

OBESITY
HEALTHY WEIGHT, HEALTHY LIVES
BRIEFING PAPER

RECOMMENDATIONS

Prior to the issue of specific NICE guidance aimed at addressing obesity in local communities, the Health & Well Being Board is asked to consider the following:

1. Levels of obesity in Torbay reflecting on the national picture and the rates continuing to rise.
2. The wider strain and cost to the wider economy.
3. What makes Torbay an obesogenic environment and how can we address this?
4. Increase active travel opportunities e.g. park & ride facilities, cycling routes
5. Ensure health impact assessments are routinely incorporated in to all planning process's
6. Promote the availability of current services, including training opportunities and public programmes

JULY 2011

1.0 PURPOSE

To provide the Health and Well Being board with a background paper on the issue of obesity both as a national Public Health concern but one which locally also poses an increasing burden on resources in terms of capacity as well as financial.

Obesity is a preventable condition which has a far reaching detrimental impact on the individual's health; life expectancy; social and behavioural wellbeing.

Obesity is estimated to reduce life expectancy by between 3 and 14 years and is a health inequality issue.

People need to eat a healthy diet and maintain an active lifestyle through exercise. All organisations can contribute to the opportunities for the local population to do so. In particular, local authorities can take the strategic decisions which make it easier for people to make healthy choices.

The National Institute for Health and Clinical Excellence (NICE) is developing guidance for Public Health, 'Obesity: working with local communities', which will consider how local policy and decision makers can work with different communities to reverse the obesogenic tendencies associated with contemporary living. It will cover access to food, transport, education, planning and media as well as opportunities for physical health.

This guidance will be presented to the Board in the near future but this paper seeks to give members a chance to consider how Council decisions could positively address the rising tide of obesity in Torbay.

The health and wellbeing board are asked to drive, support and increase the profile of the multi pronged action needed to be taken across Torbay Care Trust Public Health Team, Torbay Local Authority (including environmental health, education and transport and planning), private organisations and within local communities.

2.0 DEFINITION

The World Health Organisation (WHO) defines obesity and overweight as 'abnormal or excessive fat accumulation that presents a risk to health.' Body mass index (BMI) is routinely used to measure overweight and obesity. BMI is weight (kg) divided by height squared (m^2). A BMI of 25-30 is generally described as overweight, 30+ is obese.

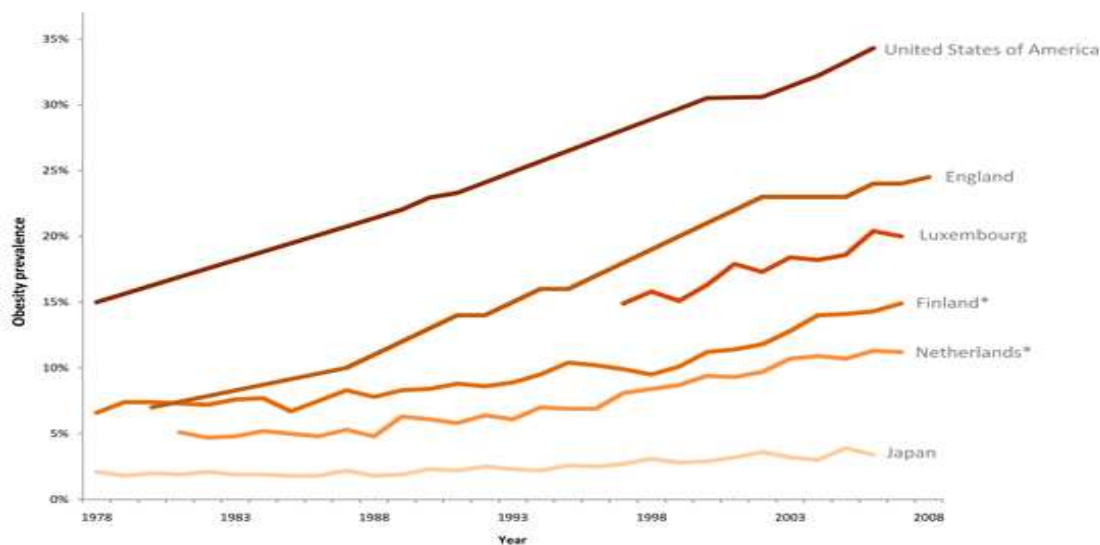
It is more complex to measure BMI in children and adolescents than it is in adults since BMI changes naturally with age and differs between boys and girls. Therefore, children's weight in the UK is assessed by reference to BMI percentile charts (comparable to growth charts). A high BMI for age is termed 'obesity'; a slightly lower BMI for age is defined as 'overweight.'

Although waist circumference is a more simple proxy measure which is now used to classify adults as obese or overweight, various systematic reviews (NICE 2006 and ISG 2003) have concluded that there is insufficient evidence to recommend this should replace the BMI for children and young people.

3.0 PREVALENCE

The prevalence of obesity in England has more than doubled in the last twenty five years. Although this recent increase in the prevalence of obesity has been seen in virtually every country in the world, the rate of increase in England has been particularly high (see Figure 1).

Figure 1: Trends in adult prevalence of obesity (BMI $\geq 30\text{kg/m}^2$) – percentage of the adult population assessed as obese in a selection of countries



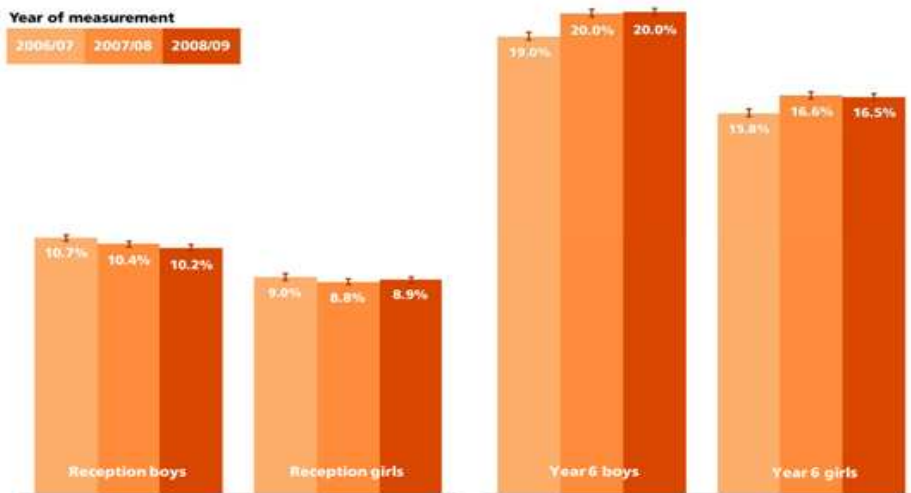
The rapid increase in the prevalence of overweight and obesity has resulted in the proportion of adults in England with a healthy BMI (18.5-24.9) decreasing between 1993 and 2008 from 41.0% to 32.5% among men, and 49.5% to 41.1% among women. In England, currently 24.5% of adults (aged 16 years and over) are obese (HSE 2008).

By 2050 the prevalence of obesity is predicted to affect 60% of adult men, 50% of adult women and 25% of children (Foresight 2007).

The prevalence of obesity and overweight changes with age. Prevalence of overweight and obesity are lowest in the 16-24 years age group and generally higher in the older age groups among both men and women. (HSE 2008)

Among children 10.2% of boys and 8.9% of girls in Reception year (aged 4-5 years) and 20.0% of boys and 16.5% of girls in Year 6 (aged 10-11 years) are also classified as obese according to the British 1990 population monitoring definition of obesity (≥ 95 th centile) (NCMP 2008/09) (Figure 2).

Figure 2: Prevalence of obesity (with 95% confidence limits) by year of measurement, school year, and sex (National Child Measurement Programme)

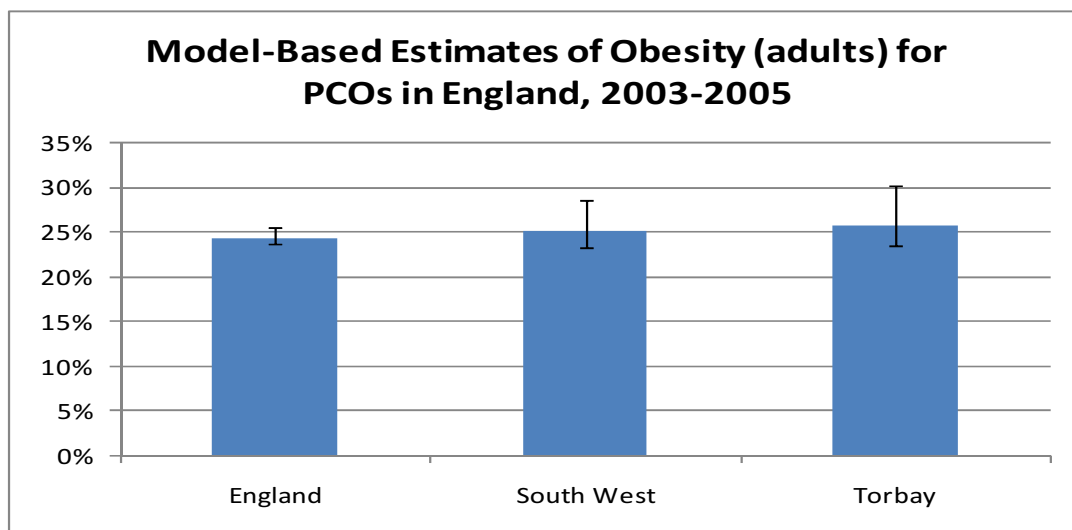


Information from the Health Survey for England shows an increasing trend in child obesity prevalence between 1995 and 2004. Particularly among older children, there is evidence of a slowing down the increase in the rate of child obesity since 2004.

4.0 PREVALENCE IN TORBAY

4.1 **Adults** - Locally it is estimated that 25% of adults are obese. (Health Surveys for England 2003 to 2005)

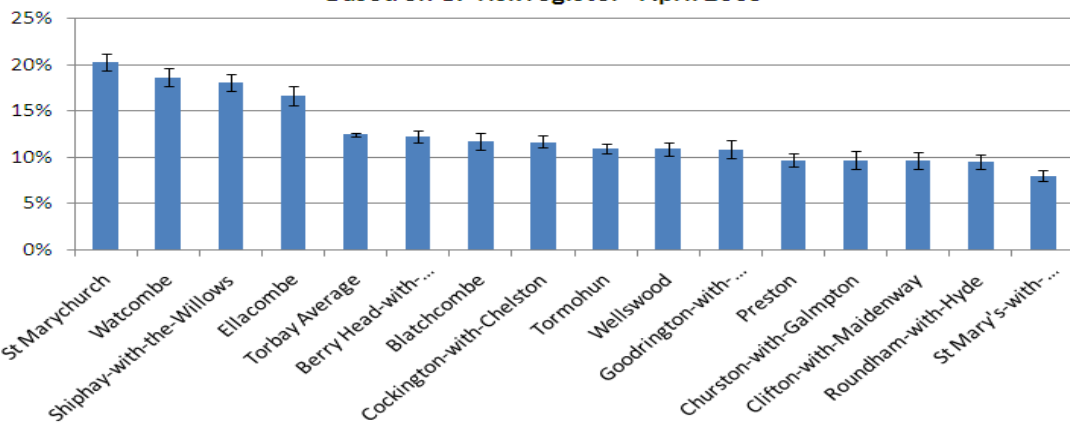
Figure 3:



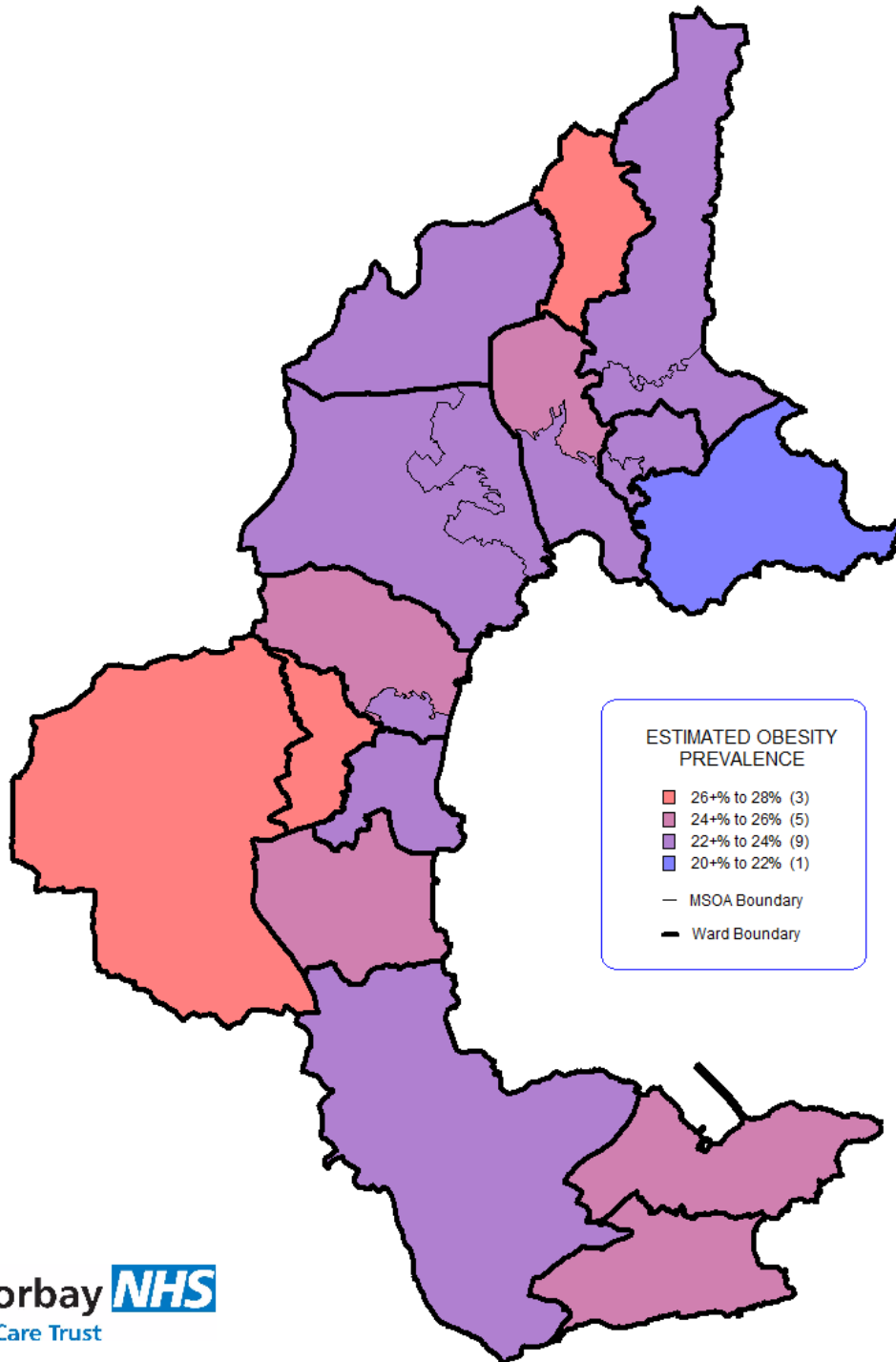
The JSNA data using primary care information estimates the figure to be ~19% of adults to be obese. However there is selection bias in the results as three practices did not return data and GPs do not have measurement details for the whole population, only those attending the surgery therefore it is more likely to be in line with the higher estimate of 25% .

Figure 4: Estimated levels of Obesity for registered patients.

Estimated levels of obesity for registered patients aged 16+ in Torbay by electoral ward.
Based on GP risk register - April 2009



**MODEL-BASED ESTIMATES OF OBESITY IN THE 16+ POPULATION
BY MSOA IN TORBAY, 2003-2005**



Torbay NHS
Care Trust

Source: Health Surveys for England 2003 to 2005. ONS

4.2 Children – Good participation rates within the childhood measurement programme has provided data which shows continuing high levels of obesity among primary school age children. 8.9% of reception children in 2009 are obese and 17.4% of year 6 children are obese.

Figure 5: Prevalence of obese children in Reception

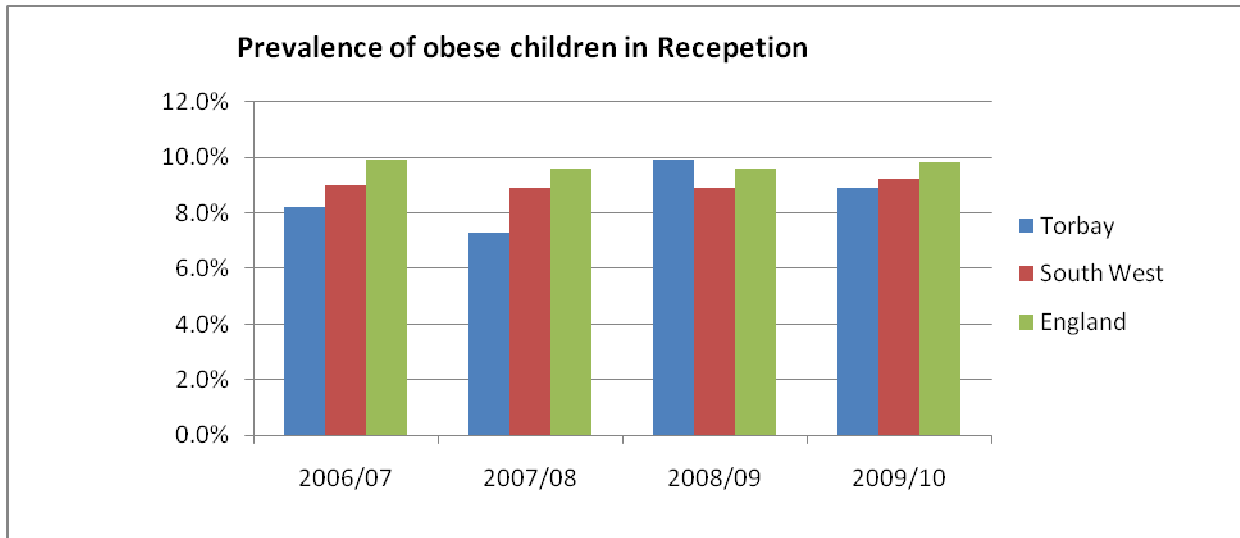
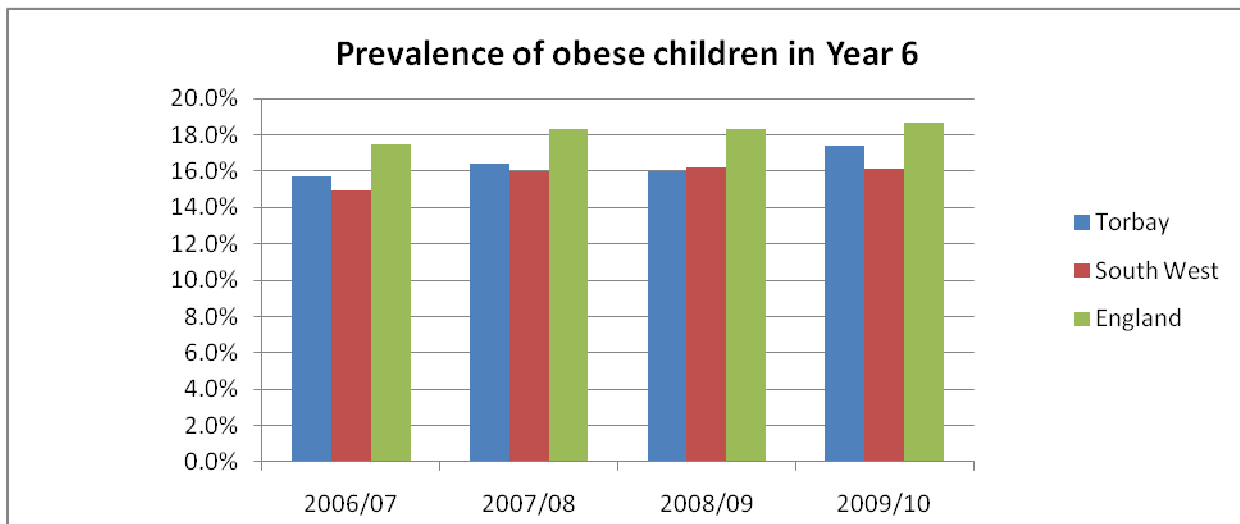
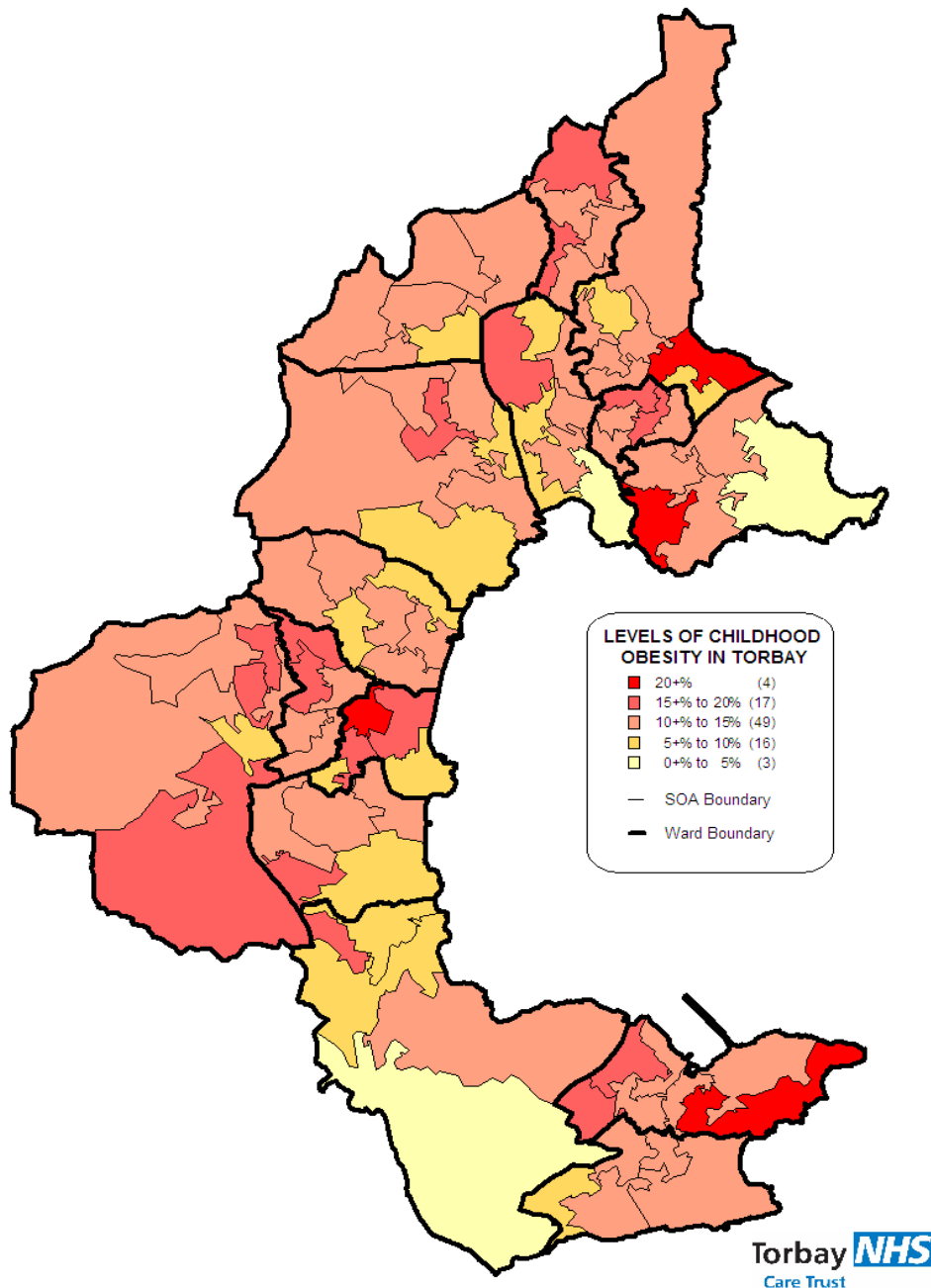


Figure 6: Prevalence of obese children in Year 6



AVERAGE LEVELS OF CHILDHOOD OBESITY IN TORBAY FOR BOTH RECEPTION YEAR AND YEAR 6 PUPILS FROM 2005/06 TO 2008/09



5.0 WHO IS AT GREATEST RISK

The prevalence of obesity and overweight changes with age; social class and deprivation; parental BMI and ethnicity. Prevalence of overweight and obesity are lowest in the 16-24 years age group and generally higher in the older age groups among both men and women. Obesity prevalence has increased across almost all social classes however the gap between the highest and lowest social class has widened for both sexes. (HSE 2008).

Other high risk groups include recent weight reducers; ex smokers; individuals with physical or learning difficulties; women post pregnancy and individuals with mental health problems.

6.0 OBESITY AND HEALTH

6.1 Adults - Obesity in adults is known to lead to both chronic and severe medical problems.

It reduces life expectancy by an average of nine years (more years in smokers), greatly increases the risk of heart disease, cancer, type 2 diabetes and high blood pressure. Around 8% of annual deaths in Europe (at least one in 13) have been attributed to overweight and obesity. (Appendix 1: Health Risks of Adult Obesity)

6.2 Children - Obesity in childhood and adolescence similarly has a range of serious adverse health consequences, both in the short term (for the obese child) and long term (for the adult who was obese as a child). Once established, obesity is notoriously difficult to treat, so prevention and early intervention are very important.

It is estimated that high blood lipids are present in at least one quarter of obese adolescents and conditions not previously seen in children, such as fatty liver disease and type 2 diabetes (Reilly 2009). Childhood obesity has also been linked to a range of negative consequences and social inequalities including impaired psychological health, poor quality of life, low self esteem and poor educational outcomes (Reilly 2009). (Appendix 2: Health Risks of Childhood Obesity)

7.0 COST OF OBESITY

The cost to the UK economy of overweight and obesity was estimated at £15.8 billion per year in 2007, including £4.2 billion in costs to the NHS. In economic terms, NHS costs attributable to overweight and obesity are projected to double to £10 billion per year by 2050, while the wider cost to society and business are estimated to reach £49.9 billion per year at today's prices (Butland et al 2007).

The estimated annual costs of diseases relating to overweight and obesity in Torbay is in the region of £42.4 million, increasing to £47.1 million in 2015.

	Estimated annual costs to NHS of diseases related to overweight and obesity £ million			Estimated annual costs to NHS of diseases related to overweight and obesity £ million		
	2007	2010	2015	2007	2010	2015
Torbay Care Trust	42.4	44	47.1	22	23.8	27.4

SOURCE: Healthy Weight, Healthy Lives: A toolkit for developing local strategies (2008)

Bariatric surgery, a generic term for weight loss surgery has increased in recent years from around 470 in 2003/04 to over 6,500 in 2009/10. This is NHS commissioned and does not include the unknown level of activity carried out by the private sector. During 2008/09 29 Torbay patients had NHS commissioned surgery at a total cost £163,051. Costs for drugs treating obesity in 2008/09 was £99,917.

The three most commonly performed bariatric surgery procedures in the UK are adjustable gastric banding, gastric bypass and sleeve gastrectomy. Bariatric surgery is recommended as a treatment option when all appropriate non-surgical measures have been unsuccessful for adults with morbid obesity. Its use is not generally recommended with children and adolescents.

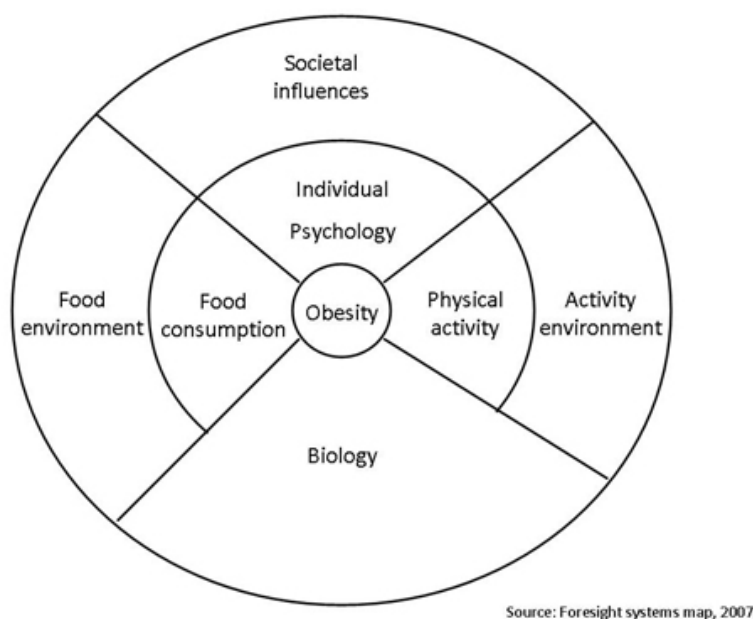
Bariatric surgery is more effective in achieving weight loss than non-surgical management and weight loss is more likely to be maintained in the longer term. However, adverse events are more common following surgery, and vary from one procedure to another.

8.0 CAUSES OF OBESITY

For obesity to develop, the number of calories consumed by an individual must exceed the number of calories utilised over a period of months and years.

However there are many complex behavioural and societal factors that combine to contribute to the causes of obesity. The Foresight report (2007) referred to a “complex web of societal and biological factors that have, in recent decades, exposed our inherent human vulnerability to weight gain”. The report presented an obesity system map with energy balance at its centre. Around this, over 100 variables directly or indirectly influence energy balance (Figure 7). For simplicity the Foresight map has been divided into 7 cross-cutting predominant themes .

Figure 7: Foresight Systems Map 2007



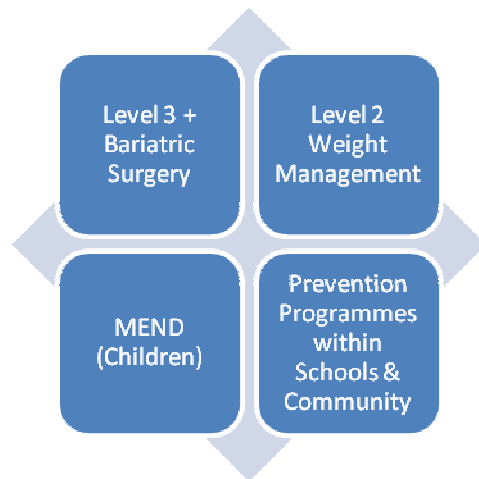
9.0 DEALING WITH THE ISSUE

The distinction between prevention and treatment is important. Once weight is gained and overweight obesity established, it is difficult to reverse. A number of NICE guidance has been published which looks at the links between obesity and built environment; Promoting physical activity and workplace guidance; Promoting physical activity for children and young people.

Treatment – while treatments are generally thought to be of limited effectiveness, as people may find it difficult to maintain weight loss, a modest weight loss by 5 to 10% of initial weight is said to reduce the risk of developing type 2 diabetes, improve blood pressure and reduce total cholesterol. Therefore treatment alongside prevention to support people to avoid weight gain is essential.

Locally the NHS is treating and providing intervention services to address issues of overweight and obesity through the following programmes.

Figure 8. Local models of Provision



Level 3 + Bariatric Surgery – a new level 3 service is currently being commissioned. The service will offer pre obesity surgery service for those people being considered for bariatric surgery following NICE criteria. Level 4 Obesity surgery is last resort after all other options have been explored. The new level 3 service will offer intensive support to patients within their local setting, including a structured education and supervised physical activity programme. Clinician, dietitian and psychologist involvement will ensure a high quality service that can provide tailored weight management support within the community.

Level 2 Weight Management programmes – structured weight management programmes delivered in the community have been developed across agencies to ensure the multi disciplinary approach needed in tackling the complex range of issues individuals deal with in relation to their weight.

Change 4 Life adult weight management programme is an 11 week community based course led by Dietician and lifestyle support workers offering support and advice with weight loss. This programme is offered to people aged over 18 years who have a BMI between 25 and 42.

Weight reduction and Exercise Programme – pilot scheme initially among the Torquay North cluster of GP practices has since been rolled out to accept referrals from all GP practices in the Bay. This programme is offered to patients with a BMI >30 but with no co-morbidities and lasts 26 weeks. It combines weight reduction which is monitored by the Practice Nurse, together with a tailored fitness/exercise weekly programme with a personal trainer.

Private Providers – Weight watchers, Slimming World, Rosemary Conley. Independent groups run throughout the bay.

Community Fitness Team delivers free or discounted physical activity programmes which includes one to one advice; GP exercise referral; pedometer loans, Bay walks; Exercise group for carers, Cardiac rehabilitation, balance and strength exercises for the prevention of falls.

MEND - programme is a community, family based 10 week programme for overweight and obese children aged between 7-13 years and their families. We are currently delivering our 8th MEND programme within the bay and now looking at adapting the model to meet the needs of the family and flexibility in order to achieve better retention rates balanced against outcome measure of weight loss.

Prevention programmes within schools and communities – there are a range of strategies that aim to prevent the development of overweight in normal-weight individuals and the progression of overweight to obesity in those who are already overweight.

Provide information and enhancing skills – community cooking skills; website; pharmacy public health campaigns; Pedometer loan scheme; type 2 diabetes group education, Fit 4 School booklet distributed by schools to all reception age children, Junior Life Skills Healthy Eating scenario reaches all year 6 pupils.

Enhanced services and support – walk to school; cost to access sports facilities; education programmes for carers including exercise and nutrition; Be HiP (healthy in Pregnancy) programme

Modifying access, barriers and opportunities – parks and recreational facilities; cycle paths;

Changing the consequences of key behaviours – 5 a day; Change4life; Bay Walks;

Modifying policies and broader systems – school meals; Schools Sports Partnership; Licensing of fast food premises; transport planning, planning developments to include health impact assessments.

Training

Obesity Brief Intervention Training is now routinely available for all healthcare professionals and key community work force. Training for both childhood and adult obesity are currently available.

Cook 4 Life Facilitator Training is currently available, for key community staff.

9.0 HOW CAN WE HELP PEOPLE TO BE A HEALTHY WEIGHT?

Whilst the health service can treat the symptoms of obesity and provide interventions to address unhealthy lifestyle behaviours, Local Authorities can take steps to prevent their environments from being obesogenic.

An obesogenic environment is one which discourages physical activity and makes it easy to access foods high in fats and sugar. The National Obesity Observatory provides a number of publications including systematic evidence reviews which shows the environment has an effect on people's dietary habits and participation in physical activity, which in turn affects their health. In order to identify where this may be a problem and to develop appropriate interventions, local areas need to investigate elements of the physical environment that relate to physical activity and diet. The impact on dietary behaviour such as food purchasing and consumption, and physical activity behaviour such as mode of travel to work. These can include:

- Accessibility: for example, travel time to a healthy food outlet; opening hours of a healthy food outlet; distance to shops and work; cost of healthy food; cost of physical activity facility; and distance to a green space or park.
- Availability: for example, types of food outlet available in a local area; availability and quality of green space; and availability of good quality food in a local area.
- Perceptions: for example, perceptions of safety in parks, food provided in food outlets and cost of healthy foods.

The observatory also provides insights into the knowledge and attitudes people hold that prevents them living a healthy life.

Obesity is a major public health concern both nationally and locally, for which there are no easy or short-term solutions. In order to meet this challenge, it is important that local responsibility for the health of our community is shared between the agencies that make up the Health and Well Being Board as well as the community itself. Action to be taken

Promoting a healthy weight through their role in shaping how cities, towns and villages are developed and built.

- **Ensure planning applications for new developments always prioritise the need for people (including those whose mobility is impaired) to be physically active as a routine part of their daily life.**
- **Ensure pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads.**

Plan and provide a comprehensive network of routes for walking, cycling and using other modes of transport involving physical activity.

- **Ensure public open spaces and public paths can be reached on foot**
- **Urban walkability scores.**
- **Provision of pavements.**

Promoting healthy workplaces. Opportunistic physical activity advice for staff accessing occupational health services; Provision of drop-in weight management services for all staff

Role in the management, maintenance and development of open/green space facilitating and encouraging physical activity by the local and wider community

Promoting physical activity for children and young people

- **the importance of consultation with children and young people and how to set about it**
- **planning and providing spaces, facilities and opportunities particularly with new school builds**
- **training people to run programmes and activities such as youth workers**
- **how to promote physically active travel such as cycling and walking to school.**
- **Children: healthy growth and healthy weight – for example, as many mothers as possible**
- **breastfeeding up to 6 months – promoting ‘baby friendly’ venues in town.**
- **Promoting healthier food choices – for example, less consumption of high-fat, high-sugar and high-salt foods in school food contracts**
- **Building physical activity into our lives – for example, reduced car use and more outdoor play**
- **Creating incentives for better health – for example, more workplaces that promote healthy eating and activity**
- **Personalised support for overweight and obese individuals – for example, everyone able to access appropriate advice and information on healthy weight.**

10.0 RECOMMENDATIONS

Prior to the issue of specific NICE guidance aimed at addressing obesity in local communities, the H&WB is asked to consider the following:

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APPENDIX 1 – IMPACT OF OBESITY (ADULTS)

Musculoskeletal system

- Raised body weight puts strain on the body's joints, especially the knees, increasing the risk of osteoarthritis (degeneration of cartilage and underlying bone within a joint).
- There is also an increased risk of low back pain.

Circulatory system

- Raised BMI increases the risk of hypertension (high blood pressure), which is itself a risk factor for coronary heart disease and stroke and can contribute to other conditions such as renal failure.
- The risk of coronary heart disease (including heart attacks and heart failure) and stroke are both substantially increased.
- Risks of deep vein thrombosis and pulmonary embolism are also increased.

Metabolic and endocrine systems

- The risk of Type 2 diabetes is substantially raised: it has been estimated that excess body fat underlies almost two-thirds of cases of diabetes in men and three quarters of cases in women. Diabetes currently affects nearly 200 million people worldwide and International Diabeted Federation predict that this will increase to over 330 million by 2025, with a massive burden in developing countries. Worldwide, the number of people with diabetes has tripled since 1985.
- There is a greater risk of dyslipidemia (for example, high total cholesterol or high levels of triglycerides), which also contributes to the risk of circulatory disease by speeding up atherosclerosis (fatty changes to the linings of the arteries).
- Metabolic syndrome is a combination of disorders including high blood glucose, high blood pressure and high cholesterol and triglyderide levels. It is more common in obese individuals and is associated with significant risks of coronary heart disease and Type 2 diabetes.

Cancers

- The risk of several cancers is higher in obese people, including endometrial, breast and colon cancers.

Reproductive and urological problems

- Obesity is associated with greater risk of stress incontinence in women.
- Obese women are at greater risk of menstrual abnormalities, polycystic ovarian syndrome and infertility.
- Obese men are at higher risk of erectile dysfunction.
- Maternal obesity is associated with health risks for both the mother and the child during and after pregnancy. [Click here for more information on maternal obesity](#)

Respiratory problems

- Overweight and obese people are at increased risk of sleep apnoea (interruptions to breathing while asleep) and other respiratory problems such as asthma.

Gastrointestinal and liver disease

Obesity is associated with:

- Increased risk of non-alcoholic fatty liver disease.
- Increased risk of gastro-oesophageal reflux.
- Increased risk of gall stones.

Psychological and social problems

- Overweight and obese people may suffer from stress, low self-esteem, social disadvantage, depression

APPENDIX 2 – IMPACT OF OBESITY (CHILDREN)

Mental health

- The emotional and psychological effects of being overweight are often seen as the most immediate and most serious by children themselves. They include teasing and discrimination by peers; low self-esteem; anxiety and depression. In one study, severely obese children rated their quality of life as low as children with cancer on chemotherapy (Schwimmer et al 2003). Obese children may also suffer disturbed sleep and fatigue.

Physical health

- Overweight and obese children are more likely to become obese adults, and have a higher risk of morbidity, disability and premature mortality in adulthood. Although many of the most serious consequences may not become apparent until adulthood, the effects of obesity – for example, raised blood pressure, fatty changes to the arterial linings and hormonal and chemical changes such as raised cholesterol and metabolic syndrome; type 2 diabetes – can be identified in obese children and adolescents.

Other health risks of childhood obesity include early puberty, eating disorders such as anorexia and bulimia, skin infections, and asthma and other respiratory problems. Some musculoskeletal disorders are also more common, including slipped capital femoral epiphysis (SCFE) and tibia vara (Blount disease)

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