Old habits die hard

Discussion Document

Tackling Obesity in South London

March 2014

Executive Summary

Obesity is not a disease, but being overweight has far reaching implications for people's health and well being, and the future costs of health care. Despite a significant amount of research (particularly into preventing childhood obesity) and hundreds of small scale interventions, obesity is still increasing and solutions still need to be found urgently.

We are in the foothills of understanding how to help people lose weight – and need to find out quickly what works, for whom, and why. We need to leverage community and existing public sector assets to unlock individual motivations in order to make better progress, rather than design labour-intensive costly interventions.

What is this discussion document about?
The Health Innovation Network commissioned the Young Foundation to help with the development of an Obesity Strategy for South London, because it is relevant to all the Network's priority clinical themes, particularly MSK and Diabetes, and because it also underpins the approach and philosophy of the Network. This is to move away from a health service focused primarily on the treatment of ill health, to one more focused on prevention with the public and local communities taking more responsibility for their own health and well being, and better managing their own conditions

It sets out the context of what needs to be done by different stakeholders to address obesity, particularly in adults, including a whole range of innovations some of which have been shown to work – but usually only in the short term. It focuses on the gaps in knowledge and support about how to help people tackle their weight problems for adults **whose weight is a problem for them in their lives, but they are not yet so severely obese that surgery is the best option.** There are two main groups who will benefit who do not currently receive much support:

- Those who need motivational support to prevent them tipping over into becoming overweight
- Those who need specialist weight management to prevent people tipping over into becoming morbidly overweight where health problems escalate rapidly

This document highlights the importance of a clear Obesity Pathway (from early identification and motivational support, through to surgical intervention in tertiary centres for whom there is no other option). The pathway may be complex, made up of multiple components, and will critically need to be tailored to an individual's interests and constraints. We suggest ways to build community capacity and leadership to motivate and support people to address their own issues, using health services as a last resort. People need to be able to choose how they tackle the issue for themselves to maximise their motivations to stay healthy. Involvement of experts in human motivation would be helpful.

In South London

The data suggests that obesity in South London overall is slightly better than then rest of the UK, but is still increasing (both in prevalence and incidence). The projections for South London suggest that the societal costs of the population being overweight in the local health and social economy would be around £500 million by 2015 and increasing. A significant part of the increased costs are likely to come from treating people with diabetes and musculoskeletal problems - key priorities for the Health innovation Network.

In South London, much is already in place to build on, to help people increase their exercise and reduce their energy consumption (both drinking and eating) but there are some areas where this could be strengthened and would be helped by more consistency across the whole area.

Proposals and recommendations

There are detailed recommendations contained in the report. A summary is given below which highlights how all the agencies and partner organisations across South London could work together to achieve optimal impact:

- The Health Innovation Network can play a role in facilitating joint working between organisations and partners to make changes that work. This would enable the co-design of effective screening and preventative support for adults who are already overweight. The HIN will also engage with commercial partners including the food industry to influence they to work with the health and wellbeing system to encourage weight reduction
- Commissioners should be commissioning services that enable people to control their own weight before it becomes a problem, and ensure that there is a clearly understood obesity pathway that has minimal clinical interventions
- Boroughs, through their Health and Well Being boards should ensure that there is consistent well evidenced screening and motivational processes in place.
- NHS providers should help their staff take a leadership role in the community
- They should also develop capacity and capability to address tier 3 and tier 4 needs in South London and should train all staff to use an obesity brief intervention to *make Every Encounter Count* across the services
- Local community networks should identify and train Community Health Champions who can lead the work at street level
- Primary Care providers need to train practice staff to use screening, brief inventions and social prescribing, in order to help people change their behaviours permanently

Through the Health Innovation Network's Obesity Steering Group and drawing on discussions with, and input from, all relevant partners, we would like to review and prioritise the long list of potential initiatives and recommendations contained within this strategy to come up with a concrete action plan for how we collectively tackle the obesity challenge in South London.

1 Context

The South London Academic Health Science Network came into being in April 2013, tasked with the adoption and spread of health and care innovation. In September 2013 it became the Health Innovation Network for South London. The Young Foundation was commissioned by the Health Innovation Network (HIN) in South London to explore and co-design practical, evidence- based approaches to encourage weight loss across South London.

The Health Innovation Network's clinical priorities are determined by local public health needs:

- diabetes
- dementia
- musculoskeletal (MSK)
- alcohol
- cancer

In addition to the above themes, the Network has a national "systems support" role (in relation to other national AHSNs) in mental health, reflecting local strength and expertise, and the choice of clinical programmes. There is a particular focus on mental and physical health co-morbidities.

While obesity is not a disease in itself it contributes to the development and worsening of many diseases so finding and supporting the adoption and spread of effective ways of helping people reduce their weight is key to achieving the Network's priorities. There are close links between obesity and the majority of the Network's key clinical priorities; diabetes, MSK, alcohol and mental health issues. In simple terms, loss of unhealthy weight can have multiple positive health effects particularly on diabetes and MSK problems. Alcohol consumption can significantly increase weight gain almost silently, and there is a very complex relationship between health and well being and healthy eating – which is poorly understood.

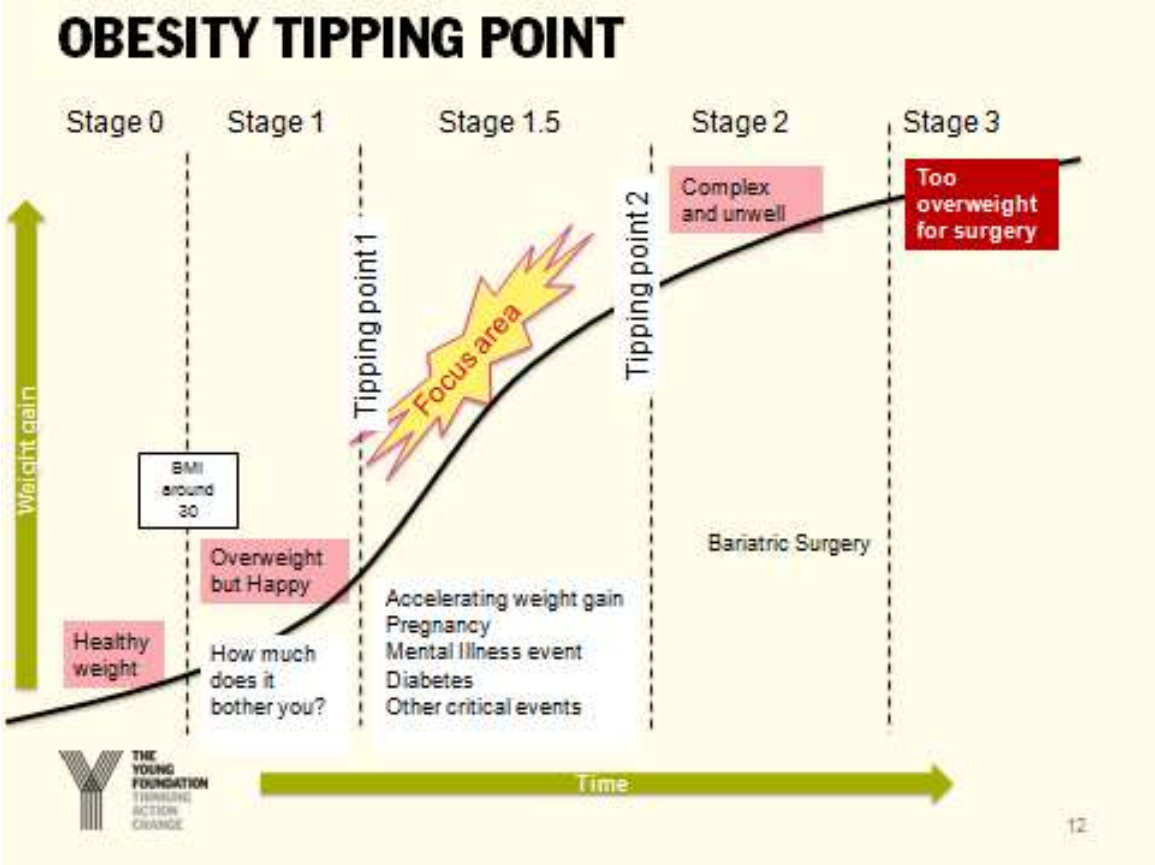
This paper considers what contribution the HIN can make using its convening power, resources, influence and networking to help people decide for themselves that they should lose weight and maintain that loss.

1.1 Scope

The initial work carried out by the Young Foundation explored the effectiveness of different interventions for various groups defined by weight, disease and age, in order to understand what was known about obesity and what interventions were most effective in reducing weight and maintaining weight loss.

From this initial review it appeared that there was a group of people in the middle who were not significantly overweight but who had a constant struggle with weight gain, and

for whom few effective interventions were available. They were typified by repeatedly having tried to reduce their weight, usually by dieting, which were rarely successful in the longer term.



This initial review was discussed at an expert steering group in July 2013 which decided to focus on this middle group of adults. They felt that early prevention with children around diet and exercise and the late stage (surgical intervention for the morbidly obese) were already relatively well served. People who have become severely overweight find it extremely difficult to achieve a meaningful weight reduction and could require bariatric surgery.

The middle group of adults are defined as '**those whose weight is a problem for them in their lives, but not yet so severely obese that surgery is the best option'**. It is very desirable to intervene as early as possible in the process of gaining weight, before significant weight loss becomes more difficult, and further health problems emerge. This is illustrated by the diagram above which identifies two tipping points for people who need:

- motivational support to prevent them tipping over into becoming over weight
- specialist weight management to prevent them tipping over into becoming morbidly overweight where problems escalate

The Health Innovation Network's Obesity Steering Group has given the work a tighter focus, as adults in this 'middle' ground were the most promising audience for weight reduction and there is comparatively little available for this important group. Therefore the scope of this report includes:

- The nature and scale of the obesity challenge nationally and locally
- The specific actions that could be taken by the Network, by local authorities, by CCGs and by healthcare professions to reduce weight in adults before they start to experience serious weight related health problems

1.2 Our approach

The Young Foundation has led this work, using a combination of desk based research and qualitative work with key experts, working closely with the Health Innovation Network, building on existing initiatives, local knowledge and expertise. This has included:

- Carrying out desk based research into existing programmes and approaches to combating obesity
- Reviewing current policy, local contextual information and research on obesity and its prevention
- Conducted in depth interviews with experts from the local area, public health and other health care settings
- Meetings with local and nation experts
- Holding discussions with innovators delivering community based programmes or initiatives which could support weight loss

The report described below does not:

- Provide a systematic review of the research literature
- Rehearse the detailed linkages between diabetes, MSK, alcohol and mental health issues and obesity which is being led by other groups;
- Make detailed comments on the care pathways within each of the 12 boroughs within South London

2 Policy Context

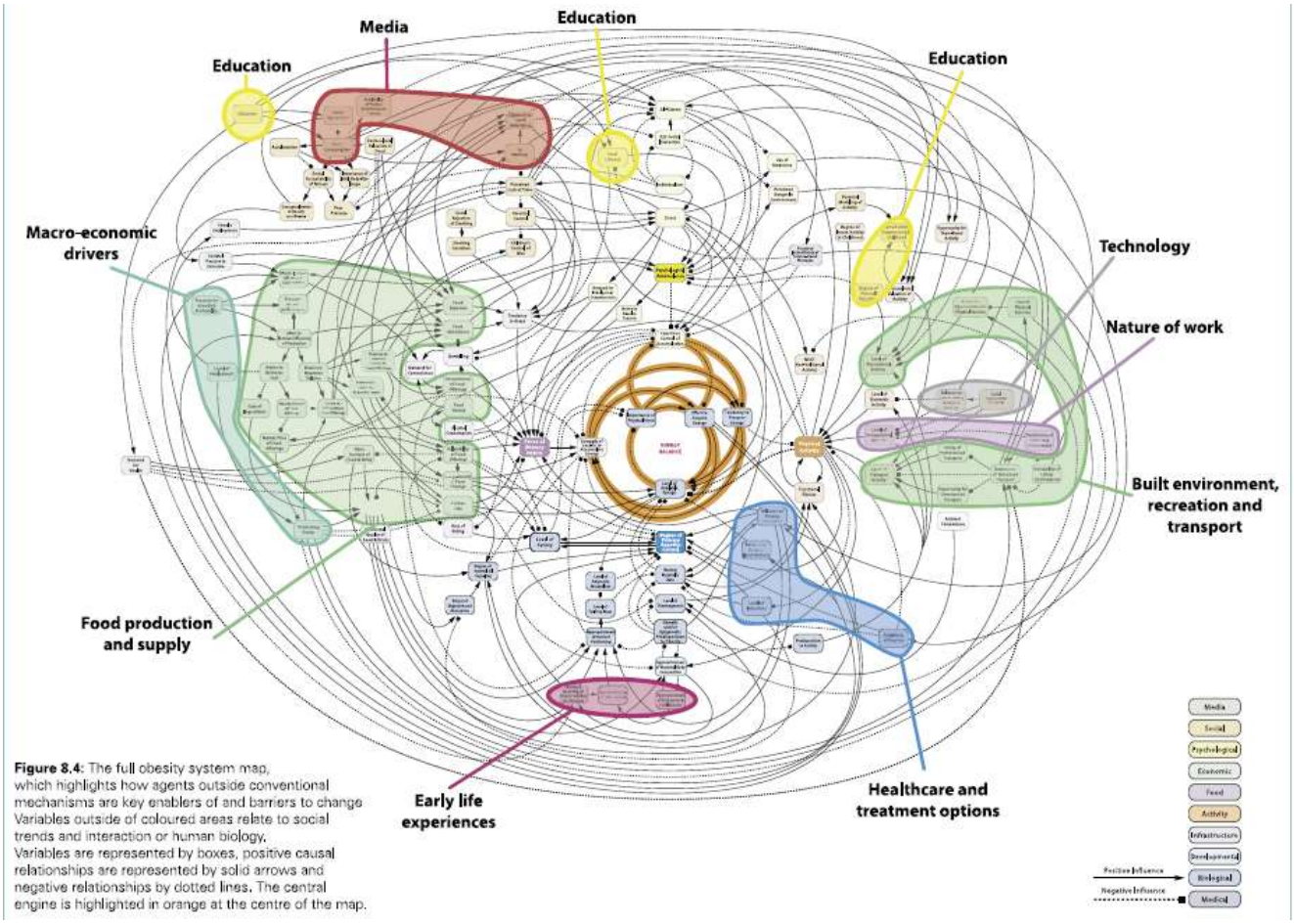
There have been a number of recent policy documents highlighting the problem of obesity and outlining how it should be tackled, the most important of which are described below. Any interventions taken forward by the Health Innovation Network need to fit within these policies and build on local initiatives.

2.1 National Policy guidance

In 2007, the growing obesity problem was recognised in the *Foresight Report, Tackling Obesities: Future Choices* as a complex problem with multiple causes and multiple consequences (Figure 2). There is a degree of "visual rhetoric" in this diagram; a more comprehensible picture would be possible but the important point is that the interaction between biology, psychology and economics leads to a complex and variable set of causal relationships.

Figure 3

The full obesity system map (*Foresight Report, Tackling Obesities: Future Choices.*



In 2011, *Healthy Lives, Healthy People: A call for action on obesity in England* called for reducing obesity in children and adults by 2020. The publication articulated:

- Plans for involving wider communities in addressing obesity
- That individuals must take more responsibility to change their behaviour, but that obesity is a problem for society
- That stakeholders such as government and business have a responsibility to support people to lose weight
- The aim to reduce the daily calories consumed in England by 5 billion and outlines the role that the food industry has to play in this

The Department of Health policy paper, *Public Health Outcomes Framework* (2012), articulated two overarching outcomes for public health in England between 2013 and 2016; both of are key to the problem of obesity:

- Increasing healthy life expectancy
- Reducing the disparity in life expectancy and healthy life expectancy

Some of the indicators from the outcomes framework are particularly relevant to obesity such as, the proportion of physically active and inactive adults, diet, excess weight in adults and recorded levels of diabetes.

The Department of Health published its *Reducing Obesity and Improving Diet policy* in March 2013. Highlighting that the majority of adults, and nearly a third of children, in England are either overweight or obese, the policy calls for comprehensive action so that by 2020 there is both a downward trend in the level of excess weight in adults and a sustained downward trend in the level of excess weight in children. The document aimed to help people to make healthier choices, through promoting public health messages, encouraging the food industry to sell and promote healthier food and drink, and promoting information around recommended activity levels. The main recommendations it included were:

- Meeting local needs, through health and wellbeing boards in local councils which will be responsible for bringing local organisations together to create an environment in which people can make healthier choices
- Encouraging responsible business, through the *Public Health Responsibility Deal,* encouraging industry to sell responsibly, provide nutritional information to customers, and support employees to be healthier

Obesity may be triggered by other health factors such as pregnancy. The Women's Health Department at Guy's and St Thomas' NHS Foundation Trust is developing a community-based maternal obesity intervention based on a qualitative study of service providers' view. The aim of this study was to explore healthcare professionals' views on the development of multi-component interventions for overweight pregnant women as there is a gap in services in South-East London.

2.2 NICE clinical guidelines

NICE clinical guidelines on the prevention, identification, assessment and management of overweight and obesity in adults and children (CG43) aim to stop the rise in obesity and related diseases; make preventative interventions more effective; and improve the care, particularly primary care, of obese adults and children. This guidance focuses on encouraging individuals to eat a healthy diet and take the recommended level of exercise. It also stipulates that preventing and managing obesity is a key priority both from a strategic point of view and one of delivery in primary care settings. The guidelines identify providing adequate training and resources for staff across multiple disciplines as a significant component of developing effective prevention and management services.

Within the numerous NICE pathways and guidelines related to obesity is the **Pathway for Obesity: Working with Local Communities.** Crucially it looks to support a community-wide non medical strategy for preventing obesity and calls for an integrated approach across agencies, including local voluntary and community sector groups to combat obesity. The pathway proposes coordinated local action across agencies and an integrated commissioning approach including community-based interventions, input from businesses and social enterprises and an important role for public health. This pathway also highlights the need for robust monitoring and evaluation and assessment of cost-effectiveness of any programme or service implemented.

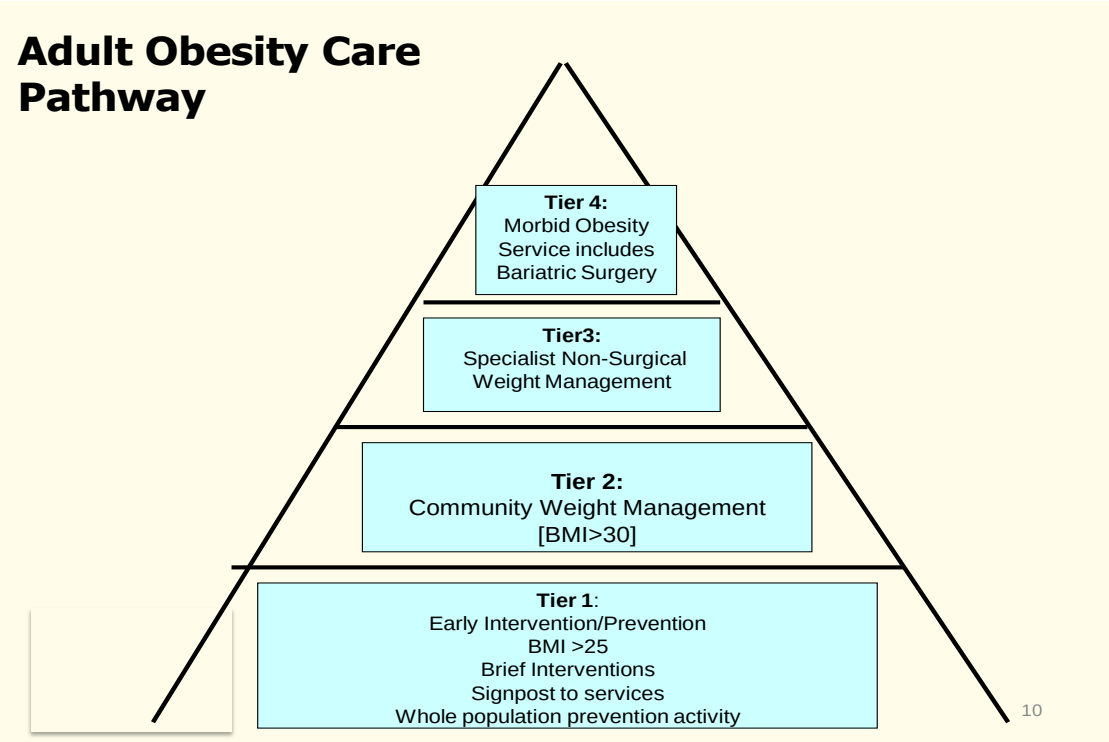
NICE is currently developing guidance on managing overweight and obesity in adults through lifestyle weight management services, due for publication in 2013. The consultation draft covers Tier 2 multi-component lifestyle weight management services for overweight and obese adults and has a number of interesting components for the current work. It highlights the need for lifestyle weight management services to focus on weight loss, maintaining weight loss and preventing further weight gain; raising awareness amongst commissioners; educating and training healthcare professionals and those delivering programmes; and the importance of monitoring and evaluating programmes and local service provision.

The draft recommends an integrated approach allowing easy progression through the local obesity pathway with referrals across services, requiring knowledge of lifestyle weight management services in other services. It suggests that local organisations and groups, such as gardening or community walking groups, which address the wider determinants of health should be identified and linked to the local obesity pathway. The consultation document also addresses the need to be mindful of adults' expectations of programmes and the importance of motivation for long-term lifestyle and behaviour change. Further it stipulates the need for maintenance of weight loss through the development of self-management.

2.3 Clinical Commissioning

Clinical Commissioning services for adult obesity have recognised 4 Tiers of service;

- Tier 4; Morbid Obesity Service includes Bariatric Surgery
- Tier 3; Specialist Non –surgical weight management delivered largely by health professions
- Tier 2; Community weight management BMI>30 community supported interventions often provided by third sector organisation under a 'social prescription'
- Tier 1; Early intervention BMI>25 identifying people who are gaining weight rapidly and giving them the motivation and tools to reduce their weight



These Tiers are shown in the Figure 3 above. The Tiers are not related to the size of the population in each group – there are very, very few people in Tiers 3 and 4 compared to Tiers 1 and 2. The services in each tier need to be integrated and well connected with those at other levels, making an overall pathway. It does not mean that people need to exhaust the options at each level before being referred onwards.

NHS England's Complex and Specialised Obesity Surgery guideline (April 2013) outlines the need for a co-ordinated and comprehensive approach to specialist non-surgical weight management prior to considering surgical interventions. This highlights the importance of an integrated obesity care pathway from Tier 1 to Tier 4 and a requirement for a high quality multi-component weight management service at Tier 3 to act as a gateway to entry into the highest level (Tier 4) services.

3 The scale of the problem

This section explores the scale of the problem at a national and local level and identifies what services are available.

3.1 The scale of the problem in the UK

Using the best known index of weight, the Body Mass Index (BMI), about 25% of Britons are obese (NHS Information Centre 2011). Twenty five years ago this number stood at less than 5%, and by 2020 it likely to be over 30%. Obesity has reached levels that would have seemed unimaginable a generation ago, and the numbers are increasing rapidly. Only 34% of men and 39% of women are of a healthy weight in this country.

Table 1.
Relative risk factors for obese people of developing selected diseases by gender

England	Men	Women
Type 2 diabetes	5.2	12
Hypertension	2.6	4.2
Myocardial infarction	1.5	3.2
Cancer of the colon	3	2.7
Angina	1.8	1.8
Gall bladder etc	1.8	1.8
Ovarian cancer		1.7
Osteoarthritis	1.9	1.4
Stroke	1.3	1.3

Source *NAO*

If you are obese you are unlikely not just get just one health problem, you are likely to get multiple problems and they will result in a much worse (and shorter!) life.

Obesity contributes to a broad range of conditions that produce disability and hasten death, including diabetes, heart disease, stroke, and cancer. Obese women are 13 times more likely to develop Type 2 diabetes than non-obese women. It is estimated that moderate levels of obesity can reduce life expectancy by up to three years, and severe obesity by eight to ten years, comparable to a lifetime of smoking (Obesity and Life Expectancy, National Obesity Observatory, August 2010). This has serious consequences for the health of the nation and for the cost of health services to treat the conditions caused by obesity. Given this combination of scale and severity, there may be no greater preventable cause of disability and death in the UK today.

Additionally, obesity does not affect everyone in the population equally, but is a driver of the significant health inequality. Amongst women, obesity is clearly correlated with poverty, although the picture is more complex amongst men.

3.2 The scale of the problem in South London

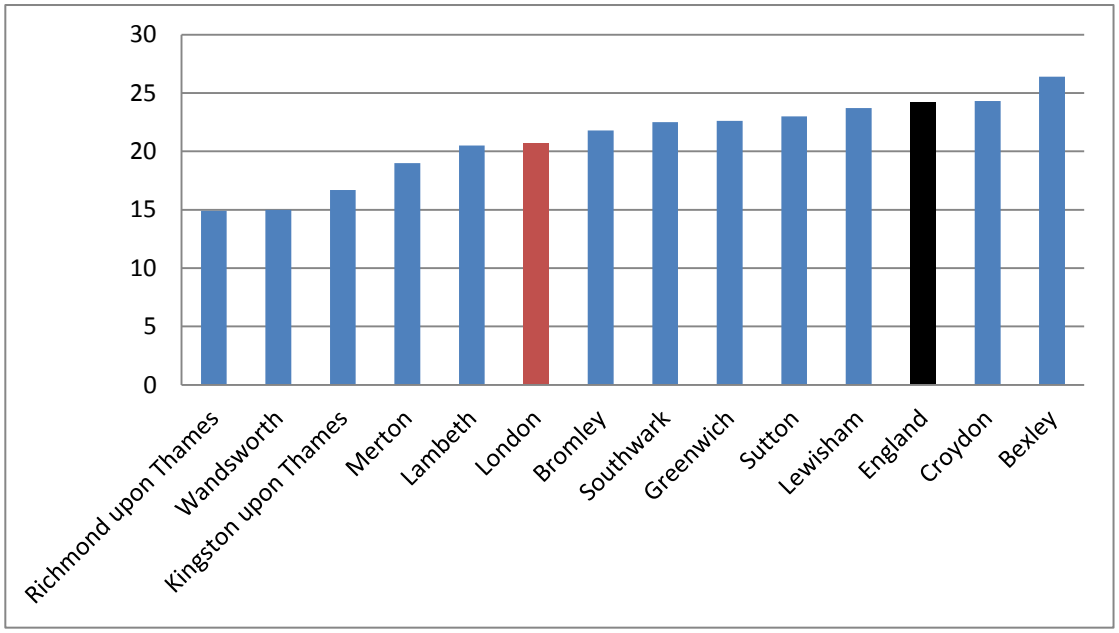
The obesity challenge is greater than for smoking and drinking. People don't need to smoke or drink to live, but they do need to eat. Brief interventions for alcohol work, but sustainable change for eating is likely to be much harder.

In South London, as a whole, is less obese than the rest of England despite London being more deprived than England as a whole. Just over 20% of South Londoners are obese, compared to 25% of the English population. Of the 12 boroughs in South London, 10 are at or below the national average, however, there is a high incidence of conditions (e.g. CVD, diabetes) where obesity is a risk factor.

The graph below shows the modelled percentage obesity prevalence in adults in the South London boroughs in comparison to both the London and England average. Data has been taken from the National Obesity Observatory and Health Survey for England 2006-2008.

Fig 2; **Obesity rates in South London boroughs in relation to UK average**

Source: National Obesity Observatory and Health Survey for England 2006-2008



It would be worth investigating different areas have different rates of obesity although there are likely to be issues with data quality.

The modelled projections for adult obesity for Southwark and Lambeth show slightly lower than the national average estimated levels of obesity {Southwark 22.5% [21.2-23.8%], Lambeth 20.5% [19.4-21.7%]. These are likely to be underestimates given the large numbers of residents from groups at high risk of obesity [Black African and Black Caribbean women, those living in socially deprived areas]. In addition Southwark has a particularly high prevalence of childhood obesity compared to London's average [28.3% v 22.5%% respectively in year 6 children, NCMP 2011-2012] and given many obese children

go on to become obese adults this has important implications for the future prevalence of adult obesity in the borough.

It is estimated by the Department of Health that diseases related to obesity cost NHS Southwark £47 million in 2010 due to increase to £54 million in 2015 and NHS Lambeth £49million to increase to £57million by 2015[DOH, 2008]. Scaling this up roughly across South London suggest that next year the costs of the South London population being overweight in the local health and social economy would be around £400- 500 million.

3.3 Services in South London

Many London boroughs have already moved toward the tiered system described, but not in a very coordinated or integrated way - and there are still some large gaps and capacity issues so it is important to consider new ways of addressing this by doing things differently. Services within NHS organisations in South London**,** to support people with weight problems are as follows:

Tier 4 services are concentrated in Lambeth and Southwark, particularly at Kings. As there is limited triaging of people being referred for Tier 3 services and the specialist hospital based services are concerned that they will be overwhelmed. In response they have developed a triaging tool for assessing referrals to Tier 4 (see appendix 2) which they would like to adapt for use in the community in Tiers 1 and 2.

Tier 3 services are patchy and underdeveloped across South London. Development of greater capacity in specialist multi-dimensional weight management services in several locations across South London would be beneficial. A possible specification for a Tier 3 service is given in Appendix 3.

Tier 2 The results of scanning the websites of each borough are summarised in the table below while services in Southwark and Lambeth are described in greater depth. Each Borough has developed its own services and a lot is already happening, but in a rather uncoordinated way. Knowing what is available is not always easy, and organisations frequently change. Maintaining an up to date social prescribing directory is essential (online if possible). Integrating organisations and services into a a coherent pathway is also important.

- **Southwark:** Tier 2 services for adults in Southwark are limited. For those with a BMI between 30-45kg/m2 Exercise on Referral is available although the focus of this intervention is cardiovascular risk reduction rather than weight management. A number of Tier 2 weight management services [Shape Up, Mindfulness Weight Management Group] are being trialled via the NHS Health checks for those with no pre-existing co-morbidities, age 40-74year and with a BMI >35kg/m2. General dietetic care is available for those with BMI>35kg/m2 via the GSTT primary care cluster clinics.
- **Lambeth** – Tier 2 weight management support can be accessed through LEIPS [Lambeth Early Intervention & Prevention Service]. Although the focus of the

service is CVD risk reduction rather than weight management. The service includes health trainer support, exercise on referral and weight reduction.

Recommendation: Services should be collated into a single web based directory accessible as widely as possible across South London.

Tier 1 services – both at borough level (local authority provision) and in general practice have not yet been mapped;

Recommendation: Boroughs could be asked to do this and to contribute to a single web based directory.

Primary care is constrained by capacity, and the current model of ten minute consultations addressing immediate health needs does not make for proactive care for people with weight problems. This has led to challenges to effective implementation of a number of interventions to date, however there may be opportunities to explore with local GPs how new models of primary care delivery might better support patients with weight management issues.

Conclusions

Any interventions taken forward by the Health Innovation Network should fit within national guidelines and meet local needs as identified through the Joint Strategic Needs Assessment (JSNA) and Health and Well Being Strategy for each South London borough.

The whole pathway needs to be better integrated and there needs to be integrated and fluid movement across tiers to ensure co-ordination and continuity.

4 Why is losing weight such a hard problem?

So why is losing weight such a hard problem? After all, gaining weight is usually an imbalance between eating too much and low physical activity levels. However this simple calorific calculus is the end result of a complex sequence of interacting factors, which is poorly understood.

The diet industry pays testament to the desire of many people to lose weight, and improved diet and exercise are within the grasp of nearly everyone. As human beings we are wired to enjoy food that is bad for us in excess, to dislike physical activity for its own sake, to be poorly motivated by long term health benefits, to misjudge our own satiation and to struggle to make complex calculations in real time (such as the nutritional value of a shopping basket). Add in modern levels of prosperity, easy access to highly calorific food, an economic system which incentivises the exploitation of these tendencies and has influential levers on behaviour and the powerful series of factors, which promote obesity become clear.

Changing eating patterns is also a more fundamental change compared to other lifestyle changes. People have to eat to live, whereas you thrive better without smoking or drinking alcohol. So, the problem is could be considered a personal judgement about not eating too much, rather than stopping something completely.

While medicines can work 'with the grain' of the powerful healing mechanisms of the human body, in helping people to lose weight we experience a powerful headwind making it difficult to make progress 'against the grain'.

4.1 Energy consumption versus energy usage

The draft NICE guidance refers to lifestyle weight management services as *"programmes that aim to change someone's behaviour to reduce their energy intake and encourage them to be more physically active".* Weight loss or gain is determined by the balance between energy consumption and energy usage from basal rate, exercise and heat generation in these approximate proportions:

- 60-75% basal
- 10% thermo genesis
- 15-30% physical activity - it is possible to raise the basal metabolic rate significantly through exercise

As body energy usage from exercise/activity is around 15% for people who take little exercise, focusing on more activity is good, but is not enough on its own.

The weight reduction achieved by the most effective interventions which have been evaluated so far is not large. A 5% reduction is typical. A relatively small number of long term studies suggest that the majority of the lost weight is put back on. There is lack of evidence about how we can help people lose weight and keep it off effectively.

Certainly we are nowhere near solutions that will impact on the scale of the problem. Unlike other major causes of preventable death and disability, such as smoking, alcohol and infectious diseases, there are as yet **no** populations in which the obesity epidemic has been reversed by public health measures (including regulation).

4.2 Old habits die hard - Changing behaviour.

There is more to this than bemoaning the scale and nature of the challenge. Effective ways of helping people to lose weight need to engage with those factors in people's day to day lives that matter to them.

Short, time-limited, intense interventions are not sufficient; more often than not a return to one's normal environment means a slow return to one's old habits, and weight. Ways must be found of empowering and supporting individuals to work towards a healthy weight in their day to day lives – to give them tools to battle the headwind.

We have limited knowledge about how to go about doing this. There are many possible ways of constructing an obesity intervention – recruitment, staffing, frequency, location, tools, regime, communication techniques, and length of intervention add up to a complicated ingredients and recipes that need to be tailored to the needs of individuals.

Aggregating evaluations of these complex interventions into meta-studies and systematic reviews results in conclusions that are becoming more and more complex and high-level, and guidelines that are strikingly vague. For example NICE guidance recommends that behavioural interventions for adults should include the following strategies, as appropriate for an individual:

- Self monitoring of behaviour and progress
- Stimulus control
- Goal setting
- Slowing rate of eating
- Ensuring social support
- Problem solving
- Assertiveness
- Cognitive restructuring (modifying thoughts)
- Reinforcement of changes
- Relapse prevention
- Strategies for dealing with weight regain

The implementation of <u>any</u> of these in practice on their own for individuals is challenging. If successful it would seem intuitively that more than half the battle to lose weight would have been won. In other areas of medicine we know that getting processes right strongly affects results, e.g. the WHO surgical checklist where a small laminated piece of paper ensured that doctors did things that they already knew how to do.

4.3 Readiness to change

People find it difficult to motivate themselves towards long term rewards, even when they understand the rewards to be great, such as increased life expectancy. Achievable short term goals are much more effective. Digital technology can give feedback on very short term goals which is highly motivating, for instance wearing a wristband which counts steps towards a daily target.

"*If I had not reached my target for the day, I would often climb the steps to my apartment repeatedly until I had reached my step goal for the day*".

To reduce weight people must be both willing and able to change their behaviour. This can be mediated by a clinician, so it is important for clinicians to be able to recognise when an individual is receptive or ready to change their behaviour and maintain that motivation. The success of an intervention is greater when the individual feels their reason for taking part is theirs alone.

Motivational Interviewing is a technique which can be used to support individuals to change their behaviour. The technique is focussed on the practitioner supporting the client to recognise and alter behaviour in relation to current or possible future problems. It is considered particularly successful where a person is ambivalent about the need to change their behaviour. In a systematic review of literature, Motivational Interviewing was found to have an impact on behaviour in 77% of studies related to weight-loss, diabetes and asthma. (Rubak S,et al) but to be done effectively its often time-consuming.

It is important to tailor the intervention to that individual's interests. Healthcare professionals need to support the person to find their own motivation for weight loss, be that pregnancy, weight gain related illness or any other reason.

When training and educating healthcare professionals to support people to lose weight it is key to understand the impact of **weight bias** - the tendency to form an undesirable or negative view of an individual based upon their own weight or body size. This can have negative impact on care, for instance, healthcare professionals may attribute undesirable personal characteristics to individuals merely based on their weight, appearance or BMI, such as being lazy or unhygienic which could lead to a person not seeking support with weight loss.

The body weight of the healthcare professional themselves can also have an impact on the level of support provided to the overweight or obese patient. Those of normal weight have been shown to be more likely to discuss and advise weight loss support for overweight or obese people than those of higher than normal BMI. It has also been shown that whilst the majority of overweight people trust their healthcare practitioner they are more likely to trust dietary and nutrition advice from a practitioner who is themselves overweight.

In all, this suggests that healthcare providers require specific training in order to provide them with the skills to be able and willing: to engage successfully with overweight and obese patients; enable people to feel their motivation for losing weight is autonomous; and support their people to lose and maintain weight loss.

Suggested action: Training for frontline healthcare providers in the use of Brief interventions for overweight people and use making Every Encounter Count.

4.4 What works?

There are many excellent summaries of the studies into the weight loss, which will not be replicated here (see SIGN guidance). While the research is not as extensive as one might expect given the scale of the problem, it does give very consistent messages that the most effective interventions use some mix of:

- Self-monitoring
- Peer Support
- Cognitive Restructuring
- Stimulus control
- Education and advice
- Access to physical activity
- Access to dietary advice

An NHS systematic review of the clinical effectiveness and cost-effectiveness of long-term weight management schemes for adults incorporated 22 studies including 12 RCTs with varying results. Long term multi-component weight management interventions seem to hold the most promise but one common finding seems to be the tendency of weight to be regained after the intervention. It remains difficult to see which intervention is most effective as those multi- component interventions focusing on diet were not found statistically significant and although a high level physical activity focus was more effective in the short term than standard behavioural therapy, the change after 30 months was not statistically significant. The full report provides details of each study.[i]

Given this illustration, that long term interventions have the greatest impact on sustained weight loss and the need to consider individual motivation for change, the Health Innovation Network could recommend the implementation of a service where obese people are first referred to a short intense intervention (6-8 weeks).This could kick start the weight loss process. Many interventions such as this come with some evidence of effectiveness although, due to their short term nature, for many the weight loss is not maintained as has been highlighted by the NHS systematic review referenced previously. This type of intervention is highlighted in the long list of innovations.

Once the individual has completed a short term intervention they can be supported in the long term by community based interventions available from partner organisations outside the NHS which draw on their personal interests and motivations. These need to

help them maintain the' good' behaviour change by providing local, community based opportunities, which fit the needs and interests of each individual.

4.5 What do we know about why interventions work?

We know relatively little about the optimal method for implementing any of these changes and even less about tailoring them to individuals' needs. There is some evidence that slightly better results are achieved if these techniques are used in combination, as a menu of choice that individuals can fit to their own interests. The idea is to maximise a person's pre-existing readiness to change.

Just motivating people to start changing their behaviour requires a range of different approaches for different attitudes and starting points: Some people value the company and camaraderie of the local tennis club, others like the calming effect of swimming, Tai Chi or yoga. Some people love nature, and a walk in the country. Similarly Weightwatchers may work well for women, but not attract men. Different target groups will have different special requirements: many will have an existing complication of obesity which may limit their choices; they may not be attracted to conventional forms of exercise and diet control; their social situation may be complex; family and cultural expectations and behaviours may be difficult for them to overcome individually.

We can compare our level of knowledge about how to organise an obesity intervention with what we think a supermarket might know about how to organise a supermarket – (see box). Little research in this area is in the public domain nor are the supermarkets particularly open about anything that might be perceived as manipulative but the points in the box have been gleaned from expert commentary in the press.

Organising a supermarket to maximise purchasing.

- Size of the shopping trolleys. These have grown as having a bigger trolley makes us buy more.
- Changing the floor plan regularly and deliberately to make a shopper explore the store and notice new things.
- Placement. The basics that most shoppers will need are not placed together, but spread out over the store. The placement of goods at eye lines, and on the ends of aisles is carefully thought out.
- Using smell. The bakery and rotisserie smells are used deliberately.
- Pricing. Reference goods such as bread and milk are used as a reference to judge overall value for money. So retailers often use these as loss leaders and increase margins elsewhere.

While there are a small number of individual interventions that are well specified and evidenced (e.g. Counterweight), the extent to which they can be adapted to different circumstances is unclear. Indeed, our relative ignorance of these detailed factors should be grounds for optimism; by improving our understanding and enhancing our techniques we may achieve far greater impacts than we have to date.

Google once famously tested 41 different shades of blue to work out the shade that pleased customers the most. The usual clinical research tools are not well adapted to refining the details of a complex intervention. Improvement Science has long been used in manufacturing, engineering, retail and the airline industry, as well as in certain surgical areas. A high degree of disciplined practical experimentation is required to develop well

evidenced and specified interventions that cover a broad range of circumstances and motivations.

Suggested action: The Health Innovation Network could use Improvement Science expertise to understand complex interventions better.

4.6 What do we need to know?

Some of questions that need to be answered about each of these approaches include:

- What attracts different types of individuals?
- What different kinds of motivation works for different groups?
- What people need what sort of services, at what frequency?
- What factors need to be in place in the home and community to make an intervention worthwhile?
- What methods of motivation and communication work for whom?
- How does a programme need to be adapted for different ages, genders, ethnicities?

Many of these can be addressed rapidly through qualitative approaches.

5 Promising Innovations

In this section we describe a number of promising areas which would be worth supporting the system-wide adoption and spread by the Health Innovation Network, while at the same time undertaking evaluations of what works, for whom, and why.

5.1 Cataloguing and classifications

A list of innovations/interventions that have investigated are included in Appendix 3. Many have limited evidence of effectiveness. These have been coded to indicate the following:

- Tiers where the innovation could be used
- Where there is some evidence of effectiveness
- There the innovation could be used with social prescribing
- Short intense interventions which could kick start behaviour change

Suggested action: The Health Innovation Network should contribute to developing and maintaining a list of initiatives used locally and encouraging people to evaluate new ideas and add the evidence to this database.

5.2 Innovations along the obesity pathway

These promising areas are useful in different parts of the obesity pathway. The areas and innovations are described in more detail below.

5.2.1 Early identification using King's triage tool

Early identification of weight gain is very important. The handling of this first encounter is key, as it may influence the level of success with which the individual is able to lose weight. There are several different approaches for anyone who attended attending a clinic of GP practice, for any reason, who was considered overweight.

The King's triage tool could be adapted for using in primary care to identify people with problems as early as possible. Currently the tool (see Appendix 2) is used to assessing a person obesity level suitability for bariatric surgery/Tier 4 services using symptoms of a range of different diseases. It would be possible to adapt it for use in primary care.

GP practices and community clinics could set up weight loss services run by nurses, physiotherapists and/or health trainers. Staff in hospitals could also identify people with a potential weight problem and make suggest alternative actions to the individuals.

5.2.2 Extending Health check

Everyone is at risk of developing heart disease, stroke, diabetes, kidney disease and some forms of dementia, and being overweight exacerbates most of these. These conditions can often be prevented, even if the person has a family history of them. The NHS Health Check can help by assessing a person's risk of developing these health problems and giving personalised advice on how to reduce it.

The **NHS Health Check** is currently available for adults in England between the ages of 40 and 74 and covers: Stroke, Dementia, Heart disease, Diabetes and Kidney disease. More detail is given at NHS Choices.

In Southwark, the Health Check leads to a referral to a different weight loss service, excluding people with a pre-existing condition (e.g. diabetes).

The Health Check process could be used more systematically for a wider range of people for early detection of obesity where people could be referred onward to defined pathways through social prescribing.

Suggested action: these are changes that could be used by to identify and intervene earlier.

5.3 Increasing individual motivation

For people who have been identified as at increased risk of diseases, making every contact count at each brief intervention would mean that every health and care professional or community health champions would reinforce the weight loss message consistently and frequently.

However, when an overweight person walks into the surgery, clinicians often feel inhibited from mentioning it, as weight can be a sensitive topic. The Alamance Regional Medical Center (ARMC) in their 2013 report, Measuring Up: The medical profession's prescription for obesity, state that "*we have to acknowledge that some clinicians are insensitive, ineffective, and lack confidence when dealing with people who have problems with their weight*." Healthcare professionals therefore need to be educated and trained so that they are both willing and able to discuss this sensitive issue with patients as they present for other services.

Every interaction between a healthcare professional and a person can be considered a touch-point. These can take numerous guises: a visit to the GP; emergency hospital admission or going to the dentist. Whilst there are clear guidelines for interventions around both excess alcohol use and smoking there is no such process in place for obesity. For instance in smoking cessation support *"everyone who smokes should be advised to quit, unless there are exceptional circumstances. People who are not ready to quit should be asked to consider the possibility and encouraged to seek help in the future. If an individual who smokes presents with a smoking-related disease, the cessation advice may be linked to their medical condition*".

If a person came in to see a healthcare professional with a visible growth on their body, it is unlikely that they would ignore it. She would talk to the person about what to do about it. There is no such clear training structure for healthcare professionals when it comes to obesity prevention and weight reduction. Indeed in the 2010 Foresight report it was identified that there is a need for consistent and thorough training for healthcare providers in relation to obesity.

In addition, there is an opportunity to identify and train non clinical community health champions to help build community responses to tackling obesity and to support individuals locally.

Suggested action: Make Every Contact Count for obesity in each Brief intervention for people who are overweight could be developed for use by healthcare professional and community health care champions.

5.4 Social Prescribing

Social Prescribing is the use of non-medical interventions as a prescription – and is likely to be very useful in helping people to lose weight. The majority of prescriptions are for increased exercise and changes in diet. Typically a community clinician would refer an individual to community or third sector provider. To date it has been relatively widely used with people with mental health issues. However, there could be benefits from using this approach to help tackle and prevent unhealthy weight gain.

Closer working with the voluntary and community sector is an often-stated goal of the health service, but it continues to be rare in practice. Social prescribing implements this at the front line and offers a better opportunity to use an individual's personal motivation. For example encouraging more exercise through a person's interest in football (e.g. FitFans) or in gardening (e.g. The Green Gym).

The key to social prescribing working well is that health professionals can find appropriate activities easily to refer people to. This requires a relatively up to date directory of local options. Assembling and maintaining the directory not a huge workload, but is significant. **The Health Innovation Network is well placed to commission a directory of suitable activities for social prescribing, and to offer some training on appropriate facilitation**.

Through our research we have identified that organisations and interventions which increase wellbeing and activity levels, or educate about healthier lives, do not necessarily market themselves as obesity related. Or it may be that there is a gap in provision.

There is therefore an opportunity for the **Health Innovation Network to run a challenge competition to identify innovative social prescribing opportunities in the area and to support the adoption and spread of those successful innovations throughout South London**.

5.5 Community engagement and support

Imagine two identical health programmes serving deprived areas. Both are hitting their outcome targets, but one is doing a lot more. Somehow its service users are not just in better health, they are also happier and more confident. A small but significant number who were unemployed have found jobs, in some cases taking whole families off benefits. These families are eating better and taking more exercise. Their children's attendance at

school is better and their results are improving. It is obvious which approach is more satisfying for healthcare professionals and more attractive to cash strapped funders.

5.5.1 Community health champions and mentors

Altogether Better has been helping to share learning about the community health champion model and increasing the voice of patients and communities in shaping health and social care services. Altogether Better aims to develop a network of community health champions (across England) to support localities to replicate the values and principles of the community health champion model, and respond positively to some of the important questions and challenges which need to be addressed by health leaders, decision-makers and commissioners.

Building on four years' experience of recruiting, training and supporting more than 17,000 volunteer community health leaders, the ambition is to continue to work to create social value by unlocking the assets and resources of individuals and communities to create healthier communities and better quality health services. Altogether Better's evidence-based community health champion approach is delivering improved health and wellbeing and reducing unemployment. Families are getting off benefits, eating more healthily and taking more exercise and their children's attendance and results at school are improving.

A social return on investment (SROI) analysis of case studies from two projects targeting older people in the Altogether Better programme found a positive SROI of between £8 - £110, for every pound invested. This is based on a number of estimates and assumptions made and provide a useful indication of the potential levels of return for the community health champion approach for funders.

'Altogether better', have made great use of community champions, especially around diabetes and this approach is also likely to work for obesity which will help reduce diabetes. In South London Lambeth, Southwark and Lewisham Diabetes UK's have used Community Champions for diabetes, as had Bexley some time ago. CCGs are seeking how to promote cross borough working, using the Diabetes Modernisation Initiative and HIN as a catalyst, and are considering developing p a community of community champions across South London. They would help address diabetes and MSK-related morbidity through weight loss.

Suggested action: Community health champions and mentors should have a key role as reduction in obesity will help address diabetes and MSK morbidity.

5.5.2 Health trainers

The role of Health Trainer was first outlined in the 2004 White paper **Choosing Health**. From the outset they have generated a great deal of interest from commissioners, collaborators and members of the public. From the start they were intended to offer support from next door rather than advice from on high and their aim was to:

- Target 'hard to reach' and disadvantaged groups
- Increase healthy behaviour and uptake of preventative service
- Provide opportunities for people from disadvantaged backgrounds to gain skills and employment
- Reduce health inequalities

The Health Trainer workforce in England has been developed over the last seven years in collaboration between the Department of Health, regional teams and local services. In South London, Bexley have commissioned Altogether Better. An enormous amount has been learnt about how to recruit, train and support a lay workforce to engage people from some of the country's poorest communities and support them to make the lifestyle changes that they want to make. Within the there is information about how to commission and manage Health Trainer services, and the latest evidence about their effectiveness and value for money.

In relation to obesity, health trainers help people to develop healthier behaviour and lifestyles in their own local communities. They offer practical support to change their behaviour to achieve their own choices and goals. The exact role depends upon the needs of the community in which they work, but typically would involve encouraging people to:

- Stop smoking
- Participate in increased physical activity
- Eat more healthily
- Drink sensibly
- Practice safe sex

Suggested action: Health trainers seem to be a good resource, to use alongside community health champions to increase the effectiveness of individual interventions.
www.healthtrainersengland.com/about-health-trainers

5.6 Apps, motivation and monitoring

There are currently more than 17,000 health applications available online www.usatoday.com/story/news/nation/2013/09/24/fda-health-apps/2860731/, and the number is growing daily. Although unregulated as yet, without any way of knowing whether an app actually does what it says it does safely, health apps are used by millions of people (who have smart phone) and open up an interesting new opportunity to influence health behaviour of a certain segment of the population. Whilst apps are a new format, the techniques they apply are familiar. The NHS has been slow to take advantage of a potentially powerful lever on behaviour. There is still no approved list of health Apps but the health and care system could use its influence to promote apps that are evidence based and well designed; if it doesn't there is a danger that the burgeoning app market becomes as ineffective as the diet industry.

While apps do not do anything radical, they use a number of different mechanisms, packaged into a user friendly format, to help people manage their weight. These mechanisms include:

- Contextual Information – How to carry out a certain exercise, or the calorie count of various foodstuffs
- Self Tracking – To allow users to easily track their diet and exercise
- Motivation – often via groups or gamification – including "rewards" such as points and levels of achievement to 'nudge' people to change

Apps have the potential to do things better, to empower people's behaviour change and to reach people who use smart phones, where conventional approaches do not. For example, manually recording the quantity of exercise carried out, or the number of calories eaten is time consuming. We know this sort of tracking is an effective boost to motivation and weight loss, and anything that makes it easier is potentially important. Anyone who has ever played a computer game knows how arbitrary achievements can be compelling, even addictive; if we can bring this to bear on weight loss, then that would potentially be a powerful tool.

There is a need to find what works and look at studies to demonstrate benefit; mobile apps and texting can be used to prevent progression (with weight gain) and address diabetes for those with pre-diabetes - Imperial College are running a trial in this area.

5.6.1 Apps and weight monitoring

Weightwatchers is a good example of combining the trends above into a single package. Points for various foodstuffs which allow people to judge their intake, track their weight and, through a community of users, facilitate peer pressure on behaviours.

An interesting example is MyFitnessPal, which has 40m users and claims that they have collectively shed 100lbs million since the launch of the site. Users can enter both their diet and exercise, and get a fairly accurate measure of their calorie balance, as the site is backed by a database of over 4m food items. This is something that individuals have not been able to do before.

5.6.2 Apps and drinking monitoring

The combination of alcohol use and obesity is associated with poor outcomes but the relationship is only partly causal. It is associated also with genetic factors, exercise and lifestyle variables such as cigarette smoking and diet. A recent review concluded that:

- Many people do not consider alcohol consumption when considering their daily calorifc intake
- The effects of alcohol on body weight can be more pronounced in over weight and obese people
- Alcohol consumption can lead to increased food intake

- Excess body weight and alcohol consumption in combination appear to increase the likelihood of developing liver cirrhosis

Findings of what has been described as a "crucial British alcohol screening and brief intervention study" (SIPS)(McGovern et al 2012) support the findings above. The SIPS study was a randomised controlled study of 29 GP surgeries. 3562 patients were screened (mainly white, mean age 44) , 900 screened positive (i.e. were at risk drinkers) and of these 756 agreed to be screened and provided with Information and advice booklet (I&A), or I&A and 5 minutes face to face advice, or I&A and Brief Lifestyle Counselling (20 minutes). At 12 months there was a fall in the number of risky drinkers of 16% and no difference between the efficacy of the three interventions (i.e. minimal intervention is effective and cost-efficient).

Work is currently in progress in South London to assess the feasiblity of using a phone app to encourage change in drinking behaviour in obese individuals who present to primary care.

5.7 Physiological feedback and monitoring

Feedback is a good motivational tool. There are well evaluated tools available to provide 24h monitoring and analysis of heart rate variability (HRV) and acceleration in real-life measurements. This can be used in exercise and training research, behavioural sciences, wellness coaching and health promotion, ergonomics and work studies to provide:

- HRV and autonomic nervous system balance
- Within-day stress and recovery profiles
- Recovery analysis during sleep
- Exercise intensity and physical activity
- Energy expenditure
- Workload assessments

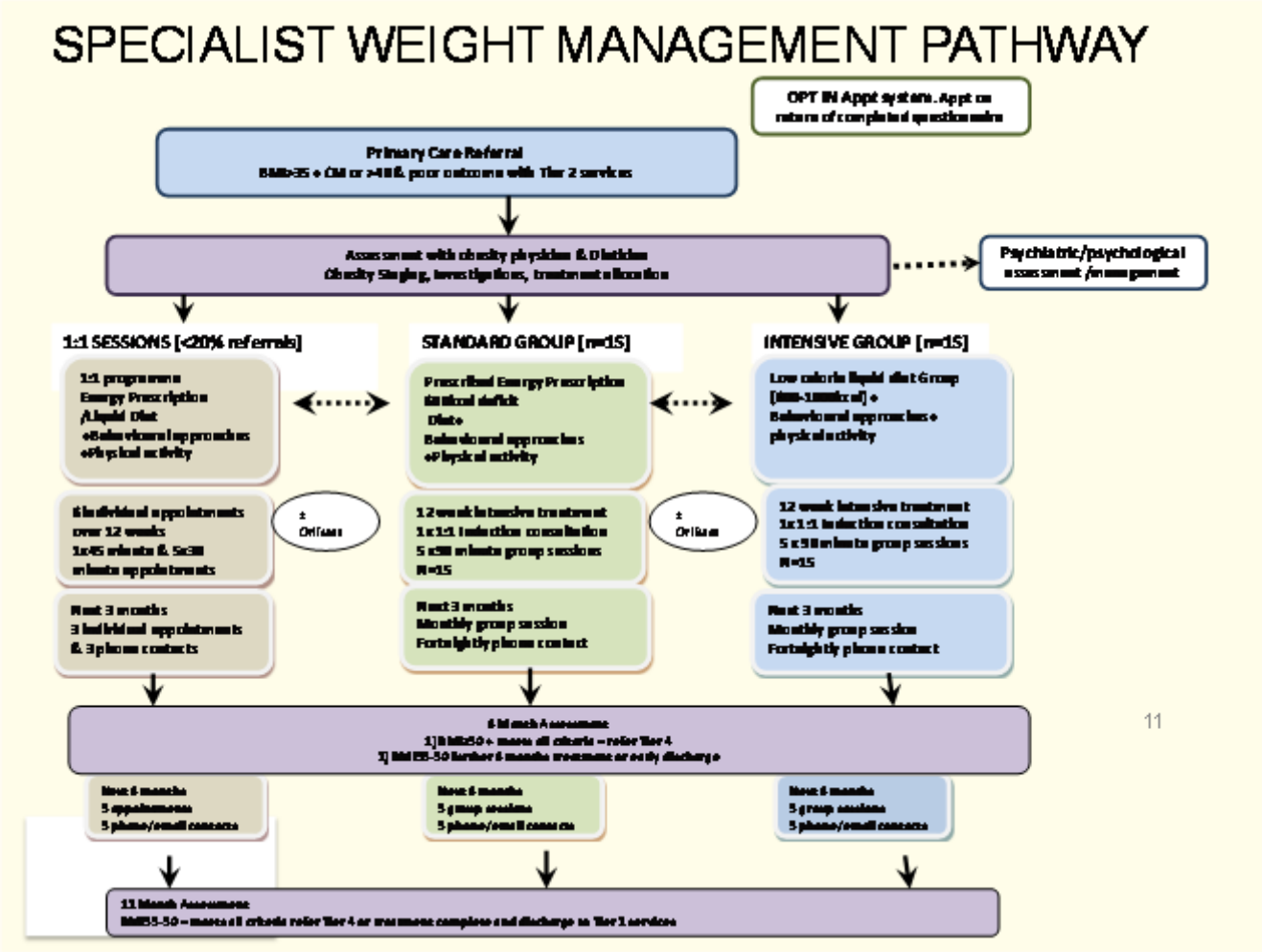
Optima life using Firstbeat heart monitor has been one of the pioneers in using this technology in the sporting, corporate and health settings to help sports teams, businesses and patients to understand more about stress, sleep, exercise, energy and lifestyle. It has been possible to measure the effectiveness of 'lifestyle' interventions.

The technology is a simple tool that is used by physiotherapists and other Allied Health professionals that provides an objective, personal understanding of behaviour to patients and practitioners. It can be used in so many settings that it can provide some cohesion between health, work, sport, school. It can help with initial evaluation and then provide objective data around the efficacy of a variety of interventions. In particular there is possibility to use it in areas where behavioural change / re-enforcement is considered a key strategy.

6 Tier 3: A missing piece of the pathway

There is little specialist weight management service yet available. This is vital to prevent people tipping into the problems caused extreme obesity and requiring surgery. The Tier 3 specialist obesity service would work with tier 2 and 4 services to ensure a cost effective integrated approach to the specialist management of obesity prior to surgery.

The Tier 3 pathway outlined below is in line with evidence based practice as summarised in NICE Obesity [CG43] guidelines 2006, Management of Obesity: Guideline 115 SIGN 2010 and Action on Obesity: Comprehensive Care for All Royal College of Physicians 2013.



The limited provision of Tier 2 services will prove problematic given its importance as a gateway to Tier 3 services and for on-going maintenance support following treatment completion.

Suggested action: The approach described in the diagram above needs to be refined, and locations and referral pathways for Tier 3 services agreed.

7 What can the Health Innovation Network do?

Central to coping with the obesity epidemic is a disciplined process for refining and evidencing innovations. In this section we discuss how that might be achieved, and what the Health Innovation Network's role might be.

7.1 Innovation infrastructure

Innovations travel a long journey which often takes many years, from the original idea until they are in widespread use. It is usually a six stage journey which begins with prompts (=defining the problem), moving through proposals to prototyping/testing, to sustaining (possibly as a social enterprise) which scales to other locations and ends in systemic widespread change. The aim is to create an innovative ecosystem where there is easy progression for innovations to grow in scale and impact.

As an idea progresses along the innovation journey it faces many challenges and only about 10% of the initial ideas are likely to scale. Some innovations move quickly through the development process while others fail to pass the initial stages.

The stages can also be thought of as overlapping spaces, each with distinct cultures and skills. During the journey an idea must develop in four ways:

- Acquiring evidence of efficacy and economy
- Refining and optimising an operational recipe/protocol
- Developing an understanding how to integrate with the existing system
- Gaining reputation/profile and champions

It will also need a team of dedicated and talented people with the right skills to make all these things happen, and organise the right organisation around them.

Innovators need help to complete this journey. An innovative system is one in which they can get this help. The NHS has not been as good as it might be at the adoption and spread of innovation (Innovation Health and Wealth, Accelerating Adoption and Diffusion in the NHS. Department of Health, 2011).

7.2 Developing the Innovation infrastructure

The Health Innovation Network was created to improve the healthcare system's ability to adoption and spread of innovation. While it needs to do this in partnership with others, it can take a lead role several ways that would accelerate the journey of innovations along the pathway.

7.2.1 Developing partnerships

The Health Innovation Network can use its convening power to assemble coalitions which are seeking to address the same or similar issues. In this case the Health Innovation Network Obesity Steering Group could potentially be extended to include a wider range of stakeholders including:

- Citizen representatives

- Innovators
- Energy retailers (supermarkets , restaurants and shops)
- Exercise experts
- Implementers – local networks and boroughs
- Marketing experts

The aim would be to generate more 'pull' of useful innovations into local communities while at the same time deepening the understanding of what works and what does not.

7.2.2 Data sharing platform

Both evidence of efficacy and operational refinement depend upon understanding what is going on. Institutions who deliver a complex task effectively and efficiently have tended to get there by detailed examination of the data (eg Google and Tesco). Data is routinely gathered around weight loss interventions, but is rarely shared beyond the immediate commissioner. The box describes Project Oracle, an example from outside healthcare.

Project Oracle: Children & Youth Evidence Hub

http://www.project-oracle.com/

Project Oracle aims to improve chances for children and young people in London by supporting charitable organisations to evaluate their work and creating a Hub of independently evaluated youth projects. It supports charitable organisations in a number of ways including:

- Research Placements
- Evidence Competition
- Online self-assessment and offline training
- Synthesis of evaluations
- Reverse Placements:

So the Health Innovation Network could:

- Promote the use of certain standardised metrics. The National Obesity Observatory's Standard Evaluation Framework provides a good guide to the necessary data
- Collect these metrics from a broad range of interventions, and share them appropriately with commissioners in South London and with others. The building up of a significant database could generate significant insights
- Build apps and websites that facilitate data collection, or work with existing app developers to enable direct data collection. Modern digital technology makes it much easier to collect and share data than has been the case in the past. If individual interventions could point users towards an app or a website that would allow people to track their weight and other factors easily, this could track change individually and collectively
- Regular weighing often leads to successful weight loss. Apps and websites of the type outlined above can facilitate individuals in their attempts to lose weight, and should be designed appropriately
- Help to analyse and disseminate the insights gained, in a way that allows innovators and implementers to refine their approach. Understanding what approaches work for whom, and under what conditions, is potentially enormously important

This sort of data sharing is becoming increasingly commonplace.

Information governance rules would need to be observed, but this problem is not insurmountable. The Health Innovation Network's position interfacing with academic, practitioners, industry and the voluntary sector make it well placed to operate here.

7.2.3 Setting evidentiary standards

Local commissioners want to know what works even where a clear evidence based solution is not yet available. The Health Innovation Network help speed up the generation of evidence by assembling relevant experts and data to grade innovations as they travel along the pathway. They can also be assessed using evidence that is not of RCT quality. (Social Research Unit's 'What Works' framework, http://dartington.org.uk/projects/what-works-evidence-standards/). The Health Innovation Network could identify what works well for the South London population, and what the key factors are which make it work. This process would enable a wider adoption and spread of those interventions which can be proven efficacious.

In an NHS systematic review of the clinical effectiveness and cost-effectiveness of long-term weight management schemes for adults incorporated 22 studies including 12 RCTs with varying results. Long term multi-component weight management interventions seem to hold the most promise but one general finding seems to be the tendency of weight to be regained after the intervention. It remains difficult to see which intervention is most effective as those multi- component interventions focusing on diet were not found statistically significant and although a high level physical activity focus was more effective in the short term than standard behavioural therapy, the change after 30 months was not statistically significant. The full report provides details of each study.[ii]

7.2.4 Communities of interest

At the Young Foundation we have been supporting innovators in the public sector for many years. Over that period we have learned that innovators get as much from each other as they do from bespoke training. They share ideas about encountering the same issues in terms of evidence, bureaucracy, commissioners, and service users.

The Health Innovation Network is already becoming a convenor of innovators and developing communities of interest around diabetes and MSK. It would be helpful to extend this to obesity to bring together professionals, citizens and evaluators to support and filter the innovations and evaluations.

7.2.5 Light touch "accreditation" for voluntary sector organisations

Weight loss programmes at level 1 and 2 can and should be carried out by non clinical staff, with some training and support. The voluntary sector already offers a broad range of services that are relevant to weight maintenance and loss. However without knowledge of what is available in South London, it is hard to recommend particular services. Done well, this could unlock a massive resource but introducing even a 'light

touch accreditation' scheme will add an additional burden in terms of required resource/financial commitment. Any process needs to generate savings across the system to be sustainable.

Suggested action: The Health Innovation Network could validate services as appropriate to raise their profile and give NHS staff the necessary knowledge and confidence in what the voluntary sector has to offer.

7.2.6 Innovation leaders

When an intervention is well evidenced, well specified, and operationally robust, it is important to have senior influential innovation figures who are prepared to open doors for an idea, and give it endorsement. It is vital to have senior support as all change results in friction in a system and complex organisations can resist even the best supported ideas without push from above.

8 Recommendations

Below are listed suggested actions some of which have been incorporated into the text in previous sections.

8.1 Recommendations for system change

These recommendations cover the Health Innovation Network with all partners:

- Assess the capacity of the current Tiers against likely need – it is likely that there will be a need to increase capacity
- Define support pathways for each innovation that the Health Innovation Network or Boroughs chooses to support
- Develop a brief intervention for obesity to match those for alcohol and smoking
- Use specialist expertise in improvement Science to understand the complex interventions that work best in weight reduction
- Run a challenge competition to identify innovative social prescribing opportunities in this area and to support the development and adoption and spread of those successful innovations
- Develop monitoring and feedback mechanisms, including apps to increase individual motivation and enable CCGs and others to measure impact
- Work with statutory agencies and social enterprises, to develop, maintain and offer some training a web based directory of activities which can be used through social prescription
- Develop agreed criteria against which to judge new innovations in this areas. The criteria could include:
    1. used effectively in at least one place
    2. can be tailored to what individuals want
    3. supports more self care - a person taking responsibility for themselves
    4. has demonstrable evidence of safety and efficacy or is contributing to developing a better evidence base
    5. can demonstrate ROI and SROI or show that this is an likely outcome across the whole system
    6. increases social capital or social return on Investment - e.g. does it strengthen local communities and/or reduce inequalities

8.2 Recommendations for NHS trusts

- Support the design and implementation of a practical Tier 3 service across South London in a number of locations
- Train staff in all departments to use the obesity brief intervention and social prescribing

8.3 Recommendations for Commissioners

- Commission services to address capacity issues in the obesity path, particularly around tier 3
- Prioritise the training for frontline healthcare and non healthcare providers in the use of Brief intervention for those who are overweight or at risk of becoming overweight
- Prioritise the establishment of Health Innovation Leaders in the community
- Prioritise the provision of and Health Trainers through the commissioning process
- Consider how the NHS Health Check could be used better to tackle obesity
- Consider how to signpost people to advice, support and services better

8.4 Recommendations for Boroughs

- Map the Tier 1 and Tier 2 activities and help maintain to a web based catalogue of these services. This will identify gaps and will inform and shape future planning and commissioning of services at local level
- Be innovative in approach and assess the impact of different innovations to increase the understanding of what works and what does not. Use this to inform future policy and activity locally
- Identify and train Health Innovation Leaders to champion new approaches such as brief interventions for obesity and locally tailored community solutions
- Identify suitable workforces who can deliver brief interventions and prioritise this in the planning of services
- Ensure that local policy and delivery mirrors the need to *'Make Every Contact Count'*

8.5 Recommendations for Primary Care providers

- Train practice staff to use:
    - the adapted King's triage tool
    - the obesity brief intervention
    - social prescribing to help people change their behaviour
- Use health lifestyle clinics to support process and to weigh people and monitor weight gain
- Work with Community Health Champions and Health Trainers

8.6 Recommendations for Local community networks

Networks should identify and train Health Innovation Leaders who can lead the work at street level

Appendix 1: Who has been involved?

Name	Organisation	Position
Clare Grace	King's College Hospital NHS Foundation Trust	Obesity Research Dietician
Dr Charles Gostling	Lewisham GP	GP and Joint Clinical Director Diabetes, HIN
Shanie-Louise Dengate	London Borough of Bexley	Policy and Health Integration Officer
Simon Aylwin	King's College Hospital NHS Foundation Trust	Consultant Endocrinologist
Dr Tom Coffey	Wandsworth CCG	GP
Prof John Moxham	King's Health Partners AHSC	Director of Clinical Strategy
Dr Angela Bhan	Bromley PCT	PH & SRO Bromley CCG
David Goldsmith	Guy's and St Thomas'	Director of CLRN, Consultant Nephrologist
Peter Littlejohns	Lewisham, Southwark & Lambeth & CLARHC	PH academic and deputy director of the CLAHRC
Zoe Lelliott	HIN for South London	Director of Strategy & Performance
Mike Hurley	St Georges Medical School	Professor, School of Rehabilitation Sciences (clinical director, MSK for HIN)
Helen Walters	GLA	Supported the development of the obesity framework for London
Dr Natasha Patel	St George's Trust	Diabetic Consultant Joint Clinical Director Diabetes SLNETWORK
Scott Pendleton	Guy's and St Thomas'	Head of Nutrition and Dietetics
Kate Bissett	Public Health Officer	Southwark Borough Council
Dr Rubin Minhas	Nuffield Health	Group Medical and Scientific Director
Mitch Rogers	Public Health England	Senior Business Development Manager
Dr Alison Tedstone	Public Health England	Director of Nutrition & Healthy Food
Simon Shepard	Optima Life	CEO
Kathleen Collett	We Are What We Do (Chicken Shop Project)	Research and Evaluation Director
Robbie Davison	Can Cook	Creator and Director
Dominic Higgins	The Green Gym	The Conservation Volunteers Business Development Manager
Jamie Blackshaw	Public Health England	Nutrition Advice, Health and Wellbeing
Harry Rutter	London School of Hygiene and Tropical Medicine	Public health , expert obesity and its determinants,
Jeanelle de Gruchy	London Borough of Haringey	Director of Public Health
Sylvia Wyatt	Young Foundation	Principal Adviser
John Loder	Young Foundation	Programme Lead
Susie Finlayson	Young Foundation	Researcher

Health Innovation Network Obesity Steering group members

Appendix 2: King's obesity staging criteria v 5

	Criterion	Stage 0 Normal health	Stage 1 At risk of disease	Stage 2 Established disease	Stage 3 Advanced disease
A	**A**irway /Apnoea	**Normal** No snoring Neck circ < 43cm Epworth score <10	**Mild sleep apnoea** Mild snoring Epworth score ≥ 10 Mild OSA (dip rate<15/hr) Neck circ >43cm (size 18) Mild asthma	**Requires CPAP** Witnessed apnoea Dip rate >15/hr Uses CPAP (controlled) Severe asthma	Cor pulmonale Obesity hypoventilation syndrome Uncontrolled OSA
B	**B**MI	**<35 kg/m^2**	**35-50 kg/m^2**	**50-60 kg/m^2**	**>60 kg/m^2**
C	**C**VD risk	**<10%** CVD risk <10% over 10 years [JBS coronary risk prediction chart*]	**10-20%** CVD risk ≥10% over 10 years T2DM	**>20% or stable heart disease** Stable IHD CCF NYHA I-II, *or* >20% risk	Severe angina, *or* CCF NYHA III-IV
D	**D**iabetes	**Normal** Fasting or random glucose <5.7 mmol/L Normal HbA1c	**IFG** IFG / IGT, *or* previous GDM	**T2DM** Diet, insulin or OHA controlled HbA1c<9%	**Uncontrolled T2DM** HbA1c>9% Advanced microvascular disease
E	**E**conomic complications	**Normal** Obesity has no financial impact	**Financial impact** Increased travel cost Increased clothes cost	**Workplace disadvantage** Earnings limited by obesity Receiving benefits due to obesity	Unemployed due to obesity Financial effect on 3rd party (e.g. carer required to reduce income)
F	**F**unctional status & musculoskeletal	No limitation	Manages one flight of stairs Limitation on work or recreation	Cannot climb stairs (<1 flight) 3rd party assistance for ADL or for dependents	Housebound Wheel chair user Registered disabled
G	**G**onadal & reproductive axis	**Normal** Normal sexual and reproductive function Celibate (not seeking physical relationship)	**PCOS / ED** PCOS Low testosterone (men) Impaired sexual function/ erectile dysfunction	**Subfertility** Subfertility or unable to access IVF Marital/ relationship breakdown due to obesity Cessation of all sexual activity	
H	**H**ealth status (perceived)	**Normal** Good mental and physical well being	**Low mood/poor QoL**	Mild–moderate depression Takes treatment for depression	Severe depression Suicidal ideation Unmanaged substance abuse Active self harm
I	Body **I**mage & eating behaviour	Minimal or no concern Normal eating pattern	**Dislikes mirror appearance** Comfort eating Inappropriate eating cues Mild body image dysphoria	**Avoids social interaction or mirrors** Severe body image dysphoria Controlled eating disorder	**Eating disorder** Active eating disorder Social phobia

Additional criteria

J	Oesophago-gastric **J**unction	Normal, no GORD symptoms	GORD (acid reflux) controlled on standard PPI	Oesophagitis on OGD within 12 months Severe GORD symptoms: requires high dose PPI	Barrett's oesophagus
K	**K**idney	Normal	Proteinuria	eGFR <60	eGFR <30
L	**L**iver	Normal	Elevated LFTs, NAFLD on ultrasound	NASH	Liver failure

Stage 1 conditions represent either patients at risk of developing co-morbidities or with mild co-morbidities that may potentially justify bariatric surgery but do not need specialist opinion

Stage 2 conditions indicate established disease and higher surgical risk that may require medical review.

Stage 3 conditions are likely to indicate a need for specialist opinion and may represent contraindications for surgery.

***Joint British Societies Coronary Risk Prediction Chart. www.bhsoc.org/resources/prediction_chart.**

Appendix 3: Possible innovations + classifications

Name	Description	Kick start	Evidence quality	Social prescribing	Tier 1	Tier 2	Tier 3
MEND UK	MEND empowers children and adults to become fitter, healthier and happier and to reach or maintain a healthier weight It delivers a series of short term programmes to children, families and adults to increase activity and improve health						
My Time	Prevention, weight management, training for frontline staff, online self-help and one-to-one sessions						
CATCH	US evidence-based, coordinated school health program designed to promote physical activity, healthy food choices and the prevention of tobacco use in children						
CHANGES weight management	Provides assessment, advice, support and intervention for adults. Dieticians deliver this with CB Therapists for individuals identified with psychological issues relating to / as a consequence of their weight. For adults over 16						
Goals	Evidence-based, community lifestyle change intervention for overweight children and their families						
CounterWeight	This is an evaluated, evidence based lifestyle weight management programme.						
Chrysallis II Community Weight Management	This project seeks to impact on self-management of obesity through lifestyle education provided in a small group setting, with online support and information.						
Coaching	In-person/telephone coaching for obese patients						
Watch It	A community-based intervention programme based in Leeds, that is provided to selected families with children aged 8–16. Health trainers work with families to encourage changes in lifestyle, supervised by dieticians, psychologists, sports physiologists and a paediatrician.						

Name	Description	Kick start	Evidence quality	Social prescr ibing	Tier1	Tier 2	Tier3
FitFans (& Fit Fans for her)	FitFans aims to build a network of high profile mentor led aspirational community based weight loss programmes, and is delivered in conjunction with local professional and amateur sports clubs with programmes operating from sports stadia and other community outlets						
Weight Watchers Referral Scheme	The Weight Watchers Referral Scheme, developed through careful piloting, offers the NHS a subsidised package to bring the Weight Watchers weekly support to overweight and obese patients						
GoodGym	GoodGym is about getting fit by doing good. We're a group of runners who get fit by doing physical tasks which benefit the community. Promote fitness and combat isolation and loneliness.						
Charlton Athletic Community Trust	Football Club linking with community to increase physical activity and healthy eating. Have done Helath checks for men attending games in past. Community football club of the year 2013						
Walking for Health	Community organised group walking to maintain and improve health and wellbeing						
Good Food Matters - (Croydon)	A community centre to grow local food, educate community in growing food, eating and cooking healthily, buying locally and affordably. Food grown is sold affordably locally. Surplus given to those in need.						
Can Cook	Introducing people to cooking and cooking healthily, providing lessons in it, leading to less dependency on takeaway food and healthier lifestyles.						
Making every contact count	Making every contact count is an innovation developed by York and Humber to re-enforce lifestyle messages around smoking drink and eating .						

Name	Description	Kick start	Evidence quality	Social prescr ibing	Tier 1	Tier 2	Tier 3
Walk once a Week (Living Streets)	We are all pedestrians, and our streets are the one public space we all use daily. At Living Streets, we think they are worth fighting for. With our supporters, we work to create streets that really put people first. When we have streets we want to walk in, lives are transformed - we are healthier, happier and more sociable .You can reward children for walking throughout the year: those who walk to school at least once a week get a collectable pin badge at the end of the month. There are 11 badges to collect across the academic year.						
Activity for Life	Exercise and Lifestlye referral service Referral partnership between NHS and councils designed to help inactive people to become more physically active						
Target: Wellbeing	Target: Wellbeing (TWB) aimed to improve the health and wellbeing of people living in poorer communities across the North West through the activities of a portfolio of ten local and two pan regional programmes. These programmes included a total of 95 individual projects each focusing primarily on one of three key themes or strands; healthy eating, physical activity and mental wellbeing						
SilverFit	Life long fitness for the over 50s						

Name	Description	Kick start	Evidence quality	Social prescr ibing	Tier 1	Tier 2	Tier 3
Green Gym	The Conservation Volunteers run the Green Gym in various boroughs across London encouraging volunteers to get active while working outdoors and to learn new skills. There is also a green gym for young people who may not find traditional types of activity motivates people. Through the use of trainers overweight and overweight people are guided to safely carry out conservation in their local area. http://www.tcv.org.uk/greengym						
Federation of city farms and community gardens	The umbrella body for city farms and community gardens UK wide						
Fit and Strong!	Fit and Strong! is a low-cost, evidence-based, multiple component exercise program. It combines flexibility, strength training and aerobic walking with health education for sustained behaviour change among older adults with lower extremity osteoarthritis						
Enhance Fitness	Targeted at older adults to increase activity levels						
Alive 'N' Kicking	Alive 'N' Kicking is a childhood and young people's obesity programme which caters for age ranges 2 - 19 and we also provide a pre and post natal package covering infants. Each age categorised programme is specifically designed and provides appropriate messages, activities and behavioural change strategies.						
Optima-life	Using Firstbeat optima-life has been one of the pioneers in using this technology in the sporting, corporate and health settings. We have been able to understand more about stress, sleep, exercise, energy and lifestyle; we have been able to measure the effectiveness of interventions and in 100% of cases we have moved away from the guess work that is so often associated with the topic of 'lifestyle'						

Appendix 4: Obesity data for South London

Source: https://catalogue.ic.nhs.uk/publications/public-health/obesity/obes-phys-acti-diet-eng-2012/obes-phys-acti-diet-eng-2012-rep.pdf

LA	Obesity Prevalence	Deprivation	Colorectal Cancer Incidence (rate per 100,000)	CHD modelled prevalence (%)	Type 2 diabetes modelled prevalence (%)	Hypertension modelled prevalence (%)		Proportion who walk or cycle for at least 30 mins, at least once per month	Participation in physical activity per week (%)- 0x30 minutes	Participation in physical activity per week (%)- 1x30 minutes	Participation in physical activity per week (%)- 5x30 minutes
England	24.2		44.9	6.4	4.4	34.5	73.0	29.4	58.3	20.7	
London	20.7	25.22	44.9	6.4	4.4	34.5	73.0	29.4	58.3	20.7	
South London Average (simple, needs pops)	**20.7**	**21.5**	**45.1**	**4.3**	**3.9**	**26.4**	**73.8**	**28.0**	**60.7**	**22.4**	
Greenwich	22.6	31.92	44.8	4.6	4.1	26.9	72.0	30.2	55.4	19.5	
Lambeth	20.5	31.25	43.4	3.3	3.8	23.0	75.0	25.1	62.0	30.2	
Lewisham	23.7	30.97	48.7	3.9	4.1	25.7	74.0	31.1	56.4	21.3	
Southwark	22.5	29.73	36.9	3.5	3.9	23.8	77.0	32.5	59.5	19.5	
Croydon	24.3	22.76	46.2	5.3	4.6	29.7	68.0	28.5	58.9	19.8	
Wandsworth	15.0	21.47	44.9	3.6	3.3	22.6	83.0	24.8	66.4	26.9	
Bexley	26.4	16.71	43.5	5.3	4.0	30.9	67.0	27.6	60.8	20.0	
Bromley	21.8	14.95	42.0	5.5	4.0	31.4	71.0	27.8	62.4	21.1	
Merton	19.1	14.56	43.6	3.9	3.8	26.1	70.0	31.0	55.0	17.5	
Kingston upon Thames	16.7	11.66	50.7	3.8	3.5	24.0	72.0	27.5	61.2	23.1	
Richmond upon Thames	14.9	10.12	50.9	4.4	3.2	26.1	83.0	21.4	69.3	27.4	

Appendix 5: References

1. NICE Obesity [CG43] guidelines 2006
2. Management of Obesity: Guideline 115 SIGN 2010
3. Action on Obesity: Comprehensive Care for All RCP 2013.
4. Loveman E, Frampton G, Shepherd J, Picot J, Cooper K, et al. The clinical effectiveness and cost-effectiveness of long-term weight management schemes for adults: a systematic review. Health Technology Assessment 2011;15(2).
5. Brandling J, House W. Social prescribing in general practice: adding meaning to medicine. British Journal of General Practice. 2009; 59(563):454–456.
6. Obesity: working with local communities. NICE public health guidance 42 (2012) http://pathways.nice.org.uk/pathways/obesity-working-with-local-communities/obesity-working-with-local-communities-overview
7. South, J., Higgins, T.J., Woodall, J.et al. (2008) Can social prescribing provide the missing link? Primary Healthcare Research & Devt**,** 9 (4), pp.310-318.
8. Obesity. NICE clinical guidance 43 (2006)
9. SIGN GUIDANCE; www.sign.ac.uk/guidelines/fulltext/115/
10. Berkman L (1995) The role of social relations in health promotion Psychosomatic Medicine 57:245-254
11. Making it possible: improving mental health and wellbeing in England. National Institute for Mental Health in England, (2005)
12. Social Research Unit's 'What Works' framework, http://dartington.org.uk/projects/what-works-evidence-standards/)
13. Markowitz S, Friedman MA, Arent SM. Understanding the relation between obesity and depression: Causal mechanisms and implications for treatment. Clinical Psychology: Science and Practice 2008;15(1):1-20.
14. Napolitano MA, Foster GD. Depression and obesity: Implications for assessment, treatment, and research. Clinical Psychology: Science and Practice 2008;15(1):21-27.
15. Obesity and Mental Health. National Obesity Observatory (2011)
16. Martin C, Woolf-May K. The retrospective evaluation of a general practitioner exercise prescription programme. Journal of Human Nutrition Diet. 1999;12 (Suppl 1):32–42.
17. South, J., Higgins, T.J., Woodall, J.et al. (2008) Can social prescribing provide the missing link? Primary Healthcare R&D, 9 (4), pp.310-318.
18. Social Prescribing for Mental Health – A guide to commissioning and delivery. Care Services Improvement Partnership (2009)
19. Public Services (Social Value) Act 2012

20. Kennedy A, Reeves D, Bower D, et al. The effectiveness and cost effectiveness of a national lay led self car support programme for patients with long term conditions: a pragmatic randomised control trial. J Epidemiol Community Health. 2007;61(3):254–261.
21. Cartwright, C & Cooper, C (2011) *Innovation in stress and health* New York: Palgrave Macmillan
22. An evaluation of the Green Dreams Project: an interim report. Healthy Settings Unit at the University of Central Lancashire (UCLan) (2012)
23. Government Office for Science. *Foresight Report, Tackling Obesities: Future Choices – Project Report*. 2007
24. NICE *Overweight and obese adults: lifestyle weight management services consultation draft* (2013) *pp2*
25. Department of Health, *Healthy Lives, Healthy People: A call for action on obesity in England.* 2011
26. . *The Public Health outcomes Framework for England,* DH *2013 – 1026.* 2012
27. Department of Health. *Reducing obesity and improving diet.* 2012
28. NICE *Obesity: Guidance on the preventions, identification, assessment and management of overweight and obesity in adults and children.* (2006)
29. Rubak S, Sandbæk A, Lauritzen T, et al. Motivational interviewing: a systematic review and meta-analysis. British Journal of General Practice 2005;55:305.
30. Washington R. L. Childhood obesity: issues of weight bias. Prev Chronic Dis2011;8(5):A94. Accessed [*16/10/13*]http://www.cdc.gov/pcd/issues/2011/sep/10_0281.htm.
31. Schwartz M.B., O'Neal Chambliss H., Brownell K..D., Blair S.N., & Billington C. Weight bias among health professionals specializing in obesity. Obesity Research 2003;11(9)
32. Sutin AR, Terracciano A (2013) Perceived Weight Discrimination and Obesity. PLoS ONE 8(7)
33. Bleich S. N., Bennett W. L., Gudzune K. A., & Cooper L. A. Impact of physician BMI on obesity care and beliefs. Obesity (2012) 20 (5):999–1005.
34. Public health is everyone's responsibility and there is a role for all of us, working in partnership, to tackle these challenges. https://responsibilitydeal.dh.gov.uk/about/
35. '*Transforming Primary Care in London: General Practice - A Call to Action*'. NHS England (London Region) Nov 2013. This sets out the challenges facing general practice in London, and the priorities that doctors and patients have told us are important to improve.