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BARIATRIC SURGERY, NUTRITION AND THE CHALLENGES OF LONG-TERM FOLLOW-UP WITHIN THE NHS

The prevalence of obesity has continued to increase and reached 26% in 2014;[1] 2% of men and 4% of women had a BMI of 40kg/m² or higher and 5% of the population had a BMI between 35 and 39.9kg/m². Although dietary and lifestyle changes are important in tackling weight issues, bariatric (weight loss) surgery is an important treatment option for those with severe and complex obesity.[2]

Mary specialises in adult obesity supporting patients through their weight loss journey. She had an instrumental role in the development of national guidance on follow-up after bariatric surgery.

Bariatric surgery results not only in weight loss, but in improvement in functional impairment and obesity-related diseases. One year following surgery, two thirds of patients with pre-operative functional impairment could climb three flights of stairs without resting and almost two thirds with sleep apnoea could stop treatment.[3] Two years after surgery, two thirds of patients with Type 2 diabetes, who had been able to stop hypoglycaemic medication after surgery, had not yet needed to restart. In recognition of improvement in diabetic control in people with recent-onset Type 2 diabetes, NICE made new recommendations (Table 1).[2]

The three main laparoscopic procedures in the UK are adjustable gastric band (LAGB), Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG).[3] As it is unknown as to which of

Table 1: NICE CG189 Obesity: Criteria for Bariatric Surgery[2]

Bariatric surgery is a treatment option for people with obesity if all of the following criteria are fulfilled:
• BMI of 40kg/m² or more, or between 35kg/m² and 40kg/m² and other significant disease that could be improved with weight loss.
• All appropriate non-surgical measures have been tried but the person has not achieved or maintained adequate, clinically beneficial weight loss.
• The person has been receiving or will receive intensive management in a Tier 3 service.
• The person is generally fit for anaesthesia and surgery.
• The person commits to the need for long-term follow-up.
Additional criteria for people with recent-onset Type 2 diabetes
• Offer an expedited assessment for bariatric surgery to people with a BMI of 35 or over who have recent-onset Type 2 diabetes as long as they are also receiving or will receive assessment in a Tier 3 service (or equivalent).
• Consider an assessment for bariatric surgery for people with a BMI of 30-34.9 who have recent-onset Type 2 diabetes as long as they are also receiving or will receive assessment in a Tier 3 service (or equivalent).
• Consider an assessment for bariatric surgery for people of Asian family origin who have recent-onset Type 2 diabetes at a lower BMI than other populations as long as they are also receiving or will receive assessment in a Tier 3 service (or equivalent).

Table 2: Recommendations for follow-up of bariatric surgery patients[8]

Patients should have lifelong nutritional monitoring to ensure optimum nutrition is maintained.
• Patients and healthcare professionals should be educated about dumping syndrome and post-prandial hypoglycaemia (PPH). PPH should be further investigated if patient fails to respond to dietary manipulation.
• Women should be advised on the potential for increased fertility and have access to preconception counselling and advice on nutritional supplements. Pregnant women require more frequent follow-up with nutritional monitoring being increased to every trimester.
• Patients should have an annual review as part of a shared care model.

Table 3: Common features of shared care models[8]

• Patient commits to long term follow-up.
• Two-year follow-up by bariatric surgery centre.
• GP keeps register of bariatric surgery patients.
• Patients receive lifelong annual review (including specialist dietetic review).
• Ability for GP to refer back to specialist centre.
• Follow-up data submitted to national database.

In clinical practice, many dietitians will meet patients who have had bariatric surgery, so it is important to understand how surgery impacts on long-term nutrition and future care.

these is the most effective for weight loss, health improvements and quality of life, National Institute for Health Research (NIHR) By-Band-Sleeve Study, a multicentre trial, is comparing these three operations and measuring a wide range of outcomes including diabetes, weight change, nutrition and quality of life.[4] The results are expected in 2025. The Duodenal Switch (DS) and the newer surgical procedure, mini gastric bypass (MGB) are performed less frequently.

In clinical practice, many dietitians will meet patients who have had bariatric surgery, so it is important to understand how surgery impacts on long-term nutrition and future care. Nutritional and dietary intake is affected and some procedures (RYGB, SG, DS, MGB) result in malabsorption of micronutrients.[5] The DS and potentially MGB result in fat and protein malabsorption.[6] If patients are unable to adhere to dietary guidelines, follow-up and aftercare, or receive the appropriate support, they are potentially at risk of developing nutritional deficiencies, or even protein malnutrition. The assessment and preparation for bariatric surgery is provided in the NHS by the Tier 3 Weight Assessment and Management clinics which have a bariatric physician and specialist dietitian as essential multidisciplinary team members.[7]

POST-OPERATIVE CARE

NHS bariatric surgery centres should offer a minimum of two-year follow-up.[8-9] The specialist dietitian plays a key role in this, having the most frequent contact with patients and supporting them in making the dietary and lifestyle changes. After two years, centres are required to discharge patients back to primary care. Unfortunately, the majority of GPs and healthcare professionals, including dietitians, working in primary care receive little training in this area. This leaves patients vulnerable, at risk and without ongoing support.

The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) recommended that there should be a clear and continuous long-term follow-up plan involving all appropriate healthcare professionals.[10]. To

Table 4: Models of shared care[8]

Model 1
Patient's care shared between the specialist centre and the GP. GP undertakes annual blood tests and weight checks and submits to specialist centre. Specialist centre undertakes comprehensive assessment including band reviews.
Model 2
GP undertakes annual blood tests and weight checks. Annual nutritional review provided by the Tier 3 dietitian (and referral back to specialist centre if necessary).
Model 3
Patient is followed up by specialist team (usually a local Tier 3 service).
Model 4
Joint follow up is provided in the community by the specialist team and GP.

Table 5: NICE QS127 Obesity: clinical assessment and management[9]

Quality statement 6
People who have had bariatric surgery have a postoperative follow-up care package within the bariatric surgery service for a minimum of two years.
Quality statement 7
People discharged from bariatric surgery service follow-up are offered monitoring of nutritional status at least once a year as part of a shared-care model of management.

improve postoperative care, both the British Obesity and Metabolic Surgery Society (BOMSS) and Royal College of General Practitioners (RCGP) produced guidelines on long-term nutritional monitoring and follow-up in primary care.[11-13] NICE CG189 Obesity added an additional recommendation: 'After discharge from bariatric surgery service follow-up, ensure that all people are offered at least annual monitoring of nutritional status and appropriate supplementation according to need following bariatric surgery, as part of a shared care model of chronic disease management.'[2] Shared care arrangements for the aftercare of patients undergoing bariatric surgery did not exist and it was not clear how this recommendation would be implemented, despite the BOMSS and RCGP guidelines.

The NHS England Obesity Clinical Reference Group commissioned a dietetic led subgroup to develop follow-up guidelines for the long-term management of patients undergoing bariatric surgery. These were the first guidelines to outline the operational requirements and pathways for the long-term care of patients who undergo bariatric surgery. They cover the whole of the postoperative aftercare and include 42 evidence-based recommendations.[8] During the immediate postoperative aftercare, recommendations are made around dietetic input, review of antihypertensive and diabetes-related medications and discharge plan to the GP. Further recommendations are made about both bariatric surgery centre and long-term follow-up. A small selection of the recommendations is shown in Table 2.[8] Across the UK, easy access to specialist advice and support is variable. Consequently, four different models of shared care are proposed, with the recommendation that clinical commissioning groups commission one of the shared care models. Each of the models contains common features (Table 3); however, they differ in their delivery (Table 4). Full details of the shared care models, including indications for when to refer back to the bariatric surgery centre, are contained in the guidelines and appendices.[8]

NICE QS127 Obesity: clinical assessment and management highlighted high-priority areas for quality improvement in obesity management with QS6 and 7 focusing on follow-up after bariatric surgery (Table 5).[9] Further work is needed to ensure that clinical commissioning groups adopt a model of shared care to improve follow-up and aftercare to patients undergoing bariatric surgery. This will require investment as healthcare professionals, including GPs, dietitians, primary care staff, midwives, obstetricians and emergency department staff, need access to training in the management of these patients.

BOMSS are hosting IFSO 2017, London, and have organised a pre-congress study day aimed at dietitians, GPs and other healthcare professionals. Topics will include management of PPH, nutritional deficiencies and shared care models. Further information may be found at www.ifso2017.com, or contact Mary O'Kane.

CONCLUSION

Bariatric surgery aids weight loss and improvement in obesity-related diseases. It is important that patients have access to long-term follow-up to maintain the best outcomes, including good nutritional status. Dietitians, who are experienced in weight management and bariatric surgery, should take a lead role in the annual follow-up as part of a shared care model.

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Questions relating to: *Bariatric surgery, nutrition and the challenges of long-term follow-up within the NHS*
Type your answers below, download and save or print for your records, or print and complete by hand.

Q.1	What is the prevalence of obesity in the UK?
A	
Q.2	Outline the results of National Bariatric Surgery Registry[3] in relation to one and two years post-surgery.
A	
Q.3	What are some of the nutritional risks of bariatric surgery procedures?
A	
Q.4	Explain the NICE criteria for bariatric surgery.
A	
Q.5	What is the criteria for people with recent onset Type 2 diabetes?
A	
Q.6	Explain why long-term follow-up care is recommended for bariatric surgery patients.
A	
Q.7	Give two recommendations for follow-up of bariatric surgery patients.
A	
Q.8	Briefly explain the four models of shared care from Guidelines by Kane et al.[8]
A	

Please type additional notes here . . .