Public Health Business Case: Obesity

Adult Weight Management Services

Executive Summary

Obesity is now a major contributory factor in ill health and premature death in the UK. Obesity is a major causal factor in many diseases and, on average, obesity deprives an individual of an extra nine years of life, preventing many individuals from reaching retirement age[1]. Obesity is linked to a number of health risks including type 2 diabetes, high blood pressure, coronary heart disease, certain cancers, mental ill health and musculoskeletal problems. Increasing obesity prevalence along with the growing needs of ageing population, the rise in non-communicable diseases associated with obesity, and rising public expectations for service intervention and treatment[2] present significant challenges and cost implications to both health and social care systems.

Obesity prevalence varies by socio-economic and ethnic group. Rising obesity rates can result in increased ill-health among disadvantaged communities particularly among black and minority ethnic groups[3]. This can lead to widening inequalities in health and social care. Overall the risk of obesity in women tends to increase with deprivation, and for men, manual occupations and lower educational attainment are associated with the highest risk of obesity[4]. Obesity may also result in adverse social impacts such as discrimination, social exclusion and reduced earnings[5,6]

The Government is concerned about the rising levels of overweight and obesity in England and has set an ambition to achieve a downward trend in the level of excess weight averaged. A coherent, community-wide, multi-agency approach to address obesity prevention and management is vital. Guidance on obesity advises that primary care organisations and local authorities should recommend or endorse weight management programmes but only if these follow best practice.

The Barnet Health and Wellbeing Strategy recognises the problems of obesity and makes a commitment to reduce rates and to improve matters through supporting the most disadvantaged groups.

A working group was established by NHS England and Public Health England to examine issues that have arisen in the commissioning of and access to elements of the integrated obesity care pathway for adults and children[7]. The group

[1] National Obesity Forum 2006, Impact of Obesity. Website www.nationalobeistyforum.org.uk accessed online 10/9/13
[2] Kings Fund (2012) Transforming the delivery of health and social care.
[3] Gatineau M, Mathrani S (2011) Obesity and Ethnicity: Oxford: National Obesity Observatiry
[4] The National Obesity Observatory accessed online 05/12/13
[5] Puhl R, Brownell KD (2011) Bias, discrimination and Obesity. Obesity Research. 9(12): 788-805.
[6] McCormick B, Stone I and Corporate Analytical Team (2007) Economic cost of obesity and the case for government interventions. Obesity Reviews. 8:161-164.
[7] Report of working group (2014) Joined up clinical pathways for obesity obesitycarepathway@phe.gov.uk

concluded that the commissioning responsibilities within the current system should be as follows:

Tiers	Description	Commissioning responsibility
Tier 1	Universal interventions – prevention and reinforcement of healthy eating and physical activity, including public health campaigns and brief advice	Local Authority
Tier 2	Lifestyle weight management services – usually time limited	Local Authority
Tier 3	Clinician-led multi-disciplinary team supporting morbidly obese patients	Clinical Commissioning Group
Tier 4	Bariatric surgery supported by multi-disciplinary team, pre and post operation	NHS England

In Barnet there is a need to co-ordinate our response to obesity to ensure that the population is given the best chance to reduce weight and prevent excess weight where possible. We have begun to tackle this through the development of physical activity initiatives to encourage people to become more active and now need to look more closely at assisting people with excess weight to manage their weight more effectively themselves and prevent obesity in others. In addition, we need to ensure that front line health and social care staff are enabled to raise the subject with clients effectively and signpost them to appropriate services.

To support overweight and obese adults to lose weight and learn how to maintain a healthier weight, this business case proposes weight management services in the community. The focus of the service is to achieve changes in behaviour and to achieve long-term changes in eating habits and lifestyle. The service will form part of the Tier 2 element of a local obesity care pathway

Tier 3 obesity service is for obese individuals usually with Body Mass Index (BMI) ≥35 with co-morbidities or BMI ≥40 with or without co-morbidities who have not responded to previous tier interventions. A Tier 3 service comprise a multi-disciplinary team of specialist led by a clinician and typically including a specialist nurse, specialist dietitian, a clinical psychologist, a specialist physiotherapist and a medical consultant or a GP with special interest[8].

It is recommended that £49,999 over two years be allocated from the Commissioning Intentions Budget (Weight management) to fund Tier 2 weight management services.

1. The Case for Change

[8] Given the high rates of obesity in Barnet this service would cost £300K - £500K per annum if Barnet choose to fund such service.

1.1 National Context

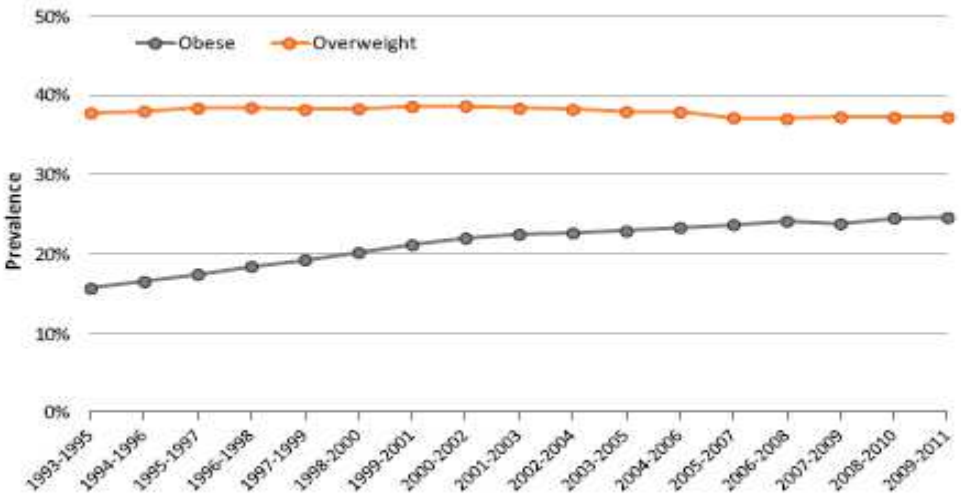
The government's national strategy on obesity 'Healthy Lives Healthy People: a call to action on obesity in England 2011' laid out a clear way forward for dealing with obesity. This built upon the life course approach supported in previous reports such as the Foresight report in 2007[9] and the Marmot Review in 2010 which advocated making the messages and support to maintain a healthy weight consistent from 'cradle to grave'. The emphasis has been to promote individual empowerment, give all partners the opportunity to reduce obesity and transfer the responsibility for prevention to local government[10].

Adult excess weight (overweight and obesity) is identified as an indicator for the Public Health Outcomes Framework 2013-16 for England[11].

1.2 Assessment of need

There has been a marked increase in the proportion of people who have been categorised as obese (BMI 30kg/m2 or over). 13% of men were categorised as obese in 1993 compared with 25% in 2011 and 16% of women were obese in 1993 to 26% in 2011 in the Health Survey for England. Over both sexes the increase has been from 15% in 1993-5 to just below 25% in 2011.

Figure 1 Prevalence of overweight and obese adults (over 16s) 1993-2011 (3 year rolling averages) England



Source: Health Survey for England

Obesity prevalence is challenging to report accurately as BMI is not routinely collected by all GP practices. It is assumed that the upward trend observed on a

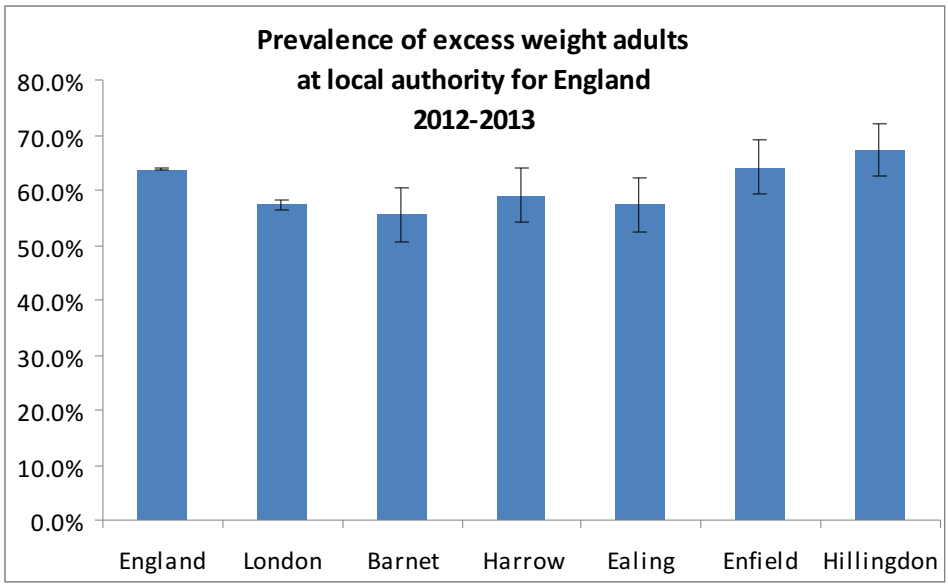
[9] Foresight 2007, Tackling obesities: future choices. Project Report

[10] Healthy Lives Healthy People: a call to action on obesity in England 2011. accessed online www.gov.uk last accessed 20/03/14

[11] http://www.phoutcomes.info/public-health-outcomes-framework#gid/1000042/pat/6/ati/102/page/0/par/E12000004/are/E06000015 last accessed 20/03/14

national level is reflected in Barnet. Previously obesity has been estimated using the Health Survey for England sample modelled estimate. This data has been succeeded by the Active People Survey (Sport England 2012) which has a self reported weight measure for adults and reported in February 2014. It reported that Barnet has lower prevalence of excess weight (obese and overweight together) 55.60% compared to England (63.8%) London (57.3%) and neighbouring boroughs (Figure 2). However this is a self reported measure and may be subject to some under-reporting.

Figure 2. Prevalence of excess weight adults



1.3 Cost of obesity

Nationally, treating the effects of obesity cost to the NHS £5 billion a year. The wider cost to the economy is estimated at closer to £20 billion a year when factors such as lost of productivity and sick days are taken into account.

Although Barnet's excess weight is lower than the London and England average, there are approximately 160,000 adults (16+) within the Borough who are overweight or obese. This poses a significant challenge to the local economy. The total cost of overweight and obesity nationally is estimated to be £94.4 million by 2015[12].

[12] Healthy Weight, Healthy Lives: A toolkit for developing local strategies – Estimating the local cost of obesity accessed online at www.fph.org.uk 10/9/13

Table 2. The estimated annual cost in Barnet to the NHS related to overweight and obesity

overweight and obesity £ million			Estimated annual cost to NHS of diseases in Barnet related to obesity £ million		
2007	2010	2015	2007	2010	2015
85.1	88.3	94.4	44.1	47.8	54.0

In terms of social care and health, in England more than 15 million people have a long-term condition and the care for people with long-term conditions accounts for 70% of total health and social care spend. There are resource implications for the cost of social care for adults with severe obesity, for example, housing adaptations, care arrangements for those who are housebound and transport.

1.4 Evidence base for preventing and treating adult obesity

Weight gain results from energy imbalance: people are eating too much for the amount of physical activity they undertake. A balanced diet and physical activity are both essential for maintaining health. However, over the last 10 years, average adult energy expenditure has decreased by as much as 30%[13], suggesting that declining levels of physical activity are of particular importance in rising obesity levels. Obesity can also be linked to factors such as, environmental, genetic, psychological and social/cultural.

For adults, overweight and obesity are assessed by body mass index (BMI). Obese adults are defined as having a BMI ≥30 and overweight is a BMI ≥25[14]. (Please see appendix 1 for further information on BMI.) The Foresight report predicted that by 2050 60% of men and 50% of women could be clinically obese in England[15].

The effective approach to preventing and treating obesity is provided by NICE (National Institute for Health and Care Excellence), which offers guidance on how clinicians should assess obesity, what they should do to treat obesity, how people can remain at a healthy weight and how to make healthy food choices easier for everyone[16].

Evidence base for brief interventions

Evidence suggests that brief interventions lasting up to 30 mins are as effective as more intensive interventions and more effective than no intervention[17],[18]. Brief

[13] Foresight 2007, Tackling obesities: future choices. Project Report
[14] National Institute of Clinical Excellence (2006) CG 43 Obesity - Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children 2006.
[15] Foresight 2007, Tackling obesities: future choices. Project Report
[16] National Institute of Clinical Excellence (2006) CG 43 Obesity - Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children 2006.
[17] Shaw K, O'Rourke P, Del Mar C, Kenardy J. Psychological interventions for overweight or obesity. Cochrane Database Syst Rev. 2005(2):CD003818.

interventions range from a single session providing information and advice to a number of sessions of motivational interviewing or behaviour change counselling.

One of the most widely used evidence-based strategies for behavioural counselling is motivational interviewing (MI). This is a collaborative, person-centred form of guiding to elicit and strengthen motivation for change[19]. Motivational interviewing is often delivered over an extended time period[20], and does tend to take longer than giving direct advice[21],[22]. While there is evidence that a total of at least 60 minutes MI counselling is optimal, it has also been shown to be effective in brief interventions of only 15 minutes[23]. As far as possible the approach to brief interventions should be planned and consistent and follow an agreed 'care pathway' which includes a periodic follow up[24].

Evidence base for commercial weight management

There is a large body of evidence supporting commercial weight loss intervention programmes[25],[26],[27].

From an eight arm randomised controlled trial (RCT)[28] done in a primary care trust in Birmingham to assess the effectiveness of a range of weight management programmes in terms of weight loss, it was found that commercially provided weight management services are more effective and cheaper than primary care based services led by specially trained staff, such as obesity clinics, which are ineffective.

Examples of programmes used in Birmingham study are:

- Weight Watchers
- Slimming World
- Rosemary Conley

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[18] Greaves CJ, Sheppard KE, Abraham C, Hardeman W, Roden M, Evans PH, et al. Systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. BMC Public Health. 2011 Feb;11(1):119.

[19] Stange KC, Woolf SH, Gjeltema K. One minute for prevention: the power of leveraging to fulfil the promise of health behaviour counselling. Am J Prev Med. 2002 May;22(4):320–3.

[20] Rubak S,.Sandbaek A, Lauritzen T, Christensen B. Motivational interviewing: a systematic review and meta-analysis. Br J Gen Pract. 2005 Apr;55(513):305–12.

[21] Emmons KM, Rollnick S. Motivational interviewing in health care settings. Opportunities and limitations. Am J Prev Med. 2001 Jan;20(1):68–74

[22] Bedard J. Initiate a behaviour change in 3 minutes. June 2010. http://www.lemieuxbedard.com/emc/

[23] Department of Health. Obesity Care Pathway and Your Weight, Your Health. London; 2006.

[24] Department of Health. Let's Get Moving. Commissioning Guidance. London; 2009.

[25] Truby H. et.al. (2006) Randomised controlled trial of four commercial weight loss programmes in the UK: initial findings from the BBC diet trials. BMJ May 2006.

[26] Dansinger ML et.al. (2005) Comparison of the Atkins, Ornish, Weight Watchers and Zone Diets for Weight Loss and Heart Disease Risk Reduction. JAMA 2005, 293:43-53.

[27] Heshka S. et. al. (2003) Weight loss with self-help compared with a structured programme. JAMA 2003, Vol 289:1792-1798.

[28] Jolly K et. al. (2011) Comparison of range of commercial or primary care led weight reduction programmes with minimal intervention control for weight loss in obesity: Lighten Up randomised controlled trial BMJ 2011;343:d6500 (Published 3 November 2011)

- Group based, dietetics led programme
- General practice one to one counselling
- Pharmacy led one to one counselling
- Or providing the participants with 12 vouchers enabling free entrance to a local authority run leisure centre (comparator group).

The cost of interventions below include the cost of the provider's service and the cost of the searches in general practice, invitation letters, and provision of call centre support.

Interventions	**Provider's costs (£)**
Weight Watchers	55.00
Slimming world	49.50
Rosemary Conley	55.00
NHS Size Down	70.00
General Practice	90.86
Pharmacy	90.43

The findings from this study suggest that a 12 week group based programme of weight management can result in clinically useful amounts of weight loss that are sustained at one year in unselected primary care population with obesity. The only programme to achieve statistically significantly greater weight loss than the comparator group was Weight Watchers.

Another study compared weight loss with standard treatment in primary care with that achieved after referral by the primary care team to a commercial provider in the community[29]. In this parallel group, non-blinded, randomised controlled trial, 772 overweight and obese adults were recruited by primary care practices in Australia, Germany, and the UK. Participants were randomly assigned to receive either 12 months of standard care as defined by national treatment guidelines, or 12 months of free membership to a commercial programme (Weight Watchers), and followed up for 12 months. In all analyses, participants in the commercial programme group lost twice as much weight as did those in the standard care group. Referral by a primary health-care professional to a commercial weight loss programme that provides regular weighing, advice about diet and physical activity, motivation, and group support can offer a clinically useful early intervention for weight management in overweight and obese people that can be delivered at large scale.

Commercial weight management providers are increasingly building referral schemes within the NHS yielding successful long-term outcomes. A recent RCT

[29] Jebb SA et.al (2011) Primary care referral to a commercial provider for weight loss treatment versus standard care: a randomised controlled trial The Lancet, Volume 378, Issue 9801, Pages 1485 - 1492, 22 October 2011
08 September 2011

showed that following a 12-week referral period participants maintain 4-5% of weight loss over a 12-month follow-up[30].

The most recent study examined the effectiveness of commercial weight loss programmes against Weight Watchers[31]. The programmes included Slimming World, Rosemary Conley and an NHS group programme. The study concluded that in the short-term all commercial programmes appeared to result in similar weight loss but the NHS alternative appears to produce less weight loss. At 12 months Slimming World led to greater weight loss but the differences between programmes was small and of minor clinical importance.

Moreover a study carried out by Lloyd and Khan (2011)[32] implied that commercial weight programmes produced successful weight loss between providers and deprivation quintiles. The results of the study showed that 44% of all participants achieved a weight loss of more than five per cent at twelve weeks. Conclusions can be drawn from this research that people who attended more than 10 sessions were more likely to be successful at losing more than 5% body weight. Numerous factors can influence the amount of sessions a person may attend the weight loss programme, however deprivation was not found to be a predictive factor as no significant difference was found between the deprivation quintiles. Findings proved positive within the aforementioned study, highlighting that commercial weight loss programmes can result in successful short term weight loss for overweight and obese adults.

There is some evidence suggesting that commercial weight management programmes are efficient use of resources.

An economic modelling study concluded that Weight Watchers is a cost-effective means of providing weight management services for NHS patients[33]. Another study compared standard care vs. a commercial provider (Weight Watchers) in a year long RCT[34] indicated that that it is cost effective for general practitioners (GPs) to refer overweight and obese patients to a CP, which may be better value than expending public funds on GP visits to manage this problem.

2 Summary of Options

Option 1

Do nothing

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[30] Stubbs RJ et. al. (2011) Weight outcomes for 34,271 participants in a commercial/primary care weight management partnership scheme. Obesity Facts (4):113-120.

[31] Madigan et al. (2014) Which weight-loss programmes are as effective as Weight Watchers? Non-inferiority analysis. *BJGP*, 64, 620 e128-e136)

[32] Llyod A, Khan R (2011) Evaluation of Health Choices: A commercial weight loss programme commissioned by the NHS. Perspectives in Public Health 4 (131): 177-183.

[33] Trueman and Flack (2007) Economic evaluation of Weight Watchers in the prevention and management of obesity. York Health Economics Consortium, University of York.

[34] Fuller NR et. al. (2013) A within-trial cost-effectiveness analysis of primary care referral to a commercial provider for weight loss treatment, relative to standard care—an international randomised controlled trial. International Journal of Obesity (2013) 37, 828–834.

Positives:

- No cost option (retained budget may be used to fund other, higher priority works if necessary)

Challenges:

- There is a danger of widening health inequalities by not addressing obesity
- Increased risk of diabetes and other diseases
- Increased health and social care cost

Option 2

Structured and brief weight management interventions in primary care

Structured brief weight management interventions will include the following stages:

- Assessing the patient's weight status and readiness to change,
- Providing information and advice and increasing motivation to change,
- Teaching behaviour change techniques such as goal setting, self-monitoring and reinforcement[35]
- Making referrals to more intensive treatment for those at high risk
- Signposting to physical activity provisions and diet advice
- Periodic follow-up – up to 12 months - to help patients to track progress and 'problem-solve' about barriers which have arisen and how to overcome them

By using structured brief interventions health care professionals, dieticians, leisure professionals and other lay care workers can address issues associated with lifestyle or behaviour[36],[37],[38].

In many cases, referral to more intensive services may be the best option to effect long- term behaviour change. However, even in these cases, brief intervention can be crucial in motivating the patient to attend more intensive interventions and to start to seriously contemplate making a behaviour change.

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[35] Miller WR, Rollnick S. Ten things that motivational interviewing is not. Behav Cogn Psychother. 2009 Mar;37(2):129–40.

[36] Kushner RF. Barriers to providing nutrition counseling by physicians: a survey of primary care practitioners. Prev Med. United States1995. p. 546–52.

[37] Bull FC, Milton KE. A process evaluation of a "physical activity pathway" in the primary care setting. BMC Public Health. England2010. p. 463.

[38] McKenna J, Naylor PJ, McDowell N. Barriers to physical activity promotion by general practitioners and practice nurses. Br J Sports Med. 1998 Sep;32(3):242–7.

Positives

- Encourages partnership working between health and social care providers.
- Enables integration of people with existing physical activity opportunities

Challenges

- Expensive
- Maybe less effective than other interventions
- Training for primary care staff –time and opportunity

Option 3

Setting up referral systems between local GP surgeries and community-based commercial weight management services currently operates in Barnet.

Patients will be referred by health professionals based on the eligibility criteria defined by Public Health. The standards of the service will comply with the NICE obesity guidelines as follows:

- Encourage people to aim for a realistic target weight
- Aiming for a maximum weekly weight loss of 0.5-1kg.
- Focus on long-term lifestyle changes
- Multi-component addressing both diet and activity and offering a variety of approaches
- Use a balanced, healthy-eating approach
- Offer safe advice about being more active
- Include some behaviour change techniques[39]
- Providing ongoing support

Positives:

- Supported by evidence of what works
- The most effective in long-term outcomes
- Uses existing structures
- Opportunity to focus on areas of high need
- Enables integration of people with existing physical activity opportunities

[39] NICE Clinical Guidance PH43

Challenges:

- Engagement of primary care
- Unit costs based on areas where there is existing provision

Our preferred option is Option 3. The remainder of the business case focuses on this option.

The weight management services will be multi-component in line with the NICE guidelines to achieve weight loss or to prevent weight gain as single strategy approaches are less effective on their own. These will include behaviour change strategies to increase physical activity levels or to reduce sedentary behaviour, improve eating behaviour and reduce energy intake. The aim of the service is to prevent further weight gain, promote modest reductions in body weight and minimise weight regain amongst adults who are overweight or obese to improve associated co-morbidities, risk factors and quality of life.

The services will be free of charge to participants and long-term ongoing support will be provided. Services will be available locality wide and during the day, evening and weekends. Key stakeholders will be engaged in the ongoing development and governance of the programme.

3 Stakeholder Engagement

The public health team is undertaking stakeholder engagement with the development of our response to tackling obesity on a much broader basis and will incorporate this initiative within this to ensure there is cohesion with providers, the CCG and other key partners. The ways in which we intend to engage with them will vary but will include direct contact, a stakeholder event and an opportunity for service users to be involved with the development of initiatives.

4 Market Appraisal and Procurement Approach

We have engaged with commercial providers who both currently operate within the Borough and are keen to work with the Council. This proposal can be funded from the Obesity Clinic line of the Barnet Commissioning Intentions.

The cost of the proposed service is below £50,000 and so the service can be procured through obtaining a minimum of three quotations.

5 Financial Appraisal

Activity	2015/16	2015/17	Description
Target number of service users	750	0	Target number of service users benefiting from service development

Costs:	£	£	
Activity based Costs (excluding vat)	49,999		Based on unit cost of £65.00 (excluding vat) per 12 week course
Set up costs	0	0	
Net Financial Position	**£49,999**		

Anticipated service start date: 1st August 2015

Year one Part Year effect? 8 months

6 Project Plan

Key milestones - Weight Management Service	By dates
Service Specification	May 2015
Procurement	June 2015
Contract Award	August 2015

7 Conclusion

This business case sets out both the scale of obesity nationally and locally together with its effect on the health of the population and on social care and health costs. The proposed investment will build on existing commercial weight management provision across the Borough and replicate similar local authority investment across London. The proposal will also enable us to monitor and evaluate the effect of this investment and inform future investment proposals and the proposed development of the obesity care pathway.

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Date

24 Feb 2015