chairs, large blood pressure cuffs and, possibly, a bariatric wheelchair need to be purchased. If an on-site gym or exercise room is provided, the equipment must be suitable for people with a high BMI and provision must be made for wheelchair users.

Advertising the service to local practices

Once the service is commissioned, it is important to ensure that local practices are aware of its existence, as well as any referral criteria. This may require a presentation to the CCG or visits to local practices. GPs may be reluctant to discuss weight in consultations, and local education meetings for GPs and practice nurses may increase referral rates. The RCGP (2013) leaflet *GP Ten Top Tips: Raising the Topic of Weight* may be useful in this setting. The cost of advertising the service may not be included in the core funding, and this can be a significant barrier.

Integrating with other services

It is essential to have good links with local public health Tier 1 and Tier 2 services. If possible, a complete local obesity pathway should be agreed. In Norfolk, there are close links between the health trainers, commercial slimming groups, physical activity providers, Tier 3 services and endocrinologists via the Norfolk Obesity Network. This is an informal group, with no membership fee, which meets about five times a year. It discusses clinical cases, shares good practice and also organises joint educational meetings with other groups, such as the Association for the Study of Obesity. It also produces a newsletter with details of other obesity-related educational materials.

The FWMS has very close links with the Norfolk and Norwich University Hospital Trust, one of the consultant endocrinologists of which is a member of the service's clinical core group. This ensures rapid expert clinical advice via email or telephone if required. The FWMS also shares joint education meetings and research projects with the Trust. In addition, it is important to have close links and to develop shared protocols with the local bariatric surgery centres.

Challenges of evaluation

Selecting the core dataset

The core dataset is influenced by the commissioners and agreed key performance indicators. These include weight loss targets such as, typically, 5% and 10% of initial weight, to be lost within defined timescales in a fixed proportion of completers. However, the results that are achievable depend on the population recruited, and weight or BMI change alone is a crude indicator of health outcomes. A modest weight loss with a significant reduction in HbA_{1c} in people with type 2 diabetes, or an increase in physical activity or functional ability, may also be very desirable outcomes.

The FWMS uses the National Obesity Observatory's (2009) Standard Evaluation Framework. This framework recommends collecting data on diet, physical activity and QoL in addition to demographic data. The FWMS also collects data on blood pressure and, in people with type 2 diabetes, HbA_{1c}.

It is impossible to compare and benchmark outcomes in different populations, and consideration

Page points

1. A high-quality Tier 3 weight management service requires good access and transport links, appropriate facilities and specialist equipment for obese individuals, and close links with local leisure and physical activity services.
2. Integration with other health services, including Tier 1 and Tier 2 services and, if possible, local academic centres, is also important in order to ensure the availability of specialist clinical advice.
3. It is key to advertise the service to local practices. Local education meetings with GPs and nurses may increase referral rates, as will efforts to encourage GPs to discuss weight with their patients.

Page points

1. Evaluating the outcomes of a service is important; however, the key performance indicators should align with clinical objectives and reflect the patients enrolled.
2. Achieving only modest weight loss may be a desirable outcome if it is accompanied by improvements in comorbidities, functional ability and quality of life.
3. The National Obesity Observatory provides a useful framework for evaluating a service; however, their recommendations that follow-up data be collected 1 year after completing the programme may be difficult to implement without funding.

should be given to using a clinical scoring system, such as the Edmonson Obesity Scoring System proposed by Sharma and Kushner (2009), to classify obese patients and define the population (RCP, 2013). Unrealistically high key performance indicators may deter experienced service providers from bidding for tenders and may increase the administrative burden on the service. The performance indicators should align with the clinical objectives.

Managing the data

This requires dedicated administrator time and a large database. The cost of evaluating a weight management service is suggested to be 10% of the budget by the National Obesity Observatory but, in practice, this is rarely reflected in the actual budget.

Collecting long-term follow-up data

The National Obesity Observatory framework recommends that data be collected 1 year after completion of an intervention, but this is difficult to achieve unless funding is available. The FWMS initially wrote to each patient's GP 1 year and 2 years after discharge to request recent weight data, with the patient's permission. Disappointingly, we found that many patients had not been weighed, even though they were attending regularly for chronic disease management. In that situation, we contacted the patient for a self-reported weight measurement or offered to see them at our long-term support group. The limited data gathered were encouraging, and our new service specification allows us to invite all attendees for a review appointment 1 year after completion of the programme.

Statistical analysis of the data

This may not be included in the service specification but, as Tier 3 services have not been extensively evaluated, it may be interesting to work with public health or a local university to look at the data produced. This information may inform future NHS policy.

Bariatric surgery referral

This should be an appropriate clinical outcome for specific patients; however, some commissioners seem to view this as a failure. Referral rates will vary according to the BMI and comorbidities of the

population recruited. However, an effective service would expect to successfully achieve weight loss without surgery in many patients.

Medical and psychological complexity of patients

It is important to ensure that commissioners understand the medical complexity of the participants and do not make inappropriate outcome comparisons with Tier 2 services. A modest reduction in weight with a large reduction in HbA_{1c} in people with type 2 diabetes, a drop in blood pressure or an increase in physical activity may represent a real clinical health gain.

QoL and social aspects

It is difficult to capture these effects, but weight loss may increase mobility, reduce the need for extra social care and improve psychological wellbeing (Wright et al, 2013). This could have considerable financial implications for both the NHS and social services, and needs to be explored further.

Conclusion and discussion

Tier 3 weight management services are an integral part of the bariatric pathway. There is evidence for their effectiveness in terms of weight loss as well as improvements in HbA_{1c}, depression scores and QoL (Morrison et al, 2012; Wright et al, 2013; Jennings et al, 2014). However, there is sparse literature on the challenges of setting them up and evaluating them. Although commissioning guidelines are available, they are inconsistently implemented. Until CCGs commit to commissioning these services, with guaranteed long-term funding, there is little incentive for clinicians to train to deliver these services. However, medical involvement is crucial in the assessment and management of these complex patients. It is encouraging that more GPs are joining organisations such as NOF and the RCGP Nutrition Group and are expressing an interest in this area.

The National Obesity Observatory's Standard Evaluation Framework provides guidance on a core dataset but does not take full account of the complex patients seen at a Tier 3 service, and it may not recognise important clinical changes, such as reductions in HbA_{1c} in people with type 2 diabetes. Additional clinical outcomes need to be reported to reflect the health and social care gains provided by

these services. A strong collaborative approach with secondary care and bariatric surgery units is essential.

Primary care does not have the financial or academic infrastructure to subsidise the significant administrative burden of collecting a large range of data and organising long-term follow-up to assess the true efficacy of these services. The development of partnerships with academic centres and robust clinical assessment would increase the value of these services to the NHS. ■

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