Time to act? Is the new era of gut hormone-based pharmacotherapy an opportunity to rethink the tier-based UK obesity care model?

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Abstract

Obesity, like type 2 diabetes, is a complex, often life limiting disease influenced by genetics and modern environment. However, unlike diabetes, the provision of integrated, holistic care for people with obesity in the UK remains underdeveloped, despite the growing prevalence of obesity and increasing availability of effective treatments for weight loss. The current tier-based approach to obesity management, although based around a multidisciplinary model, can be fragmented with significant geographical variations in care. The recent approval of new pharmacotherapies by the National Institute for Health and Care Excellence offers an opportunity to rethink and reshape the approach to obesity management. This article provides a review of the current tier-based system for obesity care in UK and proposes alternative models aimed at improving efficiency, promoting equity, and enhancing person-centred outcomes.

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Background

Obesity is a complex, multifactorial disease driven by a combination of genetic susceptibility and modern environmental circumstance.[1] Much like type 2 diabetes (T2DM), it is associated with multiple chronic and potentially life-changing complications resulting in a significant reduction in life expectancy.[2] Yet in contrast to diabetes, integrated holistic care for people living with overweight and obesity is comparatively underdeveloped in the UK. This is despite significant improvements in our understanding of these conditions and a recognition that obesity is rapidly reaching epidemic proportions.[3] Recent decades have seen a major service transformation from hospital to community-based care across several long-term conditions, including T2DM. Although not perfect in this case, it has led to nationally standardised quality measures, enhanced screening programmes for complications and general improvements in care delivery.[4] Conversely, the often complex multi-stakeholder provision for overweight and obesity interventions can be difficult to negotiate for service users, may possibly enhance inequalities and, it could be argued, are counterintuitive to the natural history of the disease. Increasing National Institute for Health and Care Excellence (NICE) approval of pharmacotherapy associated with clinically significant short-term weight loss has the potential to change the therapeutic landscape and may represent a real opportunity to overhaul existing structures for the benefit of people living with the condition.[5] Here we briefly describe the currently recommended tier-based system for NHS overweight and obesity care in the UK and propose three alternative models which may improve efficiency and optimise person-centred care.

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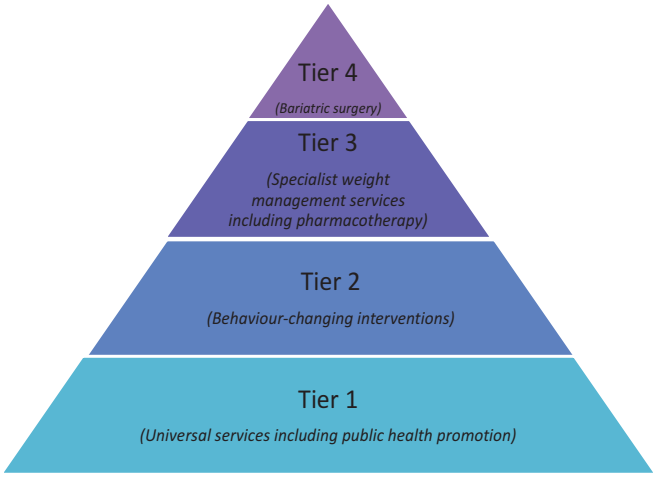
The current tier-based approach to overweight and obesity management

NICE first acknowledged the need to identify and treat obesity in 2006 and since then guidance has been regularly updated.[6] In 2014, the Department of Health Working Group report described a tier-based system for weight management.[7]

Figure 1. The current tier-based approach to weight management



The current system divides weight management services into four tiers (Figure 1):

Tier 1: Universal population-level services, usually delivered at primary care level and commissioned by the local health authority

Tier 2: Commonly delivered by local authorities or via commercial providers, focusing on behaviour change including lifestyle interventions for overweight and obese individuals

Tier 3: Multidisciplinary specialist-care approach, including medication for weight loss, psychology and onward referrals to Tier 4. Commissioned by the local Integrated Care Board (ICB)

Tier 4: Surgical interventions, such as metabolic or bariatric surgery. Again, commissioned by the local ICB

Figure 1 summarises the current tier-based approach to weight management.

Recommended eligibility criteria for each tier are set out in the guidance and reflect increasing severity and complexity of obesity.

Difficulties facing overweight / obesity care services

Before considering new models of care, it is important to acknowledge the significant challenges faced by existing weight management services. As diabetes specialists, many of our readership will have encountered these issues. They appear to be wide- ranging, from predictable capacity and funding issues to more nuanced concerns over healthcare provider knowledge and training. Unfortunately, negative attitudes towards overweight and obesity are also commonly encountered by people with lived experience, resulting in weight-related treatment bias and significantly worse outcomes.[7,8] The complexity of referral processes can also hinder user experience and progression through the system. These will be considered in this review as general issues and those specific to specialist weight management services (Tier 3 or Tier 4).

General challenges facing weight management services

Capacity and equity

According to the latest health and social care statistics, 64% of the UK adult population is now living with overweight or obesity.[9] This presents major issues for existing service provision across the spectrum of weight management. According to a new position statement from the Obesity Health Alliance, the number of people eligible for weight loss medication and interventions beyond Tier 2 is estimated at 4 to 5 million.[10] This is comparable to current prevalence estimates for T2DM so it would be reasonable to assume that capacity planning and service redesign for this population would need to follow a similar trajectory. A delivery model on this scale would therefore need to be predominantly community-based and would probably require significant additional investment in training and infrastructure. At present it is very uncertain whether primary care is sufficiently equipped to deal with this volume of cases or with the complexity of advanced disease.

Socioeconomic and racial inequity lead to poorer access, uptake and adherence to weight management services. People living in the most deprived neighbourhoods are twice as likely to be obese as those from more affluent areas, whilst certain ethnic groups have a much higher risk of obesity-related complications at lower body mass index (BMI) thresholds.[11] Men and people from Black and Afro-Caribbean backgrounds are also much less likely to be referred for weight management services.[11] Personal time, resources and educational attainment are also important outcome indicators in behavioural weight management interventions. Therefore, bespoke services that can identify and adapt to local needs whilst enhancing personal agency are likely to be more successful. Services should be specifically required to demonstrate how they address these and other health inequalities in weight management service provision at commissioning. Whilst a detailed review of the literature in this area is beyond the scope of this article, it seems likely that future services will need to be based in and to draw upon lived experiences of local communities through social networks, stakeholder involvement, ongoing innovation and piloting.

Structural complexity

Commissioning of the different components of the tier-based system is complex, often involving a number of providers. Coherent cross-talk between services, which typically hold entirely independent contractual arrangements and anticipated outcomes, is often limited. This can seriously hinder cohesion and the patient journey through the system. A number of national programmes that many patients will be eligible for (such as diabetes prevention,[12] and digital weight management programmes[13]) can only be accessed from primary care, or via self-referral in some cases, further complicating the weight management referral process. Anecdotal feedback suggests that primary care teams are often not sure how or where to refer their patients when confronted with four or five services, all with differing criteria and requirements. The national picture suggests that while many individual services cope well, there is a significant issue with movement between the tier-based elements. This suggests that they may benefit from improved coordination and delivery networks to simplify the pathway, reduce confusion and maximise efficiency.

Healthcare provider knowledge and training

Partly for the reasons already described, there is significant geographical variation in the provision of NHS obesity care. This is especially true of specialist services and may be due to local policy directives, differing interpretation of NICE guidance and a lack of knowledge and education around obesity. Unlike the US, there is currently no separate specialty for obesity medicine in the UK. In 2010 the Royal College of Physicians published a set of competencies for overweight / obesity training targeted at healthcare professionals with a specific interest. This is now part of the diabetes and endocrinology specialist training curriculum,[14] and has also been extended to the public health and health promotion part of the curriculum for internal

medicine, but has not yet been incorporated more widely. There is a need to develop core competencies which apply to specific services and their workforce. If future models involve community-based care, appropriate physician, nurse and allied healthcare professional training will be required beyond the basic provision set out in existing NHSE educational frameworks.

Weight bias and stigma

For most people living with obesity, weight loss is not a matter of personal choice. Rather it is a constant and too often demoralising battle which basic physiology tells us the person will ultimately lose. Despite copious amounts of evidence describing its limited long-term effect on weight loss, societal and healthcare professional advice often persists with the simplistic and somewhat stigmatising mantra of "eat less and move more" as the solution to the overweight and obesity epidemic. The resultant stigma attached to this way of thinking, coupled with the psychological impact of a sense of repeated "failure", inevitably have a profoundly negative effect on the individual trying to lose weight. A recent report written by the Obesity Health Alliance calls for immediate action to create a more supportive environment for people living with obesity.[15] The report recommends that, moving forward, people with lived experience become much more involved in policy and decision-making and that stigma is tackled at all levels in society.

Challenges facing the specialist weight management services (Tier 3 and Tier 4)

While the tier-based approach is in principle sound, with holistic multidisciplinary care directed to those in most need, its implementation generally has faced challenges from the beginning.[7] Some of the major issues are listed below.

Access to and provision of services

The original rationale for the development of a tier-based approach to weight management generally lacked clarity and the evidence supporting the use of such a design as applied to weight management is limited.

As mentioned above, Tier 3 is a clinician-led multidisciplinary team (MDT)-based specialist weight management service comprising mostly (but not always) specialist dietitians, nurses, psychologists/talking therapists and exercise specialists and is often delivered at the secondary care level. It is the first service in the tier-based system that can prescribe novel weight-loss pharmacotherapies, and can deliver low-calorie diets (LCDs), provide psychological support and access to exercise specialists. The service can also make referrals for appropriate patients to Tier 4 services for consideration of bariatric or metabolic surgery, theoretically playing a vital role in the entire tier-based system.

One concern is that the access to and provision of Tier 3 services across England is highly variable. Currently only 50% of the ICBs in England commission both Tier 3 and Tier 4 services.[16] Furthermore, communication between these tiers is often not streamlined, leading to fragmented and delayed care.

Only a small percentage of those patients eligible are referred to these services. A recent observational study showed that between 2007 and 2020, only 3.13% of eligible patients were referred to weight management services.[11] The study concluded that access to weight management interventions in England has not improved in the last 10 years despite rising obesity rates, requiring national attention.

A recent review of Tier 3 services in England found that many services do not fulfil the criteria for a Tier 3 service provision due to lack of a MDT approach, short duration of interventions, and limited or no access to pharmacotherapy and gateway service for bariatric surgery.[17]

Lack of joined-up care, particularly for patients with more severe and complex forms of obesity, results in multiple long-term conditions, and failure to address the underlying root causes for many patients also poses a big challenge.

The waiting list to access the Tier 3 service is often long, sometimes several months or even years, which can be a frustrating experience for patients.

Efficacy of Tier 3 specialist weight management services

The current state of Tier 3 services is strained, with many struggling to meet patient demands, especially for pharmacotherapies and psychological support. Devolved funding responsibilities of some components or entire Tier 3 services by local ICBs have also led to significant variability in availability and quality. As a consequence, the private sector is stepping in to fill the gap, leading to concerns about equitable access. Between October 2023 and March 2024, NICE approved seven digital MDT-based services for prescribing, monitoring and delivering weight management services.[18] These are not aligned to the current definitions of a secondary care-based Tier 3 service and suggest a shift away from the usual tier-based model of care.

The current data regarding the efficacy of Tier 3 weight management services are limited and show that the existing Tier 3 services only achieve a 5% weight loss in 50% of patients over 6-12 months. When LCD were excluded, the weight loss was even more modest, between 2 to 6 kg.[7] A systematic review showed that MDT team composition and eligibility criteria across the services varied widely and that dropout rates were high at around 43–62%.[19] The review showed a reduction in mean BMI ranging from 1.4 to 3.1 kg/m^2 and a mean weight loss ranging from 2.2 to 12.4 kg. Furthermore, absence of long-term data makes the cost-effectiveness of Tier 3 weight management services difficult to evaluate.[17]

Prescription of weight-loss pharmacotherapies in Tier 3

Our better understanding of the weight-regulating mechanisms and the role of the gut-brain hormonal axis on appetite has led to the development of safe and effective gut hormone-based treatments for obesity.[5,20] These drugs have proven effective in promoting weight loss and addressing many obesity-related complications. NICE has already approved use of Saxenda (liraglutide) and Wegovy (semaglutide) for up to two years through the Tier 3 services,[6] whilst an assessment of Mounjaro (Tirzepatide) is expected in December 2024.[21]

A two-year restriction on prescription of weight-loss pharmacotherapies in Tier 3 services has raised concerns, as obesity is a chronic, relapsing and remitting condition that requires long-term treatment. In the Diabetes Prevention Programme, intensive lifestyle management led to an average weight loss of around 7 kg in six months and then a slow regain of more than 70% of the weight lost in the four years after stopping the intensive lifestyle intervention.[22] In the SURMOUNT 4 study, all participants received tirzepatide for an initial 36 weeks lead-in period and they were then randomised to either continue tirzepatide or be switched to placebo for another 52 weeks. The mean percentage weight change from week 36 to week 88 was −5.5% with tirzepatide versus 14.0% weight regain with placebo, showing an overall difference of −19.4% in favour of tirzepatide at the end of 88 weeks ($p<0.001$).[23]

With the increasing number of pharmacotherapies approved for weight loss and many more in the pipeline, it will be challenging for existing weight management services to manage the increased demand for these potent weight-lowering medications. Where they are available, demand for the approved weight-loss medications is outstripping supply, putting immense pressure on the entire tier-based system.[8] More than 4 million people are eligible for Wegovy in England alone but the current capacity to treat is around 35,000 people per year. Providing pharmacotherapy to the existing eligible 4 million would cost an estimated £2.2 billion in medication costs alone.[17]

Dose titration and review of tolerability and potential side effects will be another challenge for the services as the number of people who have been prescribed these medications rises. The current NHS workforce capacity will also create problems in providing effective weight management services in the coming years, particularly for support and monitoring purposes. Provision of community pharmacist and digital services can overcome some of these capacity issues.

The interrupted stocks of some of the pharmacotherapies creates another barrier to provision of pharmacotherapy via the Tier 3 services, which then encourages people to choose readily available, off-label, unsupervised and illicit private purchases. Irresponsible media coverage and stigmatised public and political attitudes towards people living with obesity add fuel to the fire.

The role of low-calorie diets in weight management in Tier 3

Low-calorie diets (LCDs) are effective, as shown by the DIRECT and DROPLET trials,[24,25] and these data have driven a national programme for people living with T2DM and high BMI.[26] However, barriers to adherence remain a challenge and long-term weight loss efficacy is awaited. Early findings from the NHS Type 2 Diabetes Path to Remission Programme show that of 7,540 people referred to the programme between September 2020 and December 2022, 1,740 started the total diet replacement (TDR) and 960 completed the programme, with a mean weight loss of 8.3% after 12 months.[26]

Commercially provided LCDs are relatively expensive,[27] and may lack the support needed to supervise and follow up within the Tier 3 service intervention period. LCDs may have uses, for example for pre-surgical rapid weight loss, but their place in Tier 3 is currently unclear since there is no evidence of their long-term efficacy in this setting where people often have higher BMI or more complex needs.

Bariatric surgery (Tier 4): a limited option

Despite NICE CG189 recommending bariatric surgery for selected patients,[6] access to this modality is inconsistent across the NHS. In the UK, of 3.6 million eligible people only about 4,000 underwent a bariatric procedure in 2021-22.[28] Many people are seeking the procedure privately abroad, which is promoting health tourism in many countries.[29]

In the tier-based system, the referral process for bariatric surgery can be lengthy and is physically and mentally draining for the patients. Although bariatric or metabolic surgery remains the most effective long-term solution for weight-loss maintenance, its scalability is always going to be problematic.

With current and future GLP-1-based therapies, the weight-loss efficacy gap between common metabolic surgery procedures and pharmacotherapies is closing rapidly.[5] Consequently, more people living with obesity will find interest in pursuing medications as a long-term solution to their weight problems.

The solution moving forward: shifting obesity care from Tier 3 to primary or community care?

New, more effective weight-loss pharmacotherapies will probably need to be primary care-based if they are to reach the number of people eligible to use them. This could be analogous to the pre-existing T2DM model of care where only the most complex cases are referred to secondary care and the majority of cases are managed in the community. This means that primary care will need to be resourced and have the confidence to deliver interventions, including prescribing and monitoring of weight-loss pharmacotherapies. There will need to be effective strategies targeting the right patient groups and managing expectations of the people using the services. Effective wraparound care, dietetic and psychological support in addition to pharmacotherapy start/stop rules, will be required to maximise efficiency and safety. At present the evidence base for these additional vital components of a primary care-based strategy is lacking. There is also significant risk of inequalities and variation in interpretation of service requirements. However, this represents an opportunity to provide true integrated care and cooperation across the system. A number of models could be proposed.

Model 1: Primary care/community-based "Tier 3"

Model 1 replaces the existing secondary care-led Tier 3 with a fully supported primary care-based multidisciplinary intervention centred around pharmacotherapy and psychological support (Figure 2).

Model 2: Integrated care model

In the second model, the entire tier-based system is merged into an integrated model for provision of a more holistic approach to avoid delays in provision of care. This would be

Figure 2. Replacing the existing Tier 3 with a primary care model

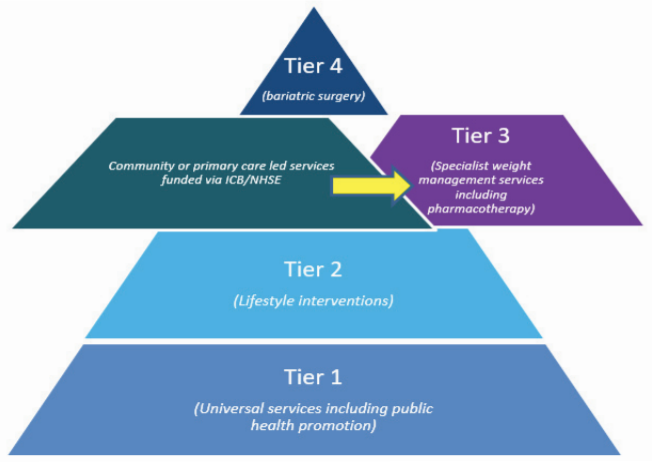


Figure 3. Integrated care model with wider stakes for primary care

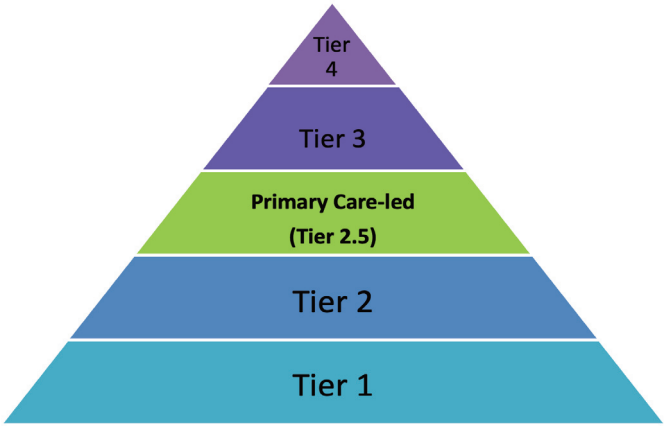
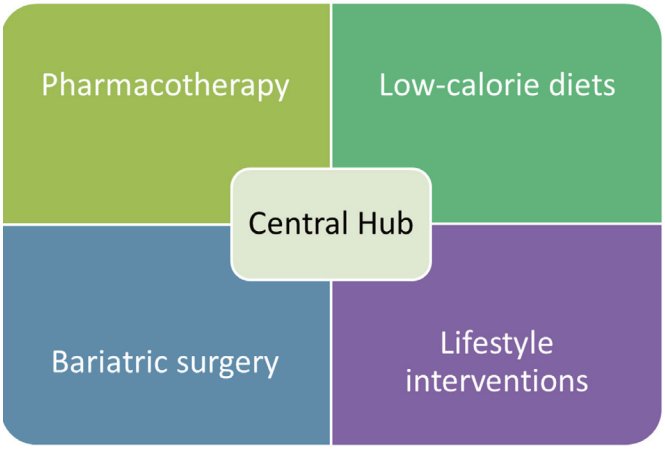


Figure 4. Hub and spoke model of provision of weight-loss services



led mainly from primary care, which would have a more central role (perhaps a "Tier 2.5") and have more influence with regard to choice of interventions (Figure 3). It should have the capacity to prescribe pharmacotherapy or to refer to secondary care like the existing T2DM service framework and might even be able to make direct referral for bariatric surgery. The exact referral criteria could be decided at local or national level depending upon local service resources and infrastructure. This could be generated by general consensus, expert opinion and lived experience in a similar way to the "super" criteria for Diabetes referral.

For both model 1 and model 2 options, it will be vital to integrate specialists into the primary care team for support and training of the staff.

Model 3: Hub and spoke model

The last is a "hub and spoke" model, offering a range of specialist services through a central hub covering a defined geographical area (Figure 4). This abolishes the tier-based approach to weight management and offers individual or combined interventions. This model is similar to that of the 21 UK Complications of Excess Weight clinics (CEW) which were commissioned by NHS England in 2020/21 for children and young people aged 2-17 years who live with severe or complex forms of obesity.[30] Findings from the evaluation of this initiative could provide useful insight for the development of adult services.

Conclusion

Whether achieved through modification or replacement of the existing model, there is an urgent need to improve and expand weight management services. The implementation of any new model of care will need to consider carefully the financial and capacity issues in an already stretched primary care system. The final agreed model should be the one which has a centrally administered framework agreed by all stakeholders, including those living with the condition. Including the experiences of those living with the condition within stakeholder groups is vital for the success of any model of care, allowing policymakers to understand the

Key message

- Obesity is chronic disease, and a major health concern
- The current UK tier-based approach to obesity management is facing significant challenges including capacity issues. Access to pharmacotherapies is variable creating health inequalities.
- There is an opportunity to reshape the framework of obesity management in the era of gut hormone-based pharmacotherapy.

unique phenomenology of this patient group. Despite the challenges faced in the current tier-based system, the arrival of new pharmacological treatments and an effective MDT approach could plug the current service/treatment gap. This will give time to consider more evidence and develop policy to create the right infrastructure to improve the lives of people living with obesity.

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