

West Yorkshire & Harrogate Joint Committee of Clinical Commissioning Groups

Summary report			
Date of meeting: 5 June 2018	Agenda item: 56/18		
Report title:	Improving outcomes in severe and complex obesity.		
Joint Committee sponsor:	Helen Hirst		
Clinical Lead:	Dr Gordon Sinclair		
Author:	Clare Smart, Deputy Director Bradford District and Craven CCGs		
Presenter:	Michelle Turner Programme Director, Bariatric Surgery		
Purpose of report:			
Decision	✓	Comment	
Assurance			
Executive summary			
<p>In March 2018, the WY&H Clinical Forum considered the case for reducing variation and equalising investment in severe and complex obesity. The paper is attached at Appendix A.</p> <p>The Clinical Forum's recommendations were supported at a development session of the Joint Committee of CCGs on 3rd April 2018. To enable the Joint Committee to agree next steps, members requested that the report be presented at a meeting in public, alongside detailed financial information about the impact of the proposals on each CCG.</p> <p>Although the Joint Committee agreed to take a collaborative approach to any Specialised Commissioning areas that transferred to CCGs, the decisions that enact this approach have not been delegated to the Joint Committee, therefore final decision rests with each CCG. This report paper outlines the recommendations for individual CCGs to consider.</p> <p>Financial modelling of the costs of 'levelling up' to the recommended number of interventions has been shared with CCG Chief Financial Officers and a summary is attached (Appendix B).</p>			
Recommendations and next steps			
<p>The Joint Committee is invited to recommend the West Yorkshire and Harrogate CCGs to support the Clinical Forum's recommendations:</p> <ol style="list-style-type: none"> a) That there is a strong clinical case to commission more bariatric surgery over the next 2 to 5 years. b) To have a new service specification for WY&H for Tier 4 services which the CCGs commission collaboratively once financial values have been agreed. 			

This may include, depending on the financial implications, additional capacity requirements to meet the aspiration of meeting the needs of 4% of the eligible population.

- c) To ask the West Yorkshire Association of Acute Trusts (WYAAT) to consider how to respond to a collaborative commissioning approach against a single service specification for WYH
- d) To ask WYAAT to consider how best to meet any additional capacity required from the CCGs.

And to **note**;

- e) The individual CCG financial implications of commissioning of bariatric surgery at the same rate as the highest performing CCG.
- f) That the collaborative commissioning model needs to be developed and will be brought back to the Joint Committee for sign off.

Delivering outcomes: describe how the report supports the delivery of STP outcomes (Health and wellbeing, care and quality, finance and efficiency)

Commissioning consistently:

- To improve the health of the population by providing preventative health and social care support through the health optimisation approach
- To save money and release money to be used elsewhere for health and social care
- To reduce difference and inconsistency in policies and the way that health and social care is delivered
- To reduce the feeling of a 'post-code lottery' across the region, where people have different experiences of health and social care depending on where they live.

Impact assessment

(please provide a brief description, or refer to the main body of the report)

Clinical outcomes:	As above
Public involvement:	As above
Finance:	Appendix B
Risk:	None identified
Conflicts of interest:	None identified

Improving outcomes in severe and complex obesity

Purpose

1. This paper considers the implications of recommendations made by the West Yorkshire and Harrogate (WY&H) Clinical Forum in March 2018, which were considered at a private development session of the Joint Committee in April 2018. As the decision on this has not been delegated to the Joint Committee the final decision rests with each CCG.
2. The key proposal is that each CCG works towards commissioning up to the level of surgery of the CCGs currently commissioning at the highest rate, where around 4% of those patients likely to be 'eligible and accepting of surgery' in one year are currently being operated on. In terms of the aspiration to commission at the rate of the highest performing CCG, the summary Tier 4 implications for each CCG are attached (Appendix 1) and full financial detail has been shared with Chief Financial Officers.

Considerations

3. The recommendations include a 'levelling up' to the CCG currently commissioning at the highest rate per head of eligible population and a revised service specification. The specification will outline the procedures routinely commissioned and the standards expected of a designated service in terms of a per/peri/post-operative treatment pathway.
4. The specification is expected to recommend a Multi-Disciplinary Team (MDT) approach to the surgical management of patients and remove the requirement for completion of a tier 3 complex weight management (CWM) course over a period of at least 6 months. It will not determine eligibility criteria as that will be left for each CCG to determine. The CCGs may wish to consider eligibility criteria for access to bariatric surgery.
5. Bariatric surgery is contracted for with individual acute trusts. During the course of this work, current local providers of bariatric surgery have indicated capacity constraints in relation to these complex patients. During times of bed pressures, and in particular in relation to critical care bed capacity, these patients often have their surgery cancelled and remain on the surgical waiting list. The CCGs are seeking to align and reduce variation in the commissioning of services for people with complex and severe obesity. In working with WYAAT to understand how best to provide Tier 4 surgical services, we will work to also align our providers and reduce variation in provision.

Recommendations

6. The Joint Committee is invited to **recommend** the West Yorkshire and Harrogate CCGs to support the Clinical Forum's recommendations:
 - a) That there is a strong clinical case to commission more bariatric surgery over the next 2 to 5 years.
 - b) To have a new service specification for WY&H for Tier 4 services which the CCGs commission collaboratively once financial values have been agreed. This may include, depending on the financial implications, additional capacity requirements to meet the aspiration of meeting the needs of 4% of the eligible population.
 - c) To ask the West Yorkshire Association of Acute Trusts (WYAAT) to consider how to respond to a collaborative commissioning approach against a single service specification for WYH
 - d) To ask WYAAT to consider how best to meet any additional capacity required from the CCGs.

And to **note**;

- e) The individual CCG financial implications of commissioning of bariatric surgery at the same rate as the highest performing CCG.
- f) That the collaborative commissioning model needs to be developed and will be brought back to the Joint Committee for sign off.



West Yorkshire & Harrogate Clinical Forum

6 March 2018

Summary report	
Report title:	Commissioning Bariatric services for people with severe and complex obesity
Clinical Lead:	Dr Andrew O'Shaughnessy, Consultant in Public Health, City of Bradford Metropolitan District Council
Report author:	Michelle Turner, Programme Director, Tier 4 Bariatric Surgery Programme, WY&H Health and Care Partnership Helen Lewis, Head of Commissioning, Planned Care and Long Term Conditions, Leeds CCGs Partnership and member of WY&H Bariatric Surgery Programme
Presenters:	Michelle Turner and Dr Andrew O'Shaughnessy
Executive summary	
<p>This paper summarises the work to date across the WY&H Health and Care Partnership in respect of bariatric services.</p> <p>It stems from a decision by the CCG Chief Officers to create a WY&H wide approach to the contracting and commissioning of obesity surgery following the transfer of commissioning responsibility from NHS England in April 2017.</p> <p>A joint working group has been established, and Bradford CCG colleagues have taken on the oversight of the obesity surgery activity levels across the patch. This paper summarises the activity year to date, and the current position on weight management assessment and treatment services across the patch.</p> <p>The joint working group has prepared the enclosed paper which proposes a way to reduce the variation in access across the WY&H STP area and makes a case for equalising investment to improve health gain. It has also consulted surgical colleagues and is now developing a Commissioning policy for obesity surgery which CCGs may wish to adopt on an WY&H STP-wide footprint.</p>	
Recommendations and next steps	
<p>The Clinical Forum is asked to review the attached proposal and outline investment case from the West Yorkshire and Harrogate Bariatric working group to increase the funding for Bariatric surgery (by 19/20 at latest, and recurrently) and to reduce the variation in access to these services for the people of West Yorkshire and Harrogate.</p> <p>The Clinical Forum is asked to make a recommendation to the West Yorkshire and Harrogate Joint Committee of CCGs.</p>	
Delivering outcomes: describe how the report supports the delivery of STP outcomes	
<p>Health and Wellbeing: Bariatric surgery reduces risk of Type 2 Diabetes, induces remission of Type 2 Diabetes and lowers associated mortality.</p> <p>Care and Quality: Bariatric surgery is considered to be a clinically and cost-effective intervention for serious/morbid obesity.</p> <p>Finance and Efficiency: n/a</p>	

Commissioning bariatric surgery for people with severe and complex obesity

1. Background

The commissioning responsibility for obesity surgery transferred from NHS England Specialised Commissioning to CCGs from 1 April 2017. Healthy Futures agreed to develop a system-wide approach to the commissioning of this surgery, including maintaining a system-wide overview on expenditure on surgical procedures, and shared commissioning policies for obesity surgery and associated services. A working group has been set up with representatives of the STP CCGs, chaired by Michelle Turner, and Bradford CCGs have taken the lead for overseeing the volumes of obesity surgery by provider and CCG. Dr O'Shaughnessy has provided two detailed papers which identify variation in access across the STP Area and the health economic benefits of investment in obesity surgery. These were presented to the WY&H Clinical Forum and are attached as Appendix 1.

The Clinical Forum in November 2017 reviewed this information and was supportive of progressing an 'outline case for investment' which would address the current inequalities of access across the STP area and which described the costs and benefits of increasing the current levels of surgery in the area which are significantly lower than 3 years ago despite increasing numbers of patients meeting the NICE criteria for eligibility for this intervention.

The working group has developed an outline investment case (see appendix 4) for the Clinical Forum in March 2018 and Chief Officers in April 2018. The working group has also developed a revised draft commissioning policy for obesity surgery. No CCG has formalised their own surgery policy since they took over responsibility from NHSE specialist commissioners in April 2017 so surgeons are relying on NICE and the pre-existing commissioning policies.

2. Obesity Surgery Volumes

During 17/18, Bradford CCGs have provided a lead contracting function for obesity surgery, which has allowed for a system-wide oversight on the numbers of operations carried out. Up to date data is shown in detail at Appendix 2. During 2017 Chief Officers agreed to commission at 'steady state' for 17/18 pending further discussions.

In October 2017, activity was up on the previous year, with a straight line Full Year effect of 226 compared to a full year of 185 in 16/17. However, given the bed situation across the area, and the significant levels of cancellation of non-urgent surgery, it is highly likely that very few patients will be treated in Quarter 4 so likely to end up at a similar level to 16/17. It should be noted that this level of surgery is significantly less than the volumes delivered in 15/16. The majority of obesity surgery for the STP area is carried out by local NHS providers (LTHT, MYHT, CHFT and BTHFT).

3. Tier 3 Services

There is significant variation and change in local weight management services during 17/18 which has led to a more disparate position than at the start of the

year with more changes planned from April. In line with local strategies, a number of local authorities have altered their configurations of services, expanding or altering tier 2 services and often integrating these into wider behaviour change models for healthy living services. Where Tier 3 services are also commissioned by the Local Authority, this has meant that there is not always now a service consistent with commissioning guidance for a specialist weight management service as a precursor for surgery. If surgeons then operate strictly within NICE guidance or in line with the previous NHSE commissioning policy for obesity surgery, they would then not have any candidates eligible for surgery. The current position is shown below. It should be noted that MYHT has indicated that to local providers and commissioners that it may need to give notice on the remainder of its Tier 3 service contracts because of the recent commissioning changes in Wakefield and North Kirklees. This would leave Bradford and Calderdale without Tier 3 services and would potentially require them to find a new provider.

Tier 3 Weight Management Provision – WY&H CCGs

CCG	Provider	Activity / Value
AWC & Bradford	MYHT	Bradford: 200 patients @ £535 per patient AWC: <50 patients @ £620 per patient
Calderdale	MYHT	2017-18: 12 months, 60 cases 2018-19: 6 months, 30 cases £800 per patient
Greater Huddersfield	MYHT (commissioned by LA but now given notice)	Activity in 2017/18 across Greater Huddersfield and N Kirklees, 76 in first 9 months; cap of 200 with max value of £110,000
Harrogate	Do not commission	Do not commission
North Kirklees	MYHT (commissioned by LA but now given notice)	As above – not now commissioning a formal Tier 3 model from April 18
Leeds	LTHT and LYPFT	£185,000 FYE – funded currently via PBR for attendances in medical and dietetic clinics (excludes Mental Health inputs funded separately) with about 400 patients currently being seen by the service [referrals 17/18 FYE of 136 which is lower than previously due to local pathway changes]
Wakefield	MYHT plus a new provider from December 2017 (commissioned by LA for both Tiers 2 and 3)	MYHT clinical specialist from April 18 Annual full year cost of service £72,000 (2018/19) Activity 180 patients per annum Further psychology and dietetic services commissioned from December 17 with combined full year cost of £135,000 and activity of up to 550 patients per year. NB this is across Tier 2 and Tier 3

Data correct as at 16.01.2018

4. Proposals for 18/19 and 19/20

Representatives for the local CCGs met in December 2017 and discussed how to move towards a more equitable delivery of services across the area, addressing unwarranted variations, in light of the significant health economic benefits outlined in Dr O'Shaughnessy's paper.

An outline investment case is appended to this report (appendix 4) which proposes that:

- a. CCGs should move towards providing at least the minimum level of specialist weight management services required to assess and prepare patients for obesity surgery. Without an MDT assessment including psychological, medical and dietetic assessment, surgery is unlikely to be as successful, and aftercare is required for at least 2 years to ensure appropriate nutritional balance and management of any side effects, and psychosocial support for the new lifestyles required post-surgery. This would not be the equivalent to the full national service specifications for a Tier 3 service which are recommended by NICE guidance currently and where guidance has been refreshed recently by the British Obesity and Metabolic Surgery Society and Royal College of Surgeons¹ (2017) but without this wrap round service, patients could not be safely offered surgery. It is possible that more detailed financial analysis of the cost of ensuring all tier 3 services meet this standard will result in some resource being available to support the investment case appended
- b. To propose that each CCG works towards commissioning up to the level of surgery of the CCGs currently commissioning at the highest rate. These CCGs are commissioning at a level where around 4% of those patients likely to be eligible and accepting of surgery in one year are currently being operated on. The details will be included in the business case. This would bring numbers back close to where they were in 2015/16 for the STP area overall, and require additional investment of somewhere between 130 and 170 cases above 17/18 outturn depending on the outturn figures that CCGs already have within their financial plans for 18/19. This would be at a cost of around £890,000 of which around half would be for Leeds CCG. The additional costs per CCG are shown in Appendix 3. For those CCGs who do not currently commission even a limited Tier 3 service that would be required to ensure the appropriate patient selection and preparation and post-surgical aftercare, this would also require a further investment. Based on the information we have from local CCGs, a further minimum annual cost of £600-800 per patient over at least a 2-3 year period would be required.
- c. For 18/19 to request CCGs to contract for the higher of their forecast outturn position and their full year outturn for 16/17 and to work collaboratively with WYAAT to try to secure this capacity which has been significantly challenged by the recent bed pressures limiting routine elective activity.

¹ British Obesity and Metabolic Surgery Society, Royal College of Surgeons (2017) Commissioning Guide: weight assessment and management clinics (Tier 3)

- d. For CCGs to consider jointly agreeing to a refreshed obesity surgery commissioning policy which is currently being compiled, following local consultation with obesity surgeons across the area. The requirement for STP wide public consultation/engagement on this will be discussed with the leads for the Standardisation of Commissioning policies workstream. The recommendation will be to prioritise patients with the highest BMIs and Type 2 diabetes, which would be more restrictive than current NICE guidance but would enable priority for limited capacity to be given to those who would benefit most.



City of
BRADFORD
METROPOLITAN DISTRICT COUNCIL



CCGs working together

Airedale, Wharfedale and Craven CCG
Bradford City CCG
Bradford Districts CCG

FINANCIAL AND ECONOMIC IMPACT OF EXPANDING ACCESS TO BARIATRIC SURGERY IN WEST YORKSHIRE AND HARROGATE

Dr Andrew O'Shaughnessy
Consultant in Public Health
City of Bradford Metropolitan District Council
November 2017

Introduction and Background

Severe and morbid obesity are increasing rapidly in the UK. Bariatric surgery, the use of surgical procedures for treatment of obesity, is considered to be a clinically and cost-effective effective intervention for severe and morbid obesity. In 2006, the National Institute for Health and Care Excellence (NICE) recognised that the large gap between population need, measured in terms of the prevalence of obesity, and service delivery within the NHS. NICE recommended a gradual expansion of bariatric surgery utilisation for patients with morbid obesity, as well as for patients with severe obesity when comorbidity is present. In addition, the International Diabetes Federation has advocated more widespread use of bariatric surgery in the management of obese patients with poorly controlled type 2 diabetes mellitus ⁽¹⁾.

In April 2013, NHS England assumed responsibility for the commissioning of bariatric surgery, with this role having previously being undertaken by local Primary Care Trusts (PCTs). As of April 2017, this responsibility has returned to local Clinical Commissioning Groups (CCGs). In the West Yorkshire and Harrogate footprint, the process of this transfer is being overseen by the 3 Bradford CCGs.

In September 2017, the WY&H STP Clinical Forum received a paper outlining the key need/demand and capacity issues to be considered in advance of development of a bariatric surgery commissioning policy and process for West Yorkshire and Harrogate (attached at Appendix 1) ⁽²⁾.

The purpose of this report is to estimate financial and economic impact of expanding access to bariatric surgery to the number of patients estimated in the August report. Estimates of impact at CCG level are provided but it is important to recognise that these are **estimates** based on the findings of key studies and basic pro rata arithmetic estimation. Detailed biostatistical analysis is beyond the scope of this report but can be pursued should this be requested.

It is important for the purposes of this report to consider the differences between and interrelationships of **economics** and **finance**. Economics uses theoretical approaches to estimate the intersection of supply, demand, marginal cost and marginal utility, that is not always very useful in actual practice. Many key decision makers want a number - that is where finance comes into play – in establishing the actual models that allow for the pricing of risk and valuation of future cash flows Finance also informs business managers how to evaluate business proposals and most efficiently allocate capital. Basically, economics posits that capital should always be invested in a way that will produce the best risk-adjusted return; finance actually figures that process out ⁽³⁾.

Economic Context

It is important to place this report in a proper and pragmatic context. There is no doubt that bariatric surgery **reduces healthcare spend** in a number of key areas, in particular:

- Reduction in the incidence of type 2 diabetes ⁽⁴⁾
- Induces remission of type 2 diabetes ⁽⁵⁾
- Reduced number of cardiovascular deaths ⁽⁶⁾
- Reduced number of transient ischaemic attacks ⁽⁴⁾
- Lower mean annual drug costs ^(7, 8)

In addition, there are also four key ways in which **costs are incurred**:

- Costs of the work up for surgery
- Costs of the surgery itself
- Costs of post-operative care and dietetics
- Standard healthcare costs due to increased life expectancy

(In practice these are expressed through tariff cost for the procedure, increased mean cumulative hospital days ⁽⁷⁾, increased non-primary care outpatient visits ⁽⁷⁾ and increased inpatient costs ⁽⁹⁾).

However, these costs are outweighed by expected health benefits to obese individuals. This is a case of financial outlay that **delivers an amount of health in return** which translates to an **overall economic benefit to the healthcare system**, this is the nature of health economics.

As such, it is not necessarily helpful to think of bariatric surgery as cost *saving* - this would not be expected as it is unlikely for a procedure that reduces mortality in a population that experiences a heavy burden of morbidity to reduce **lifetime health expenditures**. Rather, the increased immediate and long-term healthcare costs are outweighed by health benefits to obese individuals. Bariatric surgery is highly *cost-effective* and will be expected to deliver substantial net health or monetary benefits if access is expanded in patients with severe and morbid obesity. In addition, bariatric surgery is associated with substantial health gains at costs that are **well below accepted thresholds for cost-effectiveness**, i.e. they comfortably undercut the £20-30,000 per QALY nominally used by NICE.

The two models used in this report take different approaches. The key UK study uses a **lifetime time horizon** ⁽¹⁾, finding that bariatric surgery does not deliver cost **savings** as such over this period, rather that huge health and associated monetary benefits to the healthcare system make surgery extremely cost-effective at UK criteria for ability and willingness to pay. The second UK study, undertaken by the Office for Health Economics in 2010 uses a shorter time horizon (3 years) and specifies savings in terms of reduced healthcare expenditure over this period, and also considers and calculates wider societal benefits in terms of patients returning to paid employment and a reduction in benefits claimants ⁽¹⁰⁾. Both approaches are valid, provided we maintain a focus on **outcomes as currency** as well as finance.

Models Used to Estimate Savings

1. Gulliford 2016 ⁽¹⁾

*This is the authoritative UK study. A 2016 cohort study and cost-effectiveness analysis using electronic health records to estimate **costs** and **outcomes** of increasing access to bariatric surgery for obesity.*

Incremental **lifetime costs** associated with bariatric surgery were £15,258 (95% CI £15,184 to £15,330), including costs associated with bariatric surgical procedures of £9164 per participant.

The authors concluded that:

- If a decision is made to invest in 1,000 bariatric surgical procedures over a defined period of time, then the **immediate NHS costs** will amount to **£9.2M** at 2014 prices. The total additional costs to the NHS, **over the patients' lifetime**, are estimated to be **£15.3M**.
- When health benefits and costs are combined into a single metric, using accepted values of cost per QALY, use of bariatric surgery is expected to yield substantial **net monetary benefits** amounting, over a lifetime, to **£49M per 1,000 persons**.

Note: The increased lifetime health-care costs are associated with **increased life expectancy**.

Table 1 below sets out these findings pro rata in terms of the West Yorkshire and Harrogate STP footprint, broken down by CCG (Note these are ***estimates***)

2. Office of Health Economics Shedding the Pounds 2010 – Obesity Management, NICE Guidance and Bariatric Surgery in England ⁽¹⁰⁾

This report details the results of an exercise undertaken by the Office of Health Economics (OHE) looking at trends in obesity, current provision of bariatric surgery in England with particular reference to the NICE clinical guideline for obesity, and potential economic benefits that could be achieved through adherence to the NICE Guideline.

Sample and Initial Costs of Surgery

The OHE model uses a reference tariff cost of £5,665 per procedure. This compares favourably with current tariff costs which are between £5,000 and £5,800 and so the reference cost was maintained in this report.

The model states that the total tariff cost for a 5% sample was £127,000,000, and as such the size of the 5% sample is 23,000 (this is not stated explicitly in the report). For the purposes of this analysis of 8,884 patients in West Yorkshire and Harrogate who would likely progress to surgery, an arithmetic adjustment of $8,884/23,000 = 0.386$ is applied to the OHE 5% model.

So, the initial cost of surgery for 8,884 patients = £127million x 0.386 = **£49,000,000**

Table 1 Lifetime Impact Based on Gulliford Economic Model

CCG	Number of practices	List size Ages 18+	Register	Prevalence (per cent)	No. who would pursue surgery	NICE Guidance	Gulliford Model based on £30,000/QALY (in those who would pursue surgery)		
							Immediate NHS costs (2014)	Incremental Lifetime Costs	Lifetime Net Benefit
NHS AIREDALE, WHARFEDALE AND CRAVEN CCG	16	125,169	12,804	10.23	539	6,734	£4,848,530	£8,063,317	£26,397,554
NHS BRADFORD CITY CCG	27	85,655	11,100	12.96	409	5,107	£3,676,906	£6,114,855	£20,018,711
NHS BRADFORD DISTRICTS CCG	40	253,666	30,861	12.17	1,135	14,191	£10,217,436	£16,992,041	£55,628,265
NHS CALDERDALE CCG	26	171,073	18,843	11.01	734	9,179	£6,609,083	£10,991,192	£35,982,785
NHS GREATER HUDDERSFIELD CCG	39	193,843	19,359	9.99	841	10,517	£7,571,934	£12,592,455	£41,224,972
NHS HARROGATE AND RURAL DISTRICT CCG	17	130,594	10,539	8.07	554	6,929	£4,988,751	£8,296,510	£27,160,980
NHS LEEDS NORTH CCG	27	168,256	14,252	8.47	692	8,656	£6,232,044	£10,364,160	£33,930,018
NHS LEEDS SOUTH AND EAST CCG	41	209,932	24,511	11.68	892	11,153	£8,029,989	£13,354,221	£43,718,829
NHS LEEDS WEST CCG	37	305,944	25,589	8.36	1,232	15,394	£11,083,691	£18,432,659	£60,344,538
NHS NORTH KIRKLEES CCG	29	144,769	16,955	11.71	636	7,955	£5,727,249	£9,524,663	£31,181,687
NHS WAKEFIELD CCG	40	290,260	35,839	12.35	1,219	15,238	£10,971,514	£18,246,104	£59,733,797
WEST YORKSHIRE	339	2,079,161	220,652	10.61%	8,884	111,052	£79,957,127	£132,972,179	£435,322,136

NHS Financial Impact on STP

So, for 23,000 patients, the OHE model estimates:

Component	Year 1 £m	Year 2 £m	Year 3 £m	Total Year 1 to Year 3 £m
NHS Savings	-£8	£56	£56	£104

Applying an arithmetic adjustment of $8,884/23000 = 0.386$

For 8,884 patients:

Component	Year 1 £m	Year 2 £m	Year 3 £m	Total Year 1 to Year 3 £m
NHS Savings	-£3.09	£21.63	£21.63	£40.17

Societal Financial Impact on STP

Findings from a comprehensive literature review undertaken by OHE suggested an **increase of patients in work from 58% to 76%** over the period and average weekly time worked. The share of patients not claiming benefits pre-surgery was **68%** and this rose to **90%** post-surgery. This contribution of **additional paid work** generated following bariatric surgery offset the costs of surgery. This is achieved **one year after surgery**.

For 23,000 patients:

Component	Year 1 £m	Year 2 £m	Year 3 £m	Total Year 1 to Year 3 £m
Paid hours gained	£135	£135	£135	£405

For 8,884 patients:

Component	Year 1 £m	Year 2 £m	Year 3 £m	Total Year 1 to Year 3 £m
Paid hours gained	£52.15	£52.15	£52.15	£156.44

Tables 2 and 3 below set out a pro rata conversion of the OHE model giving estimates on the NHS and wider society of the financial and economic impact of expanding access to surgery to include the 8,884 patients estimated to be likely to pursue bariatric surgery, broken down by CCG.

Summary of Other Key Published Studies

Keating 2015 ⁽⁵⁾

The report of the Scandinavian Obesity Surgery Registry - between Sept 1, 1987, and Jan 31, 2001, 2010 adults who had bariatric surgery and 2037 who were treated conventionally were enrolled. 4030 patients were analysed (2836 who were euglycaemic; 591 who had prediabetes; 603 who had diabetes). Total health-care costs were higher for patients with euglycaemia or prediabetes in the surgery group than in the conventional treatment group, but no difference was detected between the surgery and conventional treatment groups for patients with diabetes. Long-term health-care cost results supported prioritisation of patients with obesity and type 2 diabetes for bariatric surgery. Long-term health-care cost outcomes favour patients with diabetes relative to those with euglycaemia or prediabetes. Mean 15 year **drug cost savings** of \$5487 were accrued in patients in the surgery group with diabetes compared with those in the conventional treatment group, whereas a \$3329 cost saving was accrued in those with prediabetes.

Borisenko 2015 ⁽⁴⁾

A 2015 Swedish study using decision analytic model covering cardiovascular diseases, type 2 diabetes, and surgical complications. Clinical effectiveness and safety were based on the literature and data from the Scandinavian Obesity Surgery Registry. Over a lifetime, surgery led to savings of €8408 and generated an additional 0.8 years of life and 4.1 quality-adjusted life years (QALYs) per patient, which translates into gains of 32,390 quality-adjusted person-years and savings of €66 million for the cohort, operated in 2012. Delays in surgery may also lead to a loss of clinical benefits: up to 0.6 life years and 1.2 QALYs per patient over a lifetime.

Cremieux 2008 ⁽¹¹⁾

A 2008 US study where each of 3,651 patients who underwent bariatric surgery during 1999-2005 was matched to a control subject who was morbidly obese and never underwent bariatric surgery. Bariatric surgery patients and controls were matched based on patient demographics, selected comorbidities, and costs. The mean bariatric surgery investment ranged from approximately \$17,000 to \$26,000. After controlling for observable patient characteristics, it was estimated that all costs had been recouped within 2 years for laparoscopic surgery patients and within 4 years for open surgery patients.

Table 2

Year 1-3 NHS Financial Impact Based on OHE Model

CCG	Number of practices	List size Ages 18+	Register	Prevalence (per cent)	No. who would pursue surgery	NICE Guidance	OHE Model (based on those who would pursue surgery)			
							Year 1 £m	Year 2 £m	Year 3 £m	Total Year 1 to Year 3 £m
NHS AIREDALE, WHARFEDALE AND CRAVEN CCG	16	125,169	12,804	10.23	539	6,734	-£0.187	£1.312	£1.312	£2.44
NHS BRADFORD CITY CCG	27	85,655	11,100	12.96	409	5,107	-£0.142	£0.995	£0.995	£1.85
NHS BRADFORD DISTRICTS CCG	40	253,666	30,861	12.17	1,135	14,191	-£0.395	£2.764	£2.764	£5.13
NHS CALDERDALE CCG	26	171,073	18,843	11.01	734	9,179	-£0.255	£1.788	£1.788	£3.32
NHS GREATER HUDDERSFIELD CCG	39	193,843	19,359	9.99	841	10,517	-£0.293	£2.048	£2.048	£3.80
NHS HARROGATE AND RURAL DISTRICT CCG	17	130,594	10,539	8.07	554	6,929	-£0.193	£1.350	£1.350	£2.51
NHS LEEDS NORTH CCG	27	168,256	14,252	8.47	692	8,656	-£0.241	£1.686	£1.686	£3.13
NHS LEEDS SOUTH AND EAST CCG	41	209,932	24,511	11.68	892	11,153	-£0.310	£2.172	£2.172	£4.03
NHS LEEDS WEST CCG	37	305,944	25,589	8.36	1,232	15,394	-£0.428	£2.998	£2.998	£5.57
NHS NORTH KIRKLEES CCG	29	144,769	16,955	11.71	636	7,955	-£0.221	£1.549	£1.549	£2.88
NHS WAKEFIELD CCG	40	290,260	35,839	12.35	1,219	15,238	-£0.424	£2.968	£2.968	£5.51
WEST YORKSHIRE	339	2,079,161	220,652	10.61%	8,884	111,052	-£3.09	£21.63	£21.63	£40.17

Table 3

Year 1-3 NHS Societal Impact Based on OHE Model

CCG	Number of practices	List size Ages 18+	Register	Prevalence (per cent)	No. who would pursue surgery	NICE Guidance	OHE Model (based on those who would pursue surgery)			
							Year 1 £m	Year 2 £m	Year 3 £m	Total Year 1 to Year 3 £m
NHS AIREDALE, WHARFEDALE AND CRAVEN CCG	16	125,169	12,804	10.23	539	6,734	£3.162	£3.162	£3.162	£9.49
NHS BRADFORD CITY CCG	27	85,655	11,100	12.96	409	5,107	£2.398	£2.398	£2.398	£7.19
NHS BRADFORD DISTRICTS CCG	40	253,666	30,861	12.17	1,135	14,191	£6.663	£6.663	£6.663	£19.99
NHS CALDERDALE CCG	26	171,073	18,843	11.01	734	9,179	£4.310	£4.310	£4.310	£12.93
NHS GREATER HUDDERSFIELD CCG	39	193,843	19,359	9.99	841	10,517	£4.938	£4.938	£4.938	£14.81
NHS HARROGATE AND RURAL DISTRICT CCG	17	130,594	10,539	8.07	554	6,929	£3.253	£3.253	£3.253	£9.76
NHS LEEDS NORTH CCG	27	168,256	14,252	8.47	692	8,656	£4.064	£4.064	£4.064	£12.19
NHS LEEDS SOUTH AND EAST CCG	41	209,932	24,511	11.68	892	11,153	£5.237	£5.237	£5.237	£15.71
NHS LEEDS WEST CCG	37	305,944	25,589	8.36	1,232	15,394	£7.228	£7.228	£7.228	£21.69
NHS NORTH KIRKLEES CCG	29	144,769	16,955	11.71	636	7,955	£3.735	£3.735	£3.735	£11.21
NHS WAKEFIELD CCG	40	290,260	35,839	12.35	1,219	15,238	£7.155	£7.155	£7.155	£21.47
WEST YORKSHIRE	339	2,079,161	220,652	10.61%	8,884	111,052	£52.15	£52.15	£52.15	£156.44

Neovius 2012 ⁽⁷⁾

The report of the Swedish Obese Subjects study is an ongoing, prospective, nonrandomized, controlled intervention study conducted in the Swedish health care system that included 2010 adults who underwent bariatric surgery and 2037 contemporaneously matched controls recruited between 1987 and 2001.

Compared with controls, surgically treated patients used **more inpatient and non-primary outpatient care** during the first 6-year period after undergoing bariatric surgery but not thereafter. Drug costs from years 7 through 20 were lower for surgery patients than for control patients.

Cost savings in the surgery group were seen for medications that treat diabetes and cardiovascular disease between year 7 and 20, resulting in **lower overall drug costs** during that period.

Weiner 2013 ⁽⁹⁾

A multiyear analysis of health care costs by type of procedure within a large cohort of privately insured persons who underwent bariatric surgery compared with a matched nonsurgical cohort. **Total costs were greater in the bariatric surgery group during the second and third years following surgery** but were similar in the later years. However, **the bariatric group's prescription and office visit costs were lower** and their inpatient costs were higher.

Concluded that **bariatric surgery does not reduce overall health care costs in the long term.**

Sensitivity Analyses ⁽⁴⁾

Sensitivity analyses show that:

- Four parameters can affect the cost saving effect of surgery (i.e., surgery becomes cost-effective):
 1. The magnitude of the effect of surgery
 2. Start age (better to operate patients when they are younger)
 3. BMI (better to operate patients when BMI is lower)
 4. Inclusion of an annual visit to a surgeon during the follow-up program from year three and onwards.
- Bariatric surgery produces clinical benefits (additional QALYs) in all patients and has a **cost saving effect in 99.1 % of cases while, in the remaining 0.9 %, it is cost-effective**
- Change of cost variables with 50 % variations did not influence the cost saving effect of surgery.
- **The most sensitive parameter from cost variables was the annual cost of type 2 diabetes.**

Discussion and Conclusions

The report is dominated by the interplay between economics and finance, and the challenges in balancing both planning models and ledgers. This has complicated the approach taken and the author recognises the effect this will have on both internal and external validity. The evidence base is relatively limited, however the Gulliford study is both recent and comprehensive. Nonetheless, it is felt that the findings and modelling contained within this report are sufficiently robust to inform the strategic planning process across the STP CCG footprint.

The report provides:

- An impression of the fiscal environment and impact on budgets and financial planning
- The basis of a rational business model
- Further evidence review to add to the report presented at the September 2017 WY&H STP Clinical Forum

Key conclusions are:

- 1) It is clear that significant financial investment is required to expand access to bariatric surgery to those who would emerge from the NICE-defined pool of patients to actually pursue and receive the surgery, estimated at nearly 9,000 across the STP footprint.
- 2) Patients who receive bariatric surgery will require other interventions and services beyond the surgery itself
- 3) It is not appropriate or rational to define bariatric surgery as cost **saving**, its key returns are **system wide** and substantial and reflect a reduction in mortality and mortality – **surely the definition of successful health care**
- 4) Commissioners and providers can expect to see relatively early, significant, tangible reductions in financial spend across a number of clinical pathways.
- 5) However, these reductions in spend will likely be offset across the health care system along a relatively long time horizon as mortality falls and the cohort of patients experiences a longer life expectancy.
- 6) There is limited evidence in the literature regarding occupational outcomes following bariatric surgery ⁽¹²⁾, however the social impact on the cohort of patients might be expected to include a reduction in disability, benefit claiming and unemployment.

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**Appendix 1 Access to Bariatric Surgery: Presented to Clinical
Forum September 2017**



CCGs working together

Airedale, Wharfedale and Craven CCG
Bradford City CCG
Bradford Districts CCG

ACCESS TO BARIATRIC SURGERY IN WEST YORKSHIRE AND HARROGATE

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August 2017

Executive Summary

Severe and morbid obesity are increasing rapidly in the UK. Bariatric surgery, the use of surgical procedures for treatment of obesity, is considered to be a clinically and cost-effective effective intervention for severe and morbid obesity. From April 2017, Clinical Commissioning Groups have assumed responsibility, from NHS England, for commissioning Bariatric Surgery.

This report is designed to inform this transfer process and is set out in two parts:

1. In order to inform readers of the key factors influencing need, demand and commissioning/provision of bariatric surgery, a review of key published literature is provided, presenting key findings from research and policy.
2. A data analysis comprising key demand/need activity figures for West Yorkshire (which includes Harrogate and Rural District CCG for the purposes of this report)

Key Points:

Literature Review

- Bariatric Surgery is a clinically and cost-effective intervention for serious/morbid obesity
- Bariatric Surgery reduces risk of Type 2 Diabetes, induces remission of Type 2 Diabetes and lowers associated mortality
- In severely/morbidly obese patients who do not undergo surgery, the probability of attaining normal body weight is **1 in 290 annually for men** and **1 in 677 for women**
- 24% of Bariatric surgery in England is provided in the private sector
- Increased throughput in tier 3 obesity services increases demand for Bariatric Surgery
- Delaying Bariatric surgery is less clinically effective and less cost effective
- In England there are 2.6 million people eligible for Bariatric Surgery, with 0.6 receiving it
- 0.8% of those eligible for Bariatric Surgery would be expected to ultimately access it
- Patients are less likely to receive Bariatric Surgery if they are **non-white, male, poorer, older, sicker, living in a rural location and non-privately insured**

Data Analysis

- There are over **100,000** people in West Yorkshire who are eligible to receive Bariatric Surgery according to current national/NICE guidance
- **357** Bariatric Surgery procedures were undertaken in West Yorkshire in 2015/16 at a cost of just over **£1,000,000**
- **In West Yorkshire, 4%** of those *expected* to ultimately access Bariatric Surgery do so
- Access to Bariatric Surgery across West Yorkshire and Harrogate is inequitable based on CCG comparisons
- There is notable variation in the prevalence of obesity and diabetes between the CCGs
- There are broad differences in deprivation indices between the 11 CCGs
- Airedale, Wharfedale and Craven CCG and Harrogate and Rural District CCGs have notably larger rural communities in comparison to the other WY&H CCGs
- Harrogate and Rural District CCG does not have a Tier 3 Weight Management service

Introduction

Severe and morbid obesity are increasing rapidly in the UK. Bariatric surgery, the use of surgical procedures for treatment of obesity, is considered to be a clinically and cost-effective effective intervention for severe and morbid obesity. In 2006, the National Institute for Health and Care Excellence (NICE) recognised that there is a large gap between population need, measured in terms of the prevalence of obesity, and service delivery within the NHS. NICE recommended a gradual expansion of bariatric surgery utilisation for patients with morbid obesity, as well as for patients with severe obesity when comorbidity is present. In addition, the International Diabetes Federation has advocated more widespread use of bariatric surgery in the management of obese patients with poorly controlled Type 2 Diabetes ⁽¹⁾.

In April 2013, NHS England assumed responsibility for the commissioning of bariatric surgery, with this role having previously being undertaken by local Primary Care Trusts (PCTs). As of April 2017, this responsibility has returned to local Clinical Commissioning Groups (CCGs). In the West Yorkshire and Harrogate footprint, the process of this transfer is being overseen by the 3 Bradford CCGs.

This report outlines the key need/demand and capacity issues to be considered in advance of development of a bariatric surgery commissioning policy and process for WY&H.

The report is in 2 parts:

1. Literature Review

This section is not a systematic review per se, rather it highlights key papers from the existing literature that inform key aspects governing access to bariatric surgery. Papers are as up to date as is possible but some are older than others, in addition there was some paywall limitation and a small number are gleaned from abstracts. Not all papers are from the UK but are externally valid other than for insurance-based differences.

It is strongly recommended that this section is not passed over as it informs the data set out in part 2.

2. Data Analysis

This section presents and interprets key activity, need, demand and epidemiological data in order to facilitate a capacity:demand/need perspective on commissioning bariatric services across West Yorkshire and Harrogate.

Section 1 - Literature Review: Key Factors that Influence Access

1. Economic Circumstances

The case for the cost-effectiveness of bariatric surgery for morbid obesity in comparison to alternative management strategies has already been made ⁽²⁾. To exemplify this, a recent controlled UK analysis of Primary Care Electronic Health Records of patients with severe and morbid obesity found that:

- In patients who did not undergo bariatric surgery, the probability of participants with severe/morbid obesity attaining normal body weight was **1 in 1290 annually for men and 1 in 677 for women**
- The costs of health-care utilisation increased with Body Mass Index (BMI) category but **obesity-related physical and psychological comorbidities were the main drivers of health-care costs**
- The estimated cost per QALY gained in bariatric surgery was £7129 (95% CI £6775 to £7506) – highly cost effective
- Bariatric surgery was associated with increased immediate and long-term health-care costs but these are exceeded by expected health benefits to obese individuals with **reduced onset of new diabetes, remission of existing diabetes and lower mortality.**

In addition, a comprehensive European study published in 2015 found that Bariatric Surgery, over a lifetime horizon, is likely to lead to significant cost savings to health care systems in addition to the known clinical benefits ⁽³⁾.

2. System Characteristics

a. Macrosystem

Patient access to suitable treatment can be affected by the lack of consistency in of commissioning Tier 3 weight management services. This has created confusion for surgeons and hospitals about whether patients have gone through the correct pathways of care, and can therefore access surgery ⁽⁴⁾. The RCS has recommended that NHS England should reiterate that access to NHS bariatric surgical treatment should be based on clinical need, and uniform across the UK ⁽⁴⁾. Additionally, The National Bariatric Surgery Register 2011-13 showed **76%** being funded by the National Health Service (NHS), **24%** being independently funded and a tiny proportion actually being funded by private insurers ⁽⁵⁾.

b. Within-System Allocation of Resources

A 2014 UK service-based simulation study demonstrated that, rather than reducing demand on bariatric services, the introduction of additional resources at Tiers 1-3 is likely to speed up access to bariatric surgery and increase waiting times ⁽⁶⁾. This was evidence by a bottleneck developing between physician-led lower tier clinics and the surgical part of the service, with the latter not having the available capacity to accommodate the number of additional patients placed on the surgical waiting lists.

Conversely, as expected, the addition of surgical resources and their associate capacity brought about improvements in patient waiting times in the surgical part of the service ⁽⁶⁾. As an immediate outcome of this study the Trust decided to add more surgeons to the service instead of adding physicians alone.

c. Timeliness/delays

A further 2017 simulation study conducted in Brazil found that delaying bariatric operations is more expensive and less effective when compared with prompt surgery and very cost-effective compared to no surgery, recommending that systems should pursue strategies to accelerate access to surgery in order to decrease obesity related complications and mortality of patients, and also to improve cost-effectiveness ⁽⁷⁾.

d. Population Impact/Suitability of National Guidelines

Current NICE Guidance recommends that bariatric surgery: ⁽⁸⁾

- Is provided for morbidly obese patients, i.e **BMI≥40 or BMI ≥35 in the presence of specified comorbidities** *when other interventions for weight loss have failed*
- Should be considered as **first line treatment** for people with a **BMI >50**

A national expert has suggested that the restrictions imposed by NICE are based on out of date modelling, **which took limited account of the impact of surgery on diabetes and mortality**. It was suggested that revised modelling is needed of the cost effectiveness of the entire range of interventions in a disease rather than technology oriented model. This should include effects beyond the NHS, particularly the willingness of many people to pay for bariatric surgery and also the impact that surgery has on privately borne costs, particularly employment ⁽⁹⁾.

A 2013 analysis of the English system found that, although NHS provision of bariatric surgery had risen by 300% over the previous six years, less than 0.6% of those potentially eligible (2.1 – 2.6 million people ^(10, 11)) received surgery, with access to surgery varying widely between regions and primary care trusts ⁽¹²⁾.

Following this, in 2016 a further analysis estimated that in England: ⁽¹¹⁾

- 1.6 million people have a BMI of at least 40 ⁽¹³⁾

- There are at least half a million people with diabetes and other obesity related disease with a BMI ≥ 35 , and lowering the BMI threshold to 30 for recent onset diabetes increases this number to about a million.
- Therefore at least 2.6 million people meet NICE criteria for surgery ⁽¹⁰⁾

NICE has estimated that ~ **80%** of patients above the BMI thresholds would be medically and psychologically suitable for surgery. About **10%** of them might wish to pursue this option ⁽¹⁴⁾.

The pool of eligible people continues to escalate as an extra 60 000 people a year reach a BMI of 40. The number of people with type 2 diabetes has also increased by 60% over the past decade (to 3.3 million or 5% of the adult population), and 9.5% of adults are predicted to have the condition by 2030 (190 000 new patients each year) ⁽¹⁵⁾.

e. Public Preferences

A 2015 study conducted in Australia ⁽¹⁶⁾ in which members of the public were asked which groups of patients should be prioritised for surgery showed a preference to prioritise individuals who:

- Demonstrated a strong commitment to maintaining a healthy lifestyle
- Were categorised with very severe (BMI ≥ 50) or (to a lesser extent) severe (BMI ≥ 40)
- Already had obesity-related comorbidity
- Had a family history of obesity
- Had a greater chance of maintaining weight loss
- Had spent a longer time on the waiting list.

In addition, lifestyle commitment was considered to be more than twice as important as any other criterion and there was little tendency to prioritise according to the age of the recipient.

3. Population Socioeconomic Characteristics

A 2010 US study examining 159,116 records representing 774,000 patients with morbid obesity from a 2006 nationwide inpatient sample determined the likelihood of accessing bariatric surgery associated with socio-economic status as an independent factor ⁽¹⁷⁾.

Lower income and non-private insurance status associated with significantly lower odds ratios for bariatric surgery. Of particular note, **rural-dwelling patients who were non-white, male, poorer, older, sicker, and non-privately insured almost never received bariatric surgery (Odds Ratio = 0.0089).**

In respect of the contribution of differing rates of access to private surgery, a 2015 study undertaken in Australia analysed rates of access to bariatric surgery, according to the **socio-economic positions** of severely obese Australian adults using all bariatric surgery episodes undertaken in Australian adults between July 2011 and June 2012 (n = 14 056)⁽¹⁸⁾. In Australia, **89%** of bariatric surgery is primarily available through the private hospital system (eligible patients must have private health insurance and pay an out-of-pocket fee). This compares with UK figures of **26.2%** and **76%** respectively so the effect size will be reduced in comparison. The authors found that:

- The lowest annual treatment rates were observed in the most disadvantaged quintiles, whereas and highest rates were observed in the least disadvantaged quintiles
- Severely obese people in the 2 most disadvantaged quintiles were 40% less likely to receive bariatric surgery relative to counterparts in the 2 least disadvantaged quintiles.
- In the public hospital setting (11% of 2011-2012 episodes), no fees are incurred by patients; however, long wait times are common. **Affordability is likely to be a key contributor to the observed socioeconomic inequalities.**
- It is likely that these treatment inequalities will further increase the already large number of socioeconomic inequalities in the prevalence and consequences of severe obesity.

4. Population Urban:Rural Characteristics

A 2016 US study retrospectively reviewed patients who had undergone bariatric surgery over a 2 year period, categorising them based on their rural-urban commuting area codes. The authors found that⁽¹⁹⁾:

- Despite a higher rate of obesity in rural populations, there was a 23% decrease in performed bariatric procedures compared to urban populations
- Rural bariatric patients had decreased success at completing bariatric programs, although this was likely confounded by insurance type.
- When the rural patients did access bariatric surgery, their outcomes were unchanged compared with urban patients.

A 2010 US study examining 159,116 records representing 774,000 patients with morbid obesity from a 2006 nationwide inpatient sample determined the likelihood of accessing bariatric surgery associated with urban:rural residence as an independent factor⁽¹⁷⁾. The authors found that, although obesity rates were higher in rural populations, rural residents were 23% less likely to receive bariatric surgery than urban residents.

Section 2 – Data Analysis

Table 1 sets out activity, need and demand figures for Bariatric surgery across the West Yorkshire and Harrogate CCGs. Table 2 sets out provider activity data for 2015/16 and 2016/17

Key Observations

- There are over **100,000** people in West Yorkshire and Harrogate who are eligible to receive Bariatric Surgery according to current national/NICE guidance
- **357** Bariatric Surgery procedures were undertaken in West Yorkshire and Harrogate in 2015/16 at a cost of just over **£1,000,000**
- **4%** of those who would be expected to ultimately access Bariatric Surgery do so
- Access to Bariatric Surgery across West Yorkshire and Harrogate is inequitable based on CCG comparisons
- There is substantial variation in the prevalence of obesity and diabetes between the 11 CCGs
- There are broad differences in deprivation indices between the 11 CCGs
- Airedale, Wharfedale and Craven CCG and Harrogate and Rural District CCGs have notably larger rural communities in comparison to the other West Yorkshire CCGs
- Harrogate and Rural District CCG does not have a Tier 3 Weight Management service
- Of the estimated need, it should be remembered that **80%** will be medically and psychologically suitable for surgery and **10%** of them will wish to pursue this option.

Data Notes:

- For the purpose of this report, Harrogate and Rural District CCG is included within the “West Yorkshire CCGs”
- Confidence Intervals are not used for the percentages shown as they would be irrationally broad, nonetheless there are logical observations which underpin conclusions satisfactorily
- Index of Multiple Deprivation (IMD) – global average of all domains for each CCG
- There was some variation in availability and timeliness of data between CCGs with some data being for 2015/16 and some for 2016/17 – following discussion with stakeholders this was not felt to significantly affect the findings presented
- Provider data for Bradford teaching Hospitals was not available for 2016/17
- Correlation calculations between access percentages and; deprivation; obesity prevalence; diabetes prevalence are all **negative** but fail to reach statistical significance
- Correlation calculation between access percentages and % pop. in rural location is **positive** but fails to reach statistical significance
- It is likely, however, that these 4 confound each other

Table 1 - Access to Bariatric Surgery – West Yorkshire and Harrogate, by CCG

CCG Name	2015-16 Activity	CCG Population	% accessing surgery	CCG Adult Pop.	% accessing surgery	Tier 3 Activity	% accessing surgery	Estimated Need	% Need Met	No. who would pursue surgery	% need met	Obesity Prevalence	Diabetes Prevalence	2015 IMD Average	% Population In Rural Location
NHS AIREDALE, WHARFEDAILE AND CRAVEN CCG	10	155,600	0.0064%	122,506	0.0082%	37	27.03%	6,734	0.1485%	539	1.86%	10.1%	6.7%	18.939	27%
NHS BRADFORD CITY CCG	8	118,000	0.0068%	86,826	0.0092%	110	7.27%	5,107	0.1567%	409	1.96%	11.2%	7.7%	51.549	4%
NHS BRADFORD DISTRICTS CCG	55	327,900	0.0168%	247,533	0.0222%			14,191	0.3876%	1,135	4.84%	13.0%	9.7%	32.317	0%
NHS CALDERDALE CCG	53	212,100	0.0250%	167,400	0.0317%	60	88.33%	9,179	0.5774%	734	7.22%	10.6%	6.1%	24.607	17%
NHS GREATER HUDDERSFIELD CCG		243,000						10,517		841	0.00%	9.9%	5.9%	21.602	18%
NHS HARROGATE AND RURAL DISTRICT CCG	35	160,100	0.0219%	128,131	0.0273%			6,929	0.5051%	554	6.31%	7.5%	5.5%	10.373	33%
NHS LEEDS NORTH CCG	21	200,000	0.0105%	165,719	0.0127%	29	72.41%	8,656	0.2426%	692	3.03%	11.5%	7.8%	20.016	0%
NHS LEEDS SOUTH AND EAST CCG	89	257,700	0.0345%	207,717	0.0428%	60	148.33%	11,153	0.7980%	892	9.98%	8.1%	6.3%	36.467	16%
NHS LEEDS WEST CCG	33	355,700	0.0093%	296,480	0.0111%	71	46.48%	15,394	0.2144%	1,232	2.68%	10.9%	6.8%	23.385	4%
NHS NORTH KIRKLEES CCG	7	183,800	0.0038%	141,525	0.0049%	289	2.42%	7,955	0.0880%	636	1.10%	7.5%	4.9%	26.984	0%
NHS WAKEFIELD CCG	46	352,100	0.0131%	286,405	0.0161%	300	15.33%	15,238	0.3019%	1,219	3.77%	11.7%	6.9%	26.892	17%
TOTAL	357	2,566,000	0.0139%	1,850,242	0.0193%	956	37.34%	111,052	0.3215%	8,884	4.02%				

Table 2 - Bariatric Surgery Provider Activity, West Yorkshire by Provider

Provider Name	2015/16 Activity	2015/16 @ 2016/17 Prices	16/17 Activity
BRADFORD TEACHING HOSPITALS NHS FOUNDATION TRUST	61	316,619	0
CALDERDALE AND HUDDERSFIELD NHS FOUNDATION TRUST	77	250,130	92
LEEDS TEACHING HOSPITALS NHS TRUST	160	274,818	104
MID YORKSHIRE HOSPITALS NHS TRUST	39	186,143	65
TOTAL	337	1,027,710	262

Discussion

This report set out to inform commissioners and policy makers of the key issues governing access to Bariatric Surgery and to describe need/demand and activity across the West Yorkshire Clinical Commissioning Groups, including Harrogate and Rural District CCG.

The results show us that Bariatric Surgery is a clinically and cost-effective intervention for serious/morbid obesity, with 2.6 million people in England eligible for surgery, but only with 0.6% receiving it. The published evidence demonstrates that patients are less likely to receive Bariatric Surgery if they are non-white, male, poorer, older, sicker, living in a rural location and non-privately insured. Across West Yorkshire and Harrogate, there are over 100,000 people who are eligible to receive Bariatric Surgery according to current national/NICE guidance, with 357 procedures were undertaken in West Yorkshire and Harrogate in 2015/16 at a cost of just over £1,000,000. Access to Bariatric Surgery across West Yorkshire and Harrogate is inequitable based on CCG comparisons

An examination of the results in relation to existing research reveals that, in West Yorkshire and Harrogate, correlations between access to surgery and deprivation, rurality, prevalence of obesity and prevalence of Type 2 Diabetes are weak. At a population level, 0.32% of those eligible to receive surgery access it in comparison to 0.6% nationally, and 4% of those who we would expect to pursue surgery in practice are accessing it.

The findings of this report are important as they describe the inequity of access between CCGs in respect of access to Bariatric Surgery and describe, the proportion of those who we would expect to access surgery who ultimately do so. In addition, the literature findings reported are crucial in framing any future debate.

There are a number of limitations in the study, including a necessary lack of confidence intervals, variation in the provision of weight management services, and a small amount of missing data. Nonetheless the results are generalisable and meaningful in the context in which they are set.

It is recommended that the findings of this report are carefully considered as commissioning policy for Bariatric Surgery across West Yorkshire and Harrogate is discussed further.

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Bariatric Surgery (across West Yorkshire and Harrogate) 2016-17

CCG of patient (via registered practice)	HRG	Bradford Teaching Hospitals NHS Trust				Calderdale And Huddersfield NHS Trust				Leeds Teaching Hospitals NHS Trust				Mid Yorkshire Hospitals NHS Trust				Salford Royal NHS Trust				South Tees Hospitals NHS Trust				York Hospitals NHS Trust				ALL PROVIDERS							
		Activity	Total Beddays	Total Critical Care Beddays	Total Cost	Activity	Total Beddays	Total Critical Care Beddays	Total Cost	Activity	Total Beddays	Total Critical Care Beddays	Total Cost	Activity	Total Beddays	Total Critical Care Beddays	Total Cost	Activity	Total Beddays	Total Critical Care Beddays	Total Cost	Activity	Total Beddays	Total Critical Care Beddays	Total Cost	Activity	Total Beddays	Total Critical Care Beddays	Total Cost								
AIREDALE, WHARFEDAILE AND CRAVEN	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over	4	9	6	£26,104					1	1	1	£6,604																								
	FX852 - Restrictive Stomach Procedures for Obesity	6	15	8	£31,164					1	2	2	£5,257																								
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity	1	0	0	£1,394																																
	F2982 - Adjustment of Gastric Band for Obesity																																				
BRADFORD CITY	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over																																				
	FX852 - Restrictive Stomach Procedures for Obesity	3	6	3	£15,582																																
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity																																				
	F2982 - Adjustment of Gastric Band for Obesity																																				
BRADFORD DISTRICTS	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over	19	74	40	£124,642																																
	FX852 - Restrictive Stomach Procedures for Obesity	15	50	24	£77,910																																
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity									1	1	0	£5,229																								
	F2982 - Adjustment of Gastric Band for Obesity																																				
CALDERDALE	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over					21	77	5	£127,673																												
	FX852 - Restrictive Stomach Procedures for Obesity					3	6	0	£15,826																												
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity					4	6	0	£4,396																												
	F2982 - Adjustment of Gastric Band for Obesity					1	4	0	£1,089																												
GREATER HUDDERSFIELD	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over					14	44	2	£84,958																												
	FX852 - Restrictive Stomach Procedures for Obesity					2	5	0	£10,551																												
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity					1	0	0	£1,099																												
	F2982 - Adjustment of Gastric Band for Obesity																																				
HARROGATE AND RURAL DISTRICT	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over																																				
	FX852 - Restrictive Stomach Procedures for Obesity																																				
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity																																				
	F2982 - Adjustment of Gastric Band for Obesity																																				
LEEDS NORTH	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over									2	2	4	£13,208																								
	FX852 - Restrictive Stomach Procedures for Obesity					6	14	6	£31,542																												
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity					1	0	0	£1,411																												
	F2982 - Adjustment of Gastric Band for Obesity																																				
LEEDS SOUTH AND EAST	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over									5	16	11	£33,020																								
	FX852 - Restrictive Stomach Procedures for Obesity					8	17	13	£42,056																												
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity																																				
	F2982 - Adjustment of Gastric Band for Obesity																																				
LEEDS WEST	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over									3	7	6	£19,812																								
	FX852 - Restrictive Stomach Procedures for Obesity									8	16	12	£42,056																								
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity																																				
	F2982 - Adjustment of Gastric Band for Obesity																																				
NORTH KIRKLEES	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over																																				
	FX852 - Restrictive Stomach Procedures for Obesity																																				
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity					1	0		£1,099																												
	F2982 - Adjustment of Gastric Band for Obesity																																				
WAKEFIELD	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over																																				
	FX852 - Restrictive Stomach Procedures for Obesity																																				
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity																																				
	F2982 - Adjustment of Gastric Band for Obesity																																				
ALL CCGS	F2842 - Stomach Bypass Procedures for Obesity, 19 years and over	23	83	46	£150,746	35	121	7	£212,631	11	26	22	£72,644	30	74	4	£199,246	2	2	0	£13,332	0	0	0	£0	4	17	13	£26,112	105	323	92	£674,711				
	FX852 - Restrictive Stomach Procedures for Obesity	24	71	35	£124,656	5	11	0	£26,377	23	49	33	£120,911	15	23	1	£78,653	0	0	0	£0	1	2	0	£5,172	1	5	0	£5,196	69	161	69	£360,965				
	FX862 - Endoscopic Insertion of Gastric Balloon or Sleeve, for Obesity	1	0	0	£1,394	6	6	0	£6,595	1	0	0	£1,411	2	0	0	£2,808	0	0	0	£0	0	0	0	£0	0	0	0	£0	10	6	0	£12,208				
	F2982 - Adjustment of Gastric Band for Obesity	0	0	0	£0	1	4	0	£1,089	0	0	0	£0	0	0	0	£0	0	0	0	£0	0	0	0	£0	0	0	0	£0	1	4	0	£1,089				

Additional capacity required above 2016/17 spend for each CCG to commission activity at least equivalent to 4% of the population who would pursue surgery.

	Expected numbers who would pursue surgery (see appendix 1 for calculations)	16/17 actual surgery numbers by CCG of GP practice	% of numbers who would pursue surgery	Nmbers of procedures 17/18 to October	Number of procedures 17/18 FYE straight line	17/18 FYE as % of expected	4% of expected	Additional cases 18/19 over 16/17 to achieve 4%	Additional cases over 17/18 FYE to achieve 4%	Additional costs of cases (at average cost of £5177) above 16/17 £
AWC	539	14	2.6%	7	12	2.2%	21.56	8	10	39,138
Bradford City	409	3	0.7%	2	3	0.8%	16.36	13	13	69,165
Bradford Districts	1135	35	3.1%	20	34	3.0%	45.4	10	11	53,841
Calderdale	734	30	4.1%	18	31	4.2%	29.36	-1	-1	3,313
Huddersfield	841	17	2.0%	21	36	4.3%	33.64	17	-2	86,145
HARD	554	3	0.5%	3	5	0.9%	22.16	19	17	99,191
Leeds North	692	7	1.0%	7	12	1.7%	27.68	21	16	107,060
Leeds South and East	892	13	1.5%	9	15	1.7%	35.68	23	20	117,414
Leeds West	1232	12	1.0%	11	19	1.5%	49.28	37	30	192,999
North Kirklees	636	17	2.7%	4	7	1.1%	25.44	8	19	43,694
Wakefield	1219	32	2.6%	30	51	4.2%	48.76	17	-3	86,767
	8883	183	2.1%	132	226	2.5%	355	172	129	890,444

OUTLINE SERVICE INVESTMENT CASE

Name of proposer:	West Yorkshire and Harrogate working group on severe and complex obesity pathways
Date:	
Title of Proposal:	Proposal to create a consistent approach to obesity surgery and related specialist weight management and assessment clinics across the STP area
Description of proposal:	<p>The proposal is to ask each CCG to commit to the same rate of commissioning for obesity surgery procedures across the STP area, and to commissioning those components of a Tier 3 service that are required to safely assess and prepare eligible patients for surgery and then follow up patients who have had surgery. The current local rate of obesity surgery commissioning is extremely low, and has reduced in recent years and there is significant inequality of access across the STP. Obesity is a clear risk factor in cancer, cardiovascular disease and other areas, and obesity surgery is a cost-effective intervention.</p> <p>Alongside this investment case for additional capacity, we also currently developing an STP wide commissioning policy for obesity surgery which would give priority to those patients with highest BMI where the impact on health outcomes is likely to be greatest. (This would give priority to patients with a BMI of 50 or 45 with comorbidities, which is a more restrictive policy than the current NICE guidance.) The policy which is currently being drafted following consultation with obesity surgeons, would also limit the range of procedures to those which are known to be most effective.</p>
Strategic fit:	<p>The West Yorkshire and Harrogate STP is committed to reducing health inequalities and reducing avoidable harm by tackling those aspects of health and lifestyle that impact on ill health and can lead to increased risks of Cancer, heart disease and other illness. Obesity surgery and specialist weight management should be seen as contributing to this strategy, particularly since pre-surgical health optimisation is also something that is being widely debated within the area and requires supportive services to enable patients to be able to lose weight prior to surgery.</p>
Impact / benefits:	<ul style="list-style-type: none"> • Would lead to a further 150 patients per year across the STP area having obesity surgery • Would reduce the variation in access between CCG areas <p>There is clear evidence that bariatric surgery reduces healthcare spend in a number of key areas, in particular:</p> <ul style="list-style-type: none"> • Reduction in the incidence of type 2 diabetes • Induces remission of type 2 diabetes • Reduced number of cardiovascular deaths • Reduced number of transient ischaemic attacks • Lower mean annual drug costs <ul style="list-style-type: none"> ▪ Borisenko, O. et al., 2015. Bariatric Surgery can Lead to Net Cost Savings to Health Care Systems: Results from a Comprehensive European Decision Analytic Model. <i>Obesity Surgery</i>, 25(9), pp.1559–1568. ▪ Keating, C. et al., 2015. Health-care costs over 15 years after bariatric

	<p>surgery for patients with different baseline glucose status: results from the Swedish Obese Subjects study. The lancet. Diabetes & endocrinology, 3(11), pp.855–865.</p> <ul style="list-style-type: none"> ▪ Sjöström, L. et al., 2012. Bariatric surgery and long-term cardiovascular events. JAMA : the journal of the American Medical Association, 307(1), pp.56–65. Neovius, M. et al., 2012. Health care use during 20 years following bariatric surgery. JAMA : the journal of the American Medical Association, 308(11), pp.1132–1141. ▪ Keating, C. et al., 2015. Health-care costs over 15 years after bariatric surgery for patients with different baseline glucose status: results from the Swedish Obese Subjects study. The lancet. Diabetes & endocrinology, 3(11), pp.855–865. <p>Analysis based on the Gulliford study estimates a lifetime net benefit of £49,000 per patient (Gulliford, M.C. et al., 2016. Costs and outcomes of increasing access to bariatric surgery for obesity: cohort study and cost-effectiveness analysis using electronic health records.) Findings from a comprehensive literature review undertaken by EHO suggested an increase of patients in work from 58% to 76% over the period and average weekly time worked. The share of patients not claiming benefits pre-surgery was 68% and this rose to 90% post-surgery. This contribution of additional paid work generated following bariatric surgery off-set the costs of surgery. This is achieved one year after surgery. (Office of Health Economics (2010) Shedding the Pounds – Obesity Management, NICE Guidance and Bariatric Surgery in England.</p> <p>The total number of patients likely to benefit from and opt for surgery across the STP area has been estimated as 8,884. This investment case only proposes an initial very small increase in numbers of operations, recognising the significant financial constraints in the system and focusing on achieving a more equitable level of access. Ideally a significantly higher number of operations would be commissioned across the area if capacity and funding can be made available</p>
Proposed Patient engagement activity	For discussion – ideally within the wider Standardisation of Elective Care programme. Not required for investment case, but may be required for the commissioning policy which is more restrictive than the current NICE guidelines on commissioning of obesity surgery.
High level costs / savings:	Requested additional funding across the STP is in the order of £1million although some of the clinic costs could potentially be covered by existing services being reprioritised.

	Expected numbers who would pursue surgery (see appendix 1 for calculations)	16/17 actual surgery numbers by CCG of GP practice	% of numbers who would pursue surgery	Numbers of procedures 17/18 to October	Number of procedures 17/18 FYE straight line	17/18 FYE as % of expected	4% of expected	Additional cases 18/19 over 16/17 to achieve 4%	Additional cases over 17/18 FYE to achieve 4%	Additional costs of cases (at average cost of £5177) above 16/17 £
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Leeds North	692	7	1.0%	7	12	1.7%	27.68	21	16	107,060
Leeds South and East	892	13	1.5%	9	15	1.7%	35.68	23	20	117,414
Leeds West	1232	12	1.0%	11	19	1.5%	49.28	37	30	192,999
North Kirklees	636	17	2.7%	4	7	1.1%	25.44	8	19	43,694
Wakefield	1219	32	2.6%	30	51	4.2%	48.76	17	-3	86,767
	8883	183	2.1%	132	226	2.5%	355	172	129	890,444

The extra cases are shown both as a change on 16/17 and on 17/18 FYE, as the additional investment required per CCG will depend on their planning assumptions already made for 18/19.

The expected savings for the additional 130 – 150 cases will be through a reduction in:
patients with diabetes; deaths and admissions through CVD; Y increase in patients able to work.

Based on the Gulliford benefit data, there would be a reduction in net lifetime costs of £7.35m (£49,000 for 150 patients) but this needs to be seen over a period of 30 years or so, and would not be cash releasing.

Year(s) of funding
2018/19 onwards; potentially part year effect if there is significant lag time in identifying appropriate surgical capacity and associated services. If non-recurrent funding is available, there may be some potential for additional capacity to be secured non-recurrently if there are patients already on the waiting list due to the extreme local bed pressures.

Where CCGs do not have any tier 3 service or equivalent available to referrers, there would be likely to be a lag time before any patients are available for surgery; even the patients with the highest BMI will require a period of assessment and preparation to confirm their suitability for surgery and ability to comply with the lifestyle changes needed post-surgery. The additional costs and capacity would therefore be likely to fall into 19/20 if there is no current service or current waiting list.

Procurement
The CCG Chief Officers are asked to consider whether we need to progress to open procurement for additional capacity required, or ask WYAAT whether they can develop proposals within existing fixed costs, potentially in partnership with other providers

Tier 4 Bariatric Surgery - West Yorkshire & Harrogate CCGs

**financial impact excludes Critical Care Bed Day costs

CCG Name	16/17 Activity	16/17 Cost	17/18 M7 FOT Activity	17/18 M7 FOT Cost	Average Tariff based on 17/18 casemix	Number who would pursue surgery as per paper	4% eligible as per population for 18/19	18/19 Proposed Cost	Variance in Activity from 16/17	Variance in Cost from 16/17	Variance in Activity from 17/18	Variance in Cost from 17/18
AIREDALE, WHARFEDAILE AND CRAVEN	14	£77,051	12	£67,200	£5,600	539	22	£120,736	8	£43,685	10	£53,536
BRADFORD CITY	3	£15,582	3	£20,589	£6,005	409	16	£98,242	13	£82,660	13	£77,653
BRADFORD DISTRICTS	35	£207,781	34	£170,439	£4,971	1135	45	£225,690	10	£17,909	11	£55,251
CALDERDALE	30	£155,650	31	£152,554	£4,944	734	29	£145,153	-1	£-10,498	-1	£-7,402
GREATER HUDDERSFIELD	17	£96,608	36	£193,394	£5,372	841	34	£180,716	17	£84,108	-2	£-12,678
HARROGATE AND RURAL DISTRICT	3	£18,252	5	£23,254	£4,522	554	22	£100,198	19	£81,946	17	£76,944
LEEDS	34	£189,633	46	£233,695	£5,049	2816	113	£568,715	79	£379,082	66	£335,020
NORTH KIRKLEES	17	£100,940	7	£38,823	£5,662	636	25	£144,035	8	£43,095	19	£105,211
WAKEFIELD	32	£187,475	51	£271,730	£5,284	1219	49	£257,630	17	£70,155	-3	£-14,100
Grand Total	185	£1,048,972	226	£1,171,678		8,883	355	£1,841,115	170	£792,142	129	£669,437