

North Yorkshire and York Healthy Weight, Active Lives Strategy 2009-2020



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Executive Summary

Background

Our local ambition is to reverse the rising tide of obesity and overweight in our local population by ensuring that everyone is able to achieve and maintain a healthy weight. This matters as obesity is an important risk factor for many chronic diseases, including coronary heart disease and stroke, type 2 diabetes, high blood pressure, metabolic syndrome, osteoarthritis and cancer^{1, 2}. The psychological and social burden of obesity can also be significant, with rates of anxiety and depression being three to four times higher among obese individuals. These diseases also curtail life expectancy - it is estimated that on average, obesity reduces life expectancy by between three and 13 years.³

We aim to contribute to the national ambition (reduction in the proportion of children who are obese to the levels observed in 2000 by 2020) through targets set locally in the NHS North Yorkshire and York (North Yorkshire and York Primary Care Trust) Operating Framework (Vital Signs)⁴ and the Local Area Agreements for 2008-11 for North Yorkshire County and City of York Councils⁵ and the Children and Young People's Plans for North Yorkshire and York.^{6, 7}

This is an ambitious goal, but achievable if we work in partnership to recognise the desire of people to live healthy lives and respond to it locally, with the information and support people need and expect. Maintaining a healthy weight must be the responsibility of individuals first. Change will only come from individuals seeing the link between a healthy weight and a healthy life, and so wanting to make changes in the way they and their families live. Effective partnership working between a wide range of organisations will also be essential to achieving efficient and sustainable outcomes.

This North Yorkshire and York Strategy sets out a clear direction for actions to enable people to achieve a healthy weight and an active life, based on government strategies and guidance^{1, 8} and NICE guidance⁹, which provides clear expectations for the NHS, local authority and other partners regarding the provision of preventative and management interventions and services.

This is the finalised version of the North Yorkshire and York, Healthy Weight, Active Lives Strategy and incorporates feedback received following the wide circulation of the draft version for comments. The Strategy has also been updated following the publication of two recent documents from the Department of Health^{8, 10}. The full version of the Strategy is available on NHS North Yorkshire and York website, www.northyorkshireandyork.nhs.uk/stayinghealthy/HealthyWeight/LocalInitiatives.htm

The Strategy has seven sections as follows:

1 Introduction

This section focuses on the case for developing a local healthy weight, active lives strategy, which flows into local accountability arrangements for NHS North Yorkshire and York (NHS NYY), North Yorkshire County Council and the City of York. It also describes a framework for delivering action at a local level.

2 The North Yorkshire and York Ambition

This section contains details of the local targets, which are in line with the national focus, to reverse the rising trend of obesity and overweight in our local population.

Within the Local Area Agreements (LAA2) the target is 'to reduce the rate of increase in the proportion of children at risk of obesity (aged 10-11 years)', which is measured annually as part of the National Child Measurement Programme (NCMP). The trajectory agreed (National Indicator 56) is shown below in Table 1:

Table 1: LAA2 trajectories for York and North Yorkshire Year 6 children (2008-2011)

	2006/07 (baseline)	2007/08 (Actual)	2008/09 (Trajectory)	2009/10 (Trajectory)	2010/11 (Trajectory)
North Yorkshire	15.8%	15.2%	16.2%	16.3%	16.3%
City of York	16%	16.6%	15.44%	15.4%	15.4%

Source: National Child Measurement Programme and North Yorkshire and York LAAs.

The most recent data for 2007/08 indicates that for North Yorkshire there is a slight reduction from 15.8% in 06/07 to 15.2% in 07/08. However, York has seen an increase from 16% in 06/07 to 16.6% in 07/08.

3 Overweight and Obesity: The Public Health Problem

This section sets out the causes of overweight and obesity, discusses the health risks of overweight and obesity in children and adults and the health benefits of losing excess weight.

4 Understanding the Problem in North Yorkshire and York

This section highlights the geographical areas to be targeted and contains the local data of the levels of overweight and obesity in Reception and Year 6 children as follows:

- The rates for all Reception children for the NHS North Yorkshire and York area at risk of being overweight (14.8% in 06/07 and 15.0% in 07/08) are significantly higher than the England rates (13.0% in 06/07 and 07/08)
- The rates for Year 6 children for the NHS North Yorkshire and York area, at risk of being obese (15.8% in 06/07 and 15.5% in 07/08) is significantly lower than the England rates (17.5% in 06/07 and 18.3% in 07/08)

Obesity data for adults over 17 years is also included, although this is limited as there are currently no routinely available or reliable measures of obesity or overweight prevalence at a local level. However, a synthetic estimate shows that 23.4% of the NHS NYY area was obese based on Health Survey for England data for 2004-2005. Levels of physical activity among children and adults are also included.

The current and predicted future direct and indirect costs of overweight and obesity are also set out. In 2007 the NHS costs directly attributable to overweight and obesity were estimated to be £4.2 billion, obesity alone £2.3 billion and the wider economy £15.8 billion¹¹. The estimated annual costs to NHS NYY area are shown in Table II:

Table II: The estimated annual costs to the NHS of diseases related overweight and obesity for North Yorkshire and York

Estimated annual costs of diseases related to overweight and obesity (BMI 25 or more) £ million			Estimated annual costs of diseases related to obesity alone (BMI 30 or more) £ million		
2007	2010	2015	2007	2010	2015
186.6	193.6	207.1	96.8	104.8	120.4

Source: Foresight tackling obesity: Future Choices

5 Choosing Interventions and Taking Action at a Local Level

This section of the Strategy emphasises that the main priority group for North Yorkshire and York is children and young people under 11 and their families, in line with NHS NYY Operating Framework⁴ and the Local Area Agreements^{6,7}, whilst acknowledging that there are other priority groups that need to be considered.

To deliver the Strategy, the steps to be taken at a local level, building on existing good practice and based on the five themes outlined in the government's Healthy Weight, Healthy Lives Strategy¹ are described.

Some of the outcomes to be delivered by implementing the Strategy are identified as follows:

- As many mothers breastfeeding up to six months as possible, with families knowledgeable about healthy weaning and feeding of their young children.
- All children growing up with a healthy weight by eating well, for example, eating at least five portions of fruit and vegetables a day.
- All children enjoying being active, for example, by doing at least one hour of moderately intensive physical activity each day.
- All schools are Healthy Schools and parents who need extra help are supported through children's centres, health services and their local community.
- More eligible families signing up to the Healthy Start scheme.
- More consumption of fruit and vegetables – 5 A DAY.
- More people, more active, more often.
- Everyone able to access appropriate advice and information on healthy weight.
- Increasing numbers of overweight and obese individuals able to access appropriate support and services.
- Appropriate training is available so that both health and non-health professionals feel confident in sensitively raising the issue of weight with those who are overweight or obese.

6 Local Leadership

Outlined in this section is the overall leadership and governance which will be facilitated by the establishment of two strategic implementation groups to oversee the implementation of the Strategy. It is proposed the North Yorkshire group will report to the Children and Young People's Partnership Board and the Healthier Communities Thematic Partnership (who in turn report to the North Yorkshire Strategic Partnership. The York group will report to YorOK Board – the Children's Trust and the Healthy City Board (who report to Without Walls, York's Local Strategic Partnership).

7 Delivering Change and Recommendations

Specific interventions aimed at changing families' attitudes and behaviours are discussed including aligning interventions to the Change4Life (C4L) approach, which is a new initiative supported by the Department of Health, bringing together health and education professionals, industry and the third sector, with the shared aims to improve children's diets and levels of activity.

The Strategy contains some recommendations which include the following:

7.1 Local Leadership - overall leadership and governance arrangements need to be agreed by all partners, with roles and responsibilities clearly identified. It is recommended that this is facilitated through the implementation of two Healthy Weight, Active Lives Strategic Implementation Groups, to be established by February 2009, linked to the Local Area Agreement process, one group for North Yorkshire and one for York chaired by a senior-level lead. These groups will develop, monitor and evaluate three year Action Plans. It is also recommended that dedicated resource is identified to co-ordinate and lead the partnership work across both areas.

7.2 Understanding the problem locally – it is essential to build on our knowledge and understanding of the prevalence of overweight and obesity and the behaviours that contribute to this. It is recommended that NCMP data should be used alongside other available data such as local authority land use data to provide a further perspective on the environmental factors especially in high prevalence areas. It is also important to develop insights on health and weight in the local population to target behaviours effectively. The commissioning of social marketing initiatives can support this process.

There is also a need to improve recording and reporting on local adult obesity prevalence data.

7.3 Implementing evidence based interventions based on the five themes set out in the government's strategies^{1,8} - whilst maintaining a balance between a whole-population approach and an 'individuals at-risk' approach it is recommended that evidence based interventions are implemented, prioritising children and young people under 11 and their families, based on the following five themes¹:

7.3.1 Children: healthy growth and healthy weight - to review existing programmes and initiatives within antenatal, early years and school settings to maximise the opportunity for encouraging a whole-family approach to eating well and being active.

7.3.2 Promoting healthier food choices – to review existing initiatives to ensure they are aligned to national guidance around recommendations for promoting a healthy, balanced diet to prevent overweight and obesity.

7.3.3 Building physical activity into our lives –to focus on action that encourages every day physical activity with the promotion of supportive built environments as well as action to reduce the time that children spend in sedentary activity.

7.3.4 Creating incentives for better health – to pilot a range of different approaches (for example, using personal financial

incentives) to encourage healthy living. Also local employers should be encouraged to promote wellness initiatives amongst staff and make healthy workplaces part of their core business.

7.3.5 Personalised advice and support for overweight and obese individuals - to commission a range of multi-disciplinary weight management services for children and families along an evidence based care pathway approach.

7.4 Building local capabilities and capacity – to provide and where necessary commission training to ensure that frontline workers are confident about raising the issue of weight and signpost individuals and families to local services and facilities for support and advice.

7.5 Communications – it is recommended that a communications strategy is developed to support effective delivery of key messages to individuals and the community.

7.6 Funding implications

To deliver the Strategy there will be a need to harness current and future resources and for all partners to agree joint commissioning arrangements and commit resources to the Strategy.

Local authorities and the NHS lead and fund many areas of work that are integral to the Strategy, therefore development and implementation of the Action Plans needs to be undertaken jointly.

1 Introduction

This North Yorkshire and York Healthy Weight, Active Lives Strategy has been developed in response to the new cross-government strategy Healthy Weight, Healthy Lives¹, published in January 2008. This national priority flows into local accountability arrangements for NHS North Yorkshire and York (North Yorkshire and York Primary Care Trust), North Yorkshire County Council and City of York Council through the following:

- The NHS in England: Operating Framework (Vital Signs) for 2007-2008/09/10⁴.
- The New Performance Framework for Local Authority and Local Authority Partnerships: Single Set of National Indicators⁵.
- North Yorkshire and York Local Area Agreements for 2008–11⁵.
- Children and Young People's Plans^{6,7}.

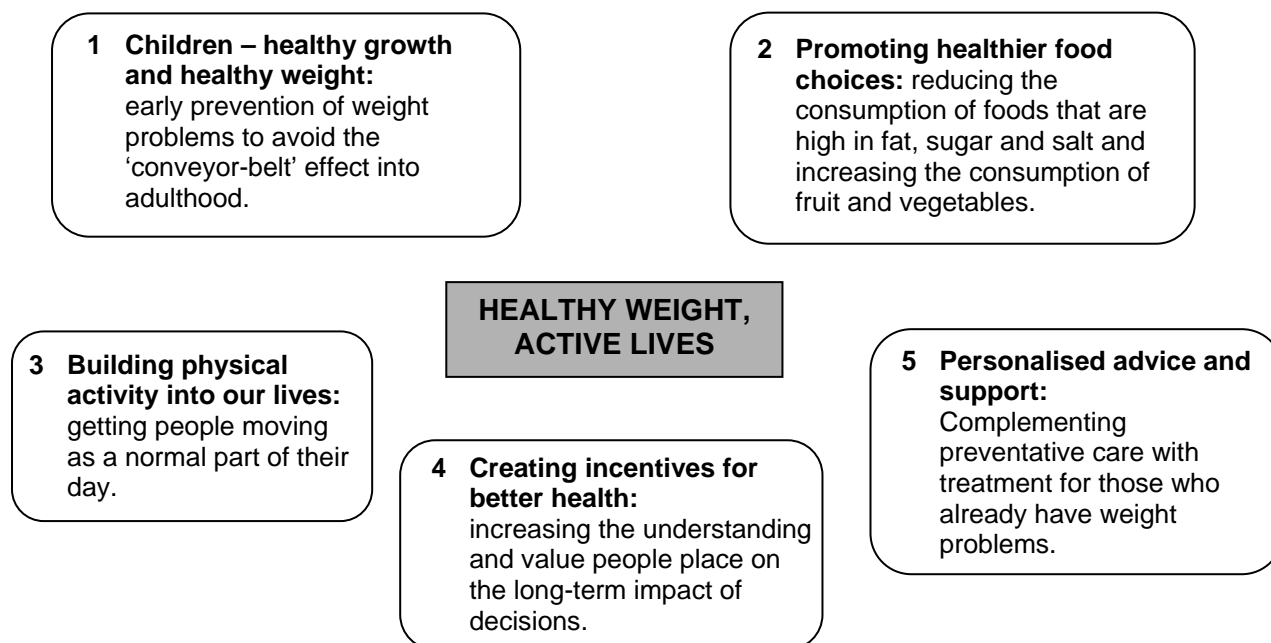
The Strategy is aligned with the Children and Young People's Plans for North Yorkshire⁶ and York⁷, which sets out how local authorities and their Children's Trust partners will meet the needs of children and young people in their area. It links to plans for adults and older people.

This is the finalised version of the Healthy Weight, Active Lives Strategy which incorporates feedback received following the wide circulation of the draft version for comments. The Strategy has also been updated following the publication of two recent documents from the Department of Health (Healthy Weight, Healthy Lives: A Toolkit for Developing Local Strategies⁸ and Healthy Weight, Healthy Lives: Consumer Insight Summary¹⁰).

Our Strategy is in line with the government's strategy, Healthy Weight, Healthy Lives¹ and supports the creation of a healthy society - from early years, to schools and food, from sport and physical activity to planning, transport and the health service. It aims to bring together employers, individuals and communities to promote children's health and healthy food; build physical activity into our lives; support health at work; and provide the incentives to promote health more widely. It also identifies the need for provision of effective treatment, management and support when people become overweight or obese.

The following five themes are identified in this local Strategy:

Figure 1: Delivering the ambition: 5 themes¹

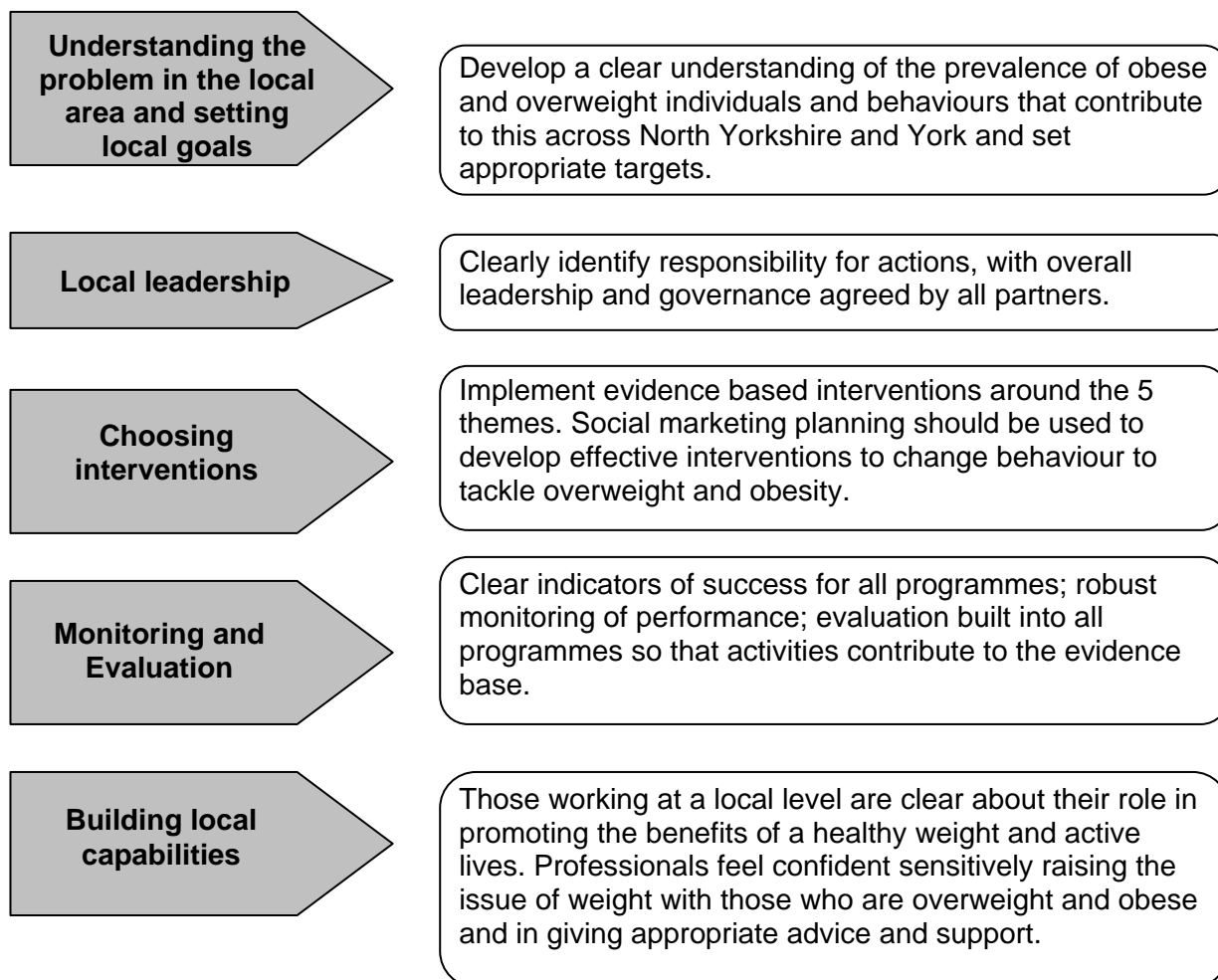


Some action at a local level has started around these five themes, which will lay the foundations for achieving the ambition (see Appendix 1). However future action is needed to strengthen this work and meet the outcomes set out in the Strategy.

Achieving our ambition will not be easy and cannot rest with one partner. Success lies in everyone, all partners in society playing a part in making and supporting healthier choices. Action to deliver the ambition will require strong leadership to ensure interventions are delivered around the five themes detailed in Figure 1.

To deliver action at a local level based on the five themes, the framework outlined in the government's Healthy Weight, Active Lives Strategy¹, Figure 2 will be used:

Figure 2: Framework for action



2 The North Yorkshire and York Ambition

In line with the national focus our local ambition is ***“to reverse the rising tide of obesity and overweight in our local population by ensuring that everyone is able to achieve and maintain a healthy weight”***.

Within NHS NYY Operating Framework (Vital Signs)⁴ the target is **“to initially halt the year on year rise in the proportion of children who are obese by 2010/11, with further reductions by 2020”**.

Within the Local Area Agreements (LAA2) the target is **“to reduce the rate of increase in the proportion of Year 6 children (aged 10-11 years) who are at risk of obesity, which is measured annually as part of the National Child Measurement Programme (NCMP)”** (National Indicator 56) which is shown below in Table 1:

Table 1: LAA2 trajectories for York and North Yorkshire Year 6 children (2008-2011)

	2006/07 (baseline)	2007/08 (Actual)	2008/09 (Trajectory)	2009/10 (Trajectory)	2010/11 (Trajectory)
North Yorkshire	15.8%	15.2%	16.2%	16.3%	16.3%
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Source: National Child Measurement Programme and North Yorkshire and York LAAs.

The most recent data for 2007/08 indicates that for North Yorkshire there has been a slight reduction in rates from 15.8% in 2006/07 to 15.2% in 2007/08. However, York has seen an increase from 16% in 2006/07 to 16.6% in 2007/08.

There are also other indicators within the National Indicator Set (NIS) that are relevant to tackling child obesity, for example, breastfeeding (NI53), take-up of school lunches (NI52), the emotional health of children (NI50), children and young people’s participation in high-quality physical education and sport (NI57) and travel to school (NI198). Indicator NI18 - adult participation in sport is relevant to adult weight issues. Progress against these indicators also needs to be monitored alongside the childhood obesity indicator.

3 Overweight and Obesity: The Public Health Problem

3.1. Terminology – what are ‘overweight’ and ‘obesity’?

Overweight and obesity are terms used to describe increasing degrees of excess body fatness. The causes of overweight and obesity are complex; essentially excess weight is caused by an imbalance between ‘energy in’ - what is consumed through eating – and ‘energy expenditure’ – what is used by the body.

Overweight and obesity in children and adults are commonly assessed by using Body Mass Index (BMI) which is defined as the person’s weight in kilograms divided by the square of their height in metres (kg/m²). The National Institute for Health and Clinical Excellence (NICE) for adults classifies ‘underweight’ as a BMI below 18.5, ‘overweight’ as a BMI of 25 to 29.9 and ‘obesity’ as a BMI of 30 or more⁹. NICE recommends that the BMI measurement should be interpreted with caution because although BMI is an acceptable approximation of total body fat at the population level and can be used to estimate the relative risk of disease in most people, it is not always an accurate predictor of body fat or fat distribution. Therefore, NICE recommends that waist circumference should be used in addition to BMI, to measure central obesity and disease risk in individuals with a BMI less than 35. (See Appendix 2 – Definition of Obesity.)

For children the situation is more complicated. There is no fixed BMI to define being obese or overweight, since this varies with gender and with growth and development. However, NICE⁹ recommends the following growth reference or BMI charts are used for children:

Assessing and monitoring **individual** children

- The 91st percentile (overweight) and the 98th percentile (obese) of the 1990 UK reference chart be used for assessing and monitoring individual children.

Screening whole **populations**

- The majority of published epidemiological work has used a definition of obesity as a BMI of more than the 95th percentile, and overweight as a BMI of more than the 85th percentile of the UK 1990 reference chart for age and sex. This definition is retained for comparative epidemiological purposes.

3.2. The health risks of overweight and obesity

Obesity increases the risk of a number of diseases including the two major killers – cardiovascular disease and cancer. It is estimated that, on average, obesity reduces life expectancy by between 3 and 13 years – the

excess mortality being greater the more severe the obesity and the earlier it develops³.

Being both obese and being overweight increases the risk of a range of diseases that have a significant health impact on individuals, although the risks increase with BMI (Body Mass Index) and so are greater for those who are obese. These include⁸:

- Metabolic and endocrine disease in particular non-insulin dependent (Type 2) diabetes.
- Cardiovascular disease and stroke.
- Mobility restricting disorders such as osteoarthritis of the hips, knees and chronic back pain.
- Some cancers (for example, colorectal, breast, ovary, uterus and prostate cancer).
- Psychological distress and illness (for example, poor self esteem and depression).

Analysis of BMI predictions from 2005 to 2050 indicate that the greatest increase in the incidence of disease would be for type 2 diabetes (an increase of more than 70% from 2004 to 2050) with increases of 30% for stroke and 20% for coronary heart disease over the same period.

Obesity in pregnancy is associated with increased rates of complications for both mother and baby. In the UK there are no national statistics about the prevalence of obesity in pregnancy. However, we know that prevalence among women of child bearing age is increasing. Evidence also suggests that obese mothers are also less likely to breastfeed, which may have a protective effect for the infant against obesity.

The associated health outcomes of childhood obesity are similar to those of adults and include⁸:

- Hypertension (high blood pressure).
- Dyslipidaemia (imbalance of fatty substances in the blood).
- Hyperinsulinaemia (abnormally high levels of insulin in the blood).

Other possible consequences for children and young people include⁸:

- Mechanical problems such as back pain and foot strain.
- Exacerbation of asthma.
- Psychological problems such as poor self-esteem, being perceived as unattractive, depression, disordered eating and bulimia.

- Type 2 diabetes.

The most important long-term consequences of childhood obesity is its persistence into adulthood and the early appearance of obesity-related disorders and diseases normally associated with middle age, such as type 2 diabetes and hypertension. Research shows that the offspring of obese parents have a greater risk of becoming overweight or obese adults¹².

Key Facts

(The following are extracted from Healthy Weight, Healthy Lives: A toolkit for developing local strategies⁸).

- Overweight and obesity increase the risk of a wide range of diseases and illnesses, including coronary heart disease and stroke, type 2 diabetes, high blood pressure, metabolic syndrome, osteoarthritis and cancer^{2,9}.
- Thirty per cent of overweight and obese people have gallstones compared with 10% of non-obese people.
- Obesity increases the risk of colon cancer by nearly three times in both men and women.
- Obese people have a five-fold risk of hypertension compared with non-obese people
- Among those aged under 50 years, there is 2.4-fold increase in risk of coronary heart disease in obese women compared with non-obese women, and a 2-fold increase in risk in obese men compared with non-obese men.
- It has been reported that 10-20% of obese children and over 75% of obese adults have been diagnosed with non-alcoholic fatty liver disease.
- Among older people, the risk of disability attributable to osteoarthritis (frequently associated with increasing body weight) is equal to the risk of disability attributable to heart disease, and is greater than for any other medical disorder of the elderly.
- In adults the consequences of overweight and obesity have led to clinical depression, with rates of anxiety and depression being three to four times higher among obese individuals. In childhood, overweight and obesity are known to have a significant impact on psychological wellbeing, with many children developing a negative self-image, lowered self-esteem and a higher risk of depression.
- Obesity in pregnancy is associated with increased rates of complications for both mother and baby.

3.3 The health benefits of losing excess weight

Weight loss in overweight and obese individuals can improve physical, psychological and social health. As Table 2 shows, there is good evidence to suggest that a moderate weight loss of 5–10% of body weight in obese individuals is associated with important health benefits, particularly in reduction in blood pressure and a reduced risk of developing type 2 diabetes and coronary heart disease¹⁴. Even small changes can have a positive impact on the overall health and wellbeing of individuals by increasing mobility, energy and confidence.

Table 2: The benefits of a 10 kg weight loss⁹

	Benefit
Mortality	<ul style="list-style-type: none"> • More than 20% fall in total mortality. • More than 30% fall in diabetes-related deaths. • More than 40% fall in obesity-related cancer deaths.
Blood pressure (in hypertensive people)	<ul style="list-style-type: none"> • Fall of 10mmHg systolic blood pressure. • Fall of 20mmHG diastolic blood pressure.
Diabetes (in newly diagnosed people)	<ul style="list-style-type: none"> • Fall of 50% in fasting glucose
Lipids	<ul style="list-style-type: none"> • Fall of 10% of total cholesterol. • Fall of 15% of low density lipoprotein (LDL) cholesterol. • Fall of 30% of triglycerides. • Increase of 8% of high density lipoprotein (HDL) cholesterol.
Other benefits	<ul style="list-style-type: none"> • Improved lung function, and reduced back and joint pain, breathlessness, and frequency of sleep apnoea. • Improved insulin sensitivity and ovarian function.

Source: Healthy Weight, Healthy Lives: A toolkit for developing local strategies⁸.

3.4 Causes of overweight and obesity

The causes of overweight and obesity are complex, but in essence is an imbalance between ‘energy in’ (calories) what is consumed through eating and drinking and ‘energy out’ what is used by the body through metabolism and physical activity. Therefore, an individual’s biology (genetics) and behaviour (eating and physical activity habits) primarily influence energy balance in the body⁸.

- Genes may play an important role in influencing metabolism and the amount and position of fatty tissue in the body. It is also likely that an individual’s eating and physical activity behaviour may, at least in part, be genetically determined².
- Eating (and drinking) behaviour is key – an individual’s energy intake is determined by their drive and opportunity to eat².

- Physical activity behaviour is also crucial. Energy expenditure is largely determined by the frequency, intensity and duration of activity as well as an individual's metabolic predisposition².

However, these primary determinants of an individual's energy balance may themselves be strongly influenced by a range of secondary psychological, social and environmental determinants which are increasingly making healthy decisions the hardest to make and adhere to. These broader factors can be considered under four headings: human biology, the food environment, the physical environment, and culture and individual psychology.

3.4.1 Human biology

There is a range of specific genes associated with excess weight. Obesity-related genes could affect how food is metabolised and how fat is stored, and they could also affect an individual's behaviour, inclining an individual towards lifestyle choices that may increase the risk of obesity⁸. It is too simplistic to claim that genes pre-destine a person to being obese or overweight, but genetic factors do increase the susceptibility of some individuals to obesity.

The pattern of growth through early life also contributes to the risk of excess weight. Whether a child is breastfed or not, and at what stage weaning begins, has also been shown to affect the risk of excess weight later in life. Breastfed babies show slower growth rates than formula-fed babies and this may contribute to the reduced risk of obesity later in life shown by breastfed babies¹³.

3.4.2 The food environment

The food industry is able to produce food cheaply and in high quantities leading to the production of growing volumes of processed foods and ready meals, many of which tend to be high in fat, sugar and salt. Fatty and sugary foods and drinks are also very heavily marketed and promoted, further reinforcing consumer demand.

Children are given more control over food choices. Grazing, snacking, eating on the go and eating outside of the home are common and contribute a substantial proportion of total calorie intake¹⁴. There is growing evidence that people eat more when presented with larger portions and calorie intake is increased without necessarily making the individual feel full¹⁵.

Did you know?

General trends in diet show that for children from lower socio-economic groups, more foods are consumed out of the home, more processed foods are consumed, and snacking and snack foods contribute greater proportions of energy to the diet¹.

3.4.3 The physical environment

Lives that were for most of the population physically demanding are now increasingly sedentary, so reducing average energy expenditure. Reasons include: fewer jobs requiring physical work; increased labour-saving technology in the home, work and retail environments; changes in work and shopping patterns – from local to distant, and the creation of transport systems which favour the car and not walkers and cyclists⁸.

Did you know?

The average number of miles travelled by car in England has increased by just under 70% between 1975 and 2002. Only 5% of children use their bicycles as a form of transport in the UK compared with 60-70% in the Netherlands⁸.

Physical activity is a particular issue in children. The last two decades have seen a 10 percentage point drop in children walking to school. In the UK 30-40% of children are now taken to school by car compared to 9% in 1971⁸. Today's children are also increasingly spending time in front of a TV or computer screen an average of five hours and 20 minutes a day, up from four hours and 40 minutes five years ago⁸.

3.4.4 Culture and individual psychology

Eating, drinking and exercise habits are greatly influenced by social and psychological factors. High consumption of fatty foods and low consumption of fruit and vegetables are strongly linked to those in routine and manual occupations. Among women, those who felt a lack of emotional support in their lives had a greater tendency to eat to cope with stress and one study showed that men were more likely to eat when stressed if they were single, divorced or frequently unemployed⁸.

Insight

Among low income families, disposable income and the cost of food may be the most important factors when deciding which foods to eat⁸.

Weight is a sensitive issue, especially for parents and evidence suggests that many parents¹:

- struggle to assess their children's weight status accurately - research found only 17% of parents with an obese child were able to correctly gauge their child's weight status
- overestimate activity levels and underestimate the amount of high-fat, high-sugar foods the family eats
- make no connection between poor diet and low activity levels in their children and long-term health problems.

Even when weight is recognised as an issue by individuals and families, there may be social and psychological conflict which makes it difficult to change behaviour patterns.

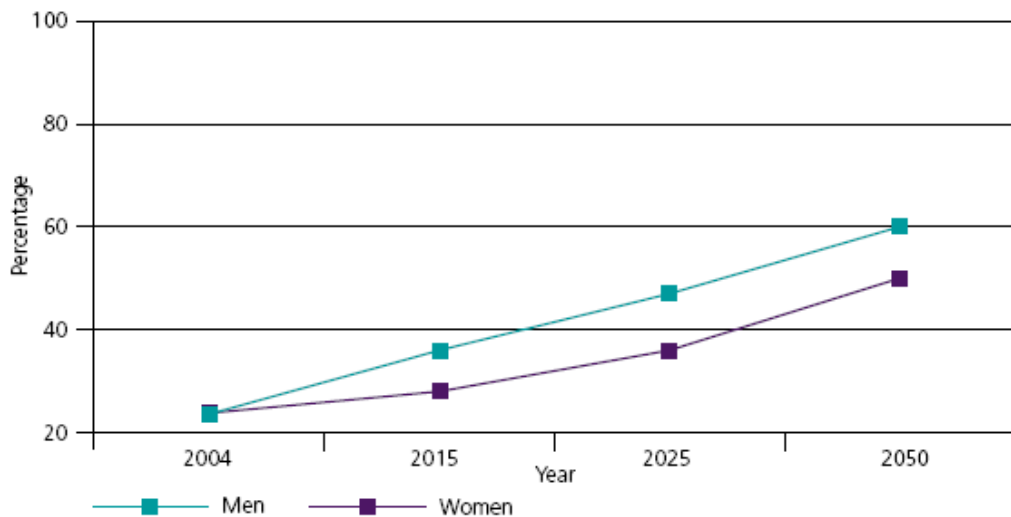
4 Understanding the Problem: National and Local Prevalence and Trends of Overweight and Obesity

4.1 National prevalence and trends of overweight and obesity

Adults:

By 2015, it has been estimated that 36% of men and 28% of women in England will be obese. Figure 3 also shows that nationally by 2050, it has been estimated that 60% of men and 50% of women could be obese⁸. It is predicted that the Yorkshire and Humber region could have an even higher growth rate and by 2050, 70% of men and 70% women could be clinically obese in the Yorkshire and Humber region⁴.

Figure 3: Future trends in obesity among adults, 2004-2050



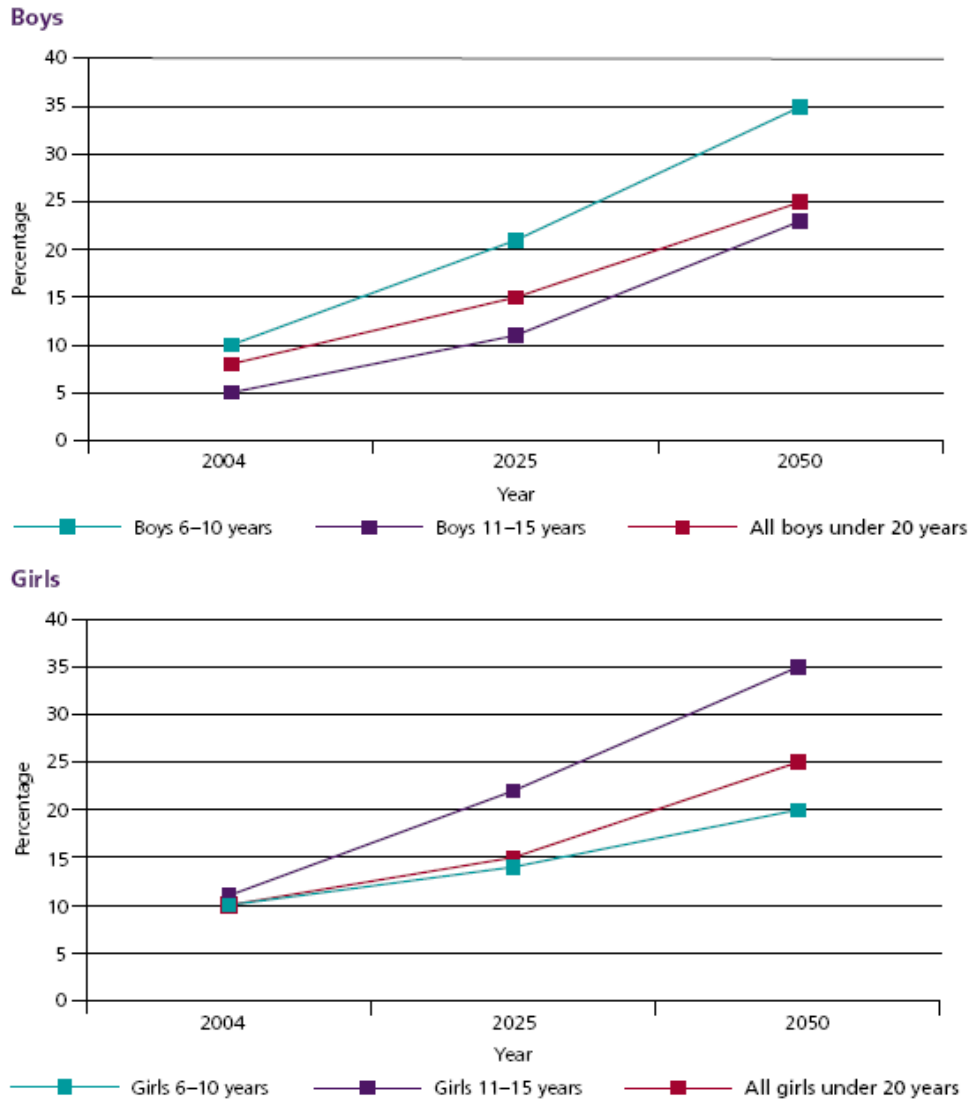
Note: The graph excludes confidence intervals (CIs), so the figures should be viewed with caution. CIs grow larger as one projects into the future. By 2050, the 95% CIs are frequently 10 or more percentage points. 2004 data are unweighted HSE data, for adults aged 16-75+ years. Estimated data for 2015-2050 (from Foresight) are for adults aged 21-60 years.

Source: Health Survey for England 2005¹⁶ and Butland et al²

Children:

It is estimated that the proportion of children in England who are obese in the under 20 age group will rise to approximately 15% in 2025 (with slightly lower prevalence in boys than in girls). Figure 4 also shows that by 2050, it is estimated that 25% of under 20 year olds will be obese.

Figure 4: Future trends in obesity among children and young people aged under 20 years, 2004-2050



Note: Data have been estimated using the International Obesity Task Force (IOTF) childhood obesity definition. The graph excludes confidence intervals (CIs), so figures should be viewed with caution. CIs grow larger as one projects into the future. The CIs on the 2050 extrapolation for girls aged 6-10 is very wide.

Source: Butland et al²

Key Facts

Prevalence of Overweight and Obesity

- In 2006, 23.7% of men and 24.2% of women were obese and almost two-thirds of all adults (61.6%) – approximately 31 million adults – were either overweight or obese¹⁶.
- It has been estimated that, if current trends continue, about one-third of adults and one-fifth of children aged 2-10 years will be obese by 2010¹⁰, and 60% of adult men, 50% of adult women and about 25% of all children under 16 could be obese by 2050².
- The figures for 2006 show that among children aged 2-15, almost one-third – nearly 3 million – are overweight (including obese) (29.7%) and approximately one-sixth – about 1.5 million – are obese (16%)¹⁷.
- Most evidence suggests that the main reason for the rising prevalence of overweight and obesity is a combination of less active lifestyles and changes in eating patterns¹⁸.

4.2 Local prevalence and trends of overweight and obesity in children

Every year children in Reception (aged 4-5 years) and Year 6 (aged 10-11 years) have their height and weight measured and recorded as part of the National Child Measurement Programme (NCMP). We are currently in the fourth year of collecting this data. Full reports on the yearly analysis of this data can be found in the Key Documents section on www.northyorkshireandyork.nhs.uk/StayingHealthy/HealthyWeight .

This data can be used to help local areas understand the prevalence of child obesity in their area, and help inform local planning and delivery of services for children. This surveillance data also allows us to analyse and monitor trends in growth patterns and obesity. It is this data that has been used to set local targets. From 2009 parents will now routinely receive feedback on the results of their child's height and weight measurement.

The national and regional year on year increase in obesity levels is reflected at a local level in North Yorkshire and York for both adults and children. Figure 5 below illustrates the likely projection in prevalence rates for our local children if nothing is done to curb the current trend.

Figure 5: Childhood obesity projections

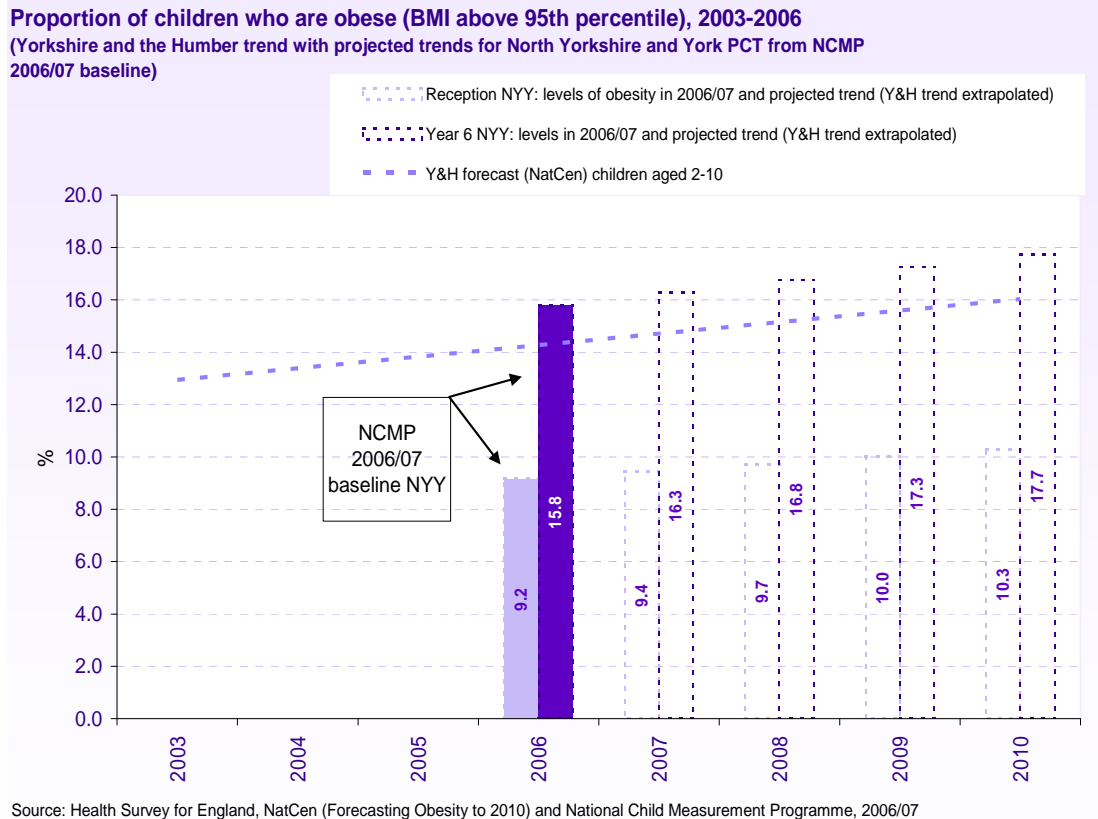


Figure 5 above highlights that:

- in 2006/07 there were 9.2% of Reception children and 15.8% of Year 6 children at risk of obesity
- if nothing is done to curb the trend then it is estimated that 10.3% of Reception and 17.7% of Year 6 children will be obese by 2010 which is above the Yorkshire and Humber forecast for children aged 2-10 years.

Did you know?

Children of obese parents are twice as likely to be overweight or obese in adulthood compared to those children with parents who are a healthy weight. Only 3% of obese children have parents who are neither overweight nor obese¹.

Figures 6 and 7 show the results of the NCMP data collection for North Yorkshire and York for 2006/07 grouping the data against growth percentiles and the NCMP categories of obese, overweight, normal and underweight. This data is useful in identifying potential demand for different levels of services at each tier, as proposed in section 5 of the Strategy.

Figure 6: Data for Reception children for North Yorkshire and York (2006-2007)

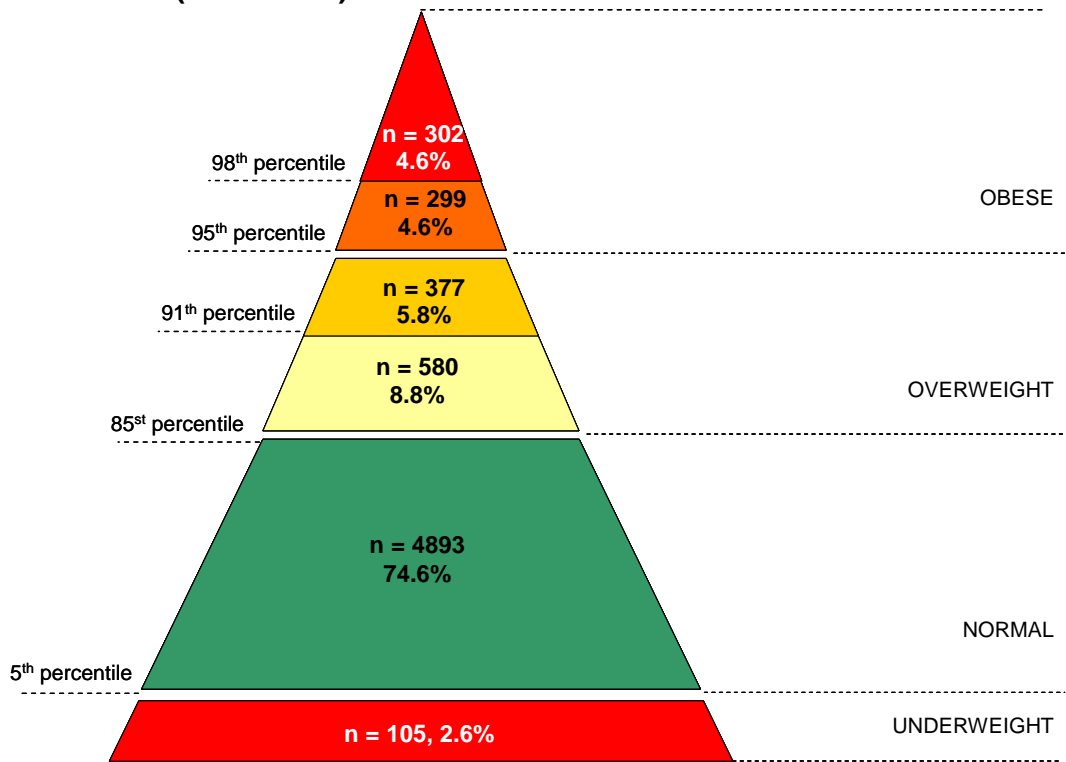
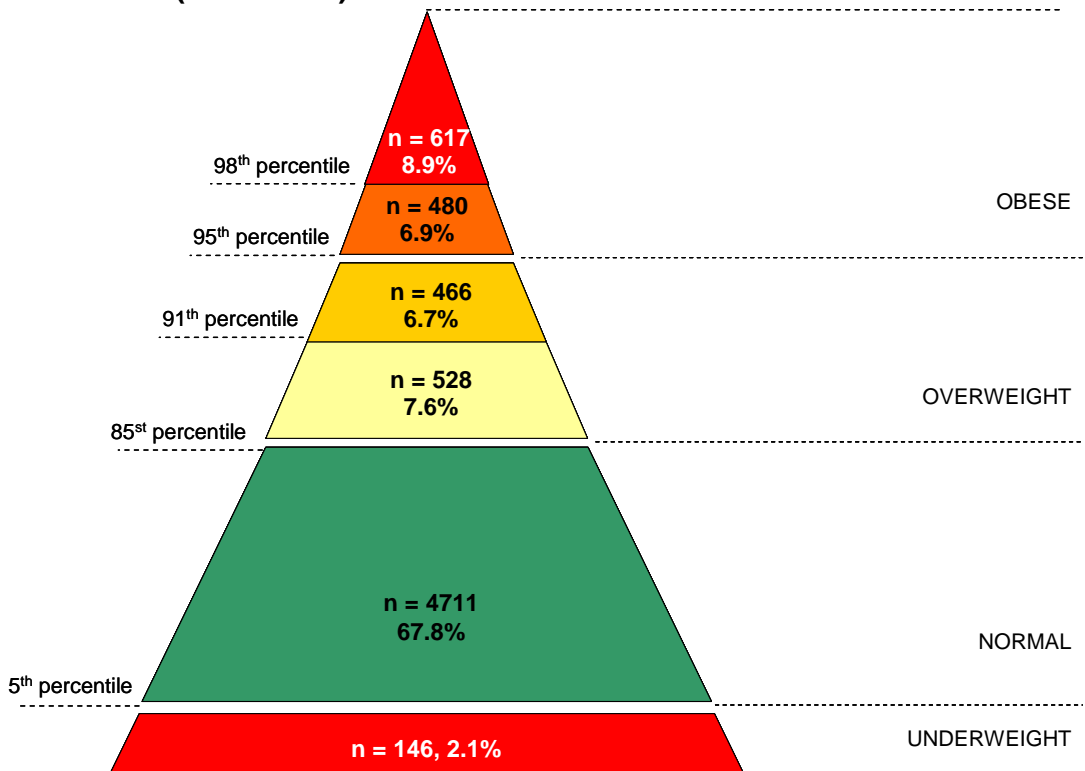


Figure 7: Data for Year 6 children for North Yorkshire and York (2006-2007)



Source: National Child Measurement Programme 2006-2007

Headline data is now available for the NCMP collection 2007/08 (full report available May 2009). The following Figures 8 and 9 show the proportion of children at risk of obesity and overweight in 2006/2007 compared to 2007/08. They highlight a number of issues.

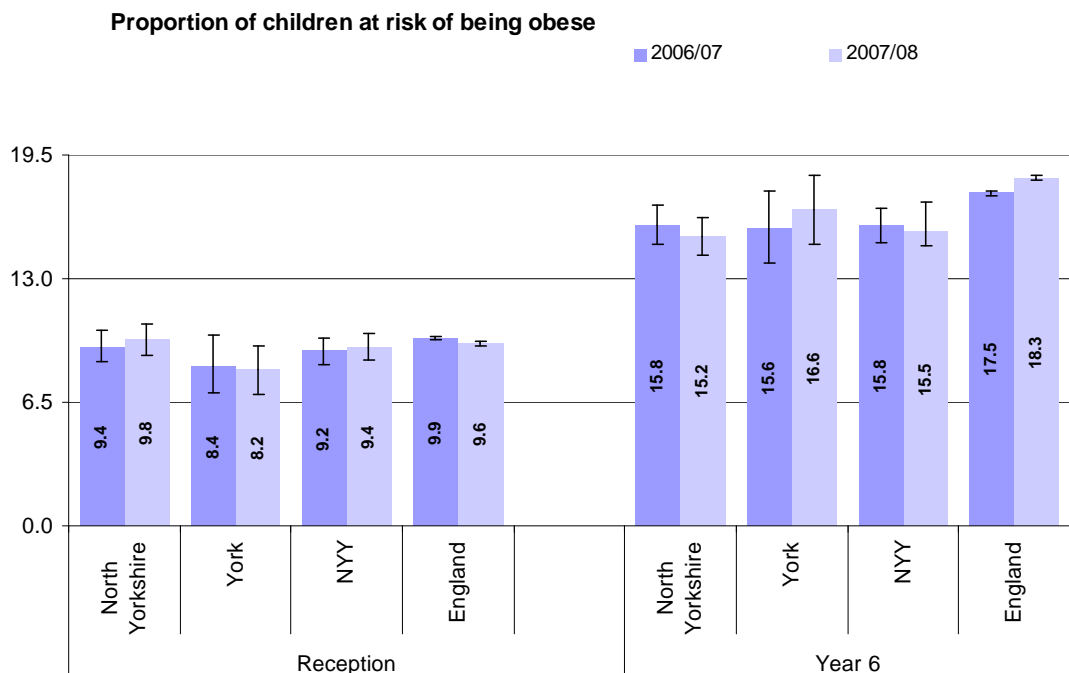
At risk of obesity:

- The rates for Year 6 children for the NHS NYY area, at risk of being obese (15.8% in 2006/07 and 15.5% in 2007/08) is significantly lower than the England rates (17.5% in 2006/07 and 18.3% in 2007/08).
- For Reception children in the NHS NYY area, there is no significant difference to the England rate.
- York has seen a rise in the number of Year 6 children at risk of obesity (15.6% in 2006/07 to 16.6% in 2007/08).

At risk of being overweight:

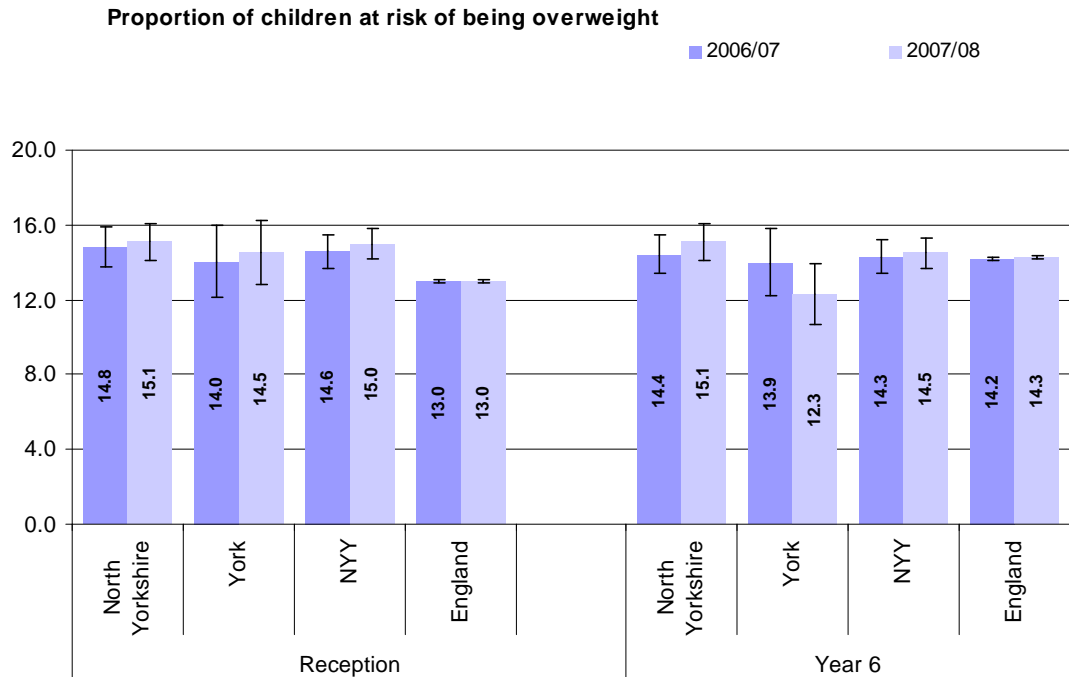
- The rates for all Reception children for the NHS NYY area at risk of being overweight (14.8% in 06/07 and 15.0% in 07/08) are significantly higher than the England rates (13.0% in 06/07 and 07/08).
- For Year 6 children in the York area only, the risk of being overweight is significantly lower than the England rate.

Figure 8: Proportion of children at risk of being obese



Source: National Child Measurement Programme 2007/08, The NHS Information Centre

Figure 9: Proportion of children at risk of being overweight



Source: National Child Measurement Programme 2007-2008, The NHS Information Centre

4.3 Overweight and obesity in our children at district level

Analysis of NCMP data for 2006/07 highlighted that among Reception children the risk of being overweight was significantly worse than the national average in the following districts:

- Ryedale
- Scarborough
- Richmondshire

School cluster level analysis identified the following hotspots within other districts across North Yorkshire and York where Reception children were significantly more at risk of being overweight:

- Bedale School Cluster in Hambleton
- Cannon Lee School Cluster in York
- Harrogate High Schools Cluster in Harrogate

Insight

Although the proportion of Year 6 children who are obese is not significantly different to the national average the figure is increasing year on year. Evidence suggests that older children who are obese and the heaviest children at any age have an increased likelihood of being obese adults. To tackle overweight and obesity for future generations, areas such as central Ryedale where there are a high proportion of obese Reception children need to be prioritised for action.

Reception children in central Ryedale were significantly more at risk of being obese than the national average. The only other school cluster area where there is a significantly higher prevalence of Reception children at risk of obesity is Aireville, located in Craven.

Prevalence of Year 6 children at risk of being overweight or obese was not significantly different from the national average in any district across North Yorkshire and York.

These analyses will be updated with the results of the 2007/08 data.

4.4 Levels of physical activity among children

Data is currently available at a local level on the proportion of children undertaking two hours of PE and school sport a week. In North Yorkshire this figure is 88% and in York it is 90%. Data from the Health Related Behaviours Survey 2006 found that as obesity increased among children, enjoyment of physical activity decreased¹⁹.

Insight

Overweight and obese children may find exercise uncomfortable (sweaty, exhausting) and embarrassing (for example, having to use public changing rooms). As such they may be disinclined to take exercise of the traditional variety. Indeed there is some suggestion that the lack of exercise follows, rather than causes, weight gain¹.

At a national and regional level, data from the Health Survey for England suggests that two thirds of 2-11 year olds are meeting the government's requirement of at least 60 minutes of moderate activity per day, however this means that **one third** are not¹⁷.

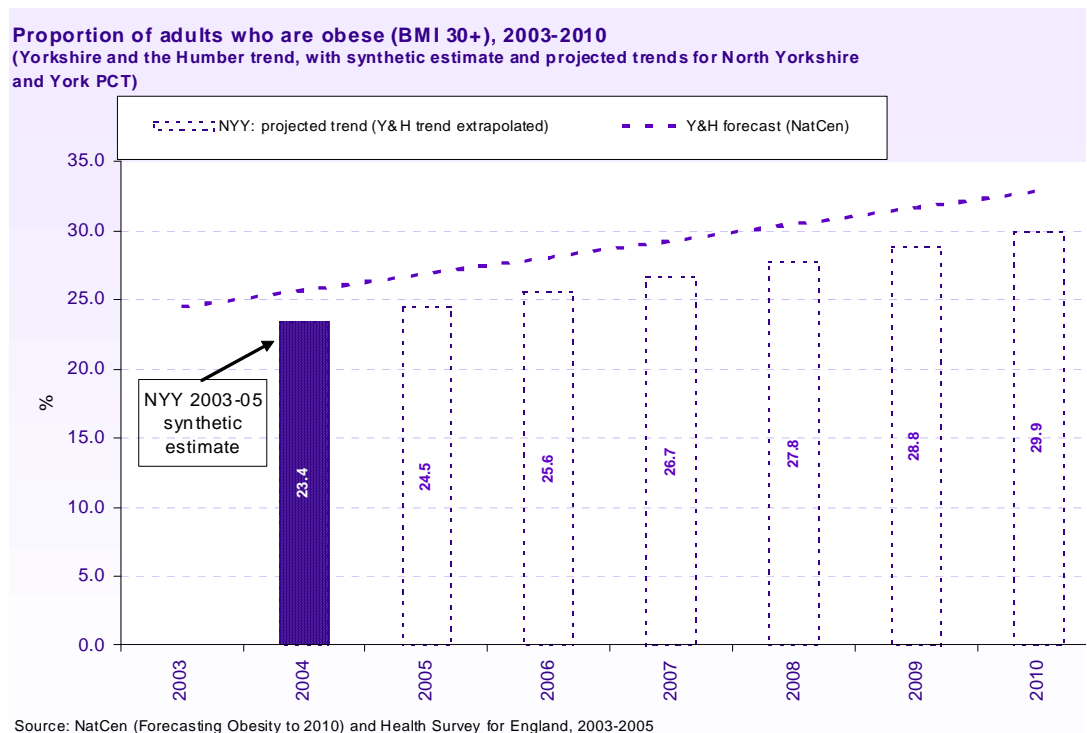
Insight

A survey by Sport England²⁰ found that motivation to participate in sports, was the highest it had been for boys and girls for the eight years from 1996 to 2002. Almost all young people agree that it is 'important to keep fit'. Therefore the fact that motivation is high but engagement levels are lower suggests that the facilities or the money required to access them, are a significant part of the problem.

4.5 The local prevalence of adult obesity and overweight

Figure 10 shows that the proportion of obese adults will continue to increase year on year across North Yorkshire and York if nothing is done to curb the trend. Although this estimated rate of growth is below the regional forecast for Yorkshire and the Humber, it does mean that nearly 30% of adults could be obese in North Yorkshire and York by 2010 which will have both economic and social burden.

Figure 10: Adult obesity projections



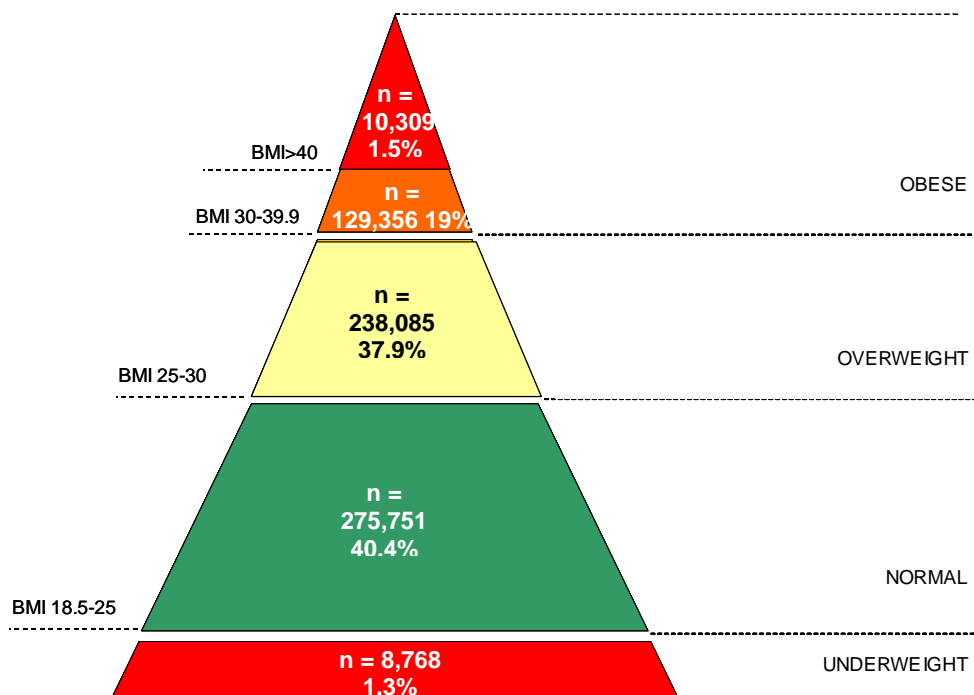
These trends discussed above apply across society. Obese individuals are present in all socio-economic groups, although they are represented to a slightly lesser extent in the most affluent, particularly for women.

Currently there are no routinely available or reliable measures of obesity or overweight prevalence at a local level for adults aged 17 years or

above. However, as Figure 11 shows, prevalence can be estimated using the NICE model⁹, which applies detailed age/sex specific national prevalence rates to age/sex specific local population data, to estimate the number of adults in North Yorkshire and York who are overweight or obese. National prevalence rates for underweight from the Health Survey for England¹⁶ have been combined with the data from the NICE model⁹ to produce the following data for adults in the North Yorkshire and York area showing:

- 40.4% are a healthy weight
- 37.9% are overweight
- 20.5% are obese
- 1.3 % are underweight.

Figure 11: Estimated number of adults aged 17+ in North Yorkshire and York who are underweight, healthy weight, overweight or obese



Source: Health Survey for England¹⁶ and NICE⁹.

This data is useful for estimating potential demand for services taking a tiered care pathway approach as proposed under section 5 of the Strategy.

4.6 Levels of physical activity among adults

Data from the Active People Survey 2005/06²⁰ showed that 21% of the population in the UK are taking part regularly in sport and active recreation.

Table 3 shows that within North Yorkshire and York, Ryedale, Selby and Scarborough are the localities with activity levels below the North Yorkshire average of 23.2%, but above the UK average; and Selby and Scarborough below the North Yorkshire average of 20.1%.

The 2007/8 interim data (small sample only) shows that Harrogate, Selby and Scarborough areas have increased their regular physical activity participation, whilst the other areas show a decrease.

Table 3: Physical activity among adults across North Yorkshire and York

Local Authority	Regular participation in 3 x 30 minutes (%)	
	2005/06	2007/08 (interim data)
Hambleton	25.9	23.3
Craven	25.7	23.5
York UA	24.8	19.5
Richmondshire	24.3	21.2
Harrogate	23.9	26.7
Ryedale	22.4	20.0
Selby	19.6	24.9
Scarborough	18.6	20.5

Source: The Sport England Active People Survey 2, 2007/08: Summary for Yorkshire.

NB: The 2007/08 figures involved only a small sample and are interim figures.

4.7 The economic costs of overweight and obesity

Apart from the personal and social costs of obesity, such as morbidity, mortality, discrimination and social exclusion, there are significant health and social care costs associated with the treatment of obesity and its consequences, as well as costs to the wider economy arising from chronic ill health² for example sickness absence and reduction in productivity.

In 2007, the NHS costs directly attributable to overweight and obesity were estimated to be £4.2 billion and obesity alone for £2.3 billion. By 2050 it has been estimated that the NHS costs directly attributable to overweight and obesity will rise to £9.7 billion and obesity alone to £7.1

billion¹¹. The estimated annual costs to NHS NYY of diseases related to overweight and obesity and obesity alone are shown in Table 4 below:

Table 4: The estimated annual costs to the NHS of diseases related to overweight and obesity for North Yorkshire and York

Estimated annual costs of diseases related to overweight and obesity (BMI 25 or more) £ million			Estimated annual costs of diseases related to obesity alone (BMI 30 or more) £ million		
2007	2010	2015	2007	2010	2015
186.6	193.6	207.1	96.8	104.8	120.4

Source: Foresight tackling obesities: Future Choices²

Obesity also brings costs to society and the economy more broadly, for example sickness absence and reduction in productivity. The 2007 estimated costs are⁸:

- National Health Service - £4.2 billion
- Wider economy - £15.8 billion
- Foresight estimate costs to economy of £50 billion by 2050.

Recommendation

Understanding the problem locally:

It is essential to build on our knowledge and understanding of the prevalence of overweight and obesity and the behaviours that contribute to this. It is recommended that National Child Measurement Programme (NCMP) data should be used alongside other available data such as local authority land use data, to provide a further perspective on the environmental factors, especially in high prevalence areas. It is also important to develop insights on health and weight in the local population to target behaviours effectively. The commissioning of social marketing initiatives can support this process.

There is also a need to improve recording and reporting on local adult obesity prevalence data.

5 Choosing Interventions and Taking Action at a Local Level

5.1 Identifying priority groups

With limited resources and capacity, and with such a wide range of possible initiatives and interventions, in terms of prevention, treatment and management, decisions have to be made about where to focus efforts. A balance must be found between a whole-population approach and an ‘individuals at-risk’ approach.

The main priority group for North Yorkshire and York is children and young people under 11 and their families, in line with the NHS North Yorkshire and York Operating Framework⁴ and the Local Area Agreements for North Yorkshire and for York⁵. Data from the National Child Measurement Programme (NCMP) will enable NHS NYY, North Yorkshire County Council, the City of York and other partners to target resources and interventions. The geographical areas of the County to be targeted were previously highlighted in Section 4.1.

In addition, some groups within the population are more at risk of developing obesity or its complications and should be considered as priorities for targeting preventative initiatives. These include the following¹:

- **Children from low income families** – there is a correlation between low income and a greater risk of obesity in childhood as well as adulthood.
- **Children from families with at least one obese parent** – the increased risk may be due to genetic and environmental factors.

Other vulnerable groups:

- **Individuals of Asian origin, particularly those of south Asian origin** – obesity carries a greater risk of metabolic syndrome and its consequences.
- **Ethnic groups with a higher than average prevalence of obesity** - particularly Black African women, Black Caribbean women, Pakistani women, Black Caribbean men, Irish men.
- **People who have a physical disability** – particularly in terms of mobility which makes exercise difficult.
- **People with learning disabilities.**
- **Older People** – increasing age is associated with increasing prevalence of obesity up to 64 years, and then a decline in the prevalence begins.

- **People who have recently stopped smoking** - people who stop smoking are prone to weight gain as nicotine suppresses people's natural appetite and increases metabolism. There is also a tendency to replace cigarettes with snacks and sweets.
- **Hormone imbalance** – people with polycystic ovary syndrome have an increased risk.

Further information which will help locally to prioritise groups, is the Department of Health research into family behaviour in relation to diet and activity (Healthy Weight, Healthy Lives: Consumer Insight Summary¹⁰), which showed that children aged 2-11 years and their families could be divided into six clusters, based on their behaviours, as follows: (See Appendix 3 for a summary of the key characteristics of each cluster.)

- Cluster 1: Lacking time, money and knowledge
- Cluster 2: Lack the knowledge and parenting skills to improve their family's lifestyle
- Cluster 3: Affluent, overweight families who over-indulge in unhealthy foods
- Cluster 4: Living healthily
- Cluster 5: Strong parenting skills, but need to make changes
- Cluster 6: Plenty of exercise, but too many bad foods

Following the research, Clusters 1, 2 and 3 were found to be more 'at risk' of developing obesity and have been prioritised for national action, within the national social marketing programme. Locally these clusters will also be targeted.


5.2 Taking action at a local level

As previously stated on page 2, action at a local level to achieve the ambition will be evidence based and centred around the following five main themes¹:

- 1 Children – healthy growth and healthy weight:** early prevention of weight problems to avoid the 'conveyor-belt' effect into adulthood.
- 2 Promoting healthier food choices:** reducing the consumption of foods that are high in fat, sugar and salt and increasing the consumption of fruit and vegetables.
- 3 Building physical activity into our lives:** getting people moving as a normal part of their day.
- 4 Creating incentives for better health:** increasing the understanding and value people place on the long-term impact of decisions.
- 5 Personalised advice and support:** complementing preventative care with treatment for those who already have weight problems.

Although the initial focus will be on children, any preventative action to tackle overweight and obesity needs to take a life course approach. The evidence to date⁸ indicates a number of points in the life course, where there may be specific opportunities to influence behaviour (see Table 5). These relate to critical periods of metabolic change (for example, early life, pregnancy and menopause), times linked to spontaneous changes in behaviour (for example, leaving home, or becoming a parent), or periods of significant shifts in attitudes (for example, peer group influences, or diagnosis of ill health).

Table 5: Critical opportunities in the life course to influence behaviour



Age	Stage	Issue
	Preconception In utero	Maternal nutrition programmes foetus
0–6 months	Post-natal	Breast versus bottle-feeding to programme later health
6–24 months	Weaning	Growth acceleration hypothesis (slower pattern of growth in breastfed compared with formula-fed infants)
2–5 years	Pre-school	Adiposity rebound hypothesis (period of time in early childhood when the amount of fat in the body falls and then rises again, which causes BMI to do the same)
5–11 years	1st school	Development of physical skills Development of food preferences
11–16 years	2nd school	Development of independent behaviours
16–20 years	Leaving home	Exposure to alternative cultures/behaviour/lifestyle patterns (eg work patterns, living with friends etc)
16+ years	Smoking cessation	Health awareness prompting development of new behaviours
16–40 years	Pregnancy	Maternal nutrition
16–40 years	Parenting	Development of new behaviours associated with child-rearing
45–55 years	Menopause	Biological changes Growing importance of physical health prompted by diagnosis or disease in self or others
60+ years	Ageing	Lifestyle change prompted by changes in time availability, budget, work-life balance Occurrence of ill health

Source: Foresight tackling obesity: Future Choices²

In addition specific interventions aimed at changing families' attitudes and behaviours will be implemented by utilising the Change4Life (C4L) approach¹⁰. Change4Life is a new initiative supported by the Department of Health, bringing together health and education professionals, industry and the third sector, with the shared aims to improve children's diets and levels of activity, so reducing the threat to their future health and happiness. The main messages of the campaign are 'Eat well, move

more, live longer' and focus on the healthy eating and physical activity messages. The initial stages will target families with young children aged 0-11.

This Healthy Weight, Healthy Lives Strategy will be aligned to C4L by adding the C4L logo to existing materials and developing new initiatives which fit the branding and by sharing best practice to help build a national and recognisable movement.

The national C4L marketing programme will be developing activity and providing resources for health care professionals to disseminate, which will provide clear messages in the following areas, which will support local initiatives:

Structured mealtimes	Shopping and cooking
Portion size	Improving food literacy
Sedentary activity	Outdoor play
Active travel	

To implement this Strategy, a three year Action Plan, will be developed, monitored and evaluated. The Action Plan will be centred on the above five themes identified in the government's strategy¹, the evidence base and guidance outlined in Department of Health documents Healthy Weight, Healthy Lives: A Toolkit for Developing Local Strategies⁸ and Consumer Insight¹⁰, Change4Life and the data and recommendations contained in this Strategy.

Action will be delivered in the context of the service models, shown on the following two pages, Figures 12 and 13.

The proposed service models conceptualise the delivery of integrated weight management services for both adults and children in line with NICE guidance⁹. The models focus on the whole care continuum from the **prevention, treatment and management** of overweight and obesity and will form the basis for the development of care pathways, service specifications and commissioning of services. The service models take a patient centred approach based on individual needs with an emphasis on encouraging self-care.

The NICE guidance on obesity⁹ provides clear expectations for the NHS, local authority and other partners regarding the provision of preventative and management interventions and services. This Strategy sets out a clear direction for actions to enable people to achieve a healthy weight and an active life. Implementing the proposed services models will ensure a cohesive and consistent approach.

The Strategy acknowledges that implementing the proposed service models will be challenging for all those involved and that effective partnership working between a wide range of agencies will be essential in order to achieve efficient and sustainable outcomes.

Figure 12: Proposed integrated weight management service model for adults

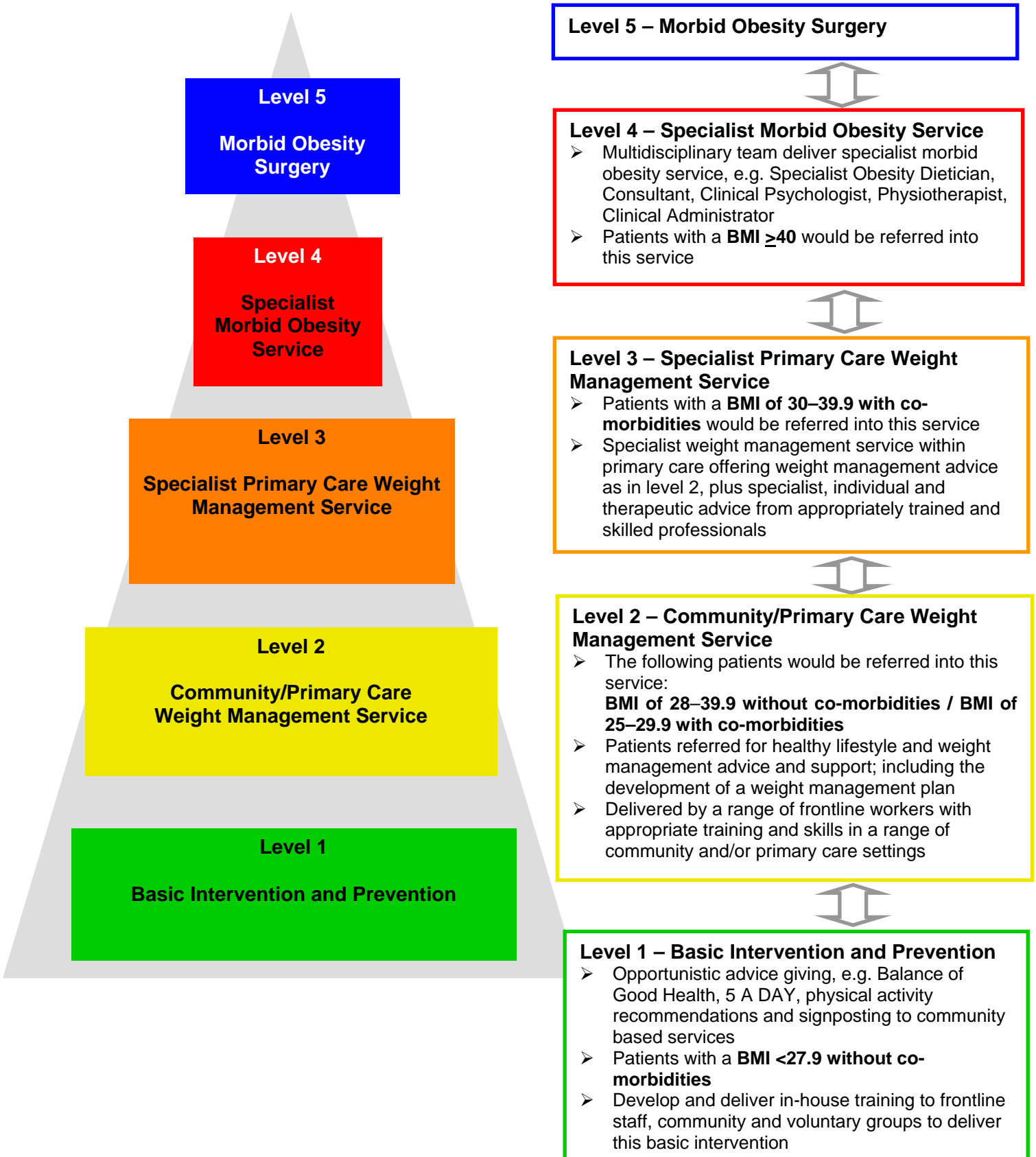
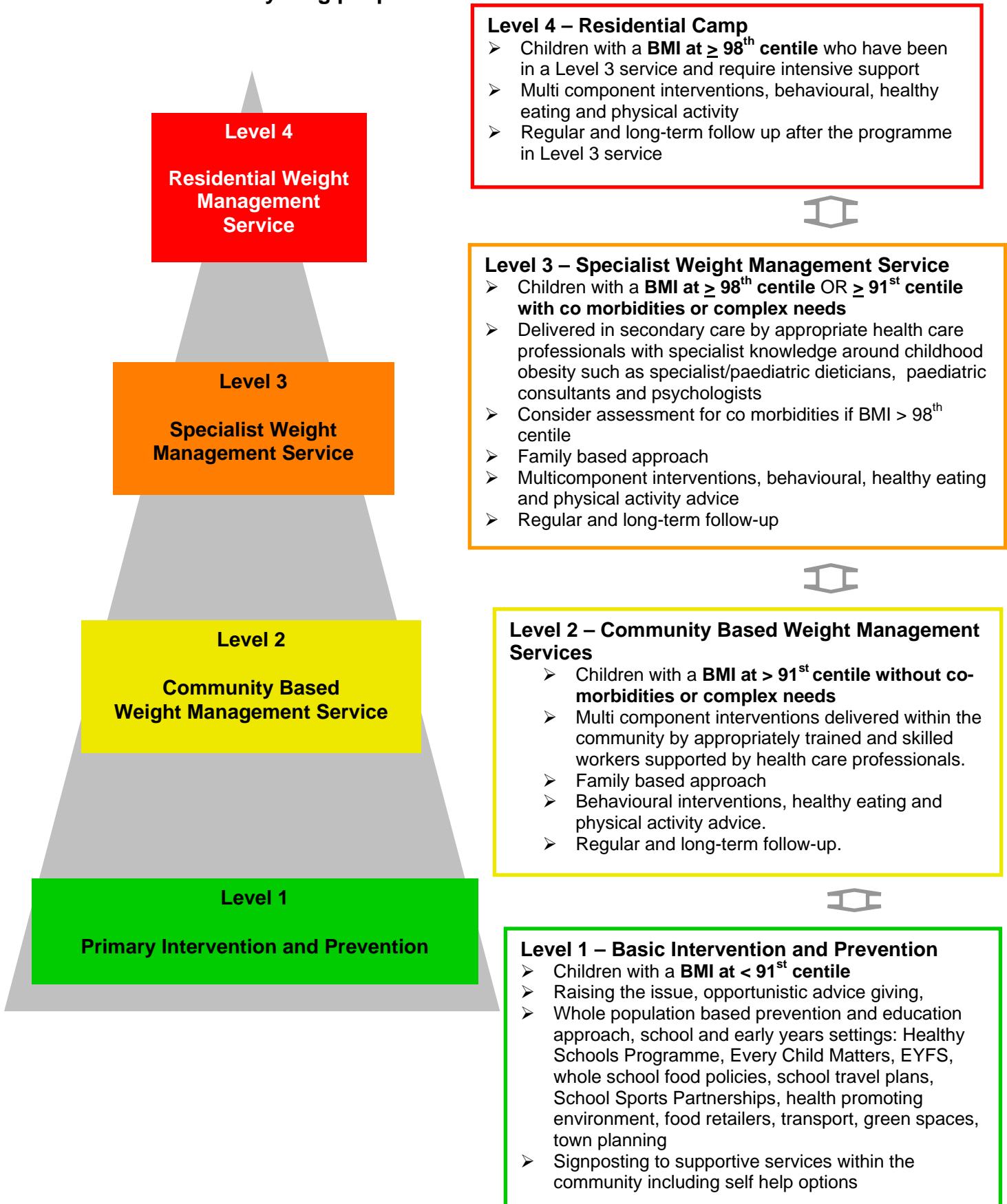


Figure 13: Proposed integrated weight management service model for children and young people



Recommendations

Implement evidence based interventions based on the five themes set out in the government's strategies^{1,8}:

Whilst maintaining a balance between a whole-population approach and an 'individuals at-risk' approach it is recommended that evidence based interventions are implemented, prioritising children and young people under 11 and their families, based on the following five themes¹:

- **Children: healthy growth and healthy weight** - review existing programmes and initiatives within antenatal, early years and school settings to maximise the opportunity for encouraging a whole-family approach to eating well and being active.
- **Promoting healthier food choices** – review existing initiatives to ensure they are aligned to national guidance around recommendations for promoting a healthy, balanced diet to prevent overweight and obesity.
- **Building physical activity into our lives** – focus on action that encourages every day physical activity with the promotion of supportive built environments as well as action to reduce the time that children spend in sedentary activity.
- **Creating incentives for better health** – pilot a range of different approaches (for example, using personal financial incentives) to encourage healthy living. Also local employers should be encouraged to promote wellness initiatives amongst staff and make healthy workplaces part of their core business.
- **Personalised advised and support for overweight and obese individuals** – commission a range of multi-disciplinary weight management services for children and families along an evidence based care pathway approach.

The following pages describe some concrete steps we can take at a local level for each of the five themes, which builds on existing good practice locally. It sets a clear direction for what needs to be done in the short, medium and long-term and should help inform local action plans.

5.2.1 Children healthy growth and healthy weight

Our vision for the future is one where every child grows up with a healthy weight, through eating well and enjoying being active.

Outcomes	Suggested Actions	Support Available Locally	Possible Indicators
<ul style="list-style-type: none"> • As many mothers breastfeeding up to 6 months as possible, with families knowledgeable about healthy weaning and feeding of their young children. • Every child grows up eating well and enjoying being active. • Parents will have the knowledge and confidence to make this happen – including as many mothers breastfeeding as possible – and will be supported by schools, children’s centres, health and other services, all promoting healthy weight. • All schools will be healthy schools. 	<ul style="list-style-type: none"> • Use children’s centres as the focus of support for parents in the early years, including NHS services. • Take a similar approach to schools for older children (e.g. school travel plans, school sport, school food), promoting Healthy Schools and Extended Schools programmes. • Use current point of engagement with parents (e.g. health visitor reviews, NCMP) as an opportunity to promote healthy eating and physical activity. • Implement UNICEF’S Baby Friendly Initiative. • Promote the benefits of a healthy weight and the risks associated with obesity, during pregnancy and to women who are trying to conceive. • Align the Early Years Foundation Stage and the Child Health Promotion Programme with the Change4Life initiative, targeting the three most at risk Cluster Groups. 	<ul style="list-style-type: none"> • Community services • Children’s services’ advisors • Healthy Schools Consultants, North Yorkshire • Extended schools officers • Midwives, Health Visitors • Websites <ul style="list-style-type: none"> NHS North Yorkshire and York – Staying Healthy North Yorkshire School Meals Service School Food Trust Food in Schools Healthy Schools Programme Healthy Start The National Child Measurement Programme 	<ul style="list-style-type: none"> • Breastfeeding initiation rates and duration at 6-8 weeks • Level of participation in the Healthy Start Programme • Provider services recording at least 93% of children’s height and weight in Reception and 88% of children in Year 6 • No of schools achieving the healthy school status • Take up of free school meals. • Take up of children having school meals • No training courses/workshops provided for front line staff.

5.2.2 Promoting healthier food choices

Our vision for the future is one where the food that we eat is far healthier, with major reductions in the consumption and sale of unhealthy foods, such as those high in fat, salt or sugar, and all individuals choosing to eat levels of fruit and vegetables in line with recommended amounts consistent with good health. Individuals and families will have a good understanding of the impact of diet on their health, and will be able to make informed choices about the food they consume, with extra support and guidance for those who need help. The food, drink and other related industries will support this through clear and consistent information, doing all they can to make food healthy.

Outcomes	Suggested Actions	Support Available Locally	Possible Indicators
<ul style="list-style-type: none"> The food we eat is far healthier, with major reductions in the consumption and sale of foods high in fat, salt and sugar, and everyone is eating their 5 A DAY especially children. Individuals and families will make decisions on their diet based on a good understanding of the impact on their health, and the food, drink and other related industries will support this through clear and consistent information, doing all they can to help parents raise healthy children. 	<ul style="list-style-type: none"> Health Impact Assessments of all new planning and policy decisions in relation to the provision of food retailers in particular convenience/fast food stores and takeaways. Targeted work with takeaway outlets. EPODE type programmes that engage with local retailers. Production of a communications strategy, linked to national campaigns e.g. Change4Life, consumer awareness of the high calorie, fat and salt levels of takeaway foods, using social marketing techniques. Dissemination of recipes of easy to cook, reasonably priced, healthy food. Encouraging low income families to apply to the Healthy Start programme. 	Websites: North Yorkshire County Council Trading Standards Service 5 A DAY	<ul style="list-style-type: none"> Consumption levels of high fat salt and sugar foods, especially in children Consumption levels of fruit and vegetables, more people meeting the 5 A DAY target, especially in children Number of Health Impact Assessment completed Evaluation reports of campaigns Monitoring of Healthy Start programmes

5.2.3 Building physical activity into our daily lives

Our vision for the future is one where all individuals and families are able to exercise regularly and to stay healthy and well throughout their lives. Individuals will understand the links between physical activity, exercise and health, and will be able to take responsibility for their travel and leisure choices as well as increasing the amount of physical activity they undertake in their everyday lives, especially for children. Government, business, local communities and other organisations will support this by creating urban and rural environments where walking, cycling and other forms of physical activity, exercise and sport are accessible, safe and the norm.

Outcomes	Suggested Actions	Support Available Locally	Possible Indicators
<ul style="list-style-type: none"> • Everyone is as active as they feel able and understand the impact of this on their health, taking responsibility both for how they travel and how they spend their time e.g. more walking and cycling to school, work, shops. • Local communities will create urban and rural environments that make activity accessible, safe and the norm. • Reduced time children spend in sedentary activity and increased time in outdoor play. 	<ul style="list-style-type: none"> • Health Impact Assessments of all new planning and policy decisions to be undertaken to encourage regular physical activity as part of every day life, strengthen the protection of green space, and lead to the improvement of parks, play facilities and neighbourhoods. • Implement recommendations from NICE guidance on physical activity and the environment. • Continue to implement and promote local schemes and initiatives to increase activity such as Walking the Way to Health, walking and cycling schemes, exercise referral scheme and the national Step-O-Meter Programme in line with NICE guidance⁹ • Promote the Change4Life programme to encourage an increase in physical activity. • Develop social marketing programmes. 	<ul style="list-style-type: none"> • NICE guidance on physical activity and the environment www.nice.org.uk • Following this guide the Department of Health will provide more detailed guidance to planning officials on using planning policy to promote healthy weight • NICE implementation advisors • Play England • Manual for Streets 	<ul style="list-style-type: none"> • People participating on the Walking the Way to Health Initiative (WHI) • People completing the exercise referral scheme • People taking up the National Step-O-Meter Programme • Children taking part in 2 hours of high quality PE or and school sport per week • Children taking part in 5 hours of school related sport per week • Adults taking part in 5 x 30 minutes of sport and active recreation per week • Schools with school travel plans • People attending leisure centres

5.2.4 Creating Incentives for better health

Our vision is a future where all employers value their employees' health, and where this is put at the core of their business plans. The longer-term risks and costs arising from excess weight will be clear to everyone, and there will be stronger incentives for people, companies and the NHS to invest in health.

Outcomes	Suggested Actions	Support Available locally	Possible Indicators
<ul style="list-style-type: none"> • Individuals and employers taking responsibility for investing in health. • Individuals will be supported and encouraged through their workplace to access healthy food and opportunities for physical activity through appropriate incentives. • Frontline workers are fully informed and able to signpost individuals and families to local services and facilities for support and advice on increasing physical activity levels, healthy eating and weight management. 	<ul style="list-style-type: none"> • Work with employers and employer organisations to develop pilots exploring how companies can best promote wellness among their staff and make healthy workplaces part of their core business model. • Launch a number of pilots of well-being assessments throughout the NHS, where individual staff are offered personalised health advice and lifestyle management programmes linked to personal assessments of their health status. • Pilot and evaluate a range of different approaches to using personal financial incentives to encourage healthy living, such as individuals losing weight and sustaining weight loss, eating more healthily or being consistently more physically active. • NHS NYY to maintain and disseminate information for health workers about local facilities for physical activity to inform opportunities within primary care settings for promoting physical activity among those who are least active. • Green Travel Plans 	DH healthy workplace guidance	<ul style="list-style-type: none"> • Number of workplace health initiatives • Number of Green Travel Plans

5.2.5 Personalised advice and support

Our vision is a future where individuals have easy access to highly personalised feedback and advice on their diet, their weight, their physical activity and their health, providing them with personalised information to encourage healthy behaviours. People will also have easy access to authoritative but clear advice on how to look after themselves, making sense of the competing claims made about eating, diet, activity and health. When people are overweight or obese, they will have access to personalised services that are tailored to their needs and support them in achieving real and sustained weight loss, leading to the maintenance of a healthy weight.

Outcomes	Suggested Actions	Support Available Locally	Possible Indicators
<ul style="list-style-type: none"> Individuals have easy access to information and advice on healthy eating and activity that is clear, consistent and personal to them. Individuals who are obese or overweight will be able to access services that are tailored to help them achieve and sustain a healthy weight. All local areas commission multi-disciplinary weight management services, for children and families to enable effective best value service models to be developed. These should include current local services and the development of other options, including exploring the potential of developing services in partnership with the private sector. GP's working with at risk patients to help prevent them from gaining weight. 	<ul style="list-style-type: none"> Encourage primary care professionals to provide support to overweight and obese adults e.g. brief interventions and/or referring to appropriate services Provide training for relevant front line staff, on basic nutrition skills, brief interventions and weight management, to ensure accurate and consistent advice is provided and make available a range of supporting resources, linking with Change4Life. Commission a range of multi-agency weight management services, in line with the local care pathway. Identify, implement and evaluate appropriate community based interventions, taking a whole family approach for children who are overweight or obese, e.g. MEND, Watch It, Carnegie Clubs and HENRY Project Front line workers to provide a wide range of information to parents and children. 	<ul style="list-style-type: none"> New commissioning guidance NICE guidance⁹ Websites: <ul style="list-style-type: none"> NHS Choices MEND Programme BIG Lottery Fund - Well-being 	<ul style="list-style-type: none"> Front line members of staff trained in understanding health improvement, nutrition and weight management Community health educators trained Number of families who have accessed and successfully completed the community based weight management programmes, such as MEND Care pathways produced and implemented

6 Local Leadership

As part of the consultation the need to identify clear leadership and structures was highlighted. Therefore, overall leadership and governance arrangements need to be agreed by all partners, with roles and responsibilities clearly identified.

It is recommended that two Healthy Weight, Active Lives Strategic Implementation Groups are established by February 2009. These groups will be linked to the Local Area Agreement process: one group for North Yorkshire reporting to the Children and Young Peoples Partnership Board and the Healthier Communities Thematic Partnership; and one for York, reporting to the YorOK Board (Children’s Trust) and the Healthy City Board to be chaired by senior level leads. These should be made up with a wide range of local partners that play a key role in influencing and delivering this agenda.

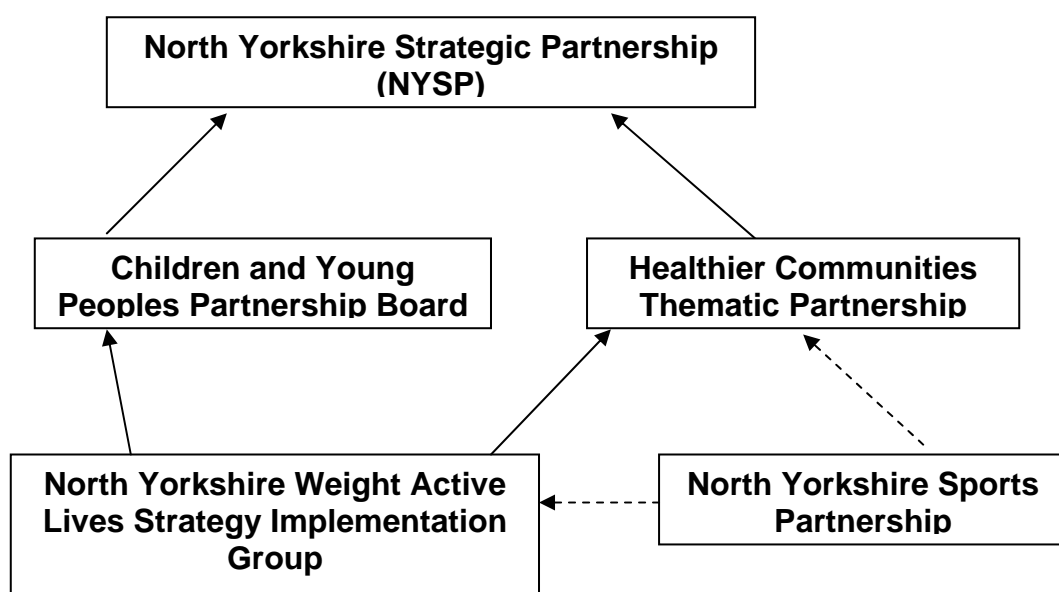
It is proposed these groups lead the development, monitoring and evaluation of three year Action Plans. All actions need to be fully costed. There is a need to ensure all action is integrated and compliments local work and groups that may be already underway at a District level.

A dedicated resource also needs to be identified to co-ordinate and lead the partnership work across both areas.

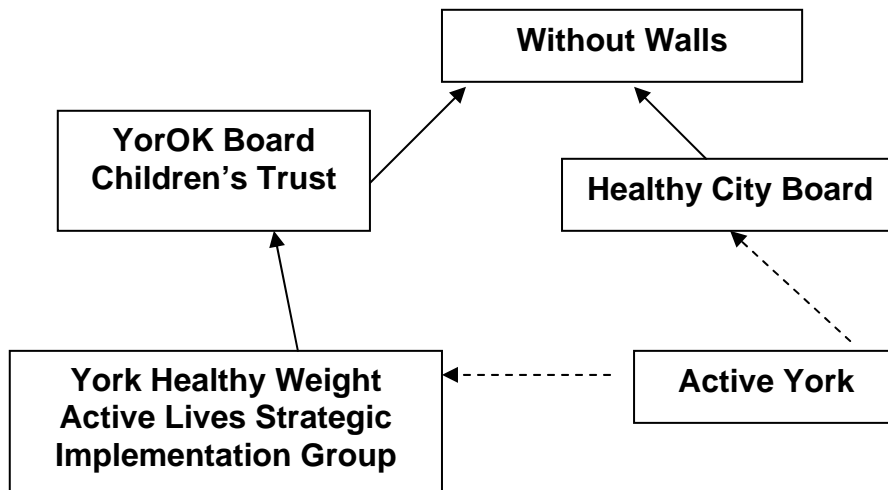
Figure 14 below outlines proposed accountability structures.

Figure 14: North Yorkshire and York healthy weight, active lives strategic implementation groups – accountability structures

North Yorkshire



York



Recommendations

Local Leadership:

Overall leadership and governance arrangements need to be agreed by all partners, with roles and responsibilities clearly identified. It is recommended that this is facilitated through the implementation of two Healthy Weight, Active Lives Strategic Implementation Groups, to be established by February 2009, linked to the Local Area Agreement process, one group for North Yorkshire and one for York chaired by a senior-level lead. These groups will develop, monitor and evaluate three year Action Plans. It is also recommended that dedicated resource is identified to co-ordinate and lead the partnership work across both areas.

7 Delivering Change

7.1 Building local capacity and capability

Key to delivering the Strategy is the importance for staff in a wide range of organisations to understand the role that they play in addressing activity and nutrition. This includes for example staff in the NHS, schools, planning, voluntary and third sector and many more.

There is a need for staff to access training that addresses the different needs of these staff groups, but importantly, it must also recognise how sensitive the issue of weight is and build on the confidence of staff to be able to raise the issues and the know-how to influence behaviour change. A number of training programmes already exist both locally and nationally.

It is recommended that organisations assess the skills and capabilities of their workforce in addressing activity and nutrition in line with their roles and responsibilities and ensure that the appropriate level of training is made available for staff.

As well as addressing the training needs of the workforce, there is also a need for greater public awareness of 'what is overweight'. A lot of media focus is on morbid obesity, meaning that the general public may be unable to recognise less extreme but still important weight problems. Alongside this is a need for consistent messages. Change4Life as detailed earlier should help with this.

It is recommended that a communications plan/approach is developed to underpin all work delivered as part of the North Yorkshire and York approach to tackling obesity.

7.2 Funding implications

Many actions required to deliver the ambition set out in the Strategy will need resources, through redirection or additional funds. An immediate priority is a dedicated resource to co-ordinate the delivery of this Strategy across North Yorkshire and York.

Nationally the government has made a total of £372 million available for the programmes it sets out as part of its national strategy¹ over the period 2008-11. This is over and above the £1.3 billion investment in school food, sport and play and the £140 million for Cycling England.

Where this funding has been allocated and devolved out to local organisations there is a need to ensure the links to this Strategy have been fully acknowledged and this funding is made available to deliver actions in this Strategy.

In developing investment plans for 2009/10 onwards NHS North Yorkshire and York has included interventions and service to address childhood and adult obesity. This investment plan is currently under negotiation and will be approved in spring 2009. It is hoped that funding can be used to jointly commission services with partners and where appropriate be used as matched funding for specific areas of work.

It is recommended that all interventions and services that are proposed or developed as part of implementing this Strategy are fully costed with their funding streams clearly identified.

7.3 Conclusion

We have set ourselves a challenging ambition but it is achievable if we recognise and support the desire of many people to live healthy lives. Maintaining a healthy weight must be the responsibility of individuals first, but it is our role to make sure those individuals and families have access to the opportunities, information and services they want in order to make healthy choices and support healthier lifestyles.

Recommendations

Building local capacity and capability:

It is recommended organisations assess the skills and capabilities of their workforce in addressing activity and nutrition in line with their roles and responsibilities and ensure that the appropriate level of training is made available for staff.

Communications:

It is recommended a communications strategy is developed to support effective delivery of key messages to individuals and the community.

Funding:

It is recommended all interventions and services that are proposed or developed as part of implementing this Strategy are fully costed with their funding streams clearly identified.

Appendix 1 - Examples of Existing Local Action

Activity		Brief Description
1 Children Healthy Growth and Healthy Weight		
1.1	Antenatal advice and support: breastfeeding and weaning	<ul style="list-style-type: none"> • Advice and support are provided to parents-to-be through antenatal classes/services to help establish the importance of a healthy lifestyle, healthy eating and exercise to the health of the whole family. • Promotion of exclusive breastfeeding for the first six months of an infant's life to parents as part of ante and post-natal service delivery along with the promotion of solid foods for infants at six months, with continued breastfeeding and appropriate types and amounts of solid foods. • Some local networks are in place to support parents with breastfeeding.
1.2	Healthy Start	<ul style="list-style-type: none"> • Local authorities and NHS NYY promote the Healthy Start programme, encouraging families to have a healthy diet, which includes fresh fruit and vegetables.
1.3	Children's Centres	<ul style="list-style-type: none"> • The local authorities and NHS NYY collaborate on the establishment of children's centres from the earliest planning stages onward. • Children's centres follow the Children's Centre Practice Guidance which covers tackling obesity as well as public health issues and support for parents.
1.4	School Nursing Service	<ul style="list-style-type: none"> • There is at least one full-time, year-round qualified school nurse to work with each secondary school and its cluster of primary schools. • The school nurse role specifically includes encouraging healthy lifestyles and programmes to tackle overweight and obesity.
1.5	National Child Measurement Programme	<ul style="list-style-type: none"> • All schools within the NHS NYY boundary participate in the National Child Measurement Programme (NCMP), and every effort is made to obtain the highest possible coverage with at least 85% of children in Reception and Year 6 weighed and measured in 2007/08. • These data are used to inform provision and targeting of local overweight and obesity prevention and management services and to track performance of programmes.

Activity		Brief Description
1.6	Food in Schools	<ul style="list-style-type: none"> Local authorities support primary schools in taking up and continuing the School Fruit and Vegetable Scheme, helping children to achieve 5 portions of fruit and vegetables a day. All school meals provided by the local authority comply with the recommended nutrient standards and all school food complies with the recommended food based standards.
1.7	Extended Schools	<ul style="list-style-type: none"> The local authority works toward joined-up extended schools provision and encourages and supports extended schools provision to contribute to healthy lifestyles, though initiatives such as physical activity programmes for parents and children and breakfast clubs.
2 Promoting Healthier Food Choices		
2.1	North Yorkshire County Council Trading Standards Service	<ul style="list-style-type: none"> A project to ascertain the energy, fat and salt levels in a selection of takeaway ready meals obtained from outlets in North Yorkshire was undertaken with several recommendations identified for future work.
3 Building Physical Activity into our Daily Lives		
3.1	Children's Play Initiative	<ul style="list-style-type: none"> Each local authority area has been allocated an amount of money based on the child population of the area and weighted by the level of deprivation. Application packs have been sent to all local authorities asking them to coordinate their areas application with their local play partnerships.
3.2	School Travel Plans	<ul style="list-style-type: none"> School travel advisers, healthy schools co-ordinators, and local authority planners' work together to promote active travel to school and ensure that all schools have school travel plans. Effectiveness of the School Travel plan is monitored.
3.3	School Sport	<ul style="list-style-type: none"> The local authority ensures that all 5-16 year olds have the opportunity to take part in high quality school sport and PE for at least two hours a week. They also support the Government's commitment to developing more opportunities for 5-19 year olds to participate in a further 3 hours of sporting activities through attractive provision designed to stimulate and increase take-up and sustain participation.
3.4	School Sports Partnership	<ul style="list-style-type: none"> The local authority works in partnership with the School Sports Partnership to increase the participation of children in schools sports, including providing support to those overweight and obese children that do not usually engage in mainstream physical activity or sports.

Activity		Brief Description
3.5	Walking the Way to Health	<ul style="list-style-type: none"> • Aims to encourage people, particularly those who take little exercise, to do regular short walks in their communities. • Age Concern and local authorities offer information and support to complete beginners and health/leisure professionals. • Support is provided for five local health walk schemes across North Yorkshire.
3.6	Exercise Referral Scheme	<ul style="list-style-type: none"> • Designed to increase the number of adults who take part in moderate activity on a regular basis and who have medical conditions that will benefit from this increased activity. • The NHS NYY co-ordinates in partnership with local authorities and the private sector four schemes across North Yorkshire and York.
3.7	National Step-O-Meter Programme	<ul style="list-style-type: none"> • The National Step-O-Meter Programme (NSP) is a two-year project that aims to make it possible for National Health Service patients - especially those who take little exercise - to have the use of a Step-O-Meter (pedometer) free-of-charge for a limited loan period. • Help and support is given to set goals, monitor the number of steps walked, record progress and increase activity levels.
3.8	Leisure Services	<ul style="list-style-type: none"> • The local authorities work to ensure that leisure centre facilities are affordable for low-income families and are suitable for different family groups (e.g. fathers and daughters, mothers and sons) and black and minority ethnic communities, and that any catering facilities promote healthy eating.
3.9	Active People Survey	<ul style="list-style-type: none"> • The Active People Survey measures adult participation in sport (16+). 3 x 30 minutes of sport/active recreation per week and provides detailed analysis.
4 Creating Better Incentives for Health		
4.1	NHS NYY Weight Management Policy	<ul style="list-style-type: none"> • NHS NYY has a weight management policy for staff, which was developed by HR and is available on the Public Folders. • Occupational health offer weight management support and advice to staff.
5 Personalised Advice and Support		
5.1	Mind Exercise Nutrition Do It! (MEND)	<ul style="list-style-type: none"> • The MEND Programme is a National community-based 10-week programme, designed to prevent overweight children becoming obese and treat obesity. • There are two MEND programmes currently being piloted across North Yorkshire in Ryedale and Selby.

Activity		Brief Description
5.2	Healthy Exercise and Nutrition for the Really Young (HENRY) Project	<ul style="list-style-type: none"> • HENRY is a community-based programme that aims to tackle childhood obesity through working with the very young. • Thirsk and Easingwold Children's Centre is currently involved in the national pilot of the HENRY project.
5.3	Royal Institute of Public Health (RIPH) Level 2 Understanding Health Improvement Course	<ul style="list-style-type: none"> • The Public Health department of NHS North Yorkshire and York is a registered centre with the Royal Institute of Public Health (RIPH) to deliver understanding health improvement courses. • This level 2 qualification is mapped to elements of the National Qualification Standards for Health Trainers. • It is relevant to groups across a range of community and organisational settings who have an interest in health and well-being of their clients and workforce.
5.4	Community Health Educators	<ul style="list-style-type: none"> • This project aims to build community capacity to support and encourage people to be more active, eat more healthy food and to improve their mental well-being.
5.6	NHS North Yorkshire and York website and Fact Sheets	<ul style="list-style-type: none"> • Local communications are consistent with national core messages. • Six key health improvement campaigns run over a 12-month period in partnership with pharmacies across North Yorkshire.

Appendix 2 - Definition of Obesity

Body Mass Index

Body Mass Index (BMI) is an effective measure of weight status at a population level but can be less accurate for assessing healthy weight in individuals, especially for certain groups (for example, athletes and elderly) where a slightly higher BMI is not necessarily unhealthy. BMI is therefore supplemented by measuring waist circumference (Table 6 below) and by considering individual circumstances.

BMI Classifications for Adults

BMI is defined as the person's weight in kilograms, divided by the square of their height in metres (kg/m²)¹

BMI below 18.5	Underweight
BMI 18.5-25	Healthy weight
BMI 25-30	Overweight
BMI 30-40	Obese
BMI over 40	Morbidly obese

Table 6: Waist circumference for adults

	Increased Risk	Substantially increased risk
Men	≥ 94 cm (37 inches)	≥ 102 cm (40 inches)
Women	≥ 80 cm (32 inches)	≥ 88cm (35 inches)

Source: WHO (1998)²¹

BMI Classifications for Children

For children the situation is more complicated. There is no fixed BMI to define being obese or overweight since this varies with gender and with growth and development. However, NICE⁹ recommends the following growth reference or BMI charts are used for children:

Assessing and monitoring individual children - the 91st percentile (overweight) and the 98th percentile (obese) of the 1990 UK reference chart be used for assessing and monitoring individual children.

Screening whole populations - the majority of published epidemiological work has used a definition of obesity as a BMI of more than the 95th percentile, and overweight as a BMI of more than the 85th percentile of the UK 1990 reference chart for age and sex. This definition is retained for comparative epidemiological purposes.

Appendix 3 – Summary of Cluster Characteristics

Table 7: Summary of the characteristics of each cluster¹⁰

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
Description	Struggling parents who lack confidence, knowledge, time and money.	Young parents who lack the knowledge and parenting skills to implement a healthy lifestyle.	Affluent families, who enjoy indulging in food.	Already living a healthy lifestyle.	Strong family values and parenting skills but need to make changes to their diet and activity levels.	Plenty of exercise but potentially too many bad foods.
Family diet	Seek convenience, eat for comfort, struggle to cook healthily from scratch.	Children fussy eaters, rely on convenience foods.	Enjoy food, heavy snackers, parents watching weight.	Strong interest in healthy diet.	Strong parental control but diet rich in energy-dense foods and portion size an issue.	Eating motivated by taste, diet includes both healthy and unhealthy foods.
Physical activity	Seen as costly, time-consuming and not enjoyable. High levels of sedentary behaviour.	No interest in increasing activity levels because parents perceive children to be active.	Believe family is active, no barriers to child's activity except confidence.	Family active although believe children not confident doing exercise.	Know they need to do more: time, money, self-confidence seen as barriers.	Activity levels are high, particularly among mothers.
Weight status	Mothers obese and overweight.	Families obese and overweight. Fail to recognise children's weight status.	Families obese and overweight. Low recognition of children's weight status.	Below average levels of obesity and overweight.	Parental obesity levels above average, children below.	Low family obesity levels but child overweight levels are a concern.
Demographic	Low income, likely to be single parents.	Young, single parents, low income.	Affluent parents of all ages, households vary in size.	Affluent older parents, larger families.	Range of parental ages, single parent families.	Average incomes, younger mothers, households vary in size.
Intent to change	High, but fear of being judged and lack of confidence are powerful barriers.	Currently low due to lack of knowledge, but willing to accept help once alerted to risks.	Low intent to change and likely to deny that problems exist.	Low intent to change but already leading a healthy lifestyle.	Low intent on diet but significant intent to change on physical activity.	Highest among the clusters for both diet and physical activity, so influencing them is not a priority.
Potential task	Build confidence, increase knowledge and provide cheap convenient diet solutions.	Increase understanding of risks of current lifestyle and develop parenting skills.	Encourage recognition of problem and awareness of true exercise and snacking levels.	Learn from successful techniques used by cluster.	Focus on increasing activity levels and educate on portion size.	Focus on providing cheap, convenient, healthy high-energy foods to fuel active lifestyle.

Source: Healthy Weight, Healthy Lives: Consumer Insight Summary¹⁰

References

- 1 Department of Health. (2008). Healthy Weight, Healthy Lives: A cross-government strategy for England. London: Department of Health.
- 2 Butland B, Jebb S, Kopelman P, McPherson K, Thomas S, et al. (2007). Foresight tackling obesity: Future choices –project report. 2nd edition. London: Department for Innovation, Universities and Skills
- 3 Jebb, S. (2004). Obesity: Causes and Consequences. Medicine Publishing.
- 4 Department of Health. (2006). The NHS in England: operating framework for 2007-08. London: Department of Health (On-line).
- 5 Department for Communities and Local Government. (2007). The New Performance Framework for Local Authority Partnerships: Single Set of National Indicators. London: Department for Communities and Local Government
- 6 North Yorkshire County Council (2008). Children and Young People's Plan 2008-2011. North Yorkshire Children and Young People's Strategic Partnership.
- 7 City of York Council (2007). Children and Young People's Plan 2007-2010. City of York Council (On-line).
- 8 Department of Health. (2008). Healthy Weight, Healthy Lives: A Toolkit for Developing Local Strategies. London. Department of Health & National Heart Forum.
- 9 NICE (2006). Clinical guidance 43. Obesity: the prevention, identification, assessment and management of overweight and obesity in adults and children. National Institute for Health and Clinical Excellence.
- 10 Department of Health. (2008). Healthy Weight, Healthy Lives: Consumer Insight Summary. London: Department of Health.
- 11 McPherson K, Marsh T, Brown M. (2007). Modelling future trends in obesity and the impact on health. Foresight tackling obesity: Future Choices. London: Department for Innovation, Universities and Skills.
- 12 Parsons TJ, Power C, Logan S, Summerbell CD. (1999). Childhood predictors of adult obesity: A systematic review. International Journal of Obesity. (Supp 8): S1-S107).
- 13 Singhal A, Lanigan J. (2007). Breastfeeding, early growth and later obesity. Short science review. Foresight tackling obesity: Future choices. Obesity Reviews. 8(s1): 51-54).
- 14 Wardle J. (2007). Eating behaviour and obesity. Short science review. Foresight tackling obesity: Future choices. Obesity Reviews: 8(s1) 63-65).
- 15 Ello-Martin JA, Ledikwe JH, Rolls BJ. (2005). The influence of food portion size and energy density on energy intake: Implications for weight management. American Journal of Clinical Nutrition; 82: 2365 -2415).
- 16 Craig R, Mindell J (eds). 2008. Health Survey for England 2006 vol 1; Cardiovascular disease and risk factors in adults. Leeds: The Information Centre.

- 17 Craig R, Mindell J (eds). 2008. Health Survey for England 2006 Vol. 2: Obesity and other risk factors in children. Leeds: The Information Centre.
- 18 Department of Health. (2004). Choosing health: Making healthier choices easier. London: The Stationery Office.
- 19 Wilkinson, M. (2008). Childhood Obesity in North Yorkshire and York PCT. Results from the collection of height and weight measurements in Year 6 and Reception children 2006/7. North Yorkshire and York PCT.
- 20 Sport England (2007). Active People Survey 2005/6. [Internet]. Available from:
http://www.sportengland.org/index/get_resources/research/active_people/active_people_1.htm
- 21 WHO (1998) Preventing and managing the global epidemic. Report of a WHO consultation on obesity. World Health Organisation, Geneva

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