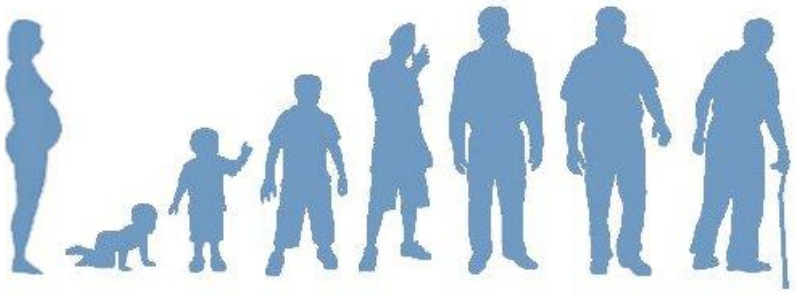
South Gloucestershire's Healthy Weight & Obesity Strategy



2014-2020

Foreword

As chair of the Health and Wellbeing Board, I welcome this new healthy weight strategy for South Gloucestershire. The strategy aims to address a number of priorities outlined in South Gloucestershire's Joint Health and Wellbeing Strategy. Tackling obesity and overweight is important as we know that individuals who are above the healthy weight range are at risk of developing a number of adverse health conditions such as type 2 diabetes, coronary heart disease and cancer.

Tackling obesity requires the work of many organisations and partners. A central theme throughout the strategy is the need for local government, NHS, communities, businesses and the third sector to work together, with a shared ambition and long-term commitment to promoting a healthy weight.

Although there has been some good progress over the last few years, we acknowledge that the majority of work has focused on individual level downstream approaches. Whereby we manage the consequences of obesity rather than more upstream approaches, which attempt to solve the real problems underpinning obesity. It is clear that the environment around us has increasingly led to individuals making unhealthy choices the default, or easiest choice. It is therefore important that we incorporate a multi-faceted approach that involves both individual and environmental approaches.

This strategy outlines our intention to have a renewed focus on prevention whilst also providing support to those children and adults who are above the healthy weight range. This will be achieved by delivering evidenced based programmes across the life course to prevent overweight and obesity, and improving the management provided for those children and adults who are above the healthy weight range. In particular, there is a need to support population groups who are at greater risk of developing obesity.

The challenge itself is huge, with no country in the world having yet successfully reversed the obesity epidemic. However, there is optimism that the rate of childhood obesity has slowed and therefore it is important to build on the success of the last few years.

Heather Goddard

Councillor Heather Goddard
Chair of the Health and Wellbeing Board

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1. Introduction

The prevalence of obesity in the UK has increased dramatically over the last 25 years with Britain now being the most obese nation in Europe. The majority of the adult population and 30% of children are either overweight or obese and it is estimated that, without clear action, these figures will rise to almost nine in ten adults and two-thirds of children by 2050[40]. While there is some indication that it may be starting to level off among children in England, prevalence remains very high among this group.[1]

The huge and rapid increase in the numbers of children and adults who are classified as obese has led to the use of the term “obesity epidemic” which has resulted in national policies, strategies and directives to address obesity that require the input of a wide range agencies working with their communities.

It is well documented that people who are overweight and obese increase the risk of a range of diseases that can have a significant health impact on individuals. Obesity is associated with type 2 diabetes and hypertension - which are major risk factors for cardiovascular disease and cardiovascular related mortality. Obesity has also been associated with cancer, disability and reduced quality of life, and can lead to premature death. Most importantly, there appears to be a link between obesity and level of deprivation.

This strategy has been produced by South Gloucestershire’s Healthy Weight Strategy Group and developed by South Gloucestershire Council in partnership with a range of statutory and voluntary organisations and sets out our plan to reduce the prevalence across the district. The strategy will translate national policies into local action, whilst also meeting the needs of local people based on evidence of what works. It will outline how organisations will need to work together to ensure obesity is integrated into high level strategic plans. The prevention and treatment of underweight children and adults will not fall within the scope of this strategy.

The actions that make up the strategy will be carefully planned to make sure that those most likely to be overweight are supported the most, focusing on reducing the health inequalities gap between the most and least deprived – the Marmot approach of ‘proportionate universalism’. In addition, our actions will be sustainable, so that over the coming years we continue to support the creation and maintenance of healthy places to live.

The strategy recognises that change will take a long time unless a simultaneous 'top-down', 'bottom-up' and partnerships ('co-production') approach is adopted. This includes action across all local organisations and networks supported by effective policies and delivery systems. Our vision is that local government, NHS, communities, businesses and the third sector will work together, with a shared ambition and long-term commitment to tackling obesity

2. Aims and Objectives

2.1 Aims

The launch of this strategy follows the recent publication of South Gloucestershire's Joint Health and Wellbeing Strategy and sets out our intentions to reduce the burden of death, disability and distress due to overweight and obesity in South Gloucestershire. The primary aim of the strategy will be to focus our efforts on lasting societal and environmental changes that enable people to maintain a healthy weight; while informing and empowering people to make healthy choices. This will be achieved by delivering evidenced based programmes across the life course to prevent overweight and obesity, and improving the management provided for those children and adults who are above the healthy weight range.

2.2 Objectives

Prevention

- To promote and encourage a maternal healthy weight.
- To install healthy behaviours to children under 5 and to their parents/carers.
- To encourage children and adults to adopt and sustain healthy eating patterns.
- To increase the habitual level of physical activity in the local population.
- To influence decision and policy making to change the environment we live in to facilitate healthy behaviours.
- To review evidence for best approaches.

Treatment

- To support individuals whom are overweight and obese by working with the CCG to revise and develop a comprehensive obesity care pathway.
- To ensure services are proportionate to the level of social and economic disadvantage within areas of high health need such as priority neighbourhoods.

These objectives will be achieved by three key elements:

- By maximizing local resources by working in partnership with a range of organisations from the statutory, private, voluntary and community sector.
- By reviewing evidence based interventions to influence the revision and development of the obesity care pathway.
- By 'skilling up' the workforce to ensure that they have the skills and competences to 'raise the issue' and support patients who are overweight or obese.

The scope of the strategy is:

1. To provide a background on overweight and obesity as a major public health issue
2. To recognise and rationalise the work currently taking place in South Gloucestershire to prevent and treat obesity
3. To support implementation of evidence-based programmes and in particular recommendations endorsed by the National Institute for Health and Care Excellence (NICE)
4. To make recommendations for action to tackle obesity in South Gloucestershire
5. To provide a structure for partnership work with local organisations to agree a way forward

2.3 The life course approach

The approach used in this strategy is based on the life course of individuals. This approach views the behaviour of individuals in the context of the continuum of their lives from birth to death, and transition through various life stages and transition points. The Foresight report suggests that evidence supports taking a 'life course' approach in which different interventions targeting the same process of behaviour change are needed in all age groups.[40]

Six life stages have been identified which will be the focus of proposed work throughout the strategy:

- Pregnancy and first year of life
- Early years and pre school
- Young children (Key Stage 1 & 2)
- Young people (11-19yrs)
- Adults (20-65yrs)
- Older people (66+yrs)

In addition to these life stages, the strategy will include several cross cutting themes which stretch across all life courses including: data collection, built environment, training and communication.

Throughout the life course we are exposed to a wide range of experiences – social, economic, psychological and environmental (wider determinants of health).These experiences can mean that individuals are more susceptible to increasing their body weight depending where they are on the life course.

These stages therefore present opportunities for intervention by health professionals and other organisations, where support could be tailored to the different needs of individuals and families at different stages in their lives.[2] However it is important to recognise that there is much to be gained from a whole family approach to tackling obesity and therefore it is important that each life stage is never tackled in isolation from other life stages.

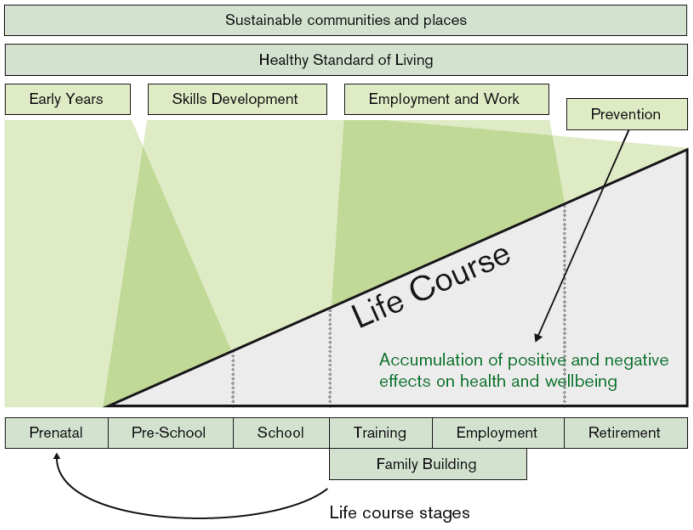


Figure 1 Action across the Life Course (Marmot Review 2010)

By using the life course approach we can support people during significant events or transition points in people's lives. This presents an important opportunity for intervening at some or all of the levels, because it is then that people often review their own behaviour and contact services. Typical transition points include: leaving school, entering the workforce, becoming a parent, becoming unemployed, retirement and bereavement.[38]

At the heart of the strategy will be a focus on preconception to early year's interventions as it has been found that the likelihood of developing childhood obesity is largely determined by the age of five.[3] It is also widely accepted that maternal health before, during and after pregnancy lays the foundations for healthy fetal development, as well as a child's physical and emotional health.[4] Breastfeeding and early growth patterns in particular provide the only period in which there is clear evidence to support the concept of a critical period of development associated with long term consequences.[40]

The strategy recognises that resources are needed to support those individuals above the normal weight range and to prevent further complications to people who have already reached school, working age and beyond. Therefore it is essential that there is adequate provision of universal preventative approaches through to targeted interventions for those that are already overweight or obese right across people's life course.

Key priorities across the life course

The list below highlights the key overarching priorities for each life course period:

1. Pregnancy and the first year of life
    - Encourage women to achieve/maintain a healthy weight prior to and throughout pregnancy.
    - Encourage women to eat the sorts and amounts of foods that will meet their nutritional requirements before and during pregnancy.
    - Support loss of excessive weight post pregnancy, by promoting healthy behaviours around physical activity and nutrition.
    - Promote and support women to initiate and continue any breastfeeding for the first six months and then alongside appropriate complementary foods for as long as mother chooses.
    - Work with parents and carers to promote and support the responsive introduction of complimentary foods to their babies.
    - Increase our workforce expertise and confidence in discussing the risks of obesity to both mother and unborn child.
    - Promote and support evidence based best practice to parents in how they can protect their infant from becoming overweight.

2. Early Years and Pre school
    - Ensure consistent, evidence based messages in line with Government guidelines are provided by all those working with this age group.
    - Work in partnership with parents and families to make healthy lifestyle choices including how to eat well and to be active.
    - Offer a variety of training opportunities for practitioners around healthy lifestyles.
    - Support further development of early years settings to provide healthy choices in play, learning and in snack and meal provision.

- Support those working in early years settings to understand the key principles of eating well and being active for children from 1 to 5 years of age.
- Promote the UK Physical Activity guidelines for Under 5's and ensure physical activity is embedded in all early years settings.

3. Young Children (Key stage 1&2)
   - Deliver a whole-family and whole-school approach to promote healthy eating and physical activity, to achieve or maintain a healthy weight.
   - Support those children identified as being overweight or obese, to achieve a healthy lifestyle.
   - Improve access to information on healthy eating and physical activity for families to support them in encouraging their children to adopt a healthy lifestyle.
   - Children to have access through a variety of referral routes, to complete care pathways for the treatment of obesity, reflecting the provision of services that are based on patient need and evidence based practice.
   - To promote local community ownership of physical activity and healthy eating.
   - Develop school based interventions that reduce stigma associated with obesity in children.

4. Young People (11-19 years)
   - Provide 11-19 year olds with information and encouragement about the benefits of a healthy diet and physical activity with additional life skills to support this.
   - Support those young people identified as being overweight or obese, to achieve a healthy lifestyle.
   - Deliver a whole-school approach to promote healthy eating and physical activity.
   - Young people to have access through a variety of referral routes, to complete care pathways for the treatment of obesity, reflecting the provision of services that are based on patient need and evidence based practice.
   - Ensure all relevant staff and practitioners have the capacity and knowledge to provide appropriate advice/brief intervention on healthy weight, especially to those at risk of weight gain.

5. Adulthood (20-65 years)
   - Adults to have access to complete care pathways for the management of obesity to ensure a single all-encompassing pathway reflecting the provision of services that are based on patient need and evidence based practice.
   - To increase physical activity and minimise sedentary behaviour by providing a range of physical activity opportunities.
   - Promote healthy eating across all settings i.e. workplace, health, commercial organisations, prisons.
   - Screen and support those individuals whom are overweight and inactive.
   - Ensure appropriate support and services are available for young people aged 20-25yrs old to maintain/achieve a healthy weight.
   - Target workplaces to promote physical activity and healthy eating. This includes the need to promote sustainable travel for journeys to / from work and for business travel.

6. Older people (66+years)
   - Screen and support those individuals whom are overweight and inactive.
   - Educate adults on the nutritional requirements in old age.
   - Improve information on healthy eating and physical activity and the benefits of adopting healthy habits in old age.

- To support patients with long term conditions to maintain or achieve a healthy weight.
- To increase physical activity and minimise sedentary behaviour by providing a range of physical activity opportunities.

Cross Cutting Themes

7. Data Collection & Surveillance
   - Improve the quality of local data on adult obesity
   - Ensure accurate data is obtained for prevalence of overweight and obesity in children
   - Ensure services are measurable and have key outcomes
   - Continue to utilise local surveillance data to identify the greatest need and allocate resources accordingly

8. Built Environment
   - Develop an environment that promotes physical activity as part of daily life e.g. a sustainable transport network that makes walking and cycling the default form of travel around our communities.
   - Create environments that support health-promoting behaviour.
   - Incorporate Health Impact Assessments (HIA's) into all new and existing housing developments.
   - Support the development of high quality green space and infrastructure.
   - Developing local accessibility standards and thresholds (based on population, quality and accessibility) which identify 'hotspots' for under-provision and allow for a more effective targeting of resources.
   - Support the development of residential travel plans that promote sustainable / active travel for local journeys.
   - Work with planners to assess the feasibility of restricting the number of fast food outlets in communities, especially near schools.

9. Communication
   - Use marketing campaigns that will inform, support and empower people in making changes to their diet and levels of physical activity
   - Actively support Change4life and embed the campaign across all life course stages

2.4 Health Inequalities and Priority Neighbourhoods

A key theme running across the strategy will be to support and help those individuals in areas of greatest health need. Evidence suggests that a relationship exists between obesity and levels of deprivation and that focusing solely on the most disadvantaged will not necessarily reduce health inequalities sufficiently. Therefore, this strategy will support the commissioning of services which are proportionate to the level of social and economic disadvantage. The Marmot Review referred to this as 'proportionate universalism' whereby a greater intensity of action is likely to be needed for those with greater social and economic disadvantage.[5]

Proportionate universalism adopts an approach which addresses the wider factors that affect people at different stages and key transition points in their lives. The approach supports the need reduce health inequalities by starting before birth and then followed through the life of the child.[5]

Although the overall health of South Gloucestershire is above the English average, pockets of health inequalities exist. Six areas within South Gloucestershire have been identified as priority

neighbourhoods. The strategy will support community led initiatives that supports people in taking responsibility for their own health. This will involve working closely with the six priority neighbourhoods located in South Gloucestershire.

Research recently undertaken on Health Survey for England data illustrated how four lifestyle risk factors – smoking, excessive alcohol use, poor diet, and low levels of physical activity co-occur in the population. Although data indicates that the overall proportion of the population that engages in three or four of these unhealthy behaviours has declined significantly, these reductions have been seen mainly among those in higher socio-economic and educational groups. For example, people with no qualifications were more than five times as likely as those with higher education to engage in all four poor behaviours in 2008, compared with only three times as likely in 2003.

In order to address health inequalities, we will need to find effective ways to help people in lower socio-economic groups to reduce the number of unhealthy behaviours they have. This is likely to work only if a holistic approach to policy and practice is adopted that addresses lifestyles that encompass multiple unhealthy behaviours. At a policy level, this is likely to mean moving beyond siloed approaches to public health behaviour policies, in which the focus is on renewing strategies on individual lifestyle risks one at a time, as this ignores how behaviours are actually distributed in the population.[6]

2.5 Evidence Based Interventions

To ensure that resources are put to maximum effect the strategy will draw on the best available evidence on what works. It will utilise local and national evaluations to inform future planning and commissioning of services against the national public health outcomes framework. There is still a lack of a solid evidence base for the cost-effectiveness of healthy weight interventions. However, poor evidence should not be used automatically as a reason for doing nothing, because this too can have negative consequences for people's health. Therefore the strategy will actively encourage and support innovative approaches which include robust evaluations and monitoring processes.

Guidance providing evidence based recommendations on how to curb the rising tide of obesity is published by The National Institute for Health & Care Excellence (NICE) and has and will continue to be used to inform and plan local services.[17] These guidelines are also supported by other guidance published by NICE which are also relevant to obesity:

- Obesity working with local communities (PH42)
- Weight management before, during and after pregnancy (PH27)
- Preventing type 2 diabetes – population and community interventions (PH35)
- BMI and waist circumference (PH46)
- Managing overweight and obese adults through lifestyle weight management services (Currently in draft format)
- Managing overweight and obese children and young people through lifestyle weight management services (PH47)
- Behavior Change :individual approaches (PH49)

Prevention and treatment of obesity will require significant behaviour change at all levels, from organisations that have an influence on individual behaviour to individuals themselves. However, once this change in behaviour has been achieved, the benefits will only be reaped for the individual and the population if they are sustained. The strategy recognises that the most effective and

sustainable changes in behaviour will come from the successful integration of cultural, regulatory and individual change. It is also clear that different approaches are needed to help different groups.

The evidence base on effective action to tackle obesity remains weak, and skewed towards individual level downstream approaches (trying to manage the consequences of obesity rather than more upstream approaches, which attempt to solve the real problems underpinning obesity). Much of the existing evidence base on obesity fails to take adequate account of the complex nature of the obesity system

2.6 Environmental and individual approaches to tackling obesity

Approaches to address the obesity can be broadly categorised into three areas; behaviour, environment and physiology. Approaches used to influence individual behaviour generally involve the provision of information, motivational messages or empowering individuals to make healthy choices. Bringing about changes in individual behaviour can be challenging due to factors within our 'obesogenic' environment which counteract or limit the success of such an approaches e.g. encouraging people to cycle to work when there are no cycle paths on route.

The need to change the current environment we live in that discourages obesity related behaviour is important. Whole population solutions that address the key drivers behind the 'obesogenic' environment such as transport, food and housing are more likely to be effective and sustainable. Support for individuals to achieve or maintain a healthy weight will continue to be important; however the priority should be for policies to reverse the obesogenic environment nature of these environments.

The breadth of this strategy adopts an approach that empowers individuals to make healthy choices and gives communities the tools to address their own particular needs and make the healthy choice the easy choice. This will primarily involve 'nudging' individuals into making healthy choices but also support local organisations to understand the role they have in influencing people's behaviour.[7]

Another important guiding principle of the Strategy is social marketing. It is essential that any marketing and communicating with the public is targeted and appropriate for the intended audience. A separate marketing plan will be produced that will run alongside the strategy and support national campaigns such as Change4Life. This plan will also follow a life course approach embedding the Governments social marketing strategy that aims to provide information and support to individuals at relevant stages in their life.[8]

2.7 Partnerships - a community wide approach

Obesity is complex as the causes of obesity are woven into the fabric of modern lifestyles. The way forward is to help people gradually make healthy choices from cradle to grave, starting with breastfeeding and continuing into a healthy and active old age. This can only be achieved through a long-term commitment by partners and stakeholders, linking together the efforts of all organisations and the public at all levels.

Tackling overweight and obesity will require the involvement of a range of partners, including the NHS, local authority, the private sector, patient groups and the voluntary and community sectors. To ensure effective delivery of the obesity strategy for South Gloucestershire, partners will need to build and develop existing links to create a 'whole-systems' approach. Because of the complex factors that can lead to obesity, the problem will not be reversed by any single approach. The success of this

strategy will be reliant on changing many aspects of people's lives and the need to change the current environment we live in which encourages obesity related behaviour.

Strong communication and partnership working will enable a more comprehensive, holistic, better coordinated and therefore more effective package of measures to be developed. Whatever the local disparities around current service provision that potentially influence the prevention and management of overweight and obesity, there are no doubt benefits to be realised from greater partnership working and the development of innovative programmes that straddle both the physical activity and healthy eating agendas.

The Local Government's new role in public health presents a number of opportunities to ensure there is a much more joined up approach in tacking obesity. It will offer the opportunity of Public Health being better integrated with areas such as social care, transport, leisure, planning and housing. The voluntary and community sector will also play a major role in the delivery of the strategy to support local communities in taking responsibility for their own health. Equally, the private sector will have the opportunity to provide expertise in the provision of services such as commercial weight management service.

3. Policy Context

This strategy will support a number of related national and local policy documents.

3.1 National Policy Driver

The Public Health White Paper, Healthy Lives, Healthy People[2] outlines the Government's ambition for public health to empower individuals to make healthy choices and give communities the tools to meet their own health needs. Closely mirroring the recommendations of Sir Michael Marmot in his review of health inequalities[5], the White Paper is clear in its commitment to seeking evidence based approaches to improving health and ensuring a healthy standard of living for all, as well as strengthening the role of ill-health prevention.

Public Health Outcomes Framework

The Public Health Outcomes Framework (PHOF) sets out an overarching vision to improve and protect the nation's health and wellbeing, and improve the health of the poorest fastest. It focuses on two high-level outcomes:

a) Increased healthy life expectancy
b) Reduced differences in life expectancy and healthy life expectancy between communities.

The PHOF includes health improvement indicators that will demonstrate the progress being made towards a reduction in excess weights at a local level. They include the following:

a) Indicator 2.6 – excess weight in 4-5 and 10-11 year olds;
b) Indicator 2.12 – excess weight in adults;
c) Indicator 2.13 – proportion of physically active and inactive adults;
d) Indicator 2.11 – fruit and vegetable consumption (under development);
e) Indicator 2.02i - breastfeeding initiation;
f) Indicator 2.02ii – breastfeeding prevalence at 6-8 weeks after birth

Other PHOF indicators focusing on breastfeeding, child development, wellbeing and utilisation of green space for exercise/health are also relevant. There is the potential for activity which tackles obesity to have a positive impact on other indicators, such as Indicator 2.17 – recorded diabetes.

Healthy Lives, Healthy People: A call to action on obesity in England

Healthy Lives, Healthy People: A call to action on obesity in England outlines the Government's approach to tackling obesity in England with a need for concerted action across society to achieve a downward trend in excess weight by 2020.

In addition to these new national ambitions the key areas covered in the call to action include:

- the importance of action focusing on both children and adults, and on both prevention and treatment;
- how a wide range of partners can work together to ensure that people get the right support and information to help them reach and maintain a healthier weight;
- how under the new public health system Local Authorities will have a new enhanced role, supported by a ring-fenced budget, and will bring together local partners to provide effective responses for addressing this major issue;
- the Government's commitment to support local areas by making sure they have access to the best possible data and evidence;
- a continuing key role for the centre to complement this, for example by leading the Responsibility Deal and national campaigns such as Change4Life;
- and a challenge to the food and drink industry to play a key role - alongside Government, NGOs and others - in reducing the population's calorie intake by 5 billion calories a day.

The strategy has sets out two new national ambitions:

- a sustained downward trend in the level of excess weight in children by 2020
- a downward trend in the level of excess weight averaged across all adults by 2020

UK-Wide Physical Activity Guidelines

In 2011, the first UK-wide physical activity guidelines were published by the four nations' Chief Medical Officers[9]. The guidelines provide a clear, evidence-based set of recommendations on appropriate levels of physical activity across the life course to achieve a range of health benefits with knock-on gains for the NHS and society. The guidelines recognise that, as a nation, we are too inactive and spend excessive periods of time being sedentary, and challenge us to change our activity habits. Adults should aim to be active daily and are advised to achieve 150 minutes or more of at least moderate intensity activity each week, which will also contribute to achieving and maintaining a healthy weight. For those adults who are already overweight or obese, physical activity brings important reductions in health risks – the more activity they do, the lower their overall risk of mortality and morbidity.

Although the emphasis has previously been on physical activity, there is now a growing body evidence showing an association between sedentary behaviour and overweight and obesity, with some research also suggesting that sedentary behaviour is independently associated with all-cause mortality, type 2 diabetes, some types of cancer and metabolic dysfunction.[10] These relationships are independent of the level of overall physical activity. For example, spending large amounts of time being sedentary may increase the risk of some health outcomes, even among people who are active at the recommended levels.

A range of other National policy documents which link to this strategy include:

- Change4Life (DH 2010a)
- Equity and excellence: liberating the NHS (DH 2010b)
- Fair society, healthy lives: a strategic review of health inequalities in England post-2010 (The Marmot Review 2010)
- Healthy lives, healthy people: a call to action on obesity in England (DH 2011)
- Healthy lives, healthy people: our strategy for public health in England (DH 2010c)
- Public Health England: our priorities for 2013/14 (PHE 2013)
- Public health outcomes framework for England 2013–2016 (DH 2012)

3.2 Local Policy Drivers

The increasing prevalence of obesity, led to South Gloucestershire developing an Overweight and Obesity Strategy for South Gloucestershire' which was published in 2006. The paper provided a planned and co-ordinated approach to the prevention and management of overweight and obesity in the local population during 2006-2008. Since then much progress has made, however the prevalence of obesity has continued to rise.

The Healthy Weight and Obesity Strategy forms part of, and supports wider health improvement programmes across South Gloucestershire including:

South Gloucestershire's Joint Health and Wellbeing Strategy 2013-2016
The Joint Health and Wellbeing Strategy (JHWS) is produced by South Gloucestershire's Health and Wellbeing Board and developed between the NHS Clinical Commissioning Group, Public Health and South Gloucestershire Council. The strategy sets out a framework for commissioning health and wellbeing services across the district. Obesity is a key priority that runs throughout the strategy.

The strategy also links with the following

- South Gloucestershire Sustainable Community Strategy (2026)
- Joint Local Transport Plan (2011-2026)
- South Gloucestershire Strategy for Children and Young People (2012-2016)
- Health Action Plans for individual Priority Neighborhoods
- Infant Feeding Strategy (to be developed)
- Joint Strategic Needs Assessment (JSNA 2013)
- Climate Change Strategy (2013-2015)
- Developing South Gloucestershire Mental Health Strategy

KEY POINTS

- The huge and rapid increase in the numbers of children and adults who are classified as obese has led to the use of the term "obesity epidemic"
- The methodology used within the Healthy Weight and Obesity Strategy will be a life course approach ensuring that interventions are targeted across the whole of the life course
- The strategy will draw on the best available evidence to inform its commissioning intentions
- The success of the strategy will be dependent on 'whole-systems' approach with a wide range of partners being involved in its delivery

4 What is Overweight and Obesity?

Overweight and obesity are terms which refer to an excess accumulation of body fat, to the extent that health may be impaired.[11] BMI is the most commonly used measure for monitoring the prevalence of overweight and obesity at population level. It is also the most commonly used way of estimating whether an individual person is overweight or obese.

BMI is calculated by dividing a person's weight in kilograms by the square of their height in metres. Although BMI is an effective measure at a population level it can be less accurate for assessing healthy weight in individuals, especially for certain groups (e.g. athletes, the elderly) where a slightly higher BMI is not necessarily unhealthy.[12]

Although BMI is used to classify individuals as obese or overweight, it is only a proxy measure of the underlying problem of excess body fat. As a person's body fat increases, both their BMI and their future risk of obesity-related illness also rise,[13] although there is still some uncertainty about the exact nature of this relationship, especially in children[14]

Body Mass Index (BMI) is calculated by:

$$\text{Body Mass Index (kg/m}^2\text{)} \quad \frac{\text{mass (kgs)}}{(\text{height (m)})^2}$$

The classification of how BMI relates to weight is as follows[15]

Body Mass Index	Classification
18.5 and under	Underweight
Over 18.5-25	Desirable weight
25-30.0	Overweight (Grade I)
Over 30	Obese (Grade II)
Over 40	Morbidly obese (Grade III)

Table 1. WHO (2004) classification of 'healthy' and 'unhealthy' weight in adults

4.1 Measuring Obesity in Children

For children the measurement is more complicated. There is no fixed BMI to define being obese or overweight since this varies with gender and with growth and development. Since the ratio of weight gain to height gain changes during children's normal growth the BMI figure must be adjusted for age and sex when using BMI for children. Children's BMI therefore varies greatly with age. The use of children's BMI charts in conjunction with appropriate centile charts is more appropriate

In the UK, the UK90 Growth Reference is the most commonly used adjustment tool where:

- Overweight = BMI equal to or greater than the 91st centile
- Obesity = BMI greater than or equal to the 98th centile.

For example, if a 5 year-old boy's BMI is in the top 9 percent of the BMI figures for all 5 year-old boys, he will be classed as overweight. Likewise, if a girl's BMI is in the highest 2 percent of all girls her age she will be classed as obese. More recently UK growth charts using the WHO standard have recently been introduced for children from birth to four years.[16]

The evidence linking specific BMI thresholds to future morbidity and mortality is weaker for children than for adults. There is however a body of evidence showing children with a high BMI are more likely to have a high BMI when they become adults, and thus a raised risk of future health problems.[14]

4.2 BMI measurements for specific population groups

Some systematic variations in 'normal' BMI also exist across other population groups. Population groups, such as Asians and older people, have co morbidity risk factors that would be of concern at different BMIs (lower for Asian adults and higher for older people).[16]

In these populations, the risks of type II diabetes and cardiovascular disease increase below the standard cut-off value of 25kg/m^2. It is important to take this into account in formulating a strategy in areas of NHS South Gloucestershire where there is greater ethnic variation.

Conversely the BMI cut-off at which older people will become at risk of co morbidities is higher than the 25kg/m^2 level. Another feature of BMI measurements is that for adults who are highly muscular the BMI calculation may be less accurate. BMI for all these population groups should be treated with caution.[17]

4.3 Other methods to measure obesity

Although BMI is often used to assess the health risks associated with obesity, research has demonstrated that measuring the waist circumference and waist hip ratio are also reliable methods of estimating the health risks associated with an increase in weight gain (intra-abdominal fat mass). 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 35kg/m^2.[17]

Waist circumference has been shown to be positively, although not perfectly, correlated to disease risk, and is the most practical measurement for assessing abdominal fat mass (i.e. central obesity)[18]; High levels of central adiposity in adults are known to be associated with increased risk of obesity-related conditions including type 2 diabetes, hypertension and heart disease[19] It is recommended that Waist circumference should never be used in isolation, as a proportion of subjects who require weight management may not be identified.[20] This is because for adults with a BMI of 35kg/m^2 or more, risks are assumed to be very high regardless of the waist circumference.

	Waist circumference		
BMI Classification	**Low** **Male <94cm** **Female <80cm**	**High** **Male 94cm-102cm** **Female 80cm-88cm**	**Very high** **Male >102cm** **Female >88cm**
Normal Weight	No increased risk	No increased risk	Increased risk
Overweight (25 to less than 30kg/m^2)	No increased risk	Increased risk	High risk
Obesity (30 to less than 35kg/m^2)	Increased risk	High risk	Very high risk

Table 2 Level of risk in relation to waist circumference[21]

4.4 Data Sources

The National Child Measurement Programme (NCMP) is currently the main source for data on child obesity prevalence across England. The NCMP measures the height and weight of all children in Reception (4 to 5 years of age) and Year 6 (10 to 11 years) in mainstream maintained primary and middle schools in England.

Data collection on adult obesity is not as robust as children. At present, modelled national and regional data is available by the Health Survey for England and the Active People Survey. Some local data is available from the Quality and Outcomes Framework (QOF), however this data are highly influenced by other factors, such as the proportion of registered patients who visit the practice over a 15 month period, the proportion of these patients that have their BMI measured by the GP, and how many of those identified as obese are correctly coded as such on the practice IT system.

KEY POINTS

- Overweight and obesity are terms which refer to an excess accumulation of body fat, to the extent that health may be impaired.
- Overweight and obesity are defined by calculating the Body Mass Index (BMI), which is a calculation that takes account of the relationship between height and weight.
- Further measuring tools such as waist circumference can be used as a measurement of central adiposity at an individual level.
- The National Child Measurement Programme (NCMP) is the main source of data to monitor obesity in children.
- At present, there is no robust data collection method for adult obesity

5 Causes of Overweight and Obesity

The causes of obesity are multi-factorial. Genetic influence contributes 25-40% of the cause of obesity.[22] However, the rapid changes in levels of obesity at the population level have occurred in too short a period to be explained by significant genetic changes. Therefore it is likely that the increase in overweight has arisen from environmental and behavioural changes, which have led to a more energy-dense diet and a rise in the level of sedentary behaviours.[23]

Energy imbalance is the fundamental cause of overweight and obesity. 'Excess weight is caused by an imbalance between 'energy in' – what is consumed through eating – and 'energy out' – what is used by the body, including that through physical activity.[28]

When an individual is in energy balance (energy intake = energy expenditure) body weight remains constant. However an increase/decrease on either side of the equation can result in changes in body weight. Obesity occurs as a result of a long term positive energy balance, that is, energy intake has consistently exceeded energy expenditure. In 2011 new guidelines were produced revising the recommended daily calorie (kCal) intake for men and women. For a woman of an average height, the daily amount was increased from 1,940 to 2,079. For a man it was increased from 2,550 to 2,605 (SACN 2011).[24]

5.1 Biology

Studies in Humans have identified a number of specific genes associated with obesity. However it is too simplistic to claim that these genes pre-destine a person to being overweight or obese however they do increase the susceptibility of some individuals.

5.2 Impact of early life and growth patterns

The key risk factors for overweight and obesity are developed over the life course, and many originate during childhood.[25] The likelihood that a child will become obese in adulthood is markedly increased if both of his or her parents are obese.[26] Children are about three times more likely to be obese if they have at least one obese parent. (OCED) Further supporting evidence comes from studies showing that children whose mothers gain more weight during pregnancy become heavier and have a greater risk of overweight and obesity[27]

The pattern of growth early in life has also been found to contribute to the risk of excess weight in individuals.[23] [28] There is now a growing body of evidence showing that formula fed babies have faster growth rates than breast fed babies, which can contribute to an increased risk of obesity in later life.[29]

There is some evidence that mothers who breastfeed provide their child with protection against excess weight in later life.[30] [31] In 2006, 72% of mothers in South Gloucestershire giving birth in local hospital trusts initiated breastfeeding. However, this dropped to 68.3% by the time of discharge from hospital and 38% at their six to eight week check.[32]

It has also been reported that if children are introduced solid foods earlier than recommended their children are at a greater risk of both 'growth faltering' (that is, they gain weight too slowly) in infancy and obesity in later childhood [33] [34] Early weaning has also been found to be associated with increased weight and body fat at age 7 years.[35]

There is also some emerging literature showing evidence of a positive relationship between maternal employment and children's excess body weight, particularly among the socially disadvantaged.[36]

Puberty for example involves rapid weight gain, and has been identified as a 'critical period' for the development of obesity because such weight gain may involve substantial increases in adiposity (Dietz 1994). Any explanation for obesity must therefore be able to account for both 'slow-trickle' and 'rapid-onset' pathways to obesity. [37]

5.3 Social and psychological factors

Our eating, drinking and physical activity habits are largely influenced by social and psychological factors. Behaviour plays an important role in people's health with evidence showing that different patterns of behaviour are deeply embedded in people's social and material circumstances, and their cultural context.[38] Recent evidence shows that obesity is strongly influenced by social networks – you are more likely to be obese if someone you know is, and even if someone once removed is.

5.4 The living environment

The term 'obesogenic environment' refers to the role environmental factors may play in both energy intake and expenditure[39]. The term encompasses the entire range of social, cultural and infrastructural conditions that promotes unhealthy behaviour and thus the promotion of obesity.[40] It is without question that society is changing and that there have been systematic reductions in our energy expenditure, as a consequence of fewer manual jobs, increases in car ownership and the rise of labour saving devices for use at home and work. Research suggests that, on average, UK adults in car-free households walk 131 miles a year more than the main driver in a car-owning household.[41] Physical activity is a particular issue for children in today's society because an increase in traffic has prevented children from playing or travelling independently.[42] Play is crucial to health and development throughout childhood.[42]

In particular, evidence shows that lower income groups are more likely to be exposed to environmental forces that promote obesity and encounter more obstacles to engaging in healthy behaviours[43]. For example, low-income and ethnic minority youth and adults are disproportionately exposed to food-related marketing through greater exposure to television. In addition, the local neighbourhoods in which vulnerable people live pose more challenges to engaging in healthy behaviours including; fewer food choices, less opportunities to exercise and a greater availability of unhealthy food option[44]. Healthy food is also relatively more expensive than energy-dense food which means that people's shopping behaviour can be influenced by financial constraints[45].

5.5 Economic drivers for food and drink consumption

Due to competitive markets and technological change the food industry is now able to produce food cheaply and in high quantities in response to consumer demand. This has led to the production of large volumes of processed foods and ready meals, many of which are high in fat, sugar and salt.

Fatty and sugary foods and drinks are also heavily marketed which has increased consumer demand further.[12] These trends have contributed to the individual and family diets containing too much saturated fat, sugar and salt and not enough fruit and vegetables.[20] As well as the food people eat, drinks also contribute to an individual's calorie intake. For this reason the rising trend in alcohol consumption has contributed to the increasing prevalence of excess weight. In South Gloucestershire consumption of alcohol has increased over the past ten years, particularly for women and young

people.[46] This will be taken forward in the developing South Gloucestershire Alcohol Strategy. Over the last 30 years the amount of household income devoted to food supplies has fallen on average to 10% in the UK. However it is important to note that it exceeds 23% among lower-income households and is below 15% in high income households.[47]

6 Prevalence of obesity across the life course

6.1 Maternal

Figure 2 below shows the maternal BMI at booking in 2012, where almost four out of ten service users have a BMI which is either overweight, obese, severely obese, or morbidly obese:

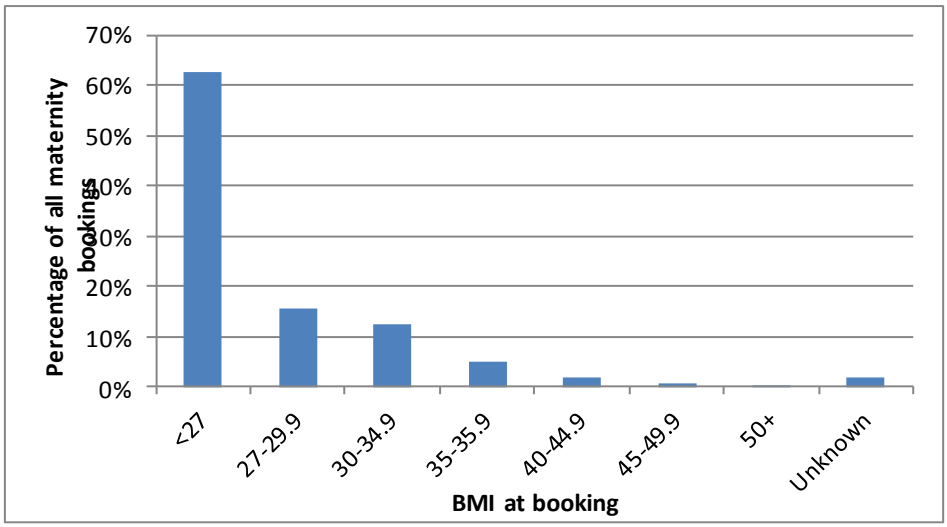


Figure 2 Maternal BMI at booking, South Gloucestershire registered patients, 2012

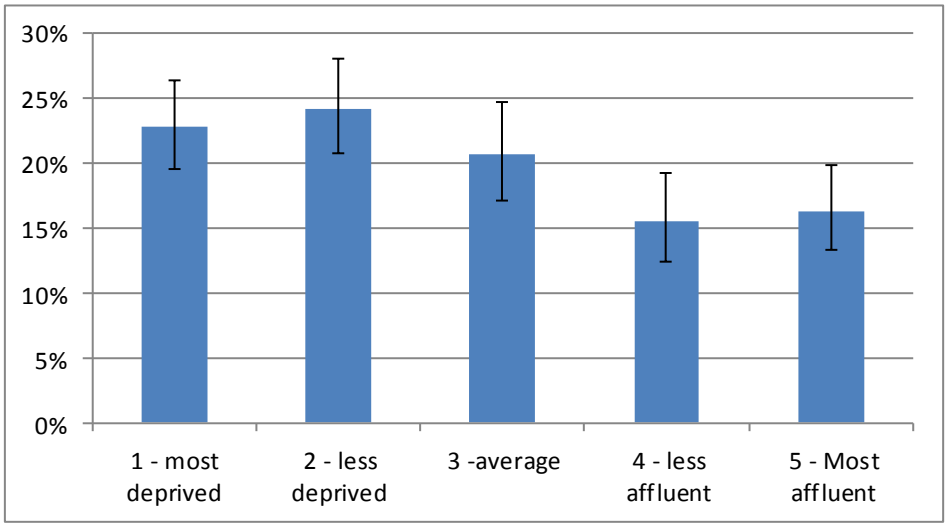


Figure 3 Percentage of maternities with a BMI of 30 or above at time of booking by deprivation quintile: South Gloucestershire registered & resident patients, 2010

Looking at the percentage of maternity patients with a BMI of 30 or above at the time of booking, almost five out of ten patients come from the most deprived or less deprived areas in South Gloucestershire. The trends can be demarcated further by looking into figure 4 overleaf, which looks into breastfeeding initiation, and breastfeeding follow-up between six and eight weeks by the priority neighbourhood areas:

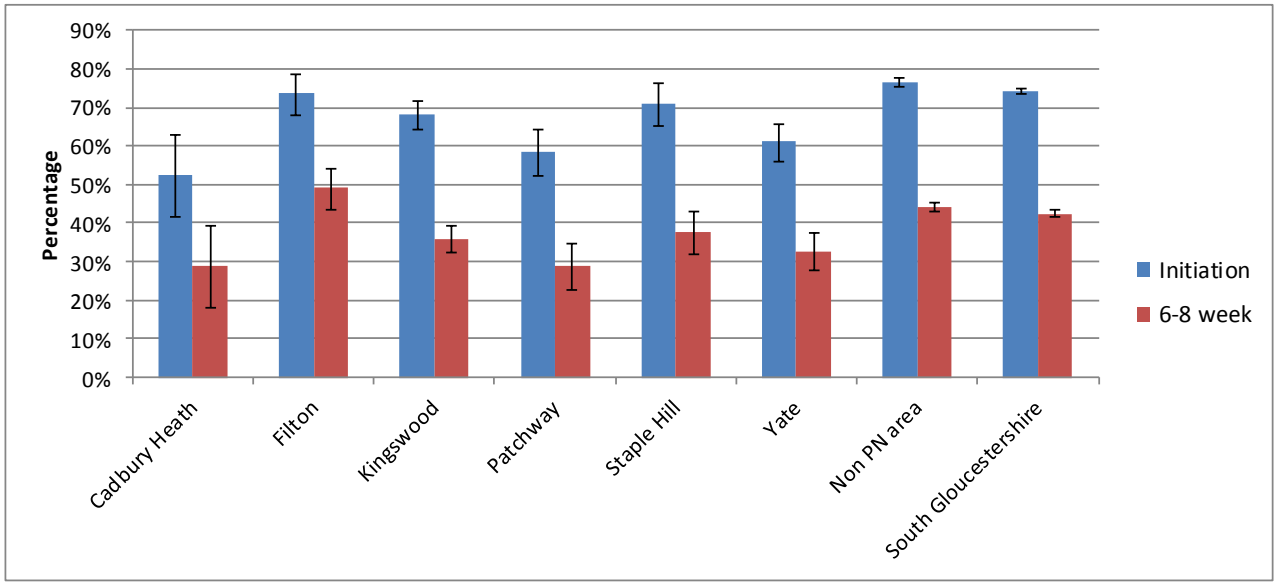


Figure 4 Breastfeeding Initiation and at 6-8 week check by Priority Neighbourhood, South Gloucestershire, 2010-2012 pooled

Out of six priority neighbourhood areas, the rate of initiation of breastfeeding is lower than that of overall South Gloucestershire, particularly in Cadbury Heath, Kingswood, Patchway, Staple Hill, and Yate. In particular, Cadbury Heath recorded a remarkable difference.

Looking at the follow-up breastfeeding rate at six to eight weeks, all of the priority neighbourhood areas recorded a lower rate of follow-up breastfeeding than the South Gloucestershire average, except Filton.

Therefore, it can be suggested that the strategy should focus on targeting Cadbury Heath, Kingswood, Patchway, Staple Hill, and Yate for both breastfeeding initiation and follow-up breastfeeding initiatives.

6.2 Children

Figures 5 and 6 below show that the number of very overweight and overweight children at reception (age four to five) has fallen for the third consecutive year.

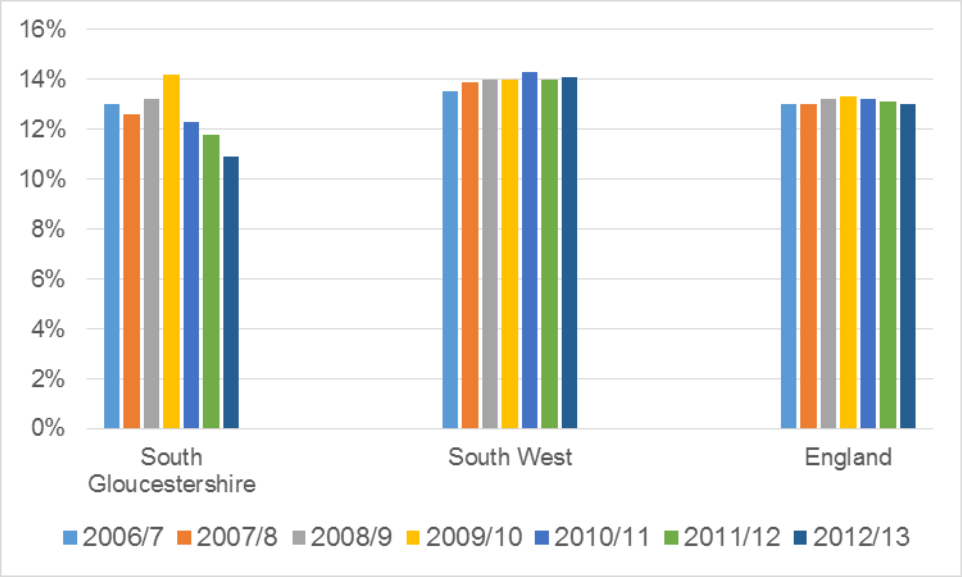


Figure 5 Percentage of overweight children at reception, by year

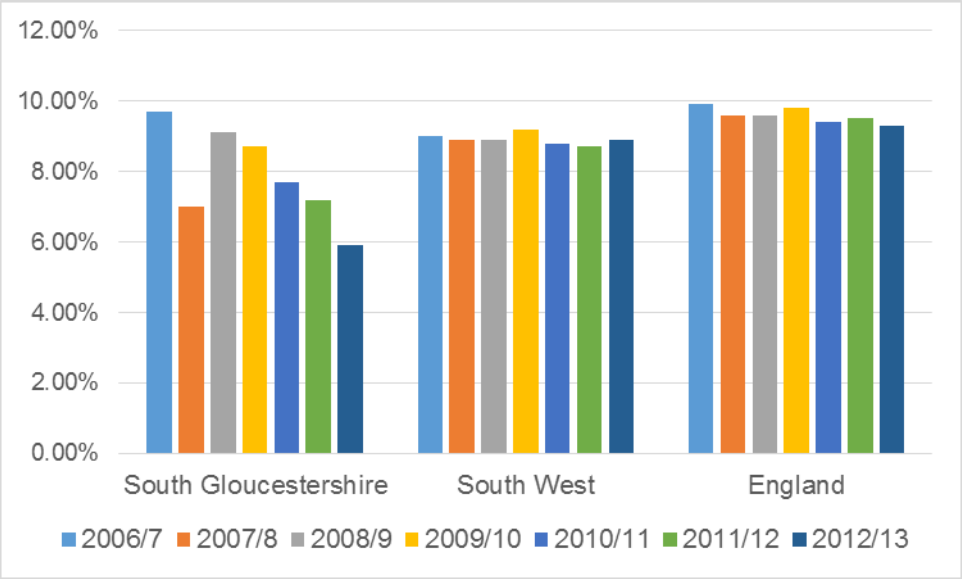


Figure 6 Percentage of very overweight children Year 6, by year

On the other hand, the percentage of overweight and very overweight children at year 6 increased in 2012/2013 compared to the previous year, as demonstrated by Figures 7 and 8 below:

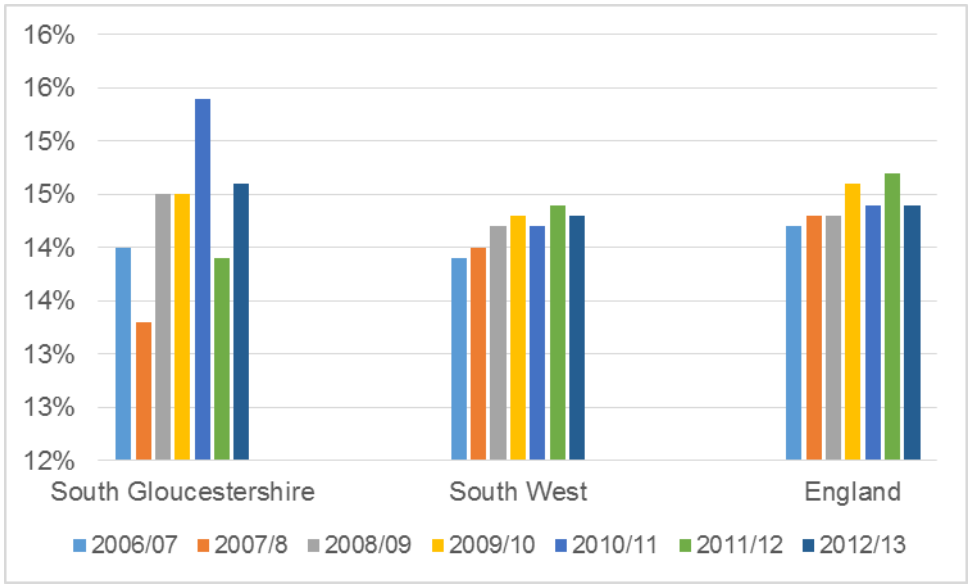


Figure 7 Percentage of very overweight children at reception, by year

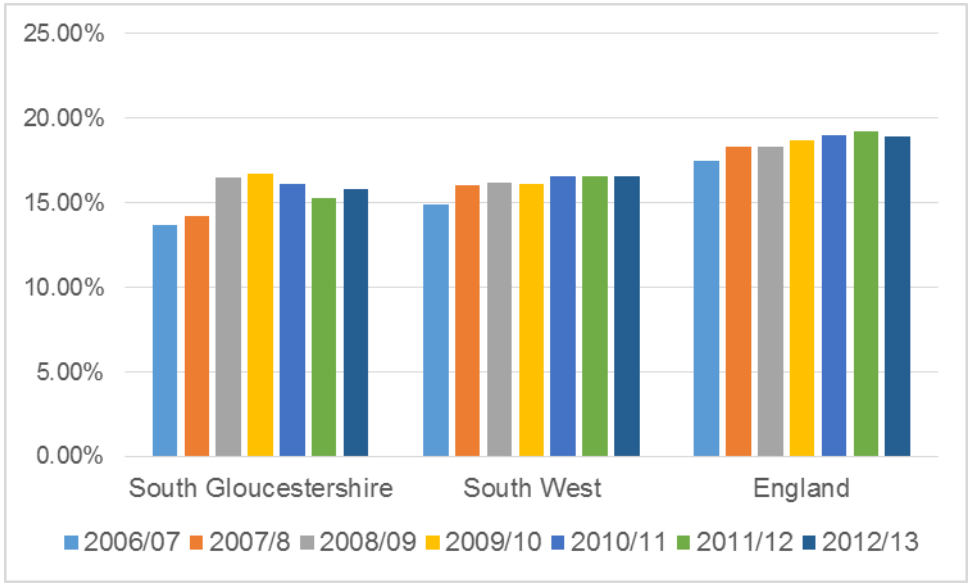


Figure 8 Percentage of very overweight children at Year 6, by year

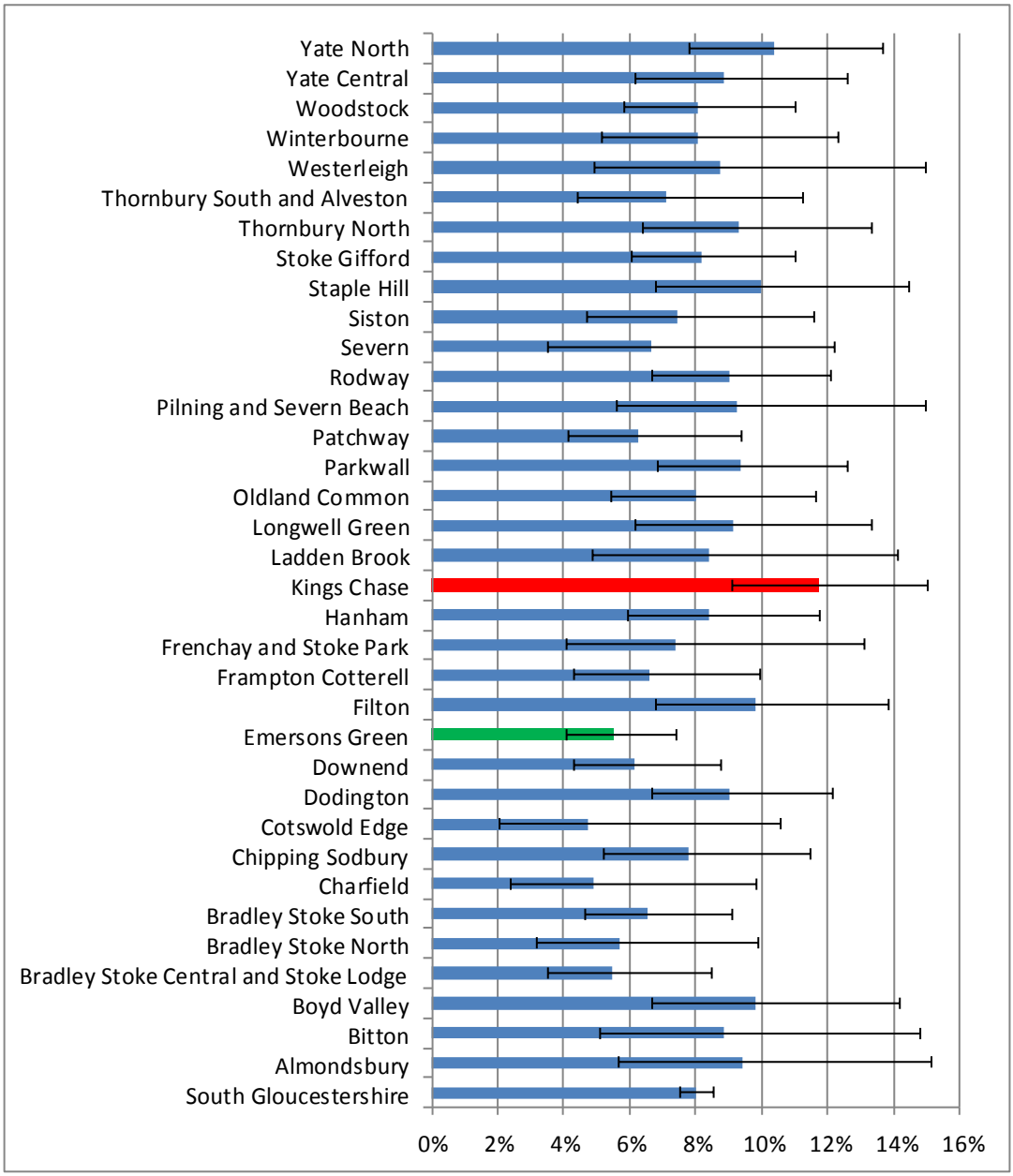


Figure 9 Obesity amongst Reception Year pupils by ward, South Gloucestershire, 2008/9 - 2011/12 pooled

Figure 9 above shows that Kings Chase ward has the highest rate of obesity amongst reception year pupils in South Gloucestershire. On the other hand, Figure 10 below depicts that Patchway ward records the highest rate of obesity amongst Year 6 pupils in South Gloucestershire.

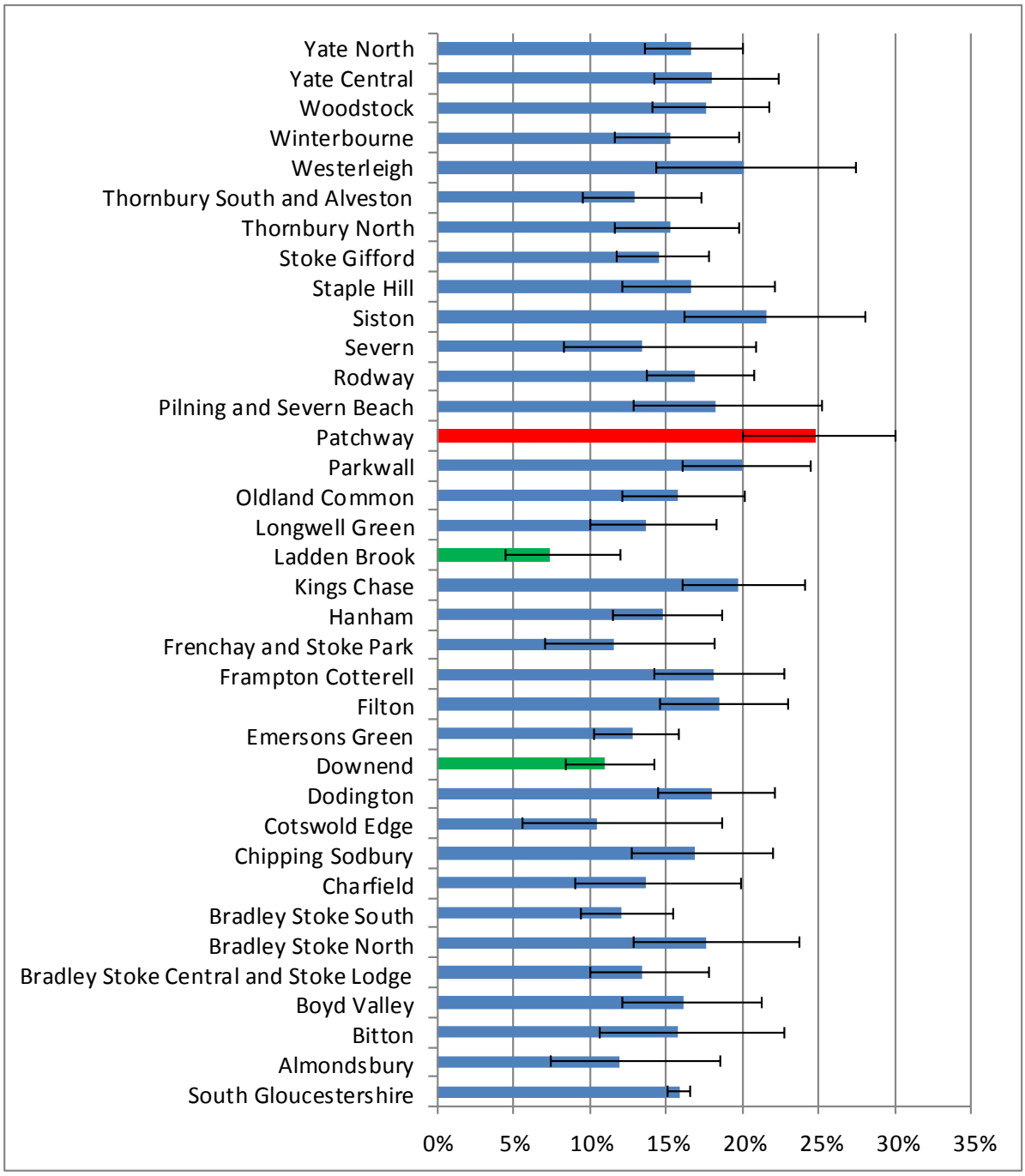


Figure 10 Obesity amongst Year 6 pupils by ward, South Gloucestershire, 2008/9 - 2011/12 pooled

6.3 Adults

Recent data published by Public Health England suggest that 59.2% of adults in South Gloucestershire are above the health weight range. This compares favorably to the South West and England average of 62.7% and 63.8% respectively. Despite this modelled based estimates indicate that 26.2% of all adults in South Gloucestershire are obese which is significantly worse than the national average* (24.2%) (Health Profile, 2013)

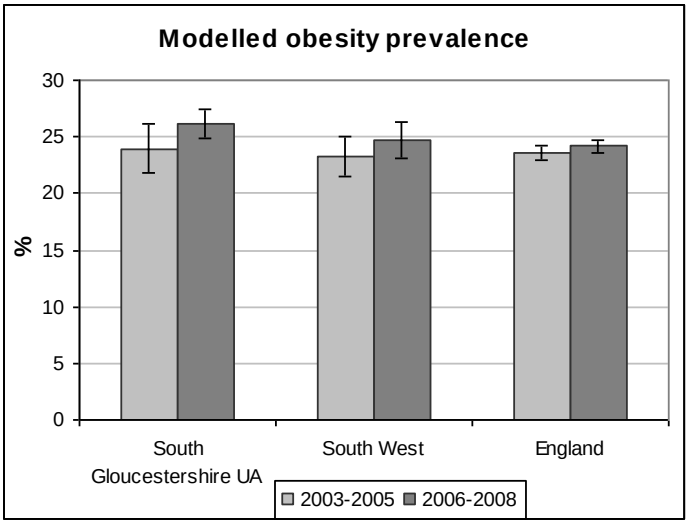


Figure 11 Model-based estimate estimates for adult obesity, Health Survey for England

More than 6 out of 10 men are overweight or obese (66.2%)

More than 5 out of 10 women are overweight or obese (57.6%)

For South Gloucestershire the prevalence of obesity can be estimated by applying national obesity rates to the local population. The number of obese people aged 16 and over in South Gloucestershire is estimated to be 51,000 whereas the estimated number of people who have a raised waist circumference is estimated to be 77,000.

	South Gloucestershire Population		Estimate of number of people who are obese (BMI greater than 30kg/m^2)		Estimate of number of people who have raised waist circumference (Male 102cm or above. Female 88cm or above	
Age	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
16-24yrs	15,591	14178	1247.28	1701.36	1403.19	2977.38
25-34yrs	16,043	16,195	3048.17	3077.05	3208.6	4858.5
35-44yrs	18,367	18,779	4959.09	4694.75	5510.1	6948.23
45-54yrs	20,041	20,131	5611.48	5636.68	7615.58	8455.02
55-64yrs	14,904	15,331	4322.16	4292.68	6110.64	6439.02
65-74yrs	12,368	13,108	3463.04	4456.72	6060.32	6685.08
75+yrs	8,892	12,234	1511.64	3180.84	4090.32	7462.74
Sub-total	106,206	109,956	24162.86	27040.08	33998.75	43825.97
Total			**51,203 adults**		**77,825 adults**	

Table 5. Estimate of obesity prevalence in South Gloucestershire (Source: the formulas for obesity are based on the Health Survey for England 2006. Populations are ONS 2012 mid-year population estimates for South Gloucestershire)

What does the future hold?

Alarmingly government predictions suggest that without clear action, these figures will continue to rise in both adults and children (See Table 4).[40]

	2015	2025	2050
Males	36%	47%	60%
Females	28%	36%	50%

Table 6. Predicted increase in the prevalence of obesity among adults from 2015-2050 Source: Foresight (2007)

Other useful data

6.4 Physical Activity

Data published by the Department of Health show that 58.9% of adults in South Gloucestershire do at least 150 minutes of moderate equivalent physical activity per week, while 22.8% of adults in South Gloucestershire do less than 30 minutes of moderate equivalent physical activity per week.

6.5 Diet and Nutrition

There are limited measures of eating habits available at a local level. Modelled estimates suggest that 71.1% of adults in South Gloucestershire do not eat the recommended 5 portions of fruit and vegetables per day, not significantly different to the England average (71.2%) (Health Profile 2012).

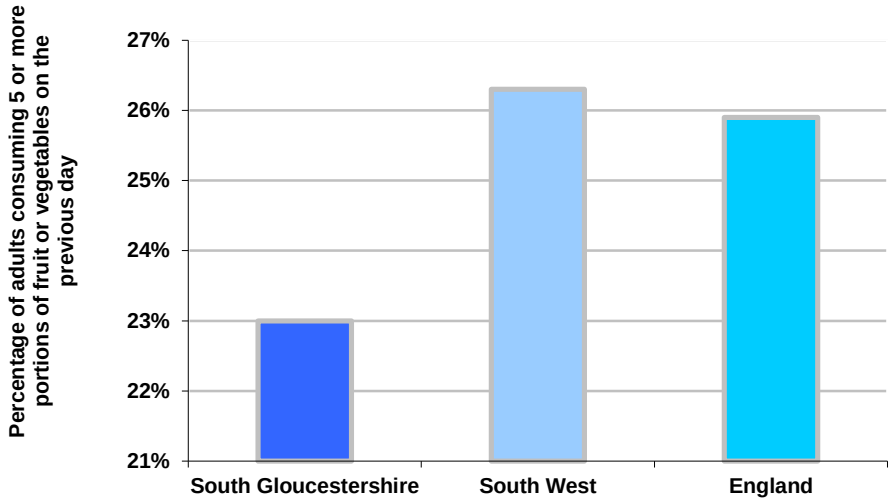


Figure 12. 2003-2005 model-based estimates for the percentage of adults consuming 5 or more portions of fruit or vegetables on the previous day (The NHS Information Centre for health and social care, 2008)

KEY POINTS

- It is estimated that approximately 51,000 adults are obese in South Gloucestershire
- In South Gloucestershire, the National Child Measurement Programme for 2012/13 shows that 16.8% of reception age children are overweight or obese
- In Year 6, 30.4% of children were either overweight or obese.
- Data show a downward trend in obesity prevalence amongst reception aged children.
- Obesity prevalence for year 6 children has remained relatively level over the last 5 years.

7 Tackling Health Inequalities

Inequalities in health outcomes between the most affluent and disadvantaged members of society are longstanding, deep-seated and have proved difficult to change.[48] Obesity is no different, with a strong relationship existing between deprivation and prevalence of obesity.

In South Gloucestershire the Joint Strategic Needs Assessment[32] reported a widening difference in life expectancy for men, with those in the more affluent areas benefiting from an increase in life expectancy over the past eight years. In contrast there had been no significant improvement for those men living in the most deprived areas.[49] This is of particular importance when looking at obesity due to a significantly low uptake of men on current weight management programmes.

Research indicates that a relationship exists between the determinants of obesity and socioeconomic status. It has been shown that Individuals from lower socioeconomic backgrounds may have diets rich in low cost energy dense foods[50] participate less in sports and physical activity[51] and have lower weight control awareness.[52]

Energy dense foods often represent the lower-cost option to the consumer.[53] Eating such diets can also overwhelm normal appetite controls; however this has to be seen not only in a physiological context,[22] but also in an 'obesogenic' context.'

Children from lower social classes are more likely to become overweight or obese than are children from higher social classes and are more likely to remain overweight or obese throughout early adulthood.[54] [55] [56] [57] Poor maternal nutrition is associated with deprivation and can lead to low birth weight.[58] This is often followed by rapid 'catch-up' growth leading to adolescent obesity. It is also the case that mothers who eat too much during pregnancy are at risk of providing 'excess' fetal nutrition, leading to high birth weights and to obesity in the later life of their offspring.[59]

Risk factors for obesity which are associated with deprivation include unemployment, employment as an unskilled manual worker, limited educational achievement or residing in poor neighbourhoods with limited access to cheap and healthy food and sporting/play facilities.

Different ethnic groups are associated with a range of different body shapes, and different physiological responses to fat storage. Therefore caution needs to be taken when considering the prevalence and health consequences of obesity within different ethnic groups.[60] This is of particularly importance for Asian groups as they have been found to being more prone to higher rates of obesity linked morbidity[61]

7.1 Who are most at risk?

According to research,[62] the following sectors of the population are at considerably higher risk of developing obesity, with an associated increase in the incidence and prevalence of related co-morbidities.[62] This strategy considers the following population groups as priorities for targeting healthy weight interventions:

Children,

- For genetic and/or environmental reasons from families where one or both parents are overweight or obese

- Children living within households with the lowest level of household income have higher rates of obesity than children from households with the highest level of household income.

Individuals from particular Black Minority Ethnic (BME) groups

- Children who are Asian are four times more likely to be obese than those who are white.[63]
- Indian men – 41% centrally obese compared to 28% of men in the general population
- Women – in 1999 obesity among Black Caribbean women was 50% higher than the national average, and 25% higher among Pakistani women.

People living on a low income,

- Among women the proportion classified as overweight or obese varies with socioeconomic status (SES)
- A higher percentage of women in the lower SES groups (29.1%) are overweight and obese, compared to women in the highest SES group (18.7%)[64]

Older people:

- Increasing age is associated with increasing prevalence in obesity up to the age of 64 years, when a decline in the prevalence begins.
- There is also a consistent trend, that the older you are the less physical activity you participate in.

Pregnancy

- Women who are overweight or obese before they conceive have an increased risk of complications during pregnancy and birth. This poses health risks for the mother and baby.
- There is also evidence that maternal obesity is related to health inequalities, particularly socio-economic deprivation, inequalities within ethnic groups and poor access to maternity services.[65]
- Maternal BMI status is also shown to relate to health inequalities, particularly for women who live in the areas of the most deprivation who are almost two and a half times more likely to be obese at the start of pregnancy than women who live in areas of least deprivation.[65]

People with a mental health condition

- Those people with a diagnosis of schizophrenia or bipolar disorder have been identified as being at increased risk of greater levels of obesity and associated conditions, such as heart disease and diabetes.[66]

People with learning disabilities

- Literature reports that there is increased prevalence of obesity and overweight among people with learning disabilities.[67]

7.2 The most effective approach

Addressing health inequalities in relation to obesity raises the issue of societal versus individual responsibilities to health. Many ingrained lifestyle habits have to be considered within their environmental context. In addition effort needs to be made to reverse the 'inverse care law', that the more deprived are less likely to access services.

The Marmot Review[5] highlighted that focusing resources solely on the most disadvantaged will not necessarily reduce health inequalities sufficiently. He suggested that actions must be universal, but

with a scale and intensity that is proportionate to the level of disadvantage - 'proportionate universalism'

One of the aims of the strategy is to empower communities to take local action to promote a healthy weight. The six community lead groups across the priority neighbourhoods will be ideally placed to support this process. Empowering these groups to take responsibility for local action in their own area, facilitated by the PCT and local authority, will help influence behaviour at a community level. This will primarily involve working with the community groups to help them identify health priorities for each of the localities over the short, medium and long term. This will be achieved by sharing local data on obesity to help the groups monitor their progress.

The voluntary and community sector will also play a major role in supporting local communities in taking responsibility for their own health.

8. The costs of obesity

8.1 Health Costs

Morbidity and mortality associated with obesity

The risks to health from overweight and obesity are clearly documented. Obesity reduces life expectancy on average by 9 years and is responsible for 9000 premature deaths a year. The most common health problems associated with obesity are:

Greatly increased risk (Relative risk much greater than 3)	**Moderately increased risk** (Relative risk 2-3)	**Slightly increased risk** (Relative risk 1-2)
• Type 2 diabetes • Insulin resistance • Gallbladder disease • Dyslipidaemia (imbalance of fatty substances in the blood, eg high cholesterol) • Breathlessness • Sleep apnoea (disturbance of breathing)	• Coronary heart disease • Hypertension (high blood pressure) • Stroke • Osteoarthritis (knees) • Hyperuricaemia (high levels of uric acid in the blood) and gout • Psychological factors	• Cancer (colon cancer, breast cancer in postmenopausal women, endometrial womb] cancer) • Reproductive hormone abnormalities • Polycystic ovary syndrome • Impaired fertility • Low back pain • Anaesthetic risk • Foetal defects associated with maternal obesity

Table 7. Relative risks of health problems associated with obesity (SACN Report)

At present the health risks of obesity are more common in adults but the increase in the proportion of overweight and obese children is a major medical concern. Problems are likely to develop earlier if obesity continues from childhood into adult life. Health risks for children and young people include:

- physical health problems
- increased blood pressure
- hyperlipidaemia
- type 2 diabetes
- hyperinsulinaemia
- adverse changes in left ventricular mass
- earlier menarche (menstruation)
- sleep apnoea
- exacerbation of asthma
- psychological health problems
- low self-esteem
- depression
- disordered eating
- psychological distress (many obese children experience teasing, social stigma and discrimination). [68]

8.2 The economic cost of obesity - Nationally

Obese and overweight individuals place a significant burden on the NHS – direct costs are estimated to be £4.2 billion and Foresight forecast these will more than double by 2050.[40]

However being above the healthy weight range can incur greater costs to society and the economy such as sickness absence and reduced productivity. It has been estimated that the costs to the wider economy are approximately £16 billion with predictions this will rise to £49.9 billion per year by 2050.[40]

If current trends continue the cost of obesity is likely to grow significantly in the next few decades. Apart from the personal and social costs 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 health.

8.3 The economic cost of obesity in South Gloucestershire

In South Gloucestershire it is estimated that the costs of disease related to overweight and obesity during 2010 was £54.8 million[69]. This is projected to rise to £60.8 million by 2015.

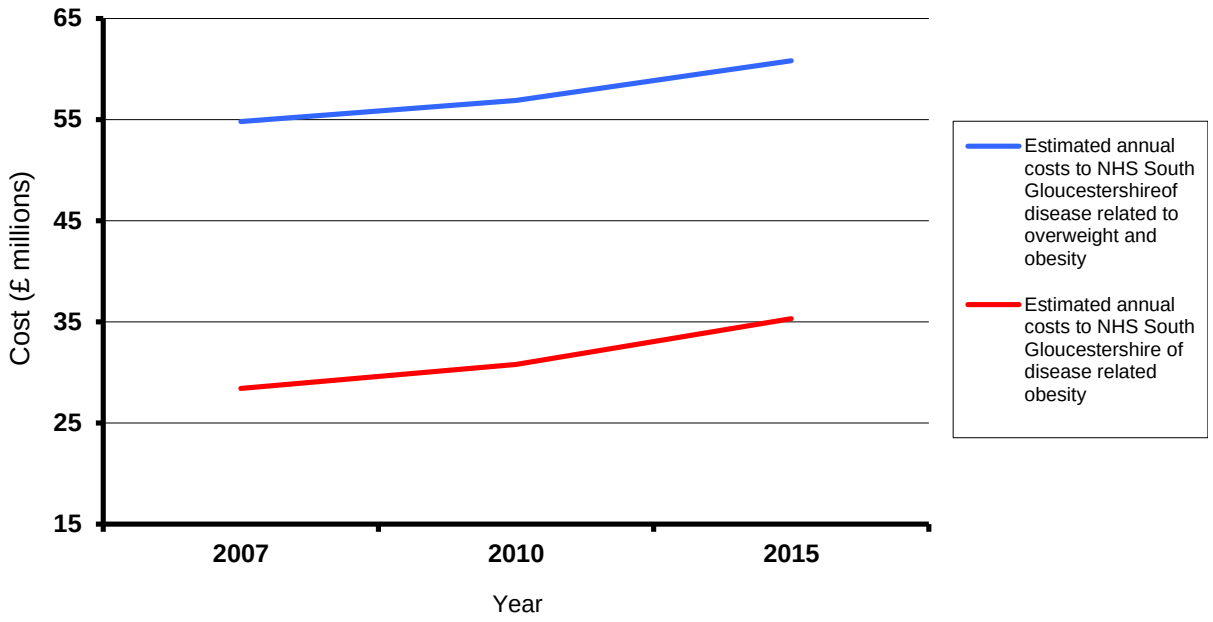


Figure 13. Estimated annual costs of obesity for South Gloucestershire [69]

Notes. Costs are calculated at 2004 prices
It is assumed the BMI distribution for England changes in line with current trends

The cost of prescribing Orlistat (weight loss drug) between 2006 and 2009 was £470,253 averaging £117,563 per year.

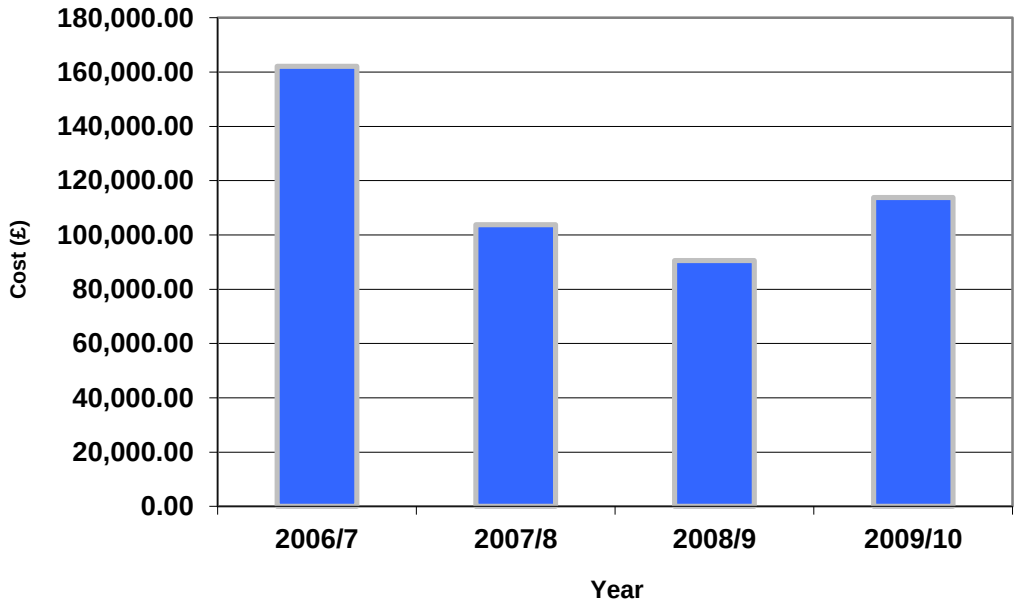


Figure 14. Cost of prescribing Orlistat to NHS South Gloucestershire (*2009/10 includes both)

8.4 The economic cost of physical inactivity – Health Impact Tool (HIT)

The relationship between inactivity and obesity is well recognised. Estimates for the annual costs to the NHS as a result of physical inactivity are between £1 billion and £1.8 billion. The costs of lost productivity to the wider economy have been estimated at around £5.5 billion from sickness absence and £1 billion from premature death of people of working age.[70]

There is a large amount of evidence to suggest that regular activity is related to reduced incidence of many chronic conditions. Physical activity contributes to a wide range of health benefits and regular physical activity can improve health outcomes irrespective of whether individuals achieve weight loss.[21]

A recent report published by UKActive found that the cost of inactivity per 100,000 people in South Gloucestershire is approximately £14,946,131 each year[71]

KEY POINTS

- Obesity reduces life expectancy on average by 9 years
- In 2015, the estimated costs of disease related to overweight and obesity in South Gloucestershire is estimated to be £60.8 million
- The cost of inactivity per 100,000 people in South Gloucestershire is approximately £14,946,131 each year

9.0 Benefits of weight reduction

The benefits of weight loss is profound. There is good evidence to suggest that weight reduction in overweight and obese individuals can improve physical, psychological and social health.

Moderate weight loss of between 5-10% of body weight in obese individuals is associated with a number of health benefits such as a reduction in blood pressure and a reduced risk of developing type 2 diabetes and coronary heart disease.[66, 67]

Mortality	• 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)	• Fall of 10mmHg systolic blood pressure • Fall of 20mmHg diastolic blood pressure
Diabetes (in newly diagnosed people)	• Fall of 50% in fasting glucose

Lipids	• 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	• Improved lung function, and reduced back and joint pain, breathlessness, and frequency of sleep apnoea • Improved insulin sensitivity and ovarian function

Table 8. Benefits for patients of losing 10kg of body weight[69]

KEY POINTS

- There is good evidence to suggest that weight reduction in in overweight and obese individuals can improve physical, psychological and social health.
- 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 a reduction in blood pressure and a reduced risk of developing type 2 diabetes and coronary heart disease
- £261,000 could be saved by implementing the NICE 43 guidelines

10. What we will do to support people with weight management

10.1 The tiered approach

The life course stages can be applied to a pyramid approach whereby interventions and services are targeted at the top to people who are already overweight and obese through to preventative interventions which are universally applied to the general population at the bottom. By doing this we highlight existing service provision and identify gaps in services. It is important to note that the diagram is for illustrative purposes rather than a detailed map – a comprehensive table of existing services can be found in appendix 1.

Where gaps have been identified, services will need to be delivered or commissioned at each level of the pyramid providing care for different members of the community with specific focus on the high risk target groups outlined in section 7.1.

Tier 1 – Universal based prevention and early intervention

This level will include lifestyle advice and information, signposting to public health interventions raise awareness of the risks of being obese and encourage self-change or nudging. Services will include whole population interventions where whole population health is considered as part of an

overarching plan. It is envisaged that most of this work will be delivered through partnership working with many different local agencies.

Tier 2 – Self-help, community and primary care initiatives

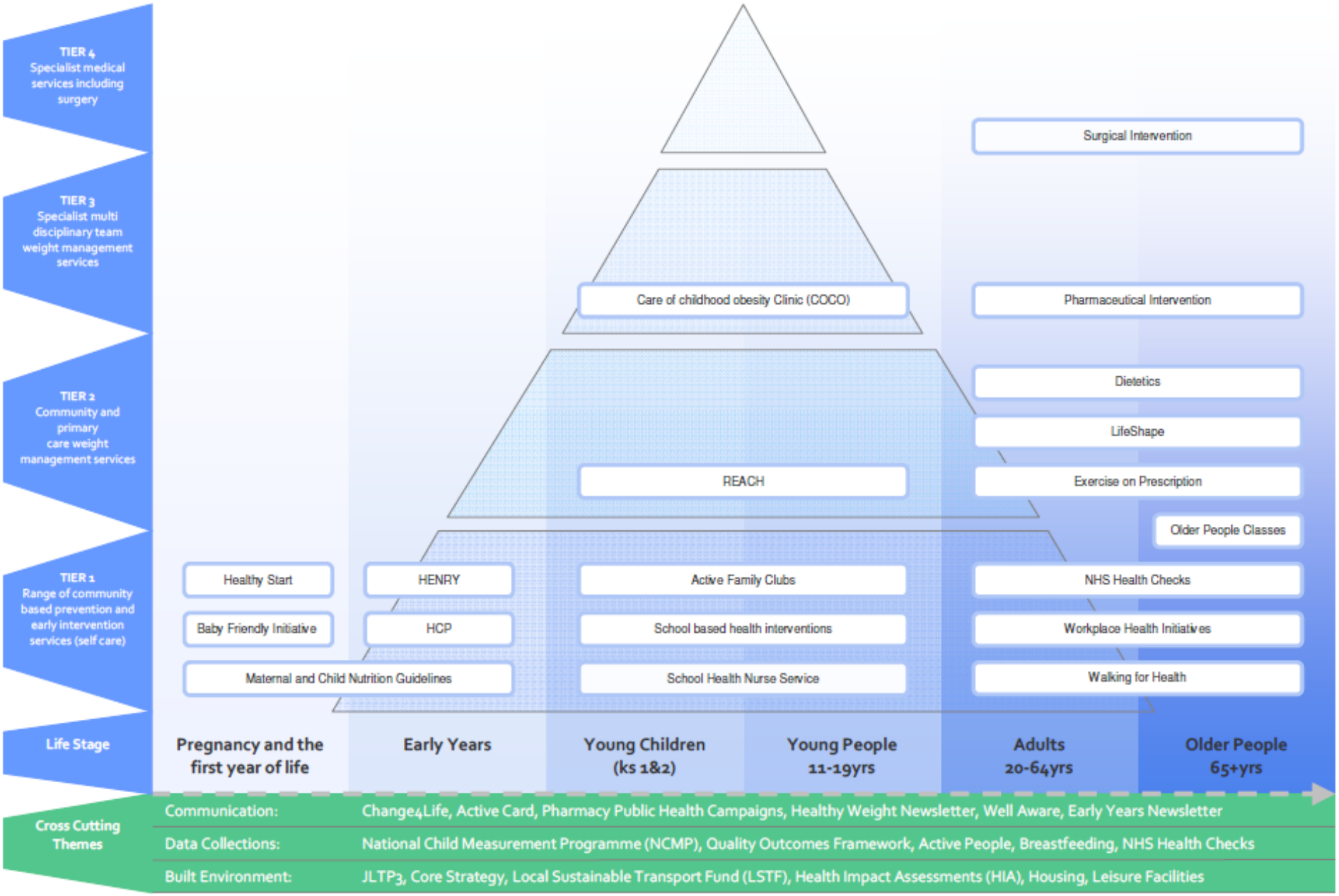
At this level, services will cater for people who are overweight or obese (primarily obesity class 1). They will require general health advice and will need to be made aware of the health issues they face and given practical advice on reducing weight through healthy diet, more exercise and better mental health. People at this level will require empowerment and motivation to make lifestyle changes. Interventions will include commercial weight management programmes, brief interventions by community pharmacists, weight management offered by GP surgeries and exercise on prescription schemes

Tier 3 – Specialist services for patient who makes no progress at Tier 2 or who has an urgent health need to lose weight

This level caters for people who have an urgent need to lose weight either because they have co-morbidities linked to their obesity or they have a high BMI (over 35). These patients need to have shown that they have the motivation to change but they are unable to instigate change alone and require help to change. Services will consist of multi-component programmes involving dietetic support, exercise and psychological support i.e. cognitive behavioral therapy

Tier 4 – Surgery (Pre-op assessment)

This level involves further treatment options and assessment clinic for bariatric surgery for adults who have not achieved Tier 3 treatment objectives. NHS England will commission complex and specialised surgery as a treatment for selected patients with severe and complex obesity that has not responded to all other non-invasive therapies, in accordance with the criteria outlined in the Clinical Commissioning Policy: Complex and Specialised Obesity Surgery[72].


TIER 4
Specialist medical services including surgery
TIER 3
Specialist multi disciplinary team weight management services
TIER 2
Community and primary care weight management services
TIER 1
Range of community based prevention and early intervention services (self care)
Life Stage
Surgical Intervention
Care of childhood obesity Clinic (COCO)
Pharmaceutical Intervention
Dietetics
LifeShape
REACH
Exercise on Prescription
Older People Classes
Healthy Start
HENRY
Active Family Clubs
NHS Health Checks
Baby Friendly Initiative
HCP
School based health interventions
Workplace Health Initiatives
Maternal and Child Nutrition Guidelines
School Health Nurse Service
Walking for Health
Pregnancy and the first year of life
Early Years
Young Children (ks 1&2)
Young People 11-19yrs
Adults 20-64yrs
Older People 65+yrs
Cross Cutting Themes
Communication:
Change4Life, Active Card, Pharmacy Public Health Campaigns, Healthy Weight Newsletter, Well Aware, Early Years Newsletter
Data Collections:
National Child Measurement Programme (NCMP), Quality Outcomes Framework, Active People, Breastfeeding, NHS Health Checks
Built Environment:
JLTP3, Core Strategy, Local Sustainable Transport Fund (LSTF), Health Impact Assessments (HIA), Housing, Leisure Facilities

10.2 Anti-Obesity Medication

The NICE Clinical Guideline 43 currently recommends that Pharmacological treatment should be considered only after dietary, exercise and behavioural approaches have been started and evaluated. Pharmacological treatment may be used to maintain weight loss rather than continue weight loss. Where treatment is withdrawn people should be offered support to help maintain weight loss.

Adults

Drug treatment should be considered for patients who have not reached their target weight loss or who have reached a plateau on dietary, activity and behavioural changes alone. The decision to start drug treatment and the choice of drug, should be made after discussing with the patient the potential benefits and limitations, including the mode of action, adverse events and monitoring requirements and their potential impact on the patient's motivation.

When drug treatment is prescribed, arrangements should be made for appropriate healthcare professionals to offer information, support and counselling on additional diet, physical activity and behavioural strategies. Information on patient support programmes should also be provided. Prescribing should be in accordance with the SPC. Regular review is recommended to monitor the effect of the drug and to reinforce lifestyle advice and adherence. Withdrawal of treatment should be considered when weight loss is insufficient.

Children

Drug treatment is not generally recommended for children younger than 12 years. Under 12 year's drug treatment may only be used in exceptional circumstances if severe life-threatening co morbidities are present and should be started and monitored only in specialist pediatric settings. In children over 12 years treatment with Orlistat is recommended only if physical co morbidities or severe psychological co morbidities are present and should be started in a specialist pediatric setting, by multidisciplinary teams with experience of prescribing in this age group and if the prescriber is willing to submit data to the proposed national strategy.

Orlistat should be prescribed only as part of an overall plan for managing obesity in adults with a BMI > 28 kg/m² with associated risk factors or a BMI > 30 kg/m². Therapy should be continued beyond 3 months only if the person has lost at least 5% of their body weight at the start of pharmacotherapy although weight loss may be slower in patients with type 2 diabetes and less strict goals may be appropriate. Treatment beyond 12 months should be made after discussing benefits and limitations with the patient.

Therapy should be continued beyond 3 months only if the person has lost at least 5% of their body weight at the start of pharmacotherapy although weight loss may be slower in patients with type 2 diabetes and less strict goals may be appropriate. Therapy should not be continued beyond 12 months.

10.3 Surgery

In April 2013, the NHS Commissioning Board (NHS England) published a Clinical Commissioning Policy on Complex and Specialised Obesity Surgery. The policy outlined the responsibility of NHS England to commission complex and specialised surgery as a treatment for selected patients with severe and complex obesity that has not responded to all other non-invasive therapies, in accordance with the criteria outlined in this document. The policy states that bariatric surgery will be offered to adults with a BMI of 40kg/m2 or more, or between 35 kg/m2 and 40kg/m2 or greater in the presence of other significant diseases.

Surgery is not generally recommended in children or young people and may only be considered in exceptional cases when they have reached or almost reached physiological maturity. No recommendation is made regarding the particular type of surgery (gastric bypass, gastric banding and gastroplasty) in terms of cost-effectiveness. Regular, specialist postoperative dietetic monitoring should be provided.

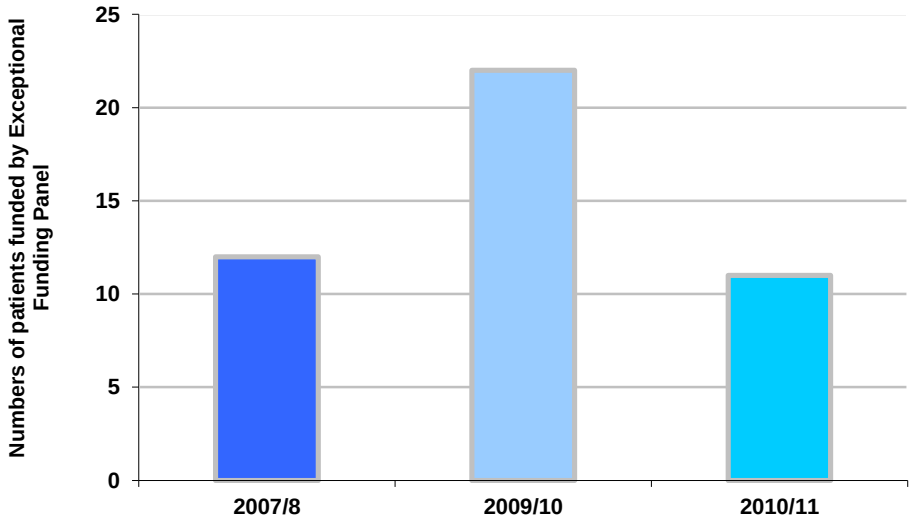


Figure 14. Number of patient's undergone surgery in South Gloucestershire, 2008-2011.

Bariatric surgery has been found to be a clinically effective and cost-effective intervention for moderately to severely obese people compared with non-surgical interventions. Advances in bariatric surgery means that this is now a well-recognised and effective intervention for obesity in circumstances where the individual has a BMI of 40 or more. Incremental Cost Effectiveness Ratios indicate bariatric surgery for morbid obese patients, incremental To cost between £2000 and £4000 per QALY gained[73]

11.0 Monitoring the strategy

In conjunction to the strategy an action plan has been developed that outlines a framework for actions demonstrating a range of preventative and management interventions required to meet the key objectives for each life course stage. The resources required, local performance indicators and milestones, and timescale for achievement will need to be agreed by a South Gloucestershire's Healthy Weight Strategy Group.

To ensure that services are cost effective and evidence based, the initiatives and proposals put forward have been assessed for their level of efficacy in terms of evidence and recommendations provided by NICE. Data and evidence on existing services in South Gloucestershire have also been included to ensure we build on existing work already taking place. It is important to note that a lack of evidence of effectiveness does not necessarily mean the proposed action is not effective; it may however mean that further research is needed in these areas.

11.1 Governance

A programme of joint action to improve health and wellbeing in South Gloucestershire will be overseen by the Health and Wellbeing Board. The strategy will be delivered by South Gloucestershire's Healthy Weight Group who will develop an action plan to deliver against the objectives outlined in the strategy. The action plan will consist of commitments from partners to provide and commission services that meet the priorities across the life course.

11.2 How will we know if we have been successful?

Measuring the success of interventions to prevent or treat obesity can be challenging as many of the benefits may not present for many years to come. The Strategy will use a number of outcomes measures to assess the success of the strategy. This will include proxy indicators on service delivery in addition to prevalence data across the life course.

Appendices

Appendix 1. Current service provision across South Gloucestershire

	Promoting healthy eating	Promoting physical activity	Managing Obesity
Pregnancy and the first year of	• Developing training, resources and support for early years settings (0-5 years) on a range of food health issues through the Healthy early Years Programme; • Encouraging childcare settings to address nutrition through the Healthy Early Years in childcare project for pre-school children; • Starting to implement UNICEF Breastfeeding Baby Friendly initiative in the community; • Health Visitors provide advice to families on healthy eating • Breastfeeding Strategy	• Healthy Early Years Programme - supports Early Years settings - Pre-schools, Nurseries, and Childminders, to promote physical activity and healthy eating and physical activity	• Promotion of breastfeeding and weaning by NHS staff to parents
Early Years 1-4yrs	• The HENRY (Health, Exercise, Nutrition for Really Young**)** is a initiative designed to tackle early childhood obesity by training community and health practitioners to work more effectively with parents and young families • Working with the Sure Start Children's Centre in South Gloucestershire by providing nutrition training for the staff working in these centres, cooking equipment to run food based activities and a resource toolkit for activity ideas around food and healthy eating. • Healthy eating workshops for parents and childcare staff. • Healthy Start Programme	• Promoting the benefits of physical activity in pre-school and nursery settings through the 'Wriggle and Jiggle' project and '*Buggy walks'*	

	Promoting Healthy Eating	Promoting Physical Activity	Managing Obesity
Childhood (Key stage 1& 2 yrs)	• Healthy Schools Programme - programme, that has been devised to support school improvement through a whole school approach to health and well-being, inclusion and educational achievement. • Development of a food & health resource pack for out of school clubs • Ensuring all schools continue to develop a whole school approach to food through the National Healthy Schools and Healthy Schools Plus Programmes.	• Public Health Pharmacy Campaigns • The Breakthrough Active mentoring programme supports children to develop confidence and self-esteem often through physical activity • Active4Life - project involves a health promotion intervention, using lessons taught by the classroom teachers to encourage healthy eating, increase physical activity and decrease sedentary activities • 'Bike-It' – Sustrans work to encourage cycling with schools • Youth Sports Trust/SSP's – 5 hour offer • School Travel Plans to increase the number of children walking or cycling to school, including park and walk, Walk on Wednesdays and Walking Buses. • Active Families Project – programme of physical activites for families with children aged 7-13yrs promoting physical activity • Active play - use of 'playpods' and Play Rangers to encourage play and the provision of high quality facilities	• Specialist obesity clinic at Children's Hospital • REACH (Rethinking Eating and Activity for Children's Health) A 12-week programme aimed at children above the healthy weight range aged 4 – 17 years and their parents. The programme covers aspects of physical activity, healthy eating and mental well being.
Young Peopme 11-19yrs	•	• Active Families Project – programme of physical activites for families with children aged 7-13yrs promoting physical activity • Active play - use of 'playpods' and Play Rangers to encourage play and the provision of high quality facilities • Fit Kids use of Bridges Health & Fitness clubs South Glos Leisure ages 12 – 16	• REACH (Rethinking Eating and Activity for Children's Health) A 12-week programme aimed at children above the healthy weight range aged 4 – 17 years and their parents. The programme covers aspects of physical activity, healthy eating and mental well being.

	Promoting Healthy Eating	Promoting Physical Activity	Managing Obesity
Adulthood 20-65yrs	• Food sampling surveys of smaller, local food manufacturers to encourage the reduction of fat, salt and sugar that is used in their food products; • A Healthy Choices Award that recognizes food outlets with healthier choices on their menu; • Healthy Choices Award: South Gloucestershire Council operates a Healthy Choices Award, which is given to food outlets where healthier options are offered on their menu.	• Cycling City – Greater Bristol (Bristol and South Gloucestershire) was awarded £11.3m by Cycling England in 2008. • Cycle lane development • Cycle Trail maps • Smarter choices - a key element of the local transport plan and seeks to promote use of walking, cycling and public transport. It also aims to reduce car usage and, hence, congestion, pollution and noise. • Active Health@Work Award which recognises employers and workplace settings where healthy food choices are available in the staff café, restaurant or canteen. • Occupational Health Teams • South Gloucestershire Council run a healthy workplace charter for all of the council offices within South Gloucestershire. • South Gloucestershire Union of Disability Sport (SUDS) - developing opportunities for disabled people across South Gloucestershire	• Weight management care pathway for diabetics identified as overweight or obese • Drug treatment in primary care for obese adults • Hospital dietetic clinics • Dietetic clinic's insurgeries • Exercise on Prescription (EOP) a well established scheme with over 6000 patients having being referred by health professionals since 2003. The scheme offers a wide range of targeted community-based interventions to adults who have been identified as having a condition that would benefit from increased physical activity (e.g. diabetes). • Morbid obesity surgery • Local surgery's weight management programmes • Weight management on referral (WMOR) – this service provides overweight and obese adults (aged 16+) with a free local weight management course in conjunction with a commercial weight management provider • Commercial weight management groups

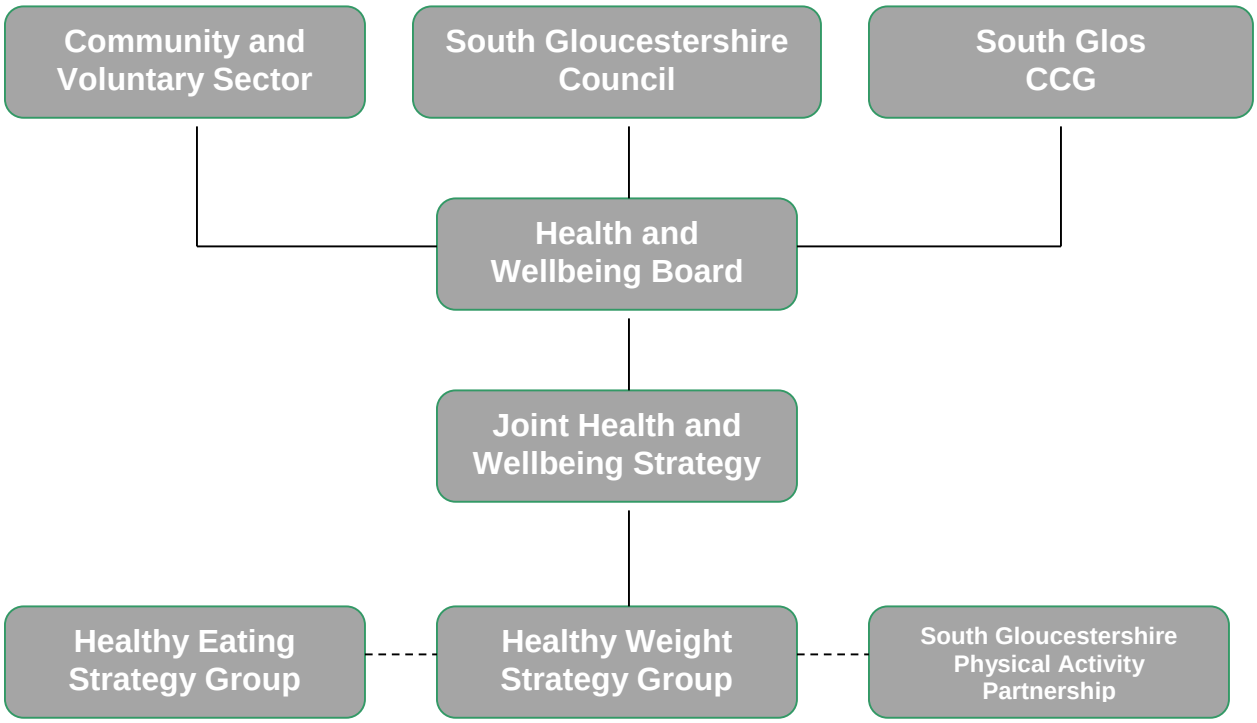
Older People 66+yrs	• Working with a group of adults with learning difficulties to educate them about healthy eating and empower them to make healthier dietary and lifestyle choices. • Monthly Food Market at Filton promoting fresh fruit and veg	• Implementation of the Allotments Strategy • Green Gym - uses conservation activities to improve the health and wellbeing of participants. The sessions are ran *entirely by volunteers* • Wild4life Project - a four year project that connects people, communities and nature through an innovative programme of projects • Active Lifestyles Directory– an annual directory detailing local physical opportunities • Providing free swimming sessions to non-swimmers aged 11+ • Dance on Prescription • Older people exercise classes – this involves taking exercise into care homes, sheltered housing schemes. • The Active Card • 'Walking to health' a series of short walks across the county • Choices4U programme - Supporting adults with learning difficulties to access community and leisure opportunities Breakthrough Project • Time for Carers • Paul's Place - supports adults with physical and cognitive impairment • Falls Prevention - The Falls Prevention Service aims to reduce the number of falls that result in serious injury and ensure effective treatment and rehabilitation for those who have fallen	• Weight management care pathway for diabetics identified as overweight or obese • Drug treatment in primary care for obese adults • Hospital dietetic clinics • Dietetic clinic's in surgeries • Exercise on Prescription (EOP) a well established scheme with over 6000 patients having being referred by health professionals since 2003. The scheme offers a wide range of targeted community-based interventions to adults who have been identified as having a condition that would benefit from increased physical activity (e.g. diabetes). • Morbid obesity surgery • Medical centre's local weight management services • LifeShape is an adult weight management service for adults. (aged 16+) who have a BMI >30kg/m^2

Cross Cutting Themes

	Promoting Healthy Eating	Promoting Physical Activity	Managing Obesity
Marketing and Comms	• Public Health Pharmacy Campaigns • Change4Life Campaign • Change4Life convenience store project • Food Standard Agency Campaigns i.e. saturated fat	• Public Health Pharmacy Campaigns • The Active Card • Change4Life Campaign - Walk4Life - Dance4Life • Cycling City • Walking for Health quarterly newsletter • Active Card Newsletter	• Public Health Pharmacy Campaigns • Healthy Weight Newsletter for health professionals • Feedback letters to parents of children's weight as part of the NCMP
Built Environment	• Gardening projects • Implementation of the Allotments Strategy	• Cycle City • Local Transport Plan 3 • Park Strategy • Play Strategy • Gardening projects • Implementation of the Allotments Strategy	

Data Collection	• Health Survey for England - Portions of fruit and vegetables per day • Breastfeeding initiation rates and at 6-weeks	• Health Survey for England - Portions of fruit and vegetables • Sport England Active People Survey - Number of people achieving 3x30mins physical activity per week • School Travel Plan Data • PE & Sport Survey 2009/10 - the proportion of pupils receiving 2 hours of curriculum PE, and - the proportion of pupils participating in at least 3 hours of high quality PE and school sport in a typical week. • Active Card - Local data of service users and activity levels	• Health Survey for England Modelled Obesity prevalence • National Child Measurement programme (NCMP) - BMI measured at reception year and year 6 • Quality Outcomes Framework - BMI recorded for 15-74 year olds in primary care
Training	• Breastfeeding Training for health visitors • Henry Training • Developing training, resources and support for early years settings (0-5 years) on a range of food health issues through the Healthy early Years Programme;	• Let's Get Moving training for Exercise on Prescription Staff • Volunteer Walk Leader Training via the Walking for Health Initiative • Sport coaching/NGB's • Multiskills coaches etc	

Appendix 2: Governance and Accountability



Appendix 3: Summary of the NICE guidance**,** 'Obesity: The prevention, identification, assessment and management of overweight and obesity in adults and children'

Prevention - recommendations for the NHS	
Organisation and strategy	• Ensure obesity is a priority at strategic and delivery levels. • Implement the local healthy weight strategy, encourage partnership working with other organisations, and train staff.
Programmes to prevent obesity and improve diet and activity levels	Programmes should: • give tailored advice and provide ongoing support • target people at times when they may gain weight (such aswhen giving up smoking, during and after pregnancy and at the menopause) involve parents and carers if aimed at children and young people
Additional action in primary care	• Offer support on weight management to people giving up smoking.
Work with other organisations	• Address people's concerns about improving diet and the safety of exercise. • Promote schemes to improve diet and activity levels, such as schemesinvolving shops, supermarkets, restaurants, cafes and voluntary community services, and cycling and walking routes. • Work with preschool and childcare, and workplaces.

Prevention - recommendations for local authorities, schools and early years providers, workplaces and the public	
Local Authorities and their partners	• Work with the community to identify barriers to physical activity. • Ensure design of buildings and open spaces encourages people to bemore active. • Encourage active travel, and promote and support physical activity schemes. • Encourage local shops and caterers to promote healthy food choices.
Early years settings	• Provide regular opportunities for enjoyable active play and structured physical activity sessions. • Ensure children eat regular, healthy meals in a supervised, pleasant, sociable environment, free from distractions.
Schools	• Ensure school policies and the whole school environment encourage physical activity and a healthy diet.Train all staff in how to implement healthy school policies. • Create links with sports clubs and partnerships. • Promote physical activities that children can enjoy outside school and into adulthood. • Ensure children and young people eat meals in a pleasant, sociable environment, free from distractions.
Workplaces	• Provide opportunities for staff to eat a healthy diet and be physically active,through: • Active and continuous promotion of healthy choices in restaurants, Hospitality, vending machines and shops for staff and clients, in line with existing Food Standards Agency guidance • Working practices and policies, such as active travel policies for staff and visitors • A supportive physical environment, such as improvements to stairwells and providing showers and secure cycle parking • Recreational opportunities, such as supporting out-of-hours social activities, lunchtime walks and use of local leisure facilities. • Promote schemes to improve diet and activity levels, such as schemes involving shops, supermarkets, restaurants, cafes and voluntary community services, and cycling and walking routes. • Work with preschool and childcare, and workplaces.

Management - recommendations for the NHS	
Identifying and assessing overweight and obesity	• Use body mass index and waist circumference to assess degree of obesity and risk of future health problems. • Check for related health problems as needed and discuss possible causes and willingness to change. Refer people with complex problems to a specialist.
Lifestyle advice	• Provide advice on both diet and exercise, agree targets and offer ongoing support. • Recommend self-help, commercial or community programmes only if they can show they meet best-practice standards **For children:** dietary change should not be the only action.
Drugs	• Prescribe drugs only if diet and exercise have been tried, after discussion of risks and benefits, and with continued support for lifestyle change. **For children:** prescribe drugs only if their health is at serious risk; for children under 12,prescribe only if there are life-threatening problems such as sleep apnoea.
Surgery	• Generally, consider surgery only for people who are severely obese and have tried all other options. But for people with body mass index over 50 kg/m2 surgery can be a first-line treatment. Surgery should be done by a specialist team providing assessment and long-term follow up. **For children:** consider only in exceptional cases and if the child is physiologically mature (or nearly so).

Appendix 4: Summary of the NICE Guidance: 'Dietary interventions and physical activity interventions for weight management before, during and after pregnancy' [74]

Recommendation 1 *Preparing for pregnancy: women with a BMI of 30 or more*	• NHS and other commissioners and managers, directors of public health and planners and organisers of public health campaigns should ensure health professionals understand the importance of achieving a healthy weight before pregnancy. • Health professionals should use any opportunity, as appropriate, to provide women with a BMI of 30 or more with information about the health benefits of losing weight before becoming pregnant (for themselves and the baby they may conceive). • GPs, dietitians and other appropriately trained health professionals should advise, encourage and help women with a BMI of 30 or more to reduce weight before becoming pregnant. • Health professionals should encourage women to check their weight and waist measurement periodically or, as a simple alternative, check the fit of their clothes. • Health professionals should offer a weight-loss support programme involving diet and physical activity. • Health professionals should offer specific dietary advice in preparation for pregnancy, including the need to take daily folic acid supplements.
Recommendation 2 *Pregnant women*	• At the earliest opportunity, for example, during a pregnant woman's first visit to a health professional, discuss her eating habits and how physically active she is. • Advise that a healthy diet and being physically active will benefit both the woman and her unborn child during pregnancy and will also help her to achieve a healthy weight after giving birth.. • Advise that moderate-intensity physical activity will not harm her or her unborn child. At least 30 minutes per day of moderate intensity activity is recommended. • Heath professionals should provide specific and practical advice about being physically active during pregnancy • Weight, height and BMI should be recorded in notes, the woman's hand-held record and the patient information system. If a hand-held record is not available, use local protocols to record this information. • Do not weigh women repeatedly during pregnancy as a matter of routine. Only weigh again if clinical management can be influenced or if nutrition is a concern13. • Explain to women with a BMI of 30 or more at the booking appointment how this poses a risk, both to their health and the health of the unborn child• Offer women with a BMI of 30 or more at the booking appointment a referral to a dietitian or appropriately trained health professional for assessment and personalised advice on healthy eating and how to be physically active. Encourage them to lose weight after pregnancy.
Recommendation 3 *Supporting women after childbirth*	• Use the 6–8-week postnatal check as an opportunity to discuss the woman's weight. • During the 6–8-week postnatal check, or during the follow-up appointment within the next 6 months, provide clear, tailored, consistent, up-to-date and timely advice about how to lose weight safely after childbirth. • Health professionals should advise women, their partners and family to seek information and advice from a reputable source. Women who want support to lose weight should be given details of appropriate community-based services. • Midwives and other health professionals should encourage women to breastfeed. • Health professionals should give advice on recreational exercise from the Royal College of Obstetrics and Gynaecology16. In summary, this states that: • If pregnancy and delivery are uncomplicated, a mild exercise programme consisting of walking, pelvic floor exercises and stretching may begin immediately. • After complicated deliveries, or lower segment caesareans, a medical care-giver should be consulted before resuming pre-pregnancy levels of physical activity, usually after the first check-up at 6–8 weeks after giving birth. • Health professionals should also emphasise the importance of participating in physical activities, such as walking, which can be built into daily life.
Recommendation 4	• Explain the increased risks that being obese poses to them and, if they become pregnant again, their unborn child. Encourage them to lose weight.

Women with a BMI of 30 or more after childbirth	• Offer a structured weight-loss programme. If more appropriate, offer a referral to a dietitian or an appropriately trained health professional. • Use evidence-based behaviour change techniques to motivate and support women to lose weight. • Encourage breastfeeding and advise women that losing weight by eating healthily and taking regular exercise will not affect the quantity or quality of their milk
Recommendation 5 ***Community-based services***	• Local authority leisure and community services should offer women with babies and children the opportunity to take part in a range of physical or recreational activities. • NHS and other commissioners and managers, local authority leisure services and slimming clubs should work together to offer women who wish to lose weight after childbirth the opportunity to join a weight management group or slimming club. • NHS health trainers and non-NHS health and fitness advisers should advise women that a healthy diet and being physically active will benefit both them and their unborn child during pregnancy. • NHS health trainers and non-NHS health and fitness advisers should encourage those who have weight concerns before, during or after pregnancy to talk to a health professional such as a GP, practice nurse, dietitian, health visitor or pharmacist • NHS health trainers and non-NHS health and fitness advisers should offer specific dietary advice in preparation for pregnancy, including the need to take daily folic acid supplements.
Recommendation 6 **Professional skills**	• Ensure health professionals, healthcare assistants and support workers have the skills to advise on the health benefits of weight management and risks of being overweight or obese before, during and after pregnancy, or after successive pregnancies. • Ensure they can advise women on their nutritional needs before, during and after pregnancy and can explain why it is important to have a balanced diet and to be moderately physically active. • Ensure they have behaviour change knowledge, skills and competencies. • Ensure they have the communication techniques needed to broach the subject of weight management in a sensitive manner and Ensure they have the knowledge and skills to help dispel common myths. • Ensure they have knowledge, skills and competencies in group facilitation, are aware of the needs of minority ethnic groups and have knowledge of local services. • Ensure their training is regularly monitored and updated.

Appendix 5

Public Health Responsibility Deal

The Responsibility Deal is a partnership between the Department of Health, industry and the health community covering alcohol, food, physical activity, and health at work. The Deal encourages organisations from the statutory, commercial and voluntary sector to sign up to a range of pledges that support public health priorities.

The Responsibility deal consists of core commitments which are signed up by all partners. The five core commitments which set out the scope, purpose and high level ambitions of the Responsibility Deal are signed up to by all Responsibility Deal Partners as confirmation that they support the Deals ambitions and commit to taking action to support them. In addition to organisations pledging to core commitments, partners also sign up to collective pledges.

Food Pledges

- Out of home calorie labeling – We will provide calorie information for food and non alcoholic drink for our customers in out of home settings.
- Salt reduction – We commit to the salt targets for the end of 2012 agreed by the Responsibility Deal, which collectively will deliver a further 15% reduction on 2010 targets.
- Artificial trans fats removal – We have already removed, or will remove, artificial trans fats from our products by the end of 2015.

Physical Activity Pledges

- Physical activity: Community – We will use our local presence to get more children and adults more active, more often including engaging communities in planning and delivery.
- Physical activity guidelines – We will contribute to the communication and promotion of the Chief Medical Officers' revised physical activity guidelines
- Active travel – We will promote and support more active travel (walking and cycling). We will set measurable targets for this health enhancing behaviour
- Physical activity in the workplace – We will increase physical activity in the workplace, for example through modifying the environment, promoting workplace champions and removing barriers to physical activity during the working day.
- Physical activity: Inclusion – We will tackle the barriers to participation in physical activity faced by some of the most inactive groups in society.

Health at Work Pledges

- Chronic conditions guide – We will embed the principles of the chronic conditions guides (developed through the Responsibility Deal's health at work network) within our HR procedures to ensure that those with chronic conditions at work are managed in the best way possible with the necessary flexibilities and workplace adjustments.
- Healthier staff restaurants – We will implement some basic measures for encouraging healthier staff restaurants/vending outlets/buffets

Individual pledges are specific to a particular organisation such as a NHS Trust and have been developed by them and approved by the Department of Health. The individual pledge gives organisations the opportunity to show where they can go further than the collective pledges or take the lead for their sector in making a commitment in an area where collective action is not happening.

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Abbreviations

BMI – Body Mass Index

NCMP – National Child Measurement Programme

NICE – National Institute for Health and Care Excellence

SES - Socioeconomic status