Optimising the Bariatric Patient
And
The Multiprofessional Team

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My Disclosures

Travel Grant – Novo nordisk

Honoraria – Novo nordisk, Mylan, Lilly
My Disclosures

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Honoraria – Novo nordisk, Mylan, Lilly

And

Content contains a bit of experience,
a few facts,
and
LOTS of personal opinion!
A thought experiment.....

If you feel able

Close your eyes

Put your hand up
Put your hand down if....

You have never disliked how you look in a photograph.
Put your hand down if....

You have never disliked how you look in a photograph.

You have never been concerned about your body shape/size
Put your hand down if....

You have never disliked how you look in a photograph.
You have never been concerned about your body shape/size
You have never made changes to your food/activity levels to influence body shape
Put your hand down if…. 

You have never disliked how you look in a photograph.
You have never been concerned about your body shape/size
You have never made changes to your food/activity levels to influence body shape
You have never used alcohol, or food to manage stress or emotions
Put your hand down if…. 

You have never disliked how you look in a photograph.
You have never been concerned about your body shape/size
You have never made changes to your food/activity levels to influence body shape
You have never used alcohol, or food to manage stress or emotions

There is not one thing about your body that you wouldn’t change
Put your hand down if….

You have never disliked how you look in a photograph.
You have never been concerned about your body shape/size
You have never made changes to your food/activity levels to influence body shape
You have never used alcohol, or food to manage stress or emotions

There is not one thing about your body that you wouldn’t change
Optimising the Bariatric Patient

Optimising Attitudes
Obesity is not a protected characteristic in UK, US or European law.
Obesity bias – effect on care, and lifespan

Spend less time


Build less emotional rapport

Gudzune a, et al, Obesity v 21, 10, 2013

Provide less health education


Increased Mortality

Bias – Wider issues

Public Policies
‘Moral undertone’
Focus on individual motivation
Lack integration
Dont address social inequality/stigma

Research
Less funding

Commissioning/allocation of Resources
Kidney transplant
Joint replacement
Fertility
Obesity medication and surgery
Optimising the Bariatric Patient

Optimising understanding

The science
Why is there such bias against people living in larger bodies?
Obesity is an error in ‘Fat Mass Regulation’

Simplistic view of energy regulation/appetite
‘a lifestyle choice’
Obesity as a condition, not a disease
Weight loss is **NOT** under volitional control
It’s a complex system with multiple inputs
CNS role in appetite, reward and satiety

Heritability of obesity – 140 loci related to obesity found so far

Those with obesity have higher numbers of these variants

Normal weight or ‘skinny’ people less.

Bears and labradors

Polygenic ‘Simple’ Obesity
Gene Wide Association Scores

Identifies SNP’s
Obesity Risk score uses 97 of these

Obesity Risk score directly related to BMI in the population

Waist to hip ratio
Genes function in fat
~ 20 genes

BMI
Genes largely function in the brain and nervous system

Many, including POMC and MC4R, are known to influence food intake
>100 genes
What happens with calorie restriction?

![Graph showing weight change from baseline over time for different therapies: Diet alone, Behaviour therapy, and Combined therapy.](image)

- **Baseline**
- **End of therapy**
- **1-year follow-up**
- **5-year follow-up**

Evolutionary preference for high fat/carb foods

Its evolution in action
Optimising the Bariatric Patient

Optimising understanding

The effect on the person
What is your pre-op patient thinking?

► How will I get to the appointment?
   Travel – trains, buses.

► Will I fit into the chairs?

► What if they can’t get my Blood (again) ?

► Will they weigh me – what if I've put on?

► Will everything be about my weight (again), or will it be ignored?

► What if I need to be examined??

► How far will I have to walk?

Will I be judged again?
Optimising the Bariatric Patient

Optimising the environment
Is your environment welcoming??
A typical patient having **bariatric** surgery....
45 year old male
Weight 170kg, BMI 46

- Type 2 diabetes, 8 years on metformin, sitagliptin, HbA1C 70
- Hypertension on amlodipine and rampiril
- Hypercholesterolemia on atorvastatin
- R knee pain (old injury) on NSAID
He has tried this….

**Diet**

- **-500Kcal/day 0.5kg loss a week**
  - Low energy density
    - Decrease saturated fats/sugar
    - Decrease portion sizes.
    - Decrease snacks
    - Increase protein
    - Increase fruit & veg
  - Structured meals – home delivery
  - Very Low Calorie Diets - Cambridge

**Increased physical activity**

- Exercise 7 days /wk
  - 30 mins moderate-high intensity OR
  - 60 mins low intensity
- Target 10,000 steps / day
  - ↑ 500 step increments

Regardless of weight / weight loss, exercise improves health
And done OK

He lost 1 – 2 lb per week with 500 – 1000Kcal/day

5% loss was achieved in 12 weeks
And done OK

He lost 1 – 2 lb per week with 500 – 1000Kcal/day

5% loss was achieved in 12 weeks

BUT:

The larger his weight loss, the harder it is to maintain

The message is ‘boring’.

His metabolic adaptation to reduced calorie intake slows progress

He’s lost weight is lost but is still has T2DM, HTN etc
He REALLY wants a Gastric Bypass

So GP referred him to Tier 3 service
He REALLY wants a Gastric Bypass

So GP referred him to Tier 3 service

A WHAT??
An Aside

Accessing treatment for obesity in England
The tiered approach to services

Or

How do patients access bariatric surgery
NICE position on Metabolic Surgery

NICE 2006

► After failure of other options
  if
  BMI > 40 kg/m\(^2\)
  BMI > 35 with co-morbid conditions

► Or first line
  BMI > 50 kg/m\(^2\)

NICE 2014

► For those with recent onset T2DM:

  Expedite bariatric surgery if BMI > 35

  Consider surgery if BMI 30-35

  Lower BMI by 2.5 points if from high risk population

- NHS England 2013
  - As per NICE but…..
  - Must have been obese for at least 5 years
  - **Must engage with non-surgical weight-loss programme for 12-24 months first**
The Tiered approach to weight management services

**Commissioned Services**

- Bariatric Surgery

**Clinical Care**

- Pre-op assessment, Surgery, Post-op care

**Tier 4**

- Multidisciplinary specialist weight management service; may be co-located with Tier 4, hospital based, or delivered in appropriate community facilities

**Tier 3**

- Multidisciplinary specialist assessment and treatment, including pharmacotherapy, LELDs, and pre-bariatric surgery care.

**Tier 2**

- Identification, primary assessment, referral and treatment using evidence based lifestyle intervention.

**Tier 1**

- Information and advice on healthy eating and physical activity. Opportunistic identification in primary care

- Universal interventions: public health, environmental and population wide

- Lifestyle interventions, multicomponent including groups and/or individual interventions
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)
Problem with Tier 3?

- Variable provision
- Variable outcomes
- Variable structure
- Variable length needed to be ‘engaged’
- Decision to refer for surgery may sit with the Tier 3 provider – limited medical input
45 year old male
Weight 170kg, BMI 46

- Type 2 diabetes, 8 years on metformin, sitagliptin, HbA1C 70
- Hypertension on amlodipine and rampiril
- Hypercholesterolemia on atorvastatin
- R knee pain (old injury) on NSAID

Spent 12 month in Tier 3, lost 8 kg and referred to our Tier 4 service
Weight Assessment and Management Clinic (WAMC) and/or medical part of Bariatric Surgery Multidisciplinary clinic

Bariatric physician (primary or secondary care)
Dietitians
Specialist nurses
Clinical psychologists
Liaison psychiatrists
Exercise therapists

Bariatric surgeon
Anaesthetist
Radiologist

= Combined WAMC and Bariatric Surgery Multidisciplinary Team (MDT)

Bariatric Surgery MDT
Our Tier 4 Team

- 4 surgeons, 2 visiting surgeons, one bariatric physician
- Bariatric fellow, 2 research registrars
- 1.2 WTE bariatric specialist nurses
- 2 WTE bariatric dieticians
- Psychologist screening and PRE operative assessment
- 5 admin staff
45 year old male
Weight 162kg, BMI 46

- Pre-screened by Clinical Psychology Triage Tool
- Alcohol Use
- Suicidal Ideation
- Drug Use
- Eating Attitudes
45 year old male  
Weight 162kg, BMI 46

► Seen by **Bariatric physician**:  
  Increase Empagliflozin  
  Start Semaglutide  
  If HBA1C>64IFCC – for OD long acting insulin  
  Referred to community diabetes team

► Epworth of 15, STOP BANG 6:  
  Referred for sleep studies

► R knee pain (old injury) on NSAID, now GORD – for OGD

► Bloods taken an results acted upon
45 year old male
Weight 162kg, BMI 46

- Seen by Bariatric Dietician:
  - Explored opportunities to change
  - Emotional eating
  - Family structure

- Goal setting (his own)

- Start Multivitamins/Vitamin D
45 year old male
Weight 162kg, BMI 46

- Seen by Bariatric Specialist Nurse
- Logistics
- Exercise tolerance
- BP/Sats
- 6 minute walk test
45 year old male
Weight 162kg, BMI 46

- Seen by Bariatric Specialist Anaesthetist
- Sleep studies
- ASA, mallampati assessment etc etc
- Difficult venous access
45 year old male
Weight 162kg, BMI 46

Only then sees surgeon

- Listed for RYGB if established on CPAP and HBA1C 64IFCC or less
So he is OPTIMISED, if not expedited...

NICE 2006

- After failure of other options
  - if BMI > 40 kg/m²
  - BMI > 35 with co-morbid conditions
- Or first line
  - BMI > 50 kg/m²

NICE 2014

- For those with recent onset T2DM:
- Expedite bariatric surgery if BMI > 35
- Consider surgery if BMI 30-35
- Lower BMI by 2.5 points if from high risk population
The benefits of a Tier 4

- The MDT Physicians, Nurses, Dieticians, Psychologists, Anaesthetists, and the surgeons

- Shared decision making – vs the ‘anaesthetic high risk clinic’
  - ‘I refer there when I’m looking for a reason NOT to operate’

- A One Stop Shop for the patient – cheaper, high satisfaction

- Few (if any) cancellations on the day
B. Supporting patients to prepare for surgery

One third of on-the-day cancellations are due to clinical reasons, such as patients being unfit for the type of surgery or anaesthetic they were listed for. Patients with lower fitness or who struggle to control their long-term conditions are at risk of major complications after inpatient surgery, which can increase average length of stay three-fold or more, and reduced long-term survival and quality of life. Therefore, it is essential that potentially modifiable risk factors are identified and treated early on.

Ambition

From April 2023, providers will be asked to establish Perioperative Care Co-ordination teams. These teams could consist of, for example, care co-ordinators, nurses and perioperative physicians who will assess health needs to proactively inform pre and post-operative care and identify surgical risk factors. They will identify low-risk patients who do not need to attend face-to-face preoperative assessment and patients who could be treated in elective hubs focused on providing high volume low complexity surgery.

This will enable patients to be treated in the place most appropriate for their condition, as well as freeing up capacity for those who require more complex care in a higher acuity setting.
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First Tier 4 Bariatric MDT at SRH
Post-operative complications

There were only 16 deaths recorded in the registry over 2013-2018, giving a post-operative in-hospital mortality rate of 0.04% following bariatric surgery for this period. This figure correlates with the HES data which reflects the safety of bariatric surgery in the United Kingdom.

When operation-specific data are considered, there was no in-hospital mortality recorded for gastric banding. The in-hospital mortality was highest among OAGB/MGB patients at 0.13%, but this is likely a statistical error given only 2 deaths were recorded. Attention to this finding will be made in future reports. This compares to 0.05% in RYGB and 0.04% in sleeve gastrectomy respectively. This may reflect the higher BMI and higher number of obesity-related comorbidities in OAGB/MGB patients. It is clear that gastric banding had the lowest mortality rate compared to the other bariatric operations, although this difference was not statistically significant.

Out of 36,573 operations, a total of 74 cardio-vascular complications were reported over the period of 2013-2018. This gave an overall cardio-vascular complication rate of 0.20% in primary bariatric surgery. This compares to the corresponding figure of 0.3% in 2011-2013 and 0.6% in 2009-2010.

The cardio-vascular complication rates were similar between RYGB (0.24%) and sleeve gastrectomy (0.21%). Only 3 case of cardio-vascular complications were reported in total in gastric band and OAGB/MGB. The rate of cardio-vascular complications after gastric band procedures was significantly lower than that reported for either gastric bypass or sleeve gastrectomy (p=0.0113; p=0.0294; Fisher’s exact test). There was no statistical difference in the complication rates and mortality rates between sleeve gastrectomy and RYGB, although the small numbers limited the conclusion that could be drawn.

The overall rate of all complications was ≤2.38%. This figure is well below the quoted complication for bariatric surgery from HES. This may reflect the fact that patients were often readmitted to other hospitals and their details not added to the NBSR. This feature is being remediated by including NHS numbers in version 2 of the database and should allow a more accurate representation of the actual complication rates.

Post op in hospital mortality

0.04%
A typical bariatric patient having other surgery....
45 year old male
Weight 170kg, BMI 46

- Type 2 diabetes, 8 years on metformin, sitagliptin, HbA1C 70

- Hypertension on amlodipine and rampiril

- Hypercholesterolemia on atorvastatin

- R knee pain (old injury) on NSAID

- Needs Cholecystectomy
Pathway

- Listed for surgery at Out Patient appointment
- Perhaps referred to Anaesthetic high risk clinic
- Pre op appointment
- Likely referred back to the Anaesthetic team
- GP (or community diabetes team) asked to optimise diabetes
- Potential for cancellation on the day – HbA1C too high, BP too high etc etc
How can you optimise a patient living with obesity in your clinic.
Things to think about with larger patients, BMI >30:

1. Do you routinely check HbA1C, Lipids, B12, Folate, Iron

2. Do you routinely discuss weight and refer to weight management services
Being overweight doesn’t mean you are well nourished

Iron deficiency


- 950 patients, 85% female
- 50% iron deficient, 41% severely so
- 7% needed IV iron

Our Practice:

**Pre op:**
- All have haematinics
- Low ferritin/Iron:— supplement 3/12
- Low normal B12 – Repeat +MMA

**Post op:**
- Low threshold for IV iron
- Then po ferrous fumarate/gluconate
- Deal with menstruation!
Things to think about with larger patients, BMI >30:

1. Do you routinely check HbA1C, Lipids, B12, Folate, Iron

2. Do you routinely discuss weight and refer to weight management services
Do patients object?
Do patients object? *It appears not*

1800 consecutive GP patients
30s intervention
1:1 randomisation
Brief advice vs advice and referral
Do patients object?

It appears not

1800 consecutive GP patients
30s intervention
1:1 randomisation
Brief advice vs advice and referral

2.4kg loss with referral
1kg loss with 30s advice
Do patients object?

*It appears not*

1800 consecutive GP patients

30s intervention

1:1 randomisation

Brief advice vs advice and referral

2.4kg loss with referral

1kg loss with 30s advice

81% thought advice helpful/appropriate
Do patients object?

Language has power

Language Matters: Obesity

Seek permission
Don’t judge or blame
Empathetic, Respectful
Collaborative, Empowering

‘Would you mind if we talked about your weight, where do you think you’re at?’

‘Some people with your symptoms find losing some weight helps them, I could recommend some services if you would like?’

‘You may not have thought of it before, but you could potentially qualify for medical or surgical help with your weight’
Discussing weight – where to refer

**Commissioned Services**

- **Tier 4**
  - Clinical Care
  - Multidisciplinary specialist assessment and treatment, including pharmacotherapy, LELDs, and pre-bariatric surgery care.

- **Tier 3**
  - Multidisciplinary specialist weight management service; may be co-located with Tier 4, hospital based, or delivered in appropriate community facilities.

- **Tier 2**
  - Clinical Care
  - Identification, primary assessment, referral and treatment using evidence based lifestyle intervention.

- **Tier 1**
  - Universal interventions; public health, environmental and population wide.
  - Clinical Care
  - Information and advice on healthy eating and physical activity. Opportunistic identification in primary care.

- **Bariatric Surgery**

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*University Hospitals Sussex NHS Foundation Trust*
Discussing weight – where to refer

Usually via Local Authority

BMI >25
What could I achieve?

Over 18,000 users across the UK have already achieved some amazing results, including:

- Weight loss of 6.5% of body weight (achieved after 26 weeks)
- 35% increase in steps taken (achieved after 26 weeks)
- 32% reduction in depressive symptoms (achieved after 12 weeks)
- 32% reduction in generalised anxiety (achieved after 12 weeks)
- 23% reduction in perceived stress (achieved after 12 weeks)

How do I get access?

Free access to Gro Health is available to those who meet the following eligibility criteria:

- Adults aged 18+ (no upper age limit) or registered carers aged under 18.
- Body Mass Index (BMI) of 25 to 40 (see the BMI calculator on the NHS website).
- Residents of West Sussex and/or registered with a GP in West Sussex.
- Working in West Sussex.

To sign up, simply fill out the registration form on the Gro Health website.
Local Wellbeing

Select your local wellbeing hub for events and information in your area.

Start

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Discussing weight – where to refer

ICS commissioned
BMI 35 +
comorbs
BMI 40 without
Feeling Good Tier 3 Specialist Community Weight Management Service for Severe and Complex Obesity

**REFERRAL CRITERIA** - Adults including Young people over 18 years

- Patients will need to meet one of the following criteria to be eligible for the service:
  - BMI ≥ 40 without related co-morbidities
  - BMI ≥ 30 with recent onset Type 2 Diabetes considering Bariatric surgery
  - BMI ≥ 35 with any of the following: hypertension, diabetes, angina/MI, stroke/TIA, sleep apnoea or other significant diseases
  - Patients who are eligible for a hip/knee joint replacement but need to reduce their BMI to below 35 prior to referral to T&O
  - Patients for assessment and preparation for Tier 4 Specialised Morbid Obesity service (Bariatric surgery)
  - 2 Years Post-bariatric surgery patients who require specific post-operative support

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**Supporting Healthy Weight Team**

- **Adult Services**
  - Tipping the Balance
  - Exercise Referral Service
  - Let’s Talk about Weight
  - Active Travel

- **Infant and Children Services**
  - Medway Breastfeeding Network
  - Mend 2-4
  - Mend 5-7
  - Mend 7-13
  - Fit Fix
  - Community Food Programme
Discussing weight – where to refer

**Commissioned Services**

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**Clinical Care**

- Pre-op assessment, Surgery, Post-op care

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- Lifestyle interventions, multicomponent including groups and/or individual interventions

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**Tier 2**

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**Tier 1**

- Information and advice on healthy eating and physical activity. Opportunistic identification in primary care

?? BMI>50

Severe Comorbs

Service dependent
Discussing lifestyle.

1. Brief intervention on physical activity
   6 minute walk test
   The larger you are, the more ‘work’ it is
   Validated in obese population
   Reproducible

   Measure a distance on your clinic floor and get them to walk?

   Suggest that person does the same at home.
Discussing lifestyle.

2. Could you choose 3 SMART Goals to enact between now and the op?

- 6 min walk test daily

Reduce alcohol, chocolate, crisps

Pay more attention to blood sugars

Let them choose the goals, however small.
Who Is YOUR MDT

When you see patients living with obesity in your pre op clinics
Your MDT.

Sleep/Respiratory Teams.

Cardiac Investigations teams

GP and practice nurse – to improve diabetes

Community diabetes team – can you refer directly?

Your local weight management services – Tier 2 and Tier3
  Find out who they are and how to refer?

Your local psychological self referral service – Do you know who they are and how patients can access?
Take home messages:

1. Optimising a bariatric patient involves:
   - Optimising your understanding, it's not a lack of moral fibre
   - Optimising your environment ‘Who’s got the Large Cuff’

2. The MDT approach for larger patients works,
   - Could you use a similar model in other areas
     - Gynae malignancy
     - Joint Replacement

3. Being the catalyst
   - Remember how important your intervention could be motivating change or encouraging someone to seek support.

Don’t be afraid of bringing up the issue, seek permission and know where you will refer
Half of world on track to be overweight by 2035

By Alys Davies
BBC News
6 hours ago | World

More than half the world's population will be classed as obese or overweight by 2035 if action is not taken, the World Obesity Federation warns.

More than four billion people will be affected, with rates rising fastest among children, its report says.

Low or middle-income countries in Africa and Asia are expected to see the greatest rises.