Commissioning guide:
Weight assessment and management clinics (tier 3)

Joint-sponsoring organisations:
Associations of British Clinical Diabetologists
Association for Clinical Biochemistry & Laboratory Medicine
Association of Physicians Specialising in Obesity
Association for the Study of Obesity
British Association of Paediatric Surgeons
British Dietetic Association
British Psychological Society
Diabetes UK
Faculty of Public Health
Royal College of Anaesthetists
Royal College of General Practitioners
Royal College of Nursing
Royal College of Obstetrics and Gynaecology
Royal College of Paediatrics and Child Health
Royal College of Physicians (London)
Royal College of Pathologists
Royal College of Psychiatrists
Society for Endocrinology
Society for Obesity and Bariatric Anaesthesia
Weight Loss Surgery Info (WLSInfo)
Plain English Summary

About two thirds of adults in the UK are overweight, 1 in 4 are obese, and 1 in 3 children aged 10-11 are overweight or obese. Both conditions predispose to diseases such as type 2 diabetes, high blood pressure, strokes, heart attacks, cancer, and general ill health. It is urgent that the National Health Service works out ways to treat patients with severe diseases caused by their obesity. At present, most hospitals do not have services for these patients. Even if clinics do exist, patients and GPs may not be aware of them and they are not referred.

This document describes the infrastructure needed to set up or commission Weight Assessment and Management Clinics (referred to as Tier 3 Clinics) in the NHS in England. This includes which staff are needed in the clinics – for instance specialist nurses and dietitians – to give the best advice to patients. As the treatment of these patients is often very complex a wide range of professionals, including medical and surgical doctors, nurses, psychologists and anaesthetists can also be involved.

The document is sponsored by and represents the views of 22 professional organisations including 9 medical royal colleges that are directly concerned with patient care. We describe in detail which patients might benefit from being referred for assessment for surgery (bariatric surgery) if they want to think about this option. There is also a section on how to set up specialist children’s and adolescent Weight Assessment and Management Clinics.
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Introduction

This guidance and recommendations are the revision of existing guidance on Weight Assessment and Management Clinics (WAMCs) published in 2014 on the Royal College of Surgeons and British Obesity and Metabolic Surgery websites. The guidance was also published as a peer-reviewed publication in 2016 in the journal Obesity Surgery 1, 2. Commissioning responsibility for bariatric surgery transfers from specialised commissioning to Clinical Commissioning Groups (CCGs) from April 2017. Although the indicative levels of funding will also be transferred to CCGs there is a need for updated commissioning guidance for several reasons, including a) the availability of new clinical data that alter thresholds for surgical referral; and b) the Clinical Reference Group for Obesity Surgery commissioning was dissolved in April 2016. New guidance will therefore be pertinent to the commissioning process as CCGs (and Local Authorities) determine relative funding levels for the different tiers of the obesity pathway that they are responsible for.

The Commissioning Policy (A05 Complex and Specialised Obesity Surgery Services of the NHS Commissioning Board April 2013) is still in current use and therefore this revision should be read in conjunction with that 3. The A05 policy describes the pathway of patients into the multidisciplinary (MDT) bariatric surgical service and later back to primary care as part of a shared care, chronic disease model of care.

Despite the large amount of data supporting the use of bariatric surgery, the rate of operations in England fell between 2011-12 and 2014-15 by 31%, from 8,794 to 6,032. In comparison, provision of surgery in other home countries is even worse, with no surgery in N Ireland, and little in Scotland or Wales 4. It is possible that the lack of universal geographical coverage of WAMCs – referred to as Tier 3 weight management services in the English NHS – has contributed to this. It is also very possible that from April 2017 CCGs could disinvest in existing clinics, threatening bariatric surgery services further.

In view of the current disinvestment in bariatric surgery and uncertainty surrounding the transfer arrangements to CCGs in 2017, the previous reports ‘Action on Obesity: comprehensive care for all’ of the Royal College of Physicians (Jan 2013) and ‘Measuring up. The medical profession’s prescription for the nation’s obesity crisis’ of the Academy of Medical Royal Colleges (Feb 2013) are still very relevant 5, 6. This updated guidance is therefore again intended for Tier 3 Specialist Services which provide the link between Tier 1/2 Environmental and population-wide services / Lifestyle interventions, and Tier 4 Multidisciplinary Specialist Bariatric Surgical Services, which is covered by NICE and SIGN Guidance and BOMSS standards for clinical services & guidance on commissioning 7-9. The tiers are defined below, as before, according to the terminology from the 2013 DoH Tier 2 guidance 10. In general Tiers 1 and 2 are funded by Local Authorities, and Tiers 3 and 4 by CCGs.
The previous guidance described different ways of setting up an ideal bariatric medical/surgical MDT process. A schematic Venn diagram is shown below of the possible interaction of WAMCs with the bariatric surgery multidisciplinary team (MDT)\(^2\). Depending on the location of the WAMC – in the community, primary or secondary care – the clinic may share staff with the surgery service as in a) or b). There need to be more WAMCs than bariatric surgery units. Note that for children and adolescents, the tier structure described above also applies with modification. Children’s and adolescent surgery should only be undertaken within a tertiary specialist children’s / adolescent service (Tier 3/4) working together with a Tier 4 bariatric service in a children’s / adolescent combined WAMC.
The previous guidance also described the role of the referring GP, what should be achieved in the clinics and who should be referred for bariatric surgery. The guidance provided an organised structure and evidence-base for treatment, guidance for referral into and out of the Tier 3 service: either back to primary care or onto specialist or surgical assessment (Tier 4). This revision is also intended to update GPs on the latest evidence, for instance the new NICE Guidance CG189 re type 2 diabetes (2014), a joint statement from international diabetes organisations (2016) and a randomised controlled trial on brief interventions (2016)\textsuperscript{7,11,12}.

In view of the scarcity of references revealed by the previous systematic review of the literature a different search question was used for the revision. The main research question was ‘what evidence exists for what should happen in / commissioning of: primary or secondary care weight assessment and management clinics in patients needing specialist care for severe and complex obesity?’\textsuperscript{2}. Five hundred and fifty-one references from 2011-2016 were screened systematically by the Guidance Development Group (GDG) and 80 were considered further, with 50 included in the final guidance. As before, the GDG added relevant new evidence when this was missed from the systematic review. Wherever possible meta-analyses, systematic reviews or Randomised Controlled Trial evidence is presented. Observational trial data have also been included where the panel considered that the findings from several studies were consistent and effect sizes large\textsuperscript{2}.

Many people eligible for bariatric surgery may choose not to have it, but still require assessment and discussion about all treatment options and this would require a review at a specialised clinic\textsuperscript{2}. The clinic could then share a long term treatment plan with the GP. However, it is hoped that in view of the new recommendations relating to
people with obesity and diabetes GPs will now refer such patients more freely to Tier 3/4 services for a bariatric surgical assessment.

There is no evidence base for how long a patient being assessed for surgery should spend in a Tier 3 clinic. As before, and contrary to the stipulation in the A05 Policy, patients need not spend a prolonged time in Tier 3. Equally, the Tier 3 clinic is not only for assessing patients for surgery. The clinics should also offer specialist diets, pharmacotherapy and psychological treatment. Patients who have persisting needs would be referred back to primary care after assessment, with a new management plan. For such complex patients this process of evaluation and assessment may typically take a period of months. During this time clinically meaningful benefit may be achieved without the need or patient’s wish for referral for surgery.

In view of NICE CG189 and the new statement on diabetes recommendations it is important to avoid undue delays in referral for surgery such as repeating failed prior interventions inappropriately due to the high likelihood of recidivism with weight regain and yo-yo dieting. This is particularly relevant to patients with BMI > 50 kg/m² for whom surgery is considered the next option instead of repeating failed lifestyle interventions. Patients fulfilling the BMI thresholds for surgery ‘should be eligible’ (evidence level 1, grade A recommendation) for a procedure and part of the clinic’s role should be to facilitate this appropriately. Section 7.7 has a table of the GRADE system of recommendation.

Thus overall the pathway is for primary care services that include community-based interventions referring into a specialist multi-disciplinary bariatric service which includes a bariatric physician (the Weight Assessment and Management Service). A proportion of patients would then be considered for bariatric surgery, with the whole team also being involved in the peri-operative care, usually as part of the same team if the surgery service is located in the same hospital. After discharge from the surgical service patients would be managed in a chronic disease model of shared care.

In this revision the GDG found no evidence to change its view that as the available literature did not distinguish between assessment clinics that either did, or did not contain surgeons (in addition to the rest of the MDT) the organisational recommendations made previously continue to describe overall best practice, avoiding subdividing what should be done in each clinic if the services are run separately. The main changes now are that infrastructure guidance and pathways for assessment of children and adolescents, and guidance for anaesthetic assessment and pathways are added.

The guidance also provides updated tools for measuring equity of access into the clinics and referral onwards for surgery. Ample evidence of cost effectiveness already exists for bariatric surgery and NICE has updated its referral guidelines. CCGs should be reassured that set-up costs of Tier 3 clinics would be offset by potential savings from reduced medication costs, consultation costs and hospital visits in those having bariatric surgery. CCGs considering disinvesting in Tier 3 or Tier 4 services should also consider the existing potential overlap and sharing of staff between diabetes clinics (with diabetologists/endocrinologists usually the predominant group of bariatric physicians), sleep medicine, dietetics/nutrition, psychology, psychiatry, and physical therapy for instance which would mitigate against new set-up costs.

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a Other groups of patients needing expeditious decision-making include severely obese patients needing renal transplants or presenting to gynaecologists with pelvic cancer.
1. High Value Care Pathway for weight assessment and management clinics

Guidance for General Practitioners (GPs):

- Use appropriate opportunities to record current weight and height and calculate body mass index (BMI) to identify overweight and obese patients, including in chronic disease management, opportunistic case finding and routine health checks. 

- Discuss with patients with overweight or obesity their understanding of the likely resulting health problems, assess individual health risks and engage with them in a partnership to modify the risks as part of a holistic approach that includes their emotional wellbeing.

- Encourage training for doctors and practice nurses so that they can provide support for patients with overweight and obesity, such as motivational interviewing.

- Consider offering patients with overweight or obesity identified as in the pre-diabetes risk group (HBA1c measurement 42-47 mmol/mol) referral to the NHS national diabetes prevention programme if clinically appropriate.

- Provide a set of scales capable of weighing up to 200kg in every surgery, and offer to refer patients over this weight to a service capable of weighing and monitoring them.

- Discuss with patients their previous attempts at weight loss and encourage those who have never successfully dieted to participate in a community or commercial Tier 2 weight management plan and share information about national and local lifestyle and behaviour change support.

- Carefully assess patient engagement with the process before any decision is made about referral to the weight assessment and management clinic.

- Recognise patients with a long history of cyclical weight loss and regain (yo-yo dieting) and make a direct referral to a weight assessment and management clinic without requiring further Tier 2 programme management as a qualifying threshold.

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b In the common Commissioning Guidance specification high value care pathway implies a benefit/cost ratio to providing the service i.e. high Quality Adjusted Life Year (QALY) value.

- Discuss the benefits of weight maintenance if patients are not yet ready to engage with a programme, and encourage them to return at any point if they decide they need help.\(^7,^{37}\)

- Refer children / adolescents with overweight (BMI > 91\(^{\text{st}}\) centile) or obesity (BMI > 98\(^{\text{th}}\) centile) to community Tier 2 children’s programmes or to specialist children’s / adolescent Weight Assessment and Management Clinics\(^d,^{7}\)

For GPs discussing with patients with diabetes whether to refer to the Weight Assessment and Management Clinic:\(^e,^{f, g}\)

- Consider that effective care of overweight and obesity is integral to good diabetes care. Offer weight management to these patients, and refer them appropriately within local services.\(^7,^{11},^{30}\) Options for this include:
  - Multidisciplinary locally-organised and commissioned services
  - Management within a diabetes service
  - Weight Assessment and Management Clinics (Tier 3 obesity services) combining diet, exercise and healthy nutrition advice aiming at realistic weight reduction goals. Services could be administered on a 1:1 basis or as a structured individual or group programme within a community, primary or secondary care setting
  - Bariatric surgery

- Expect the doses of hypoglycaemic medications to reduce with weight loss, especially with more restrictive diets that can produce rapid weight loss

- Where possible use weight-neutral and/or weight-loss associated hypoglycaemic medications\(^{38-40}\)

- Consider appropriate anti-obesity pharmacotherapy according to availability and relevant guidance. While obesity medications may lead to improved glycaemic control, understand that their indication is for weight loss and not glycaemic control.\(^{41-45}\)

- Refer patients with type 2 diabetes for an assessment for bariatric surgery as long as they are receiving or will receive assessment in a specialist weight management service before referral to a surgical team:\(^4,^{7,11},^{46}\)
  - Offer an expedited assessment for people with a BMI ≥ 35 kg/m\(^2\) with onset of type 2 diabetes in past 10 years
  - Consider an assessment for people with a BMI of 30-34.9 kg/m\(^2\) with onset of type 2 diabetes

\(^d\) The BMI thresholds are based upon NICE guidelines CG189 and expert consensus. Note that for severely obese adolescents aged ≥ 15 years, adult BMI thresholds can be used as an approximate guide to referral for obesity (BMI ≥ 30kg/m\(^2\)) and eligibility for bariatric surgery (BMI 35kg/m\(^2\) with significant comorbidity).

\(^e\) The BMI thresholds for surgery were chosen to reflect the quoted literature.

\(^f\) If a patient is already being treated in secondary care it should be accepted practice to refer to the Weight Assessment and Management Clinic directly if the patient fulfils the criteria.

\(^g\) Diabetes here refers to type 2 diabetes only.
within 10 years
  o Consider an assessment for people of Asian origin with onset of type 2 diabetes at a BMI threshold reduced by 2.5 kg/m²
  o Recommend bariatric surgery to patients with a BMI of ≥ 40 kg/m² or BMI 35.0–39.9 kg/m² when hyperglycemia is inadequately controlled by lifestyle and optimal medical therapy

- Refer children / adolescents with type 2 diabetes to specialist children’s / adolescent diabetes services

**For GPs discussing with adult patients whether to refer to the Weight Assessment and Management Clinic:**

- Consider referring adults with a BMI of 40 or ≥ 35 kg/m² and other obesity-related comorbidity eg hypertension, obstructive sleep apnoea (OSA), benign intracranial hypertension, functional disability, infertility and depression if specialist advice is needed regarding overall patient management

- Consider referring patients who have been refused elective (non-bariatric) surgery due to high BMI

- Consider that bariatric surgery is the option of choice for adults with BMI >50 when other interventions have not been effective

- Occasionally patients may be referred whose BMI is below these thresholds, if they have exceeded the thresholds in the past; this may include patients who have already had bariatric surgery presenting with a problem such as weight regain or nutritional deficiency or where revisional surgery might be considered

- Consider mental health and psychological issues, and refer patients who have complex issues to a service with appropriate expertise

**For GPs discussing with children / adolescents and those who care for them whether to refer to a Weight Assessment and Management clinic:**

- Refer those with BMI > 98th. centile and:
  
  o Known comorbidities
  
  o Potential red flags for possible secondary causes of obesity, including short stature for parents, kinky red hair and dysmorphisms
  
  o Strong family history of cardiovascular disease or type 2 diabetes
  
  o Syndromic obesity if not already under specialist care

- Refer those with more extreme obesity, regardless of other factors, generally regarded as BMI ≥ 99.86th. centile

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h Bariatric surgery is only appropriate through specialist referral.

i The BMI thresholds for surgery were chosen as the quoted literature predominantly refers to patients in these groups.

j If patients are already being treated in secondary care it should be accepted practice to refer to the Weight Assessment and Management Clinic directly if the patient fulfils the criteria.

k See also later section ‘In the children’s / adolescent Weight Assessment and Management Clinic’.
The comorbidities of obesity in children and adolescents are largely similar to those in adults, although a range of orthopaedic conditions related to the impact of obesity on growth also occur.

- Note that assessment of hypertension, dyslipidaemia and other metabolic comorbidities must be undertaken using age- and sex-appropriate centiles and is therefore unlikely to be undertaken in primary care.
- Note that psychological consequences of obesity can present in different ways to adults, and include school refusal and bullying.

**In the Adult Weight Assessment and Management Clinic:**

- **Organisational recommendations:**
  - The multidisciplinary team (MDT) contains at least a bariatric physician, a dietitian, a specialist nurse, a clinical psychologist and a liaison psychiatry professional, and a physical therapist.

- Ensure adaptations to assessment and interventions are accessible to people with learning disabilities. Adaptations including the use of simple language and individual rather than group sessions can assist comprehension and enable these patients to access weight loss services.

- The BMI is confirmed and the trend in BMI is assessed.

- A dietary and nutritional assessment is taken to ascertain the patient’s diet and its nutritional adequacy, patient feelings and expectations about potential outcomes and willingness to consider treatment options. Lifestyle advice and education should be provided, including support to stop smoking, so that patients have appropriate understanding of the relationship between eating habits and weight, aiming to:
  - Improve understanding of necessary changes in eating habits to improve health, and identify risk factors and vulnerabilities so that interventions can be planned to address and improve them.

- Encourage evidence based weight loss and weight loss maintenance programmes that might contain structured reduced energy prescription, eating plans, meal replacements and Very Low Energy Diets.

- Consider screening for rare hormonal or genetic causes for weight gain if there is clinical suspicion, eg very early childhood onset, syndromic or unusual phenotype.

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1 No literature was identified that distinguished between care provided by the bariatric physician or by the bariatric surgeon, or regarding the order in which they were seen by the different specialists. See the figure in the introduction for ways in which the various teams can interact. Also the panel recognised there is no literature to identify which professionals are best placed to provide mental health interventions in weight management, and further research is required (section 7.1, page 24). For the purpose of the guidance ‘liaison psychiatry professional’ may include a psychiatrist and a mental health-trained nurse with specialist expertise in weight management. The panel recommends that the ideal service has both a clinical psychologist and a liaison psychiatry professional; however it recognises that this is aspirational and there needs to be local flexibility in commissioning as services develop. Liaison psychiatry refers to a sub-specialty multidisciplinary team that provides an interface between physical and mental health for patients in secondary care. The panel recognised that close working relationships need to be established between the groups described and community mental health teams where available.
Possible undiagnosed obesity-related diseases are considered, screened for and where appropriate investigated, in particular type 2 diabetes, hypertension, obstructive sleep apnoea (OSA), heart failure, atrial fibrillation, chronic kidney disease, non-alcoholic fatty liver disease, idiopathic intracranial hypertension and depression as well as diseases with markedly increased prevalence such as colon or endometrial cancer.

Identified risks are optimised so that those referred for surgery are as fit as possible.

- Input from anaesthetists specialising in bariatric care may be valuable to determine peri-operative risk in complex cases or patients with a history of problems with anaesthesia, to ensure they understand potential risks.
- Patients who require non-bariatric surgery but are deemed too obese or unfit and who meet the BMI threshold for bariatric surgery should be referred for a definitive specialist anaesthetic opinion at a bariatric centre or the referral centre for specific advice beforehand.
- Cardiologists and respiratory physicians could also be involved by separate referral if patients need super-specialist care.

Patients are investigated for vitamin and micronutrient status, and deficiencies corrected, to include recognition of diets deficient in protein in those being referred for bariatric surgery.

Patients are assessed for psychological and lifestyle issues which may interfere with engagement and weight management in the longer term, as well as to provide recommendations to enhance motivation.

Although NICE estimates that about 80% patients are suitable for bariatric surgery, assessment must identify:

- Patients with unrealistic expectations of the impact of surgery on weight loss and life change, since these can have a negative impact on psychological health if they are not met.
- Patients for whom surgery may be inappropriate, eg significant cognitive impairment such as severe learning disability, active uncontrolled psychosis, severe personality disorder.
- Patients not presently suitable for surgery, eg untreated or unstable mental health presentation, active alcohol or substance misuse (including cannabis use), active eating disorder such as binge eating without psychological treatment, bulimia nervosa, self-harm and suicidal behaviours in past 12 months, current non-engagement with treatment and recent significant life event, bereavement or relationship breakdown.
- Patients with weight gain associated with psychotropic medications.
- Acute and chronic stressors that may affect self-care and engagement with postoperative dietary and physical activity guidelines.
- Past stressors including childhood and adult adversity (sexual and physical assault, emotional neglect) that have been associated with the development of obesity and weight regain.
- Patients who may after surgery need specific attention and additional long term support or who may be at risk of self-harm.

Make recommendations for treatment and offer support within the Weight Assessment and Management Clinic or refer onward as appropriate before reassessing for the suitability of surgery.
• A traffic light system may be useful to identify patients not currently suitable for surgery or who may be suitable but deemed at higher risk and requiring psychological treatment before being considered 1, 2
  o For these patients and for those not wishing surgery the clinic should provide or signpost referral pathways to evidence-based psychological treatments including Cognitive Behavioural Therapy (for binge eating disorder), Mindfulness and Acceptance based interventions 73-75

• Consider scores such as the Edmonton Obesity Staging System as a means of assessing individual risk from obesity-related disease 76

• For patients with type 2 diabetes: 46, 77
  o The team strives for satisfactory glycaemic control before surgery (HbA1c < 69 mmol/mol) but inability to achieve this within a reasonable period of time should not be a bar to or delay referral for bariatric surgery
  o Macro- and micro-vascular risk is assessed before referral for surgery, including consideration of retinal screening for patients with established retinopathy
  o The usual diabetes carer (and GP if not the primary carer) is kept informed of progress through the assessment and treatment pathway

• Give appropriate physical activity advice and consider individually tailored programmes to promote health gains and general fitness 59, 78, 79

• Consider appropriate anti-obesity pharmacotherapy according to availability and relevant guidance 41

• Give smoking cessation advice and make an appropriate referral for a long term solution 13, 77

• In view of most patients having multiple previous episodes of cyclical weight loss/regain, and that absolute weight loss per cycle may be modest, patients should not be made to achieve a set weight loss target before referral to the bariatric surgery service as a means of ‘qualifying’ for surgery; instead they should expect to lose weight during a short, supervised diet in order to make surgery technically feasible, and demonstrate engagement with the process 7, 80

• Encourage patients to attend education sessions usually arranged by the bariatric surgery team if referral for surgery is being considered 81

• The MDT meets physically or audio-visually to discuss all patients at least once before deciding on referral back to the GP or for bariatric surgery 53

• Provide patient information leaflets written in plain English and other languages as appropriate for all proposed interventions 53

In the Children’s / Adolescent Weight Assessment and Management Clinic: 82-90
Organisational recommendations:

- The MDT contains at least a paediatrician with special interest in obesity, a children’s / adolescent dietitian, a specialist children’s or adolescent nurse, a clinical psychologist with expertise in paediatrics and with access to a social worker, a physical therapist and a liaison child and adolescent psychiatrist.
- All MDT members should have appropriate training in child safeguarding, have undergone appropriate disclosure and barring assessments (‘police checks’) and had training in communication skills with children and young people.
- At least one Tier 3 specialist children’s / adolescent WAMC should be established in all regional centres serving a population of approximately 1 million children and adolescents, suggesting a need for at least 10-15 such centres across the UK.
- Bariatric surgery centres should comprise a children’s / adolescent WAMC working in very close liaison with a bariatric surgery service in the same or an associated hospital. All aspects of the service apart from the surgery itself should primarily be managed from paediatrics, allowing for child-centred care and input from a wider range of paediatric professionals where necessary.
- Surgery should be undertaken by an adult bariatric surgeon with experience working with adolescents or alternatively by the combination of a paediatric surgeon with bariatric experience working with an adult bariatric surgeon.
- Given the size and population of children and adolescents in the UK (approximately 14 million), and the small number of operations undertaken each year, there should be a maximum of 5 surgery centres including one in Scotland.

Care in the clinic in terms of BMI assessment, dietetic and lifestyle assessments, encouragement of evidence-based weight loss, screening for obesity-related conditions and assessment of surgical risks, is the same as for adults, with the following exceptions:

- A minimum of 6 months comprehensive assessment and management is appropriate for adolescents before referral for bariatric surgery, which should be considered only when all other appropriate options have been tried.
- Paediatric professionals with knowledge of age- and sex- norms for investigations and trained in working with children and adolescents undertake the assessments and screening.
- Very low energy diets are unlikely to be appropriate for adolescents who have not reached full physiological maturity.

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There was very little literature that described the staffing infrastructure of these clinics, or how many there should be for a given population, or how many there should be nationally. There was also little information on how patient care should transfer to adult services in due course. As for adult clinics there was no literature that described which professionals are best placed to provide mental health interventions in children’s / adolescent obesity.

The most recent data suggest that approximately 30 bariatric procedures were undertaken on 13-19 year olds in the NHS in 2009, and the NBSR data suggest there were at least 62 operations in 2011-13 on 18 year olds or younger. Centres should do a minimum of 10 procedures per year to allow the team to develop and maintain appropriate expertise and develop critical mass for research to improve outcomes.

NICE CG 189 states ‘consider referral to an appropriate specialist for children who are overweight or obese and have significant comorbidities or complex needs (for example, learning disabilities or other additional support needs)."
A mental health professional with expertise in children and adolescents needs to do a more detailed psychological and social assessment, taking into account the developmental age and capacity to consent, and the support from the family. This will establish whether adolescents have a Child Protection Plan or are a registered Child in Need or have a Statement of Special Educational Need or Education, Health and Care Plan. An assessment from a social worker should be considered when there are concerns about capacity or about the family's ability to provide support.

- A history of self-harm is common in adolescents and should not be considered exclusionary in the same way as for adults. Self-harm may represent significant psychological distress as in adults, and also more transient developmental issues.
- Obesity staging or scoring systems are unlikely to be appropriate for adolescents.
- Adolescents are unlikely to have had multiple previous episodes of cyclical weight loss and regain as in adults. It is appropriate for adolescents to be asked to cease weight gain for a period before surgery (e.g., 6 months). They should expect to lose weight during a short supervised diet immediately preoperatively to make surgery more feasible and demonstrate engagement, as in adults.
- Provide information leaflets on interventions tailored to children and young people and those who care for them.

- Formulate a clear pathway for handing on children's / adolescent patients to adult WAMCs at age 18-20 years:
  - Follow transition good practice.
  - Tell adolescents and those who care for them of the need for this when they are 14+ years.
  - Transition occurs around the time of completing secondary school (18/19 years) and when young people have the skills to cope in an adult clinic.
  - The specialist nurse is likely to be the appropriate professional to help ensure a smooth transition; good communication between the children's / adolescent and the receiving adult WAMCs is essential.
  - Consideration should be given to running a joint adolescent and young adult WAMC, potentially up to age 25 years, as many of the issues for young adults are similar to those for adolescents.

Patients, including children / adolescents, wanting bariatric surgery should be referred if the Weight Assessment and Management Clinics are satisfied that:

- They are adequately engaged with the team, fully understand the surgery, are well-informed and motivated and have realistic expectations.
- All management options have been put to the patient including the characteristics of the various surgical procedures available and the risks and side effects.
- They are medically optimised.

The clinic should also be able to refer patients to the bariatric surgery team for ongoing treatment if they have had previous bariatric surgery elsewhere, or where a surgical complication or revisional surgery is being considered; those patients already known to the bariatric team should also be able to be referred back to the medical clinic in a two-way process.
• There is no medical, surgical, anaesthetic, nutritional, psychological, psychiatric or social contraindication

• They understand the importance of complying with nutritional requirements before and after surgery and recognise the need for life-long follow up.  

Patients, including children / adolescents, are referred back to the GP when:

• They do not engage with the team, for instance if resistant to recommended health and lifestyle changes or repeatedly fail to attend appointments

• Obesity-related diseases have been addressed and patients and teams agree that ongoing management can now appropriately be provided by the GP and –

• They do not want to be considered or appear inappropriate for bariatric surgery assessment

Patients may remain within the Weight Assessment and Management Clinic if:

• They have complex weight-related comorbidity and the MDT agrees to keep them under review on a shared care arrangement with the GP, for instance for early supervision of a Very Low Energy Diet or specific more intensive programme

• Pharmacological treatment requires initiation and/or supervision by a specialist

At the point of discharge after surgery the bariatric unit will:

• Provide patients with clear written information on the importance of and reasons for long term follow up, to include advice about what to do if a patient becomes pregnant.

• Ensure that patients are referred to their GPs with an appropriate shared care agreement with a named Tier 3/specialist Weight Assessment and Management Clinic.

• Provide the GP with a discharge letter to include the operation details, nutritional supplements prescribed and details of the necessary long-term supplementation, and detailed guidance on the annual review requirements.

• Consider including the RCGP Top Ten Tips for the management of patients after bariatric surgery in primary care with each discharge letter, or a weblink to this guidance.

In the period of surgical aftercare the bariatric unit will:

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q This section, while not within the remit of the Weight Assessment And Management Clinic, constitutes best practice for the bariatric surgical unit.

r This section is existing guidance for bariatric surgical units.

• Follow up patients at regular intervals for a minimum of 2 years\(^5\)
  o To include appropriate access to healthcare professionals eg the surgeon, dietitian, specialist nurse, clinical psychologist/psychiatrist and bariatric physician, ensuring that dietitians have ready access to all MDT members if there are any concerns\(^7, 23, 97\)
  o Recognising that psychosocial factors affecting adherence to the recommended postoperative dietary and lifestyle regimen may have significant impact on postoperative outcomes\(^60\)

**Peri-operatively and in the period of surgical aftercare bariatric physicians and surgeons liaise closely with GPs to:**\(^23\)

• Ensure that diabetes management remains optimized\(^13\)
  o Arrange for patients and GPs to receive a care plan allowing for reduction in hypoglycaemic medications (as well as other medications e.g. for hypertension) promptly after discharge from hospital

• Consider further retinal screening for patients with established retinopathy

• Recognise and manage the development of unwanted consequences of bariatric surgery such as post-prandial hypoglycaemia\(^98\)

• Ensure that medications for other obesity-related and non-obesity-related diseases are assessed regularly and adjusted eg blood pressure and epilepsy; GPs may best be placed to supervise these with the support of the medical and surgical MDTs\(^13, 99\)

• Supervise long term assessment of nutritional and trace mineral status and dietary replacement according to published recommendations, with the help of the dietitian\(^13, 99\)

• Ensure that patients on treatment for OSA are reviewed appropriately by a sleep clinic to ensure appropriate adjustment or even discontinuation of assisted ventilation

• Identify issues that may require referral back to the surgical team and establish local protocols / ‘red flags’ for urgent re-referral of patients with surgical or nutritional complications

• Support the patient’s mental health and psychosocial needs as identified before surgery including relapse of existing conditions and the emergence of new psychological disorders in patients without a history
  o Accepting that psychological risk factors eg disturbed eating behaviour, binge eating, depression can lead to an early weight plateau and weight regain\(^63, 64, 65, 70, 100\)

• Identify patients who become vulnerable after surgery by developing depressive illness, risk of self-harm and suicide, significant eating disturbance or significant body image disturbance

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\(^5\) Note - the surgical aftercare period in the Commissioning Policy A05 is 2 years. The period chosen in NICE CG189 is also 2 years (chosen to fit with the A05 Policy)\(^3\).
• Identify post-operative alcohol use or other pathological compensatory disorders

• Give appropriate contraceptive advice to ensure that the risk of premature and unwanted pregnancy is minimised.\(^{101}\)

**After discharge from the bariatric surgery service bariatric physicians and GPs: \(^{1}\)**

- Formulate a shared care model of chronic disease management for lifelong follow up led by the physician that clarifies what is expected of each role and what should be achieved at each review.\(^u\ ^{23, 102}\)
  - Include referral pathways back and access to the WAMC, surgical unit or mental health professional if needed.\(^u\ ^{103}\)
  - Include local protocols with the WAMC for appropriate investigation of post-bariatric surgery abnormalities such as anaemia or symptoms such as pain or vomiting, or for weight regain.
  - Include local protocols with the WAMC for assessment of the psychological difficulties such as depression, disturbed eating behaviours, loss of eating control that can be associated with weight regain after 2 or 3 years.\(^v\ ^{49, 64, 69, 95, 100, 103-110}\)

- Ensure that appropriate computer codes are used to record bariatric procedures and keep a register of patients having bariatric surgery.

- Arrange for patients to be reviewed at least annually, indefinitely.
  - Include an assessment of nutritional intake, nutritional monitoring and trace mineral status, weight check, assessment of comorbidities, review of multivitamin and mineral supplements and investigation of abnormal results and appropriate treatment as required, according to the shared care model.\(^{13, 99}\)

- Arrange at least an Annual Review of diabetes control.
  - Even when patients with type 2 diabetes achieve normoglycaemia without treatment (‘remission’) they should remain on the diabetes register indefinitely.
  - Consider continuing medications indefinitely for those previously at high cardiovascular risk due to diabetes, dyslipidaemia and hypertension.\(^{13, 111}\)

- Continue appropriate physical activity advice.\(^{79, 80, 112, 113}\)

- Consider referring patients for removal of excess skin according to BAPRAS Commissioning Guidance.\(^w\ ^{114}\)

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\(^{1}\) In the context of the tier terminology ‘bariatric physicians and GPs’ implies Tier 3 and primary care services. The panel also recognised that there are existing examples of best practice where in the absence of a bariatric physician or Weight Assessment and Management Clinic surgical teams and GPs have already developed what is in effect a shared model of care.

\(^u\) Examples of models of care are given in the appendices to the O’Kane article.\(^{23}\) and can be downloaded free of charge from [http://onlinelibrary.wiley.com/store/10.1111/cob.12145/asset/supinfo/cob12145-sup-0001-AppendixS1-S3.pdf?v=1&s=f327e73b582e90f9d790e9ba4c2d8beecfa5734af](http://onlinelibrary.wiley.com/store/10.1111/cob.12145/asset/supinfo/cob12145-sup-0001-AppendixS1-S3.pdf?v=1&s=f327e73b582e90f9d790e9ba4c2d8beecfa5734af).

\(^v\) ASMBS guidelines recommend that even in the absence of severe adverse outcomes, postsurgical psychosocial involvement may support patients to negotiate the complex and dynamic process of behaviour change following surgery to support sustained adherence to the postoperative regimen in the long term. Long-term psychosocial follow-up is therefore needed.
• Provide data as required to the surgical unit for the National Bariatric Surgery Registry

2 Procedures explorer tool for weight assessment and management clinics

Users can access further procedure information based on the data available in the quality dashboard to see how individual providers are performing against the indicators. This will enable CCGs to start a conversation with providers who appear to be ‘outliers’ from the indicators of quality that have been selected.

The Procedures Explorer Tool is available via the Royal College of Surgeons website.

3 Quality dashboard for weight assessment and management clinics

In the guidance development process the quality dashboard potentially provides an overview of activity commissioned by CCGs from the relevant pathways, and indicators of the quality of care provided by surgical units. However, the quality dashboard is severely constrained by the lack of national data on provision of non-surgical services and does not demonstrate all the data required to assess a medical weight management service. It is suggested that a recognised tool such as the National Obesity Observatory Standard Evaluation Framework is used to evaluate these services, and that in future consideration is given to collecting these data nationally. Existing definitions of bariatric surgery according to HES are an estimate and open to interpretation but standard metrics could be presented against these, populated from Hospital Episode Statistics (HES) and Office for National Statistics (ONS) data. Although the following mostly relate to bariatric surgery and not Weight Assessment and Management clinics, the metrics could include:

• Rates of referral to Weight Assessment and Management clinics, as presented in a quality dashboard, according to:
  o Gender and ethnicity
  o Reported population prevalence of obesity (Standardised / 100,000) (Quality Outcomes Framework (QOF) / ONS)
  o Reported population prevalence of diabetes (Standardised / 100,000) (QOF / ONS)
  o Reported population prevalence of cardiovascular disease (Standardised / 100,000) (QOF / ONS)
• Rates of referral for surgery
  o For each of the above metrics

NHS England advises that this can only be undertaken in line with the local Effective Use of Resources policies of each CCG.
4 Levers for implementation

4.1 Audit and peer review measures

The following measures and standards are those expected at primary and secondary care. Evidence should be able to be made available to commissioners if requested.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral rates</td>
<td>Referral rates to surgery from the weight assessment and management clinic should be recorded appropriately; this could be done for each obesity stage according to the Edmonton Obesity Staging System</td>
</tr>
<tr>
<td>Progress through Weight Assessment and Management Clinic</td>
<td>Number of Out Patient Appointments (OPAs) for each of physician, dietitian, nurse, clinical psychologist and liaison psychiatry professional, other team members; follow up (FU) to new ratio e.g. 1 new and 1 FU for physician, 6-7 OPAs in all with dietetics / clinical psychologist and liaison psychiatry professional / other team members / a record of the mental health assessment eg traffic light score</td>
</tr>
</tbody>
</table>
## National Obesity Standard Evaluation Framework

The provider should arrange for on-going population and submission of this comprehensive national specified data collection tool.

## Documentation of MDT process

Record each patient discussed, frequency of meetings, who attends, quoracy.

## National Bariatric Surgery Registry

Provider should arrange for on-going annual submission of data to the NSBR for operated patients according to the current dataset requirements.

### 4.2 Quality Specification/CQUIN (Commissioning for Quality and Innovation)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
<th>Data specification (if required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient satisfaction rates with the complex obesity service</td>
<td>The provider demonstrates service user experience satisfaction with its service</td>
<td>Local patient survey data</td>
</tr>
<tr>
<td>Patient quality of life following service use</td>
<td>Use of a validated tool such as SF36 or EQ5D to demonstrate impact on quality of life</td>
<td>Local data collection</td>
</tr>
<tr>
<td>Mean weight loss (kg or % or both) and/or excess BMI loss and/or % excess weight loss post engagement with the service at 12 months</td>
<td>Would capture effect on weight at one year of any intervention provided in the clinic</td>
<td>Partial data are available in the NBSR (for surgical patients) but additional follow up data are required from non-surgical and non-specialist services which could come from a registry set up for the purpose</td>
</tr>
<tr>
<td>Measures of patient engagement</td>
<td>Measure ‘opt-in’ rates; Did Not Attend (DNA) rates including DNA even once; stratified by gender and ethnic origin, to assess equality of access</td>
<td>E.g. discharge if &gt;2 DNAs</td>
</tr>
<tr>
<td>Length of stay, improvement in HbA1c for surgical patients (more likely a component of a surgical CQUIN)</td>
<td>Provider demonstrates a mean length of stay of number more than x days</td>
<td>Data available from NBSR/HES</td>
</tr>
</tbody>
</table>
# 5 Directory

## 5.1 Patient Information for weight assessment and management clinics

<table>
<thead>
<tr>
<th>Name</th>
<th>Publisher</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHE One you programme with useful Apps such as sugar swaps and physical activity: Health quiz and advice</td>
<td>Public Health England</td>
<td><a href="http://www.patient.co.uk/">http://www.patient.co.uk/</a></td>
</tr>
<tr>
<td>Patient.co.uk website funded by Egton medical information systems. BMA patient information resource highly recommended: Includes leaflets on diet, medication, and health advice</td>
<td>Patient.co.uk</td>
<td><a href="http://www.patient.co.uk/">http://www.patient.co.uk/</a></td>
</tr>
<tr>
<td>British Heart Foundation (charity): Useful leaflets and resources</td>
<td>British Heart Foundation</td>
<td><a href="http://www.bhf.org.uk">http://www.bhf.org.uk</a></td>
</tr>
<tr>
<td>Public health England change4life. Be food smart: This includes a food smart App, recipes and information aimed at families</td>
<td></td>
<td><a href="https://www.nhs.uk/change4life-beta/be-food-smart">https://www.nhs.uk/change4life-beta/be-food-smart</a></td>
</tr>
</tbody>
</table>
## 5.2 Clinician information for weight assessment and management clinics

<table>
<thead>
<tr>
<th>Name</th>
<th>Publisher</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Public Health England (PHE) Obesity Knowledge and Intelligence team provides a single point of contact for wide-ranging authoritative information on data, evaluation, evidence and research related to weight status and its determinants.</td>
<td>National Obesity Observatory; 2009.</td>
<td><a href="http://www.noo.org.uk/core/frameworks/SEF">http://www.noo.org.uk/core/frameworks/SEF</a></td>
</tr>
<tr>
<td>The NOO website offers examples of weight management services, and encourages services to upload data evaluated via SEF.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obesity learning centre</td>
<td>UK Health Forum (Department of Health)</td>
<td><a href="http://www.obesitylearningcentre.org.uk/">http://www.obesitylearningcentre.org.uk/</a></td>
</tr>
<tr>
<td>The Obesity Learning Centre (OLC) is the nationwide centre for quality assured information for everyone working in obesity. The OLC sets out to strengthen and support local capacity and capabilities to treat overweight in children and adults.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ The National Obesity Observatory is now part of Public Health England (PHE) Obesity Knowledge and Intelligence team.
### British Obesity and Metabolic Surgery Society

BOMSS aims to promote the development of high quality centres for obesity surgery, to educate and train future obesity surgeons and practitioners

<table>
<thead>
<tr>
<th>British Obesity and Metabolic Surgery Society</th>
<th><a href="http://www.bomss.org.uk/">http://www.bomss.org.uk/</a></th>
</tr>
</thead>
</table>

### Glasgow and Clyde Weight Management Service

Range of service evaluations for weight management

<table>
<thead>
<tr>
<th>Glasgow and Clyde Weight Management Service</th>
<th><a href="http://www.nhsggc.org.uk/content/default.asp?page=s1807_3">http://www.nhsggc.org.uk/content/default.asp?page=s1807_3</a></th>
</tr>
</thead>
</table>

### The Association for the Study of Obesity

World Obesity is the UK’s foremost charitable organisation dedicated to the understanding, prevention and treatment of obesity. World Obesity a not-for-profit organisation linking over 50 regional and national associations with over 30,000 professional members in scientific, medical and research organisations. It is an umbrella organisation for 53 national obesity associations, representing 55 countries.

|------------------------------------------|-------------------------------------------------------|

### Cancer Research UK (charity)

Information on the links between obesity and cancer and benefits of weight loss.

<table>
<thead>
<tr>
<th>Cancer Research UK (charity)</th>
<th><a href="http://www.cancerresearchuk.org/cancer-info/healthyliving/obesityandweight/whatcausesobesity/">http://www.cancerresearchuk.org/cancer-info/healthyliving/obesityandweight/whatcausesobesity/</a></th>
</tr>
</thead>
</table>

### 5.3 NHS Evidence Case Studies for Weight Assessment and Management Clinics

There is very little evidence about the functioning of NHS Weight Assessment and Management Clinics. A noted exception is the paper by Jennings http://onlinelibrary.wiley.com/doi/10.1111/cob.12066/full

### 6 Benefits and risks of implementing this guide

| Consideration | Benefit | Risk |
Patient outcome and safety

Ensure access to effective therapy for severe and complex obesity, improve quality of life and comorbidity

Poor population health in patients with BMI 40 or ≥ 35 kg/m² + obesity-related comorbidity due to lack of engagement; reticence to refer to surgery possibly due to perceived risk

Patient experience

Improve access to patient information, support groups

Patients may not get referred appropriately into the clinic due to lack of engagement with primary care

Equity of Access

Improve access to effective procedures and appropriate increased use of valuable resource – bariatric surgery

Patients most likely to benefit from surgery may not get access due to either lack of referral into the Weight Assessment and Management Clinic or onward referral for surgery

Resource impact

Prevention and early treatment of diabetes and other obesity-related disease with reduced medication costs in the medium / long-term after bariatric surgery

Resource required to establish the Weight Assessment and Management Clinic

7 Further information

7.1 Research recommendations

The guidance group identified a severe lack of evidence on the outcomes from Weight Assessment and Management services. An increasing number of services are being commissioned, but as yet few have published outcome data. More research is required to define the most effective composition of the team, and what are realistic clinical outcomes. Improvement in both physical and psychological health rather than weight loss alone needs to be studied and reported on. Some suggested research ideas are:

- Research should be commissioned to evaluate the safety and efficacy of the proposed shared care models, including research into resources that could support GPs if they chose a model of care that included GP-led
annual review

- Research is needed on which of the proposed shared care models is most acceptable to patients and cost-effective
- Studies should be done to identify the current knowledge among GPs, dietitians and primary care staff about the management of post bariatric patients, and if educational needs are identified appropriate training should be developed
- Training needs have been identified among healthcare professionals obstetricians, including midwives, dietitians and emergency department staff and educational resources including e learning should be developed, evaluated and disseminated
- Alternative ways of collecting long-term data for NBSR should be explored
- Research into the ideal make-up of the MDT in the children’s / adolescent WAMC
- Research into the ideal age at which to perform bariatric surgery in children / adolescents
- Research will be needed to consider the clinician experience and competencies of the mental health professionals described in the American Society for Metabolic and Bariatric Surgery (ASMBS) article by Sogg in relation to UK clinicians
- Studies to test the hypothesis that: nurse specialists with prescribing rights can be just as effective as bariatric physicians as members of multidisciplinary teams in Tier 3
- Studies considering the impact of appropriately trained dietitians and specialist nurses providing psychosocial screening assessments in Tier 3 services
- Studies considering what issues raised in psychological/psychosocial screening need further intervention from within the MDT and which issues are referred to other services
- Studies looking at outcomes for patients who have accessed a clinical psychologist and a liaison psychiatry professional in Tier 3 vs those who have not
- Evidence is lacking on what stops patients ‘opting in’ to weight management programmes. A multi-component qualitative study including telephone interviews, focus groups etc. including MDT experience might discover barriers to engagement and generate hypotheses on how to engage hard to reach groups

A multidisciplinary group should be set up to look at relevant research questions, perhaps involving the Society for Endocrinology Obesity bariatric physician group.

### 7.2 Other recommendations

- There is an urgent need for a national registry of Tier 3 / Weight Assessment and Management Clinics. It is important for a relevant clear outcomes dataset to be identified to evaluate the work up for surgery and for surgery itself, and key stakeholders (patients, surgeons, endocrinologists, nurses, dietitians, clinical psychologists and liaison psychiatry professionals) should select these outcomes. A core set of outcomes could then be measured and reported in all studies of medical work-up for severe and complex obesity
- There is an urgent need to commission and implement children’s / adolescent obesity clinics
- All children’s / adolescent patients should be entered into the NBSR
- It would be important to add in a measure of co-morbidities such as the Edmonton Obesity Staging System
(EOSS) score to the baseline data, and to recognise that valid comparison between services should reflect the population recruited

- A multidisciplinary group could look at these ideas and the possibility of working with the PHE Obesity Knowledge and Intelligence Team should be explored.
7.3 Evidence base


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Weight assessment and management clinics


76. Padwal RJ, Pajewski NM, Allison DB, Sharma AM. Using the Edmonton obesity staging system to predict mortality in a population-representative cohort of people. CMAJ 2011; 83: 1-8. [pdf] or [slideshare] or [DrAMSharma/edmonton-obesity-staging-system]


80. Kim JJ, Rogers AM, Ballem N, Schirmer B on behalf of the American Society for Metabolic and Bariatric


99. BOMSS Guidelines on perioperative and postoperative biochemical monitoring and micronutrient


111. Moore M, Hopkins J, Wainwright P. Primary care management of patients after weight loss surgery. BMJ 2016; 352 352: i945. doi: https://doi.org/10.1136/bmj.i945


7.4 Guide development group for weight assessment and management clinics

A commissioning guide development group was established to review and advise on the content of the commissioning guide. This group met twice, with additional interaction taking place via email.

<table>
<thead>
<tr>
<th>Name</th>
<th>Job Title/Role</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Richard Welbourn</td>
<td>Consultant Surgeon (Co-Chair)</td>
<td>Past-President, British Obesity and Metabolic Surgery Society, RCS</td>
</tr>
<tr>
<td>Prof John Wass</td>
<td>Professor of Endocrinology (Co-Chair)</td>
<td>Past Academic Vice-President, Royal College of Physicians</td>
</tr>
<tr>
<td>Dr Julian Barth</td>
<td>Consultant Chemical Pathologist</td>
<td>Association for Clinical Biochemistry &amp; Laboratory Medicine</td>
</tr>
<tr>
<td>Mr Ken Clare</td>
<td>Patient representative</td>
<td>British Obesity and Metabolic Surgery Society Council member, WLSInfo patient support group</td>
</tr>
<tr>
<td>Dr John Cousins</td>
<td>Consultant Anaesthetist</td>
<td>Royal College of Anaesthetists, Society of Obesity and Bariatric Anaesthesia</td>
</tr>
<tr>
<td>Mr Ashish Desai</td>
<td>Consultant Paediatric Surgeon</td>
<td>British Association of Paediatric Surgeons</td>
</tr>
<tr>
<td>Ms Alison Diamond</td>
<td>Metabolic Dietitian - Antenatal Clinic</td>
<td>Royal College of Obstetrics and Gynaecology</td>
</tr>
<tr>
<td>Prof John Dixon</td>
<td>Professor of Metabolic Medicine</td>
<td>Baker IDI Heart and Diabetes Institute, Melbourne, Australia, invited international expert member</td>
</tr>
<tr>
<td>Prof Nick Finer</td>
<td>Hon Professor</td>
<td>Association of Physicians Specialising in Obesity-UK</td>
</tr>
<tr>
<td>Dr Rob Gregory</td>
<td>Consultant Endocrinologist</td>
<td>Association of British Clinical Diabetologists</td>
</tr>
<tr>
<td>Mr James Hopkins</td>
<td>Consultant Surgeon</td>
<td>BOMSS, RCS</td>
</tr>
<tr>
<td>Dr Carly Hughes</td>
<td>General Practitioner, Bariatric Physician, Hon Lecturer, Medical School, University of East Anglia</td>
<td>Royal College of General Practitioners, Association for the Study of Obesity</td>
</tr>
<tr>
<td>Dr Nick Kennedy</td>
<td>Consultant Anaesthetist</td>
<td>Royal College of Anaesthetists, Society of Obesity and</td>
</tr>
</tbody>
</table>
7.5 Funding statement

The development of this commissioning guidance has been funded by the following sources:

- Department of Health Right Care funded the costs of the guide development group, literature searches and contributed towards administrative costs.
- The Royal College of Physicians provided premises to support the guideline development.
7.6 Conflict of Interest Statement

Individuals involved in the development and formal peer review of commissioning guides are asked to complete a conflict of interest declaration. It is noted that declaring a conflict of interest does not imply that the individual has been influenced by his or her secondary interest. It is intended to make interests (financial or otherwise) more transparent and to allow others to have knowledge of the interest.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Declared Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Julian Barth</td>
<td>Consultant in Chemical Pathology &amp; Metabolic Medicine</td>
<td>• None</td>
</tr>
<tr>
<td>Mr Ken Clare</td>
<td>Chair of Trustees WLSInfo</td>
<td>• Novo Nordisk consultancy fees, speaker fees as key opinion leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sponsorship fees for attending conference</td>
</tr>
<tr>
<td>Dr John Cousins</td>
<td>Consultant Anaesthetist</td>
<td>• Fees for consultancy MSD – Sugammadex advisory board</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fees for speaking at meeting/symposium – MSD, Medtronic</td>
</tr>
<tr>
<td>Mr Ashish Desai</td>
<td>Consultant Paediatric Surgeon</td>
<td>• None</td>
</tr>
<tr>
<td>Ms Alison Diamond</td>
<td>Metabolic Dietitian - Antenatal Clinic</td>
<td>• None</td>
</tr>
<tr>
<td>Prof John Dixon</td>
<td>Professor, NHMRC Senior Research Fellow, Head Clinical Obesity Research, Baker Heart and Diabetes Institute Melbourne, Australia</td>
<td>• Consultancy fees Novo Nordisk, Apollo EndoSurgery, Medtronic, Bariatric Advantage, Nestlé Health Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Advisory Board and Speaker fees iNova, Novartis</td>
</tr>
<tr>
<td>Prof Nick Finer</td>
<td>Hon Consultant, Senior Principal Clinical Scientist, Global Medical Affairs, Novo Nordisk A/G</td>
<td>• Currently employed by Novo Nordisk – manufacturer of pharmacological treatments for obesity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Speaker fees and sponsorship for conference attendance Novo Nordisk</td>
</tr>
<tr>
<td>Dr Rob Gregory</td>
<td>Consultant Endocrinologist</td>
<td>• None</td>
</tr>
<tr>
<td>Mr James Hopkins</td>
<td>Consultant Surgeon</td>
<td>• None</td>
</tr>
<tr>
<td>Dr Carly Hughes</td>
<td>Bariatric Physician</td>
<td>• Consultancy fees Orexigen, Mundipharma, Oviva, Nutricia, Active Norfolk</td>
</tr>
<tr>
<td></td>
<td>Fakenham weight management service, Associate Tutor and Hon Lecturer at University of East Anglia</td>
<td>• Speaker fees from academic conferences on obesity and diabetes Ethicon, Novo Nordisk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clinical advisor Kastech (unpaid)</td>
</tr>
<tr>
<td>Dr Nick Kennedy</td>
<td>Consultant Anaesthetist</td>
<td>• Secondary Care Clinician on Governing Body of South Gloucestershire CCG</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Role</th>
<th>Financial Relationships</th>
</tr>
</thead>
</table>
| Prof David Kerrigan         | Consultant Surgeon                                                            | - Secondary Care Clinician on Governing Body of NEW Devon CCG  
| Prof Carel le Roux          | Professor of Experimental Pathology                                            | - None  
| Dr Lisa McClelland          | Consultant Psychiatrist                                                        | - Consultancy fees, speaker fees Novo Nordisk, Fractyl, Herbalife, sponsorship for conference attendance Novo Nordisk  
| Dr Barbara McGowan          | Consultant Endocrinologist and Bariatric Physician                           | - I had expenses paid by BOMSS for speaking at a BOMSS meeting a number of years ago  
| Ms Iris McMillan            | Royal College of Surgeons Patient Liaison Group                              | - Consultancy fees Novonordisk and Orexigen  
| Ms Mary O’Kane              | Consultant Dietitian                                                           | - Speaker fees Novo Nordisk, Janssen  
| Dr Vicci Owen-Smith         | Clinical Director of Public Health                                            | - Trustee of ASO, Treasurer of SFE, Metabolic and Obesity Network Lead for SFE  
| Ms Gail Pinnock             | Specialist Obesity and Bariatric Surgery Dietitian                           | - None  
| Ms Lisa Rickers             | Specialist Bariatric Nurse                                                     | - None  
| Ms Sue Sawyer               | NHS Commissioner                                                              | - None  
| Dr Vanessa Snowdon-Carr     | Lead Clinical Psychologist                                                     | - Speaker fees from Allergan / Apollo for presenting workshop at gastric band masterclass  
| Douglas Twenefour           | Deputy Head of Care, Diabetes UK                                               | - None  
| Prof Russell Viner          | Officer for Health Promotion, Royal College of Paediatrics & Child Health     | - None  
| Prof John Wass              | Professor Endocrinology                                                       | - None  
| Mr Richard Welbourn         | Chair GDG for Weight Assessment and Management Clinics – Tier 3 (BOMSS), Consultant Surgeon | - Ethicon Endo-Surgery funded a Clinical Fellowship in my hospital as part of the RCS National Surgical Fellowship scheme (2007-2015)  
|                             |                                                                               | - Consultancy fees Novo Nordisk  
|                             |                                                                               | - Educational grants from Ethicon Endo-Surgery and Allergan in last 5 years  
|                             |                                                                               | - Past-President of British Obesity and Metabolic Surgery Society (unpaid)  
|                             |                                                                               | - Chair of the National Bariatric Surgery  

Commissioning guide 2017
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Ms Claire Woods
Specialist Bariatric Nurse

Registry (unpaid)

7.7 Addendum


Table 1—ADA evidence-grading system for "Standards of Medical Care in Diabetes"

<table>
<thead>
<tr>
<th>Level of evidence</th>
<th>Description</th>
</tr>
</thead>
</table>
| **A** | Clear evidence from well-conducted, generalizable randomized controlled trials that are adequately powered, including  
- Evidence from a well-conducted multicenter trial  
- Evidence from a meta-analysis that incorporated quality ratings in the analysis  
Compelling nonexperimental evidence, i.e., “all or none” rule developed by the Centre for Evidence-Based Medicine at the University of Oxford  
Supportive evidence from well-conducted randomized controlled trials that are adequately powered, including  
- Evidence from a well-conducted trial at one or more institutions  
- Evidence from a meta-analysis that incorporated quality ratings in the analysis |
| **B** | Supportive evidence from well-conducted cohort studies  
- Evidence from a well-conducted prospective cohort study or registry  
- Evidence from a well-conducted meta-analysis of cohort studies  
Supportive evidence from a well-conducted case-control study |
| **C** | Supporting evidence from poorly controlled or uncontrolled studies  
- Evidence from randomized clinical trials with one or more major or three or more minor methodological flaws that could invalidate the results  
- Evidence from observational studies with high potential for bias (such as case series with comparison with historical controls)  
- Evidence from case series or case reports  
Conflicting evidence with the weight of evidence supporting the recommendation |
| **E** | Expert consensus or clinical experience |