

Report to the Health, Care and Wellbeing Scrutiny Committee, 23rd September 2022

Report Title:	Obesity in Herefordshire	
Corporate Director:	Hilary Hall - Corporate Director Community Wellbeing	
Report Author:	Matt Pearce - Director of Public Health	
Committee Date:	23rd September 2022	
Report Deadline:	13th September 2022	

1.0 Officer recommendations

That the committee notes Herefordshire Council's strategies to tackle obesity in line with the Council's planned priorities and objectives.

2.0 Purpose of the report

The purpose of this report is to present the background information for the committee to consider the ways in which the council and partners currently tackle obesity in the local population and to make any recommendations around future provision.

3.0 Introduction

Obesity is a complex issue influenced by many factors. While at an individual level the main causes are poor diet and sedentary lifestyles, the Foresight report (2007) identified over 100 "wider determinants" of individual, and family eating and physical activity habits (see appendix 1). These include the food and physical activity environments in which people live, work and play; their income; education; occupation and mental health and wellbeing. Over the last 20-30 years society has become characterised by environments and lifestyles that promote the consumption of high calorie food and drink, and sedentary behaviour, so it is now widely agreed that obesity is a normal 'passive' biological response to these changes.

3.0 Health and Economic Consequences

There is strong evidence to show that adult obesity is associated with a wide range of health problems which include type 2 diabetes, coronary heart disease, some types of cancer (such as breast cancer and bowel cancer) and stroke. Obesity can also impact on people's quality of life and lead to psychological problems, such as depression and low self-esteem. More recently overweight and obesity has been associated with major causes of ill-health and identified as one of the most prominent risk factors of severe COVID-19, increasing disease mortality, even in childhood¹. It has also been associated with a greater risk of long covid².

¹ Stavridou, A., et al., Obesity in Children and Adolescents during COVID-19 Pandemic. Children (Basel, Switzerland), 2021. 8(2): p. 135.

² Aminian, A., et al., Association of obesity with postacute sequelae of COVID-19. Diabetes, Obesity and Metabolism, 2021. 23(9): p. 2183-2188.

The financial burden of obesity is also significant. Modelling on the costs of obesity were last undertaken in 2014, where the cost of obesity and related ill health to the NHS in England was estimated at £6.1 billion per annum.3 Obesity also impacts local authorities' social care budgets: direct costs attributed to obesity are estimated at around £352 million per annum.4 Conditions linked to obesity, such as type 2 diabetes, although not yet systematically quantified, are likely to impose a significant additional social care burden. The costs to the wider economy are even greater, estimated at £27 billion per annum⁵.

4.0 National Context

There has been increased government commitment, since 2016, to preventing and tackling obesity through the Childhood Obesity Plan⁶. The plan aimed to significantly reduce England's rate of childhood obesity within ten years and included such commitments as introducing a soft drinks levy, working with food producers to reduce sugar in foods and introducing food school standards. More recently, the Government further published a National Obesity Strategy in July 2020 which outlined actions the government intended to take to tackle obesity and help adults and children to live healthier lives.

Both of these strategies are complemented by the NHS Long Term Plan⁷ which was published in 2019 that set outs specific actions to support people in managing their weight. This includes:

- access to weight management services in primary care for people with a diagnosis of type 2 diabetes or hypertension with a BMI of 30
- Expanding the NHS Diabetes Prevention Programme over the next five years. including a new digital option
- Test an NHS programme supporting very low calorie diets for obese people with type 2 diabetes.
- Take action on healthy NHS premises
- Nutrition training, and an understanding of what is involved in achieving and maintaining a healthy weight, varies between medical schools

5.0 Local Context

Whilst Herefordshire does not have a specific Healthy Weight Strategy, our current Joint Health and Wellbeing Strategy⁸ includes a number of priority areas where reducing levels of obesity can make an important contribution to achieving these. A new Health and Wellbeing Strategy is currently being developed that will be published early 2023. As part of the development of the strategy we will be reviewing our priorities for the future.

Herefordshire's County Plan includes a number of commitments that will contribute to reducing levels of obesity in Herefordshire through the three focus areas; Environment, community and economy. This includes actions to tackle climate change such as increasing active travel, utilising our natural resources more effectively, supporting communities and ensuring our children are healthy.

⁷ NHS Long Term Plan

³ Scarborough, P. et al. (2011), The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006-07 NHS costs. J Public Health 33(4):527-35 The direct cost to the NHS in 2006/07 of people being overweight and obese was £5.1bn. These costs have been updated to £6.1bn to take into account inflation

⁴ Unpublished analysis of Health Survey for England combined data 2011 and 2012. Obesity Knowledge and Intelligence. PHE 2014. Cost of extra formal hours of help for severely obese compared to healthy weight people.

⁵ Health matters: obesity and the food environment - GOV.UK (www.gov.uk)

⁶ Childhood obesity: a plan for action - GOV.UK (www.gov.uk)

⁸ Health and wellbeing strategy 2016 (herefordshire.gov.uk)

6.0 Epidemiology - What does the data tell us?

6.1 Children

Data for child obesity comes from the National Child Measurement Programme (NCMP) for England that records height and weight measurements of children in Reception (aged 4-5yrs) and Year 6 (aged 10-11yrs) enabling analysis of prevalence and trends in childhood obesity levels.

The last three years' worth of data shows an increase in the prevalence for children who are overweight and obese. However, it is worth noting that participation rates during 20/21 were impacted by the pandemic. Provisional data for 21/22 suggests a slight reduction in the prevalence of overweight and obesity amongst Reception and Year 6 children, although this data needs to be validated.

Prevalence of overweight and obesity in reception age children for 19/20 is statistically higher than both the national average (23%), but similar to the regional average (24.6). During the academic year 20/21 data collection period there was a national requirement to achieve a 10% uptake of the eligible population. However, locally we achieved 75% which provides comparative data (as yet unpublished) for 20/21 in Herefordshire.

Period 2018/19	No. eligible children	Participation (number / %)	No. underweight children	No. / % overweight children	No. / % very overweight children	Total (overweight + very overweight)
Reception children (4-5 year olds)	1784	1779 99.7%	**	13.4%	10.3%	23.7%
Year 6 children (10-11 year olds)	1760	1758 99.9%	**	13.7%	21%	34.7%
Period 2019/20	No. eligible children	Participation (number / %)	No. underweight children	No. / % overweight children	No. / % very overweight children	Total (overweight + very overweight)
Reception children (4-5 year olds)	1709	1709 100%	**	15.6%	10.1%	25.8%
Year 6 children (10-11 year olds)	1770	1770 100%	**	14.2%	19.2%	33.4%
Period 2020/21	No. eligible children	Participation (number / %)	No. underweight children	No. / % overweight children	No. / % very overweight children	Total (overweight + very overweight)
Reception children (4-5 year olds)	1875**	1340 74.5%	**	13.1%	13.4%	26.9%
Year 6 children (10-11 year olds)	1985**	1425 76.4%	**	16.1%	22.6%	38.7%

Table 1 - NCMP data for Herefordshire 2018/19 - 2020/21

There is a strong relationship between deprivation and childhood obesity. Analysis of data from the National Child Measurement Programme (NCMP) shows that obesity prevalence among children in both Reception and Year 6 increases with increased socioeconomic deprivation (measured by the Index of Multiple Deprivation (IMD) score). Obesity prevalence amongst reception age children in the most deprived 20% children in Herefordshire is 12.4% compared to the least deprived quartile of 7.2%. This difference is more profound in Year 6 children whereby 23.9% of children are obese in the most deprived quintile compared to 13.8% in the least deprived quintile.

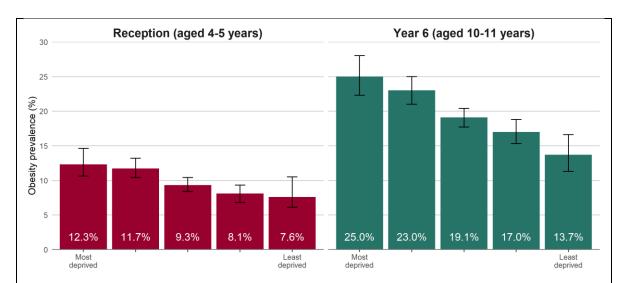


Figure 1. Obesity prevalence by deprivation and age, 2015/16-2019/20

Figure 2 identifies areas of highest levels of excess weight. The wards known to have the highest levels of excess weight for reception age are the following: Golden Valley North, Ledbury South, Llangarron, Hope End, Bromyard West, Bromyard & Bringsty, Redhill, Newton Farm, Tupsley, Widemarsh & Kings Acre.

The wards with the highest levels of excess weight for year 6 age are the following: Golden Valley North, Ross East, Sutton Walls, Hinton & Hunderton, Redhill, Saxon Gate, Aylestone Hill, College & Widemarsh.

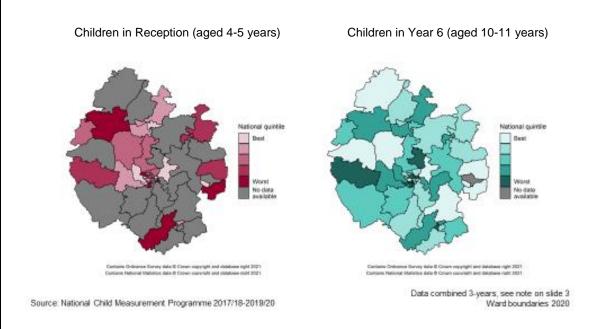


Figure 2. Prevalence of obesity by age and ward, 2017/18-2019/20

6.2 Adults

The Active Lives Survey conducted by Sport England collects data on self-reported height and weight among adults aged 18 years and over in Local Authority areas across England. The Office for Health Improvement and Disparities (OHID) uses this data to produce estimates of adult excess weight prevalence for the Public Health Outcomes Framework.

Estimates indicate that 30.9% (48,700) of adults are obese in Herefordshire which is statistically higher that the national average (25.3%) and the regional average (28.1%). Approximately 67% of adults in Herefordshire are overweight or obese which is similar to the regional average of 66.8%⁹. This equates to approximately 105,592 individuals across Herefordshire who are above a healthy weight threshold.

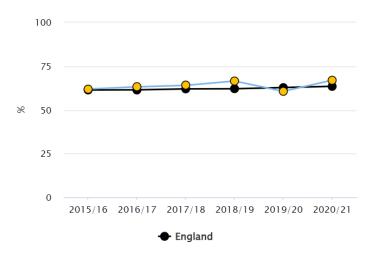


Figure 3 Percentage of adults (aged 18+) classified as overweight or obese (2015/16 – 2020/21). Please note this does not include latest 21/22 data

Some local data is available from primary care through 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 and the proportion of these patients that have their BMI measured by the GP. The data are therefore not considered representative of true prevalence, but broadly mirror the picture of local variance as outlined above. Local primary care data indicates that 19,126 of patients (16+) in Herefordshire are recorded as obese which equates to 9% of the overall Hereford adult population. From those recorded as obese on the register, 22% have more than 1 long term condition and 7% have more than 2 long term conditions.

6.21 Maternal Obesity

There is a large body of evidence which links maternal obesity to adverse pregnancy outcomes. Data on the prevalence of maternal obesity are not collected routinely in the UK, but there are currently around 11 million women of childbearing age (16 to 44 years) in England, of which around 2 million (19%) are obese. Data from the public health outcomes frameworks for 2018/19 estimates that 23.6% of pregnant women were obese (BMI>=30kg/m2) at the time of booking appointment with midwife. This is slightly higher than the national average, although this difference is not statistically significant.

There is some evidence that mothers who breastfeed provide their child with protection against excess weight in later life. Breastfeeding rates in Herefordshire are measured from birth and whether breastfeeding continues until 6-8 weeks. The percentage of babies whose first feed is breastmilk in Herefordshire is 67.8% which is similar to the national average of 67.4%, but higher than the regional average 62.5%. Over the last few years there has been a slow decline in the proportion of mothers breastfeeding at 6-8 weeks, however, during the last quarter we have seen an increase in rates to 48%. The low rates were likely down to the pandemic and as visits by health visitors were not face to face and the support was not available for peer supporters.

⁹ Obesity Profile - Data - OHID (phe.org.uk)

6.22 Health Inequalities

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 foods¹⁰ participate less in sports and physical activity¹¹ and have lower weight control awareness. Energy dense foods often represent the lower-cost option to the consumer.¹²

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. 13 Poor maternal nutrition is associated with deprivation and can lead to low birth weight. This is often followed by rapid 'catch-up' growth leading to adolescent obesity.

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. 14 This is of particularly importance for Asian groups as they have been found to being more prone to higher rates of obesity.

6.23 Who are most at risk?

According to research, 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 comorbidities.¹⁵

Children

- For genetic and/or environmental reasons from families where one or both parents are overweight or obese¹⁶
- 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 ¹⁷

Black Minority Ethnic (BME) groups

South Asian populations are at greater risk of ill health at lower BMI levels than European populations¹⁸

¹⁰ Lu N, Samuels ME, Huang K (2002) Dietary behavior in relation to socioeconomic characteristics and selfperceived health status. J Health Care Poor Underserved 213:241-57.

¹¹ Stamatakis E. Physical activity (2004). In: Sporston K, Primatesta P, eds. The Health Survey for England 2003, Cardiovascular Disease. London: The Stationery Office, 2004. -

¹² Drewnowski A et al 'Poverty and Obesity: the role of energy density and energy costs.' The American Journal of Clinical nutrition Jan 2004 Vol.79 no.1 p6-16

¹³ Kinra S, Nelder R, Lewendon G. Deprivation and childhood obesity: a cross sectional study of 20,973 children in Plymouth, United Kingdom. J Epidemiol Community Health 2000;54:456 –60

¹⁴ National Obesity Observatory (2011) Obesity and ethnicity. Association of Public Health

¹⁵ Avenell et al (2004) Systematic review of the long term effects and economic consequences of treatments for obesity and implications for health improvement. Health Technology Assessment 8: 1-473

¹⁶ Perez-Pastor EM, Metcalf BS, Hosking J, Jeffery AN, Voss LD and Wilkin TJ. Assortative weight gain in mother-daughter and father—son pairs: an emerging source of childhood obesity. Longitudinal study of trios (EarlyBird 43) ¹⁷ NOO (2012) Child Obesity and Socioeconomic Status

¹⁸ NOO (2011) Obesity and Ethnicity

People living on a low income,

- Among women the proportion classified as overweight or obese varies with socioeconomic status (SES)17
- 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%)

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.
- 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.¹⁹

People with a mental health condition

- There are bi-directional associations between mental health problems and obesity, with levels of obesity, gender, age and socioeconomic status being key risk factors²⁰
- 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.²¹

People with learning disabilities

 Literature reports that there is increased prevalence of obesity and overweight among people with learning disabilities.²²

7.0 What is effective in tacking obesity

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). This is largely down to the existing evidence base failing to take adequate account of the complex nature of the obesity system. Addressing obesity necessitates the need to establish new social norms around eating and physical activity and, given the complex interplay of determinants most experts agree that a 'whole system

²¹ Department of Health (2006) Choosing Health: Supporting the physical health needs of people with severe mental illness.

¹⁹ NICE (2008) Improving the nutrition of pregnancy and breastfeeding mothers and children in low-income households. March 2008. NICE.

²⁰ NOO (2011) Obesity and Mental Health

²² Nocon, A. (2006) Background evidence for the DRC's formal investigation into health inequalities experienced by people with learning disabilities or mental health problems. Disability Rights Commission

approach' is needed. These approaches require the involvement of all organisations from across local systems that tackle the determinants for obesity.

A <u>publication by Public Health England</u> in 2019 highlighted the important role that local authorities have in leading communities and local partners to tackle obesity, including through working with local NHS organisations and integrated care systems. The document sets out the need for areas to utilise systems science whereby its recognised that there is no single solution to obesity and that there is a need for local stakeholders, including communities, to come together, share an understanding of the reality of obesity and consider how the local system is operating and where there are the greatest opportunities for change.

A wealth of guidance has been produced by NICE based on evidence to support the prevention and treatment of obesity across the life course (see appendix 3). Much of the evidence to support overweight children and adults highlights the importance of multi-component approaches that tackle diet, physical activity and behaviour change. Whilst weight management programme remain important in tackling obesity, evidence is increasingly showing that action is needed across all levels of society.

When looking to develop a whole systems approach to obesity it is important to consider the role of different organisations in influencing the determinants of health and how we can influence individual behaviour change. The COM-B Behaviour change wheel (figure 4) provides a useful framework to assist national and local policy makers, as well as stakeholders, to understand the role they can play in influencing people's behaviour.

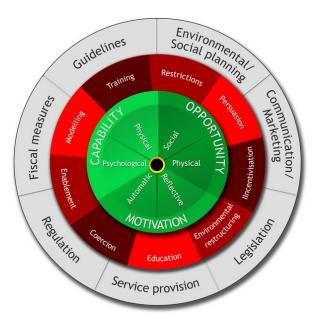


Figure 4 Behaviour change wheel

The COM-B model of behaviour is widely used to identify what needs to change in order for a behaviour change intervention to be effective. For example, at a national level regulatory measures such as introducing the soft drinks industry levy can be effective in reducing sugar consumption through persuasion²³.

Approaches used to influence individual behaviour generally involve the provision of information (education), motivational messages or empowering individuals to make healthy

²³ 'Best buys' and other recommended interventions for the prevention and control of noncommunicable diseases. Geneva: World Health Organization; 2017.

choices. Individual approaches need to be balanced alongside wider interventions that help to make healthier choices easier e.g. encouraging people to cycle to work is of limited value of there are no cycle paths on route (environmental restructuring). A balance has to be found for prevention of obesity at population level, whilst helping those who are already at risk of serious health consequences due their weight.

8.0 Current provision across Herefordshire

Given the complex nature of obesity. It is difficult for this report to outline all services, programmes and initiatives that directly or indirectly have an impact on our body weight. The next section summaries the key interventions in place across the county and gaps in provision.

Within the UK, a four-tiered approach is commonly adopted to achieve and maintain a healthy weight for children and adults - the obesity care pathway. As the severity of excess weight increases, a higher tier of intervention is required and advocated. These tiers are summarised below:

- Tier 1 Universal based prevention and early intervention
- Tier 2 Self-help, community and primary care initiatives
- Tier 3 Specialist services for individuals who makes no progress at Tier 2 or who has an urgent health need to lose weight
- Tier 4 Surgery

Commissioning responsibilities for weight management are unclear given the recent move toward integrated care systems where partnerships of organisations are now coming together to plan and deliver joined up health and care services for their local populations.

Historically, local authorities have had primary commissioning responsibility for tiers 1 and 2, including population level interventions to encourage healthy eating and physical activity, as well as lifestyle related weight management services. Integrated Care Boards (ICB's) have primary commissioning responsibility for tier 3, clinician-led specialist multidisciplinary teams and tier 4 services, including bariatric surgery.

With the introduction of the NHS Long Term Plan, a number of nationally prescribed interventions have been introduced that provide weight management support across the obesity care pathway including the National Diabetes Prevention Programme, the NHS Digital Weight Management Programme and an enhanced weight management specification for primary care (see section 8.22).

Combining a tiered approach with a lifecourse approach we are able illustrate the range of preventive and treatment interventions across Herefordshire (see Appendix 1).

8.1 Tier 1 – Universal Prevention and Early Intervention Programmes

Tier 1 services are described as "activities to help prevent everyone, regardless of their weight, from becoming overweight or obese" (NICE ph47). NICE (2012) recommend a similar model described as a 'sustainable community-wide approach' to obesity prevention that involves a set of integrated services and actions delivered by the many organisations, community services and networks that make up the local system These universal services help raise awareness of the importance of maintaining a healthy weight and develop and promote services, facilities, environments and policies that enable children, young people and their families to eat more healthily and be more physically active.

Tier 1 universal interventions (prevention and reinforcement of healthy eating and physical activity messages), which includes public health and national campaigns, providing brief advice. Tier 1 is delivered by local and regional public health teams, together with the identification and advice, often carried out in a primary care setting, by healthcare professionals such as GPs, nurses, health visitors, school nurses etc. but together with support from pharmacists, local leisure providers and allied organisations.

8.11 Tier 1 - Children

Given that universal provision to ensure children and young people maintain a healthy weight involves an expansive list of services and activities due to numerous determinants that shape our behaviour which are summarised below:

- Health Visiting Service / Healthy Child Programme
- Public Health Nursing Service
- Breastfeeding initiatives
- Children centres
- Personal Social and Health Education (PSHE) in schools
- Solihull Approach –parental support, information and advice on bringing up children and young people
- PE and sport premium for schools (Schools with 16 or fewer eligible pupils receive £1,000 per pupil. Schools with 17 or more eligible pupils receive £16,000 and an additional payment of £10 per pupil)
- Early years settings

The Public Health Nursing service (health visitors and school nurses) which is commissioned by the council and provided by Wye Valley Trust, provides the primary mechanism to promote good health from pregnancy and the first 5-19 years of life.

The programme focuses on a universal preventative service, providing families with a programme of screening, immunisation, health and development reviews, supplemented by advice around health, wellbeing and parenting. This includes advice and support on a number of areas that promote healthy growth including breastfeeding, weaning, physical activity and good nutrition. This service delivers the national child measurement programme (NCMP).

8.12 Tier 1 - Adults

There are a plethora of services and activities that exist across Herefordshire aimed at supporting adults to maintain and achieve a healthy weight. Many of these are provided or commissioned by local authorities, voluntary and the private sector. Some of these include;

- Health walks and other recreational activities
- Leisure Centres
- Sport Clubs
- Active travel

The council currently offers a Making Every Contact Count (MECC) e-learning course. This course is freely available and equips participants with the knowledge and understanding on how to deliver basic health and wellbeing advice and information to people they may come into contact with, who might benefit from making a change to a healthier lifestyle.

General advice, support and signposting to healthy weight initiatives can be found on the council's Talk Community website that is widely promoted across the county

8.2 Tier 2

Tier 2 represents local community weight management services that provide community-based diet, nutrition and behaviour change advice, normally in a group settings and for people with a BMI greater than 30.

8.21 Tier 2 - Children

Herefordshire Council provide limited child weight management services and is therefore a gap within our child weight management pathway. The National Child Measurement Programme (NCMP) provides high-quality, reliable data on child overweight and obesity levels and trends. Letters are sent by Wye Valley Trust to parents of children who are measured and offered some support by the School Nursing Team. However uptake of this service by parents is low. Some further support is provided by Talk Community health trainers if requested by parents, but this primarily addresses parental/adult behaviours, rather than recommendations contained within national guidance on child weight management programmes²⁴

Public health is working with the integrated care board (ICB) and primary care network areas (PCN) areas to develop pilot family weight management and wellbeing projects for 2022-2024.

8.22 Tier 2 - Adults

Herefordshire Council does not currently commission a generic adult weight management Tier 2 service and is therefore a gap within our adult weight management pathway. However, the council currently provides an in-house Healthy Mums programme that supports 'new mums' over 12-weeks focusing on behaviour change. This programme was initially funded with a national grant from the Office for Health Improvement and Disparities (OHID). However, the Government announced in April 2022 that this funding stream would end early due to national budgetary restraints. The Council have currently committed to maintain this provision until March 2023. To date, 11 courses have been delivered across the county with further courses to start during September.

A generic adult weight management Tier 2 programme based on the Healthy Mums approach is being delivered in one PCN area on a trial basis until March 2023.

Whilst not set up as a Tier 2 weight management service, the Council provides a Health Trainer service through Talk Community and funded through the public health grant. The service sees between 200-300 adults each year (excluding those referred for stop smoking) supporting people with healthy eating, being more active and looking after their mental wellbeing. In addition, a referral pathway is in place for any pregnant women with a BMI over 30 for the service to support keeping healthy in pregnancy.

Whilst not all referrals into the service are solely for weight management purposes, data from 2021 showed an average reduction in body weight per service user of 3.86%, which is comparable with other community weight management programmes²⁵. Whilst losing relatively small amounts of weight will likely lead to health benefits, evidence suggests that a weight loss of 5% body weight should be the goal for Tier 2 services to lead to clinical benefits. Recent evidence has shown that people with obesity may be more likely to lose

²⁴ Overview | Weight management: lifestyle services for overweight or obese children and young people | Guidance | NICE

²⁵ 4 Considerations | Weight management: lifestyle services for overweight or obese adults | Guidance | NICE

weight if they attend group sessions for weight loss programmes, rather than having one-to-one support²⁶.

A range of proxy indicators are collected and monitored as part of the health trainers' service. Figure 5 shows differences in service user's physical activity levels at the beginning and the end of the intervention. This is also mirrored in the intake of the service user's fruit and vegetables which reflect positive changes in dietary behaviour (see figure 6. The service does collect data on longer term behaviour change outcomes although this is limited due to lack of follow-up.

Figure 7 shows the uptake of the health trainer service by deprivation with a proportion of referrals from the most deprived areas. Feedback from the Health Trainers service can be found in appendix 4

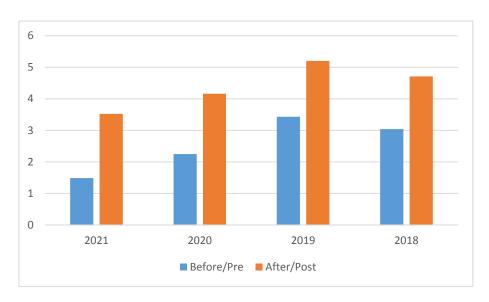


Figure 5 Average Number of Moderate Exercise Sessions of 30mins per week before and after intervention for referrals into the Health Trainer Service

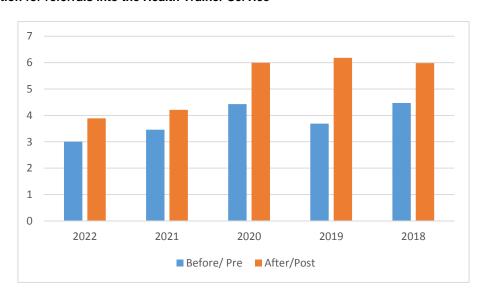


Figure 6 Average Fruit and Veg Per Day for referrals in to the Health Trainer Service

²⁶ Group versus one-to-one multi-component lifestyle interventions for weight management: a systematic review and meta-analysis of randomised controlled trials - Abbott - 2021 - Journal of Human Nutrition and Dietetics - Wiley Online Library

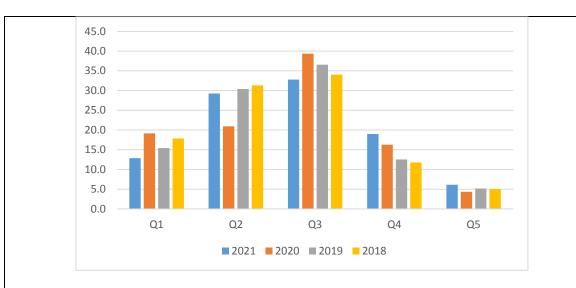


Figure 7 Proportion of referrals to the Health Trainers Service based on deprivation quintile (Q1 = most deprived, Q5 least deprived

Since 2015, the local NHS has commissioned a Diabetes Prevention Programme (NDPP) through a national procurement framework. Whilst the primary aim of the service is to provide behaviour change support to individuals with impaired glucose tolerance (Prediabetes), many of these individual will likely be above a healthy weight. The service is provided by 'Living Well Taking Controls' and offers both a face to face and digital offer. Further analysis needs to be undertaken but data for Herefordshire and Worcestershire indicates that 5340 patients have been referred into the service. Data suggests that of those patients who complete 5 sessions, they achieve an average weight loss of 3.16% body weight, those who complete 9 session achieve 5.10% reduction in body weight and those who complete 13 weeks achieve 6% reduction in body weight. No data are currently available on longer term outcomes.

In 2021, NHS England commissioned a national Digital Weight Management Programme that provides online support for individuals with who also have a diagnosis of diabetes, hypertension or both. Further data on the uptake and outcomes of this service is expected in October 2023.

Following the publication of the 2020 government policy document Tackling obesity, a national enhanced service for GP Practices was launched in 2021. This recognised that there was a need to increase the frequency of interventions for obesity in general practice care with a focus on improving referral pathways into weight management services in every local health care system. The enhanced specification rewards GP Practices for identifying patients living with obesity and signposting them to the most appropriate intervention. All practices in Herefordshire have signed up to the enhanced service.

8.3 Tier 3

Tier 3 comprises specialist weight management clinics that provide non-surgical intensive medical management with an MDT approach that consists of bariatric physicians or GPs with specialist interest, obesity specialist nurses, specialist dietitians and clinical psychologists to identify and manage psychological barriers to weight loss.

8.31 Tier 3 Children

There are no dedicated tier 3 weight management services in Herefordshire for children.

8.32 Tier 3 Adults

Herefordshire does not currently have a bespoke Tier 3 service with the referral pathway to the Gloucestershire Hospitals NHS Foundation Trust, based at Gloucester Royal Hospital. The service offer includes both face to face and virtual support, as well as 1:1 and group sessions. The location of services may present accessibility issues, particularly for those who have poor mobility.

8.4 Tier 4

Tier 4 accounts for bariatric surgery performed in secondary care with pre-operative assessment and post-operative care and support.

8.41 Tier 4 - Children

Surgical intervention is not generally recommended in children or young people. However, bariatric surgery may be considered for young people only in exceptional circumstances, and if they have achieved or nearly achieved physiological maturity. A full medical evaluation, including genetic screening or assessment should be performed before surgery to exclude rare, treatable causes of obesity.²⁷

8.42 Tier 4 - Adults

Following tier 3, tier 4 services for Herefordshire patients are provided by Gloucestershire Hospitals NHS Foundation Trust and based in Gloucester Royal Hospital. Multi-disciplinary approaches are taken with patients support by surgeons, psychologists and dietitians, for pre-operative care and two years of follow up post-surgery.

9.0 Addressing the key determinants across Herefordshire

9.1 Food and Nutrition

Our consumption is driven by food systems (e.g. how food is grown, made and distributed); the community we live in; our individual behaviours and drivers of these behaviours; and economic factors. The food system has changed both locally and nationally, with increased availability of cheaper processed foods which are often high in fat, sugar and salt and consumption of food cooked outside the home. The quality of an individual's diet can therefore be affected by poverty and the causes of poverty; low or lack of income, competing expenditures (such as heating), access to food (including geography) and the food environment, education, family life and food skills of individuals, families and communities.

Improving the food system and diets often has synergistic and broader impacts on wellbeing through wider determinants of health. For example, changes in diet to include greater consumption of healthier foods, and lower consumption of unhealthy foods, would generally improve environmental sustainability, whilst community initiatives to increase skill sharing or local growing schemes can positively impact communities for example through reducing loneliness and improving connectedness.

Evidence has indicated that throughout the pandemic there was a shift towards modified eating behaviours, characterised by an increased snack frequency and a preference for

²⁷ NICE (2014) Obesity: identification, assessment and management CG 189

sweets and ultra-processed food rather than fruits, vegetables, and fresh food. Additionally, an increased alcohol consumption has also been found²⁸. Emerging evidence suggests that children's dietary habits changed with one study indicating that the average intake of fruit in 9-12 years fell from just over one portion a day to half a portion a day²⁹.

In December 2021 the Health and Wellbeing Board endorsed a county-wide approach to becoming a Sustainable Food Place (SFP), with a Food Vision for Herefordshire developed by Herefordshire Food Alliance. The approach recognised that that food plays a key role in economic, environmental and social challenges. This includes obesity, diet related ill health, food poverty, waste and climate change. Food is a key driver of health inequalities. COVID-19 has further shown the vulnerabilities of the food system.

SFP provide a well developed and tested model on which to build our work to ensure a healthier and more sustainable food environment for all in Herefordshire. The SFP framework for strategy and action plan is structured around six key issues:

- 1. Taking a strategic and collaborative approach to good food governance and action
- 2. Building public awareness, active food citizenship and a local good food movement
- 3. Tackling food poverty, diet related ill-health and access to affordable healthy food
- 4. Creating a vibrant, prosperous and diverse sustainable food economy
- 5. Transforming catering and food procurement and revitalizing local and sustainable food supply chains
- 6. Tackling the climate and nature emergency through sustainable food and farming and an end to food waste

With regard to food redistribution specifically, the following key actions are currently being delivered in the county:

- Food redistribution working group created from Food Alliance
- Talk Community healthy lifestyle trainer service and waste team collaborative activity, use of excess food, meal planning, recipe ideas, campaign activity
- Grant recently awarded to Ethos to develop a project focusing on surplus food redistribution across the county.
- Food Alliance partner activity Food banks, Ross community gardens, Herefordshire Helpers
- Herefordshire Council waste team project area focus
- Healthy Lifestyle Trainers are attending Food shares across the county offering advice and support on cooking and eating healthily.

In addition, the council is currently participating in a national school food compliance project in collaboration with The Food Standards Agency and Department of Education.

9.2 Diet and cost of living

With the cost of living crisis there is concern that this may negatively impact on people's diet. Evidence from previous recessions has found that expenditure and calorie consumption in the home fell during the economic downturn of 2008-12, relative to its 2005-07 average. Research conducted by the IFS found that households substituted towards calorie dense items (i.e. from fruit and vegetables towards processed foods). Pensioners, single-parent households and households with young children experienced the largest decline in nutritional quality. However, subsequent analysis, accounting for meals eaten

²⁸ Eating Behaviour Changes during the COVID-19 Pandemic: A Systematic Review of Longitudinal Studies - PMC (nih.gov)
²⁹ Defeyter, G. and Mann, E. 2020. The Free School Meal Voucher Scheme: What are children actually eating and drinking?,

outside of the home, suggests that overall diets improved during the recession. IFS (2015).³⁰

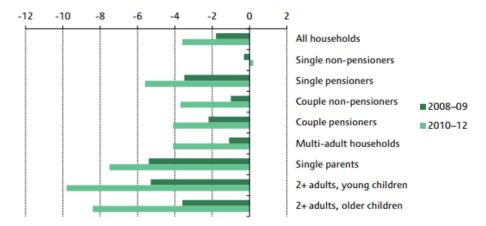


Figure 8 % change in calories purchased, from 2005-07 to 2008-09 and 2010-12

Whilst there is no easy way to count the number of people living in food poverty, in Herefordshire, as in other areas, we have seen increasing numbers of people receiving support from food banks. In 2021, there were 2792 vouchers redeemed at the two main foodbanks at Hereford and Leominster supporting 3784 adults and 2248 children. For the current year, as of August 2022, the numbers were 2102 vouchers supporting 2775 adults and 1398 children. Foodbanks have recently reported their concern that while there has been an increase in demand, there has at the same time been a reduction in food donations. This has meant that their stocks are running low and they are having to spend more money than usual on buying food. A number of Food banks are arranging "food drives" with their local supermarkets, which has raised their profile. The council continue to meet monthly with foodbanks.

In addition to the more formal foodbanks there are also other providers of food through food share such as the St Martins Foodshare in South Wye, Leominster and Kingstone, as well as other local food parcel providers / food larders particularly in Hereford – the Living Room and Putson Baptist Church. Foodbanks work closely with their local supermarkets and other local providers including farmers to use surplus fresh produce.

Holiday Activities Fund (HAF)

The 'Here for Herefordshire Holidays' programme is funded by the Department for Education and provides free activities and a meal to children and young people that are eligible for free school meals. Children and young people can access 16 hours of activities throughout the Easter and Christmas holidays and 64 hours of activities throughout the summer holidays.

30 activity providers are currently running sessions across the county in 2022 with activities on offer such as horse-riding, pottery, drama, dance, outdoor activities, aerial & circus skills, music workshops and Forest school. HALO were able to offer free family activities and sessions for children over the age of 13 to attend independently. The final numbers for this summer have not been completed yet as they are in the final week of the programme, however the number of children booked on to activities is likely to exceed over 1100 and attendance looks as though it has been much better than last summer's HAF programme.

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³⁰ WP201529.pdf (ifs.org.uk)

Last year the Council had just over 950 children book on to activities, with 780 attending at least one activity. There has been an increase in the number of children 5 – 15 years eligible for FSM, last year it was approximately 3600 this year it is approximately 4000.

9.3 Physical Activity

Physical inactivity is the fourth leading risk factor for global mortality accounting for 6% of deaths globally. People who have a physically active lifestyle have a 20-35% lower risk of cardiovascular disease, coronary heart disease and stroke compared to those who have a sedentary lifestyle. Regular physical activity is also associated with a reduced risk of diabetes, obesity, osteoporosis and colon/breast cancer and with improved mental health. 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. Physical activity is important for children and young people's healthy growth and development as well as helping to prevent a range of long-term medical conditions, including obesity.

9.31 Herefordshire's Physical Activity Strategy

Herefordshire's Physical Activity Strategy (2021-26) was <u>ratified by the Health and Wellbeing Board in March 2022</u>. The strategy sets out a goal of every person having the opportunity to: 'get moving, be active, feel better, keep well and enjoy healthier lives as part of everyday life in their local community'. Work undertaken to date to progress delivery of the strategy includes:

- The establishment of a physical activity multi-agency steering group to oversee delivery of the strategy
- Collaborative communications plan under development
- Piloting physios based in community settings started
- Collaborating with partners to target resources more effectively

9.32 Get Active Programme

As part of the Covid-19 economic and recovery plan, Herefordshire Council invested £850,000 Government Grant funding to an initiative called Get Active. The aim of *Get Active* was to increase opportunities for individuals of all ages to become more active and experience new opportunities through culture and leisure facilities.

The programme's focus was on supporting physical activity, in particular enabling inactive people to become more physically active through a combination of support to address barriers to participation and a diversification of opportunities to be more active, including improved infrastructure and access to green space.

The Programme includes seven elements directly delivered by a partner organisation or service:

- Individual health assessments and healthy lifestyle support and guidance, delivered by Talk Community Health and Wellbeing Trainers
- 2. Active Families programme, delivered by Stride Active; 157 clients engaged, 11 schools involved.
- 3. Continuing Professional Development (CPD) for school PE leads to diversify opportunities for school children to be physically active, delivered by Stride Active; Training delivered to 20 staff on various activities
- 4. Free gym membership for 15-18 year olds, delivered by HALO Leisure; 1,708 individuals
- 5. Leisure events and taster activities, delivered by HALO Leisure;

- 6. Development of walking groups for adults, delivered by Active Herefordshire and Worcestershire; 3 new walks created
- 7. Delivery of 12-week physical activity taster opportunities for adults, delivered by Active Herefordshire and Worcestershire.

9.4 Build Environment

Planning authorities can influence the built environment to improve health and reduce the extent to which it promotes obesity³¹. In particular, there is growing evidence³² that the number and density of fast food outlets adversely impacts on body weight with some local authorities³³ using their planning powers to restrict the numbers of fast food outlets in their areas. The council does not currently have a Health Impact Assessment (HIA) in place and work is underway to understand the opportunities for specific Supplementary Planning Documents to ensure new developments provide health enhancing environments that facilitate healthy behaviours.

9.41 Active Travel

A key priority for the council is 'to improve and extend active travel options across the council'. Evidence suggest that individuals switching to physically active forms of travel can have beneficial effects on body weight in addition to benefits for the environment³⁴³⁵

The Sustainability & Climate Team deliver and manage a range of schemes to increase Active Travel. Some of these are summarised below:

Cycling

- Bikeability provides cycle training to Primary school age children, Courses are delivered by Bike Right.
- Children's cycling activities delivered in school holidays, from Balance bikes up
- Adult Cycle lessons 1-2-1 sessions available to 16 + for starters, to build confidence or learn new routes or as a refresher
- Bike Loans to support lessons and build confidence
- Beryl bikes Low-cost easy access to travel for work and leisure
- E Beryl bikes making cycling more accessible

Walking

- Walk to School Promoting and supporting increased walking to school, delivered by Stride Active, delivering assemblies, lesson and walking challenges
- Get Walking Virtual walking routes to support and encourage regular walking
- Led Nordic Walking to encourage activity, build capability and confidence

Business

- Grant schemes for Business bikes and parking provide access to active travel at work and encourages increased cycle to work
- Travel to Work Network- Provides members with travel information, supports travel planning

³¹ Obesity and the environment: increasing physical activity and active travel (publishing.service.gov.uk)

³² Weight gain in mid-childhood and its relationship with the fast food environment | Journal of Public Health | Oxford Academic (oup.com)

³³ Putting the brakes on fast food - evaluating the use of planning policy to support public health - ARC (nihr.ac.uk)

³⁴ Obesity and the environment: increasing physical activity and active travel (publishing.service.gov.uk)

³⁵ Associations of active travel with adiposity among children and socioeconomic differentials: a longitudinal study | BMJ Open

Information and support

- Travel planning in schools and businesses
- Park& Share and Park & Cycle supports active commuting
- Signed walking and cycling routes provide directions and time to destination
- Maps and route planning building knowledge of the network, supports leisure

10.0 Finance

Whilst tackling obesity is a public health issue, it is recognised that many departments across the council (as well as external partners) have a key role in influencing the determinants that create environments that shape our dietary and physical activity behaviours. This therefore makes it challenging to understand the overall investment in obesity related services across the county with this regard

Public Health are best placed to drive the local leadership and strategies to promote healthy weight and are also responsible for commissioning weight management, although this is not at statutory requirement of the public health grant. A summary of current recurrent funding within the public health grant on obesity is as follows:

Intervention Service	Recurrent budget
Public Health Nursing	£2,504,500
Adult Weight Management Bespoke	£0
Adult Weight Management (Health Trainers)	£260,000 (approx.)
Children Weight Management	£0
Active Travel Initiatives via Highways and Transport	£294,000

Table 2 High level of spend within the public health grant against obesity related activities

11.0 Conclusion and key areas for policy development

This report provides a high level summary of the services, activities and interventions that are in place to support people in maintaining and achieving a healthy weight. There are a number of areas where the Committee may wish to consider making recommendations to improve provision in Herefordshire, including:

- Embed healthy weight as a strategic priority across local organisations and agencies by working with all key partners to develop a greater understanding of the causes of obesity and how best to deliver collective action through a whole system approach
- 2. Assess the impact of the current gaps in the county's weight management services in order to allocate sufficient resources as appropriate:
 - Tier 2 child and adult weight management services
 - Tier 3 child and adult weight management services NHS/ICB priority
 - Tier 4 adult weight management service NHS/ICB priority
- 3. Encourage health professionals and residents to identify ways in which patients can do more to help themselves through promotion of digital and self-help resources
- 4. Work with the planning department to develop and implement a Health Impact Assessment Tool to ensure health is considered in all planning decisions
- 5. Improve the quality of data on weight management services and obesity across the life course with a particular focus on long-term outcomes
- 6. Develop a training package around 'raising the issue of weight' for health practitioners and other front line workers to give them confidence to identify and elicit positive behaviour change in individuals

- 7. Build on the Sustainable Food Partnership to deliver collective action through a systems approach
- 8. Undertake further mapping of weight management services (and compliance with NICE Guidance) and raising awareness of the Weight Management to health practitioners across the county, including the service offer, eligibility criteria etc
- 9. Consider a consistent approach to the type of language and media used to communicate about obesity, tailoring language to the situation and co-producing communications with intended audiences

11.0 Background papers

Whole systems approach to obesity: A guide to support local approaches to promoting a healthy weight, Professor Paul Gately, Professor of Exercise and Obesity - Leeds Beckett University, Dr Duncan Radley, Senior Research Fellow - Leeds Beckett University.

Tackling obesities: future choices - <u>Tackling obesities: future choices - GOV.UK</u> (www.gov.uk)

Spotlight review concerning dental health and childhood obesity, Herefordshire Council, September 2018.

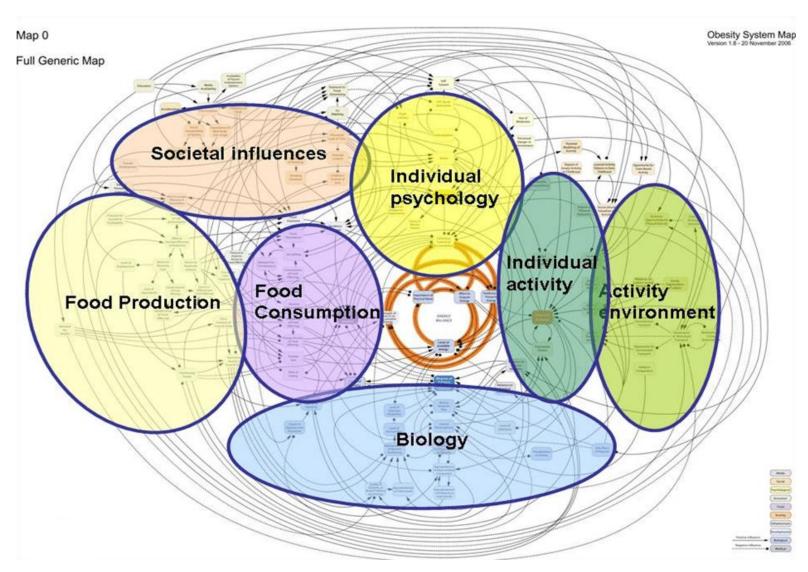
https://councillors.herefordshire.gov.uk/documents/s50063205/Appendix%202%20-%20Spotlight%20review%20concerning%20dental%20health%20and%20childhood%20 obesity%20task%20and%20finish%20group%20r.pdf

Herefordshire Health and Wellbeing Strategy, Priority 5:

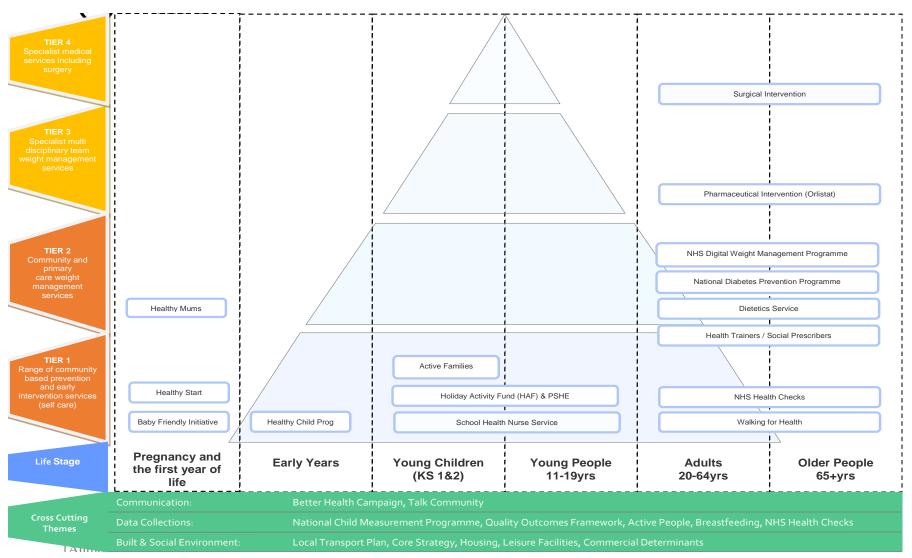
For adults – long term conditions, lifestyles(alcohol, weight, active lifestyles, smoking prevention, mental health)

Requested for and on behalf of the Health Care and Wellbeing Scrutiny Committee		
	Councillor Elisa Swinglehurst – Chairperson HCWSC	
Michael Carr – Interim Statutory Scrutiny Officer		
	Michael.Carr@herefordshire.gov.uk	
	Ben Baugh – Democratic Services Officer	
	Ben.Baugh@herefordshire.gov.uk	
Date Requested:	22 nd August 2022	

Appendix 1



Appendix 2 – A pyramid pictorially reflecting the different level of healthy weight interventions from universal provision through to services to meet individual care needs



Appendix 3 – Summary of NICE Guidance related to obesity

NICE guidance	Recommendations
	Pregnancy and Maternity
Weight management before, during and after pregnancy [PH27] - July 2010	This is NICE's formal guidance on dietary interventions and physical activity interventions for weight management before, during and after pregnancy:
http://www.nice.org.uk/guidance/ph27	 Weight management includes assessing and monitoring body weight, preventing someone from becoming overweight or obese, helping someone to achieve and maintain a healthy weight before, during and after pregnancy by eating healthily and being physically active and gradually losing weight after pregnancy Effective weight-loss programmes address the reasons why someone might find it difficult to lose weight, are tailored to individual needs and choices, are sensitive to the person's weight concerns, are based on a balanced, healthy diet, encourage regular physical activity, expect people to lose no more than 0.5–1 kg (1–2 lb) a week, identify and address barriers to change. Health professionals to use any opportunity to provide women with a BMI of 30 or more with information about the health benefits of losing weight before becoming pregnant. This should include information on the increased health risks their weight poses to themselves and would pose to their unborn child. Health professionals should offer specific dietary advice in preparation for pregnancy, including the need to take daily folic acid supplements. 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. Offer practical and tailored information. This includes advice on how to use Healthy Start vouchers. Use 6–8-week postnatal check to follow up. Dieting during pregnancy is not recommended as it may harm the health of the unborn child

 Offer women with a BMI of 30 or more after childbirth a structured weight-loss programme. If more appropriate, offer a referral to a dietitian or an appropriately trained health professional.
Encourage breastfeeding
 Offer women with babies and children the opportunity to take part in a range of physical or recreational activities. This could include swimming, organised walks, cycling or dancing. Activities need to be affordable and available at times that are suitable
 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. Ensure they have the communication

Antenatal and postnatal mental health: clinical management and service guidance [CG192] - December 2014

http://www.nice.org.uk/guidance/cg192

This guideline covers recognising, assessing and treating mental health problems in women who are planning to have a baby, are pregnant, or have had a baby or been pregnant in the past year. It covers depression, anxiety disorders, eating disorders, drug- and alcohol-use disorders and severe mental illness.

techniques needed to broach the subject of weight management in a sensitive manner.

- Assessment and care planning in pregnancy and the postnatal period should include physical wellbeing (including weight, smoking, nutrition and activity level) and history of any physical health problem
- Advise pregnant women taking antipsychotic medication about diet and monitor for excessive weight gain

Weight Management - Children and Young People

Weight management: lifestyle services for overweight or obese children and young people NICE guidelines [PH47] - October 2013 https://www.nice.org.uk/guidance/ph47

This guidance makes recommendations on lifestyle weight management (sometimes called tier 2) services for overweight and obese children and young people aged under 18. These services are just one part of a comprehensive approach to preventing and treating obesity.

• Ensure family-based, multi-component lifestyle weight management services for children and young people are available as part of a community-wide, multi-agency approach to promoting a healthy weight and preventing and managing obesity. They should be provided as part of a locally agreed obesity care or weight management pathway.

- Ensure all lifestyle weight management programmes for overweight and obese children and young people are multi-component. They should focus on:
 - diet and healthy eating habits
 - physical activity
 - reducing the amount of time spent being sedentary
 - o strategies for changing the behaviour of the child or young person and all close family members.
- Ensure the following core components, developed with the input of a multidisciplinary are included:
 - Behaviour-change techniques to increase motivation and confidence in the ability to change. This includes strategies to help the family identify how changes can be implemented and sustained at home.
 - Positive parenting skills training, including problem-solving skills, to support changes in behaviour.
 - An emphasis on the importance of encouraging all family members to eat healthily and to be physically active, regardless of their weight.
 - A tailored plan to meet individual needs, appropriate to the child or young person's age, gender, ethnicity, cultural background, economic and family circumstances, any special needs and how obese or overweight they are. This should include helping them and their family to set goals, monitor progress against them and provide feedback (see recommendation 4).
 - o Information and help to master skills in, for example, how to interpret nutritional labelling and how to modify culturally appropriate recipes on a budget.
 - Help to identify opportunities to become less sedentary and to build physical activity into their daily life (for example, by walking to school and through active play).
 - A range of physical activities (such as games, dancing and aerobics) that the children or young people enjoy and that can help them gradually become more active.
 - Information for family members who may not attend the programme itself to explain the programme's aims and objectives and how they can provide support.

	 Ongoing support and follow-up for participants who have completed the programme. Ensure all lifestyle weight management programmes are designed and developed with input from a multidisciplinary team and have taken into account the views of children, young people and their families. The team should include professionals who specialise in children, young people and weight management. Local authorities should ensure an up-to-date list of local lifestyle weight management programmes for children and young people is maintained. This should form part of a list of services commissioned for the local obesity care or weight management pathway. It should be regularly disseminated, or accessible to organisations in the public, community and voluntary sectors.
Obesity in children and young people: prevention and lifestyle weight management programmes NICE quality standard [QS94] - July 2015 https://www.nice.org.uk/guidance/QS94	This quality standard covers a range of approaches at a population level to prevent children and young people aged under 18 years from becoming overweight or obese. It includes interventions for lifestyle weight management. Statement 1. Children and young people, and their parents or carers, using vending machines in local authority and NHS venues can buy healthy food and drink options. Statement 2. Children and young people, and their parents or carers, see details of nutritional information on menus at local authority and NHS venues. Statement 3. Children and young people, and their parents or carers, see healthy food and drink choices displayed prominently in local authority and NHS venues. Statement 4. Children and young people, and their parents or carers, have access to a publicly available up-to-date list of local lifestyle weight management programmes. Statement 5. Children and young people identified as being overweight or obese, and their parents or carers as appropriate, are given information about local lifestyle weight management programmes.

Statement 6. Family members or carers of children and young people are invited to attend lifestyle weight management programmes, regardless of their weight.

Statement 7. Children and young people, and their parents or carers, can access data on attendance, outcomes and the views of participants and staff from lifestyle weight management programmes.

Statement 8. (placeholder) Reducing sedentary behaviour.

Weight Management CYP & Adults

Obesity: clinical assessment and management NICE quality standard - [QS127] August 2016 https://www.nice.org.uk/guidance/QS127

This quality standard covers the clinical assessment and management of obesity in children, young people and adults. This includes those with established comorbidities and those with risk factors for other medical conditions.

Statement 1. People are informed of their BMI when it is calculated and advised about any associated health risks.

Statement 2. Adults with a BMI of 30 or more for whom tier 2 interventions have been unsuccessful have a discussion about the choice of alternative interventions for weight management, including tier 3 services.

Statement 3. Children and young people who are overweight or obese and have significant comorbidities or complex needs are referred to a paediatrician with a special interest in obesity.

Statement 4. Adults with a BMI of 35 or more who have been diagnosed with type 2 diabetes within the past 10 years are offered an expedited referral for bariatric surgery assessment.

Statement 5. Adults with a BMI above 50 are offered a referral for bariatric surgery assessment.

Statement 6. People who have had bariatric surgery have a postoperative follow-up care package within the bariatric surgery service for a minimum of 2 years.

	Statement 7. People discharged from bariatric surgery service follow-up are offered monitoring of nutritional status at least once a year as part of a shared-care model of management.
Obesity: identification, assessment and management [CG189]- November 2014 http://www.nice.org.uk/guidance/cg189	This guideline addresses three main areas: follow-up care packages after bariatric surgery; the role of bariatric surgery in the management of recent-onset type 2 diabetes; and very-low-calorie diets including their effectiveness, and safety and effective management strategies for maintaining weight loss after such diets.
	 Measures of overweight and obesity Use BMI as a practical estimate of adiposity in adults. Interpret BMI with caution because it is not a direct measure of adiposity. Interpret BMI with caution in highly muscular adults as it may be a less accurate measure of adiposity in this group. Some other population groups, such as people of Asian family origin and older people, have comorbidity risk factors that are of concern at different BMIs (lower for adults of an Asian family origin and higher for older people Think about using waist circumference, in addition to BMI, in people with a BMI less than 35 kg/m2 For children use BMI (adjusted for age and gender) as a practical estimate of adiposity in children and young people. Interpret BMI with caution because it is not a direct measure of adiposity. Waist circumference is not recommended as a routine measure. Equip specialist settings for treating people who are severely obese with, for example, special seating and adequate weighing and monitoring equipment, larger scanners & beds in hospitals Tailor the components of the planned weight management programme to the person's preferences, initial fitness, health status and lifestyle. Multicomponent interventions (physical activity / diet / behaviour change) are the treatment of choice.

- Ensure that interventions for children who are overweight or have obesity address lifestyle within the family and in social settings
- Offer regular, non-discriminatory long-term follow-up by a trained professional for adults and children
- Use clinical judgement to decide when to measure a person's height and weight.
 Opportunities include registration with a general practice, consultation for related conditions (such as type 2 diabetes and cardiovascular disease) and other routine health checks.
- The level of intervention should be higher for patients with comorbidities / high risk groups – levels of intervention to start with general advice on healthy weight and lifestyle at level 1 – at level 4 interventions should include diet and physical activity; consider drugs; consider surgery
- Recognise that surprise, anger, denial or disbelief about their health situation may diminish people's ability or willingness to change. Stress that obesity is a clinical term with specific health implications, rather than a question of how people look. Praise successes in losing weight however small
- Consider referral to an appropriate specialist for children who are overweight or obese and have significant comorbidities or complex needs (for example, learning disabilities or other additional support needs).
- Give people who are overweight or obese, and their families and/or carers, relevant information on treatments / risks / self-care / support from the VCS
- Encourage adults & children to increase their level of physical activity even if they do not lose weight as a result
- Consider pharmacological treatment only after dietary, exercise and behavioural approaches have been started and evaluated (drug treatment not recommended for children under 12)
- Bariatric surgery is a treatment option for people with obesity if they have a BMI of 40 kg/m2 or more, or between 35 kg/m2 and 40 kg/m2 and other significant disease and where all appropriate non-surgical measures have been tried but the person has not achieved or maintained adequate, clinically beneficial weight loss.
- Bariatric surgery is the option of choice (instead of lifestyle interventions or drug treatment) for adults with a BMI of more than 50 kg/m2 when other interventions have not been effective.

•	Surgery for obesity should be undertaken only by a multidisciplinary team that can provide			
	appropriate pre-operative and post-operative support, including psychological -			
	minimum of 2 years follow-up care. Following that, annual monitoring of nutritional status			
	and appropriate supplementation according to need			

- Surgical intervention is not generally recommended in children or young people. Bariatric
 surgery may be considered for young people only in exceptional circumstances, and if they
 have achieved or nearly achieved physiological maturity.
- Offer an expedited assessment for bariatric surgery to people with a BMI of 35 or over who have recent-onset type 2 diabetes

Weight Management Adults

Obesity in adults: prevention and lifestyle weight management programmes

NICE quality standard [QS111] - January 2016 https://www.nice.org.uk/guidance/QS111 This quality standard covers ways of preventing adults (aged 18 and over) from becoming overweight or obese and the provision of lifestyle weight management programmes for adults who are overweight or obese. Although local definitions vary, these programmes are usually tier 2 interventions that may include weight management programmes, courses or clubs, and form 1 part of a comprehensive approach to preventing and treating obesity.

This quality standard does not cover specialist management (tier 3 interventions) or bariatric surgery (tier 4 intervention).

Statement 1. Adults using vending machines in local authority and NHS venues can buy healthy food and drink options.

Statement 2. Adults see details of nutritional information on menus at local authority and NHS venues.

Statement 3. Adults see healthy food and drink choices displayed prominently in local authority and NHS venues.

Statement 4. Adults have access to a publicly available, up-to-date list of local lifestyle weight management programmes.

Statement 5. Adults can access data on attendance, outcomes and views of participants and staff from locally commissioned lifestyle weight management programmes.

Statement 6. Adults identified as being overweight or obese are given information about local lifestyle weight management programmes.

Statement 7. Adults identified as overweight or obese, with comorbidities are offered a referral to a lifestyle weight management programme.

Statement 8. Adults about to complete a lifestyle weight management programme agree a plan to prevent weight regain.

Weight management: lifestyle services for overweight or obese adults

[PH53] - May 2014

http://www.nice.org.uk/guidance/ph53/chapter/1-recommendations

This guideline makes recommendations on the provision of effective multi-component lifestyle weight management services for adults who are overweight or obese (aged 18 and over). It covers weight management programmes, courses, clubs or groups that aim to change someone's behaviour to reduce their energy intake and encourage them to be physically active.

The aim is to help meet a range of public health goals. These include helping reduce the risk of the main diseases associated with obesity, for example: coronary heart disease, stroke, hypertension, osteoarthritis, type 2 diabetes and various cancers (endometrial, breast, kidney and colon).

- Adopt an integrated approach: Ensure there is an integrated approach to preventing and managing obesity and its associated conditions. Systems should be in place to allow people to be referred to, or receive support from (or across) the different service tiers of an obesity pathway. All the options in the local obesity pathway should be made clear to both professionals and the public.
- Ensure services cause no harm and treat people with respect
- Be aware of the effort needed to lose weight and harm caused by stigma
- Ensure the tone and content of all communications is respectful and non-judgemental
- Raise awareness of local weight management issues and services with commissioners, professionals and the public
- Commission services that are effective address both weight loss and maintaining weight loss
 - Multi-component: diet, activity, behaviour

- o Multidisciplinary: dieticians, psychologists and physical activity instructors
- Focus on life-long change
- o For funded referrals, note that:
 - programmes may particularly benefit adults who are obese (that is, with a BMI over 30 kg/m2, or lower for those from black and minority ethnic groups) or with other risk factors (comorbidities such as type 2 diabetes)
 - where there is capacity, access for adults who are overweight should not be restricted (that is, for people with a BMI between 25 to 30 kg/m2, or lower for those from black and minority ethnic groups) or with other risk factors (comorbidities such as type 2 diabetes)
 - there should be no upper BMI or upper age limit for referral.
- Address the expectations and information needs of adults thinking about joining a lifestyle weight management programme
 - Discuss the importance and wider benefits of adults who are overweight or obese making gradual, long-term changes to their dietary habits and physical activity levels.
 - Discuss realistic weight-loss goals. People should be aware that: The more weight they lose, the greater the health benefits, particularly if someone loses more than 5% of their body weight and maintains this for life.
 - On average, people attending a lifestyle weight management programme lose around 3% of their body weight, but this varies a lot.
 - Preventing future weight gain and maintaining a lower weight trajectory leads to health benefits.
- Provide national sources of information
- Provide training and continuing professional development on lifestyle weight management for health and social care professionals
- Monitor and evaluate progress and effectiveness

BMI: preventing ill health and premature death in
black, Asian and other minority ethnic groups
[DH46] - July 2013

http://www.nice.org.uk/guidance/ph46/chapter/1-Recommendations

This guidance aimed to determine whether lower cut-off points should be used for black, Asian and other minority ethnic groups in the UK as a trigger for lifestyle interventions to prevent conditions such as diabetes, myocardial infarction or stroke.

- Use lower thresholds to trigger action to prevent type 2 diabetes among Asian (South Asian and Chinese) population (23 kg/m2 to indicate increased risk and 27.5 kg/m2 to indicate high risk)
- Extend the use of lower BMI thresholds to trigger action to prevent type 2 diabetes among black African and African-Caribbean populations
- Raise awareness of practitioners and within the BME community that there is an increased risk of chronic health conditions at a lower BMI

Behaviour Change

Maintaining a healthy weight and preventing excess weight gain among adults and children

[NG7] - March 2015

http://www.nice.org.uk/guidance/NG7/chapter/1-recommendations

This guideline makes recommendations on behaviours that may help people maintain a healthy weight or prevent excess weight gain:

- Advice for parents and carers to encourage physical activity and appropriate dietary habits in adults and children and:
- Identify perceptions, habits or situations that may undermine efforts to maintain a
 healthy weight or prevent excess weight gain in the long term, and offer practical
 examples of helpful alternatives. These may include: drinking water instead of drinks
 containing free sugars while being physically active, not overestimating how much
 physical activity is being done, avoiding overeating after being physically active
- Increase regular walking, particularly brisk walking, or cycling as a form of active travel (to school, work or other local destinations)
- Encourage adults to limit alcohol consumption
- Help children and encourage young people to get enough sleep
- Encourage self-monitoring of weight and amount of physical activity
- Communicate benefits of a healthy weight, and of gradual improvements in physical activity and diet
- Tailor messages for specific groups

Behaviour change:	: individual	approaches
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[PH49] - January 2014

http://www.nice.org.uk/guidance/ph49/chapter/1-recommendations

This guidance makes recommendations on individual-level behaviour change interventions aimed at changing the behaviours that can damage people's health. It includes a range of approaches for people aged 16 and over, from single interventions delivered as the opportunity arises to planned, high intensity interventions that may take place over a number of sessions.

- Develop a local behaviour change strategy
- Ensure organisational strategy, policy, resources and training all support behaviour change
- Commission high-quality behaviour change interventions that take local need into account
- Use proven behavioural change techniques
- Commission suitable training for all health and social care professionals and others involved in helping to change people's behaviour
- Monitor and evaluate programme success ensure behaviour change is maintained for at least a year

Physical Activity

Physical activity and the environment - [PH8] January 2008

http://www.nice.org.uk/guidance/ph8

This guidance offers the first evidence-based recommendations on how to improve the physical environment to encourage physical activity. It is for NHS and other professionals who have responsibility for the built or natural environment.

- Involve all local communities and experts at all stages of the development to ensure the potential for physical activity is maximised.
- Ensure planning applications for new housing developments / new workplaces always
 prioritise the need for people (including those whose mobility is impaired) to be
 physically active as a routine part of their daily life.
- Ensure local facilities and services, workplaces, homes and school are easily accessible on foot, by bicycle and by other modes of transport involving physical activity.
- Ensure children can participate in physically active play in and outside of school grounds
- Ensure pedestrians, cyclists and users of other modes of transport that involve physical activity are given the highest priority when developing or maintaining streets and roads. (This includes people whose mobility is impaired.)

	During building design or refurbishment, ensure staircases are designed and positioned to encourage people to use them
Physical activity: for NHS staff, patients and carers NICE quality standard [QS84] March 2015 https://www.nice.org.uk/guidance/QS84	This quality standard covers encouraging physical activity in people of all ages who are in contact with the NHS, including staff, patients and carers. It does not cover encouraging physical activity for particular conditions.
	Statement 1. Adults having their NHS Health Check are given brief advice about how to be more physically active.
	Statement 2. Parents or carers of children are given advice about physical activity during their child's Healthy Child Programme 2-year review.
	Statement 3. Parents or carers of children are given advice about physical activity as part of the National Child Measurement Programme (NCMP).
	Statement 4. NHS organisations have an organisation-wide, multi-component programme to encourage and support employees to be more physically active.
Physical activity: walking and cycling NICE guidelines [PH41] - November 2012 https://www.nice.org.uk/guidance/ph41/chapter/1-	This guidance aims to set out how people can be encouraged to increase the amount they walk or cycle for travel or recreation purposes.
recommendations	 Ensure a senior member of the public health team is responsible for promoting walking and cycling. Ensure the joint strategic needs assessment, the joint health and wellbeing strategy and other local needs assessments and strategies take into account opportunities to increase
	 walking and cycling. Ensure walking and cycling are considered, alongside other interventions, when working to achieve specific health outcomes in relation to the local population (such as a reduction in the risk of cardiovascular disease, cancer, obesity and diabetes, or the promotion of mental wellbeing[
	 Ensure local, high-level strategic policies and plans (esp local authorities) support and encourage both walking and cycling. This includes a commitment to invest sufficient

	 resources to ensure more walking and cycling – and recognition that this will benefit individuals and the wider community. Help those interested in changing their travel behaviour to make small, daily changes by commissioning personalised travel planning programmes. Address infrastructure and planning issues that may discourage people from wanting to cycle or walk, for example, motor traffic volume and speed, lack of convenient road crossings, poorly maintained footways and cycle paths or lack of dropped kerbs, Develop strategies in consultation with staff (and other relevant stakeholders, for example, students in universities and colleges) to promote walking and cycling in and around the workplace
Physical activity: brief advice for adults in primary care NICE guidelines [PH44] Published date: May 2013 https://www.nice.org.uk/guidance/ph44	The guideline is for commissioners of health services and anyone working in primary care whose remit includes offering lifestyle advice. Examples include: exercise professionals, GPs, health trainers, health visitors, mental health professionals, midwives, pharmacists, practice nurses, physiotherapists. Identify adults who are not currently meeting the UK physical activity guidelines Advise adults who have been assessed as being inactive to do more physical activity, with the aim of achieving the UK physical activity guidelines. Emphasise the benefits of physical activity. Provide information about local opportunities to be physically active for people with a range of abilities, preferences and needs. When commissioning services to prevent or treat conditions such as cardiovascular disease, type 2 diabetes and stroke or to improve mental health, ensure brief advice on
	 physical activity is incorporated into the care pathway. Ensure brief advice on physical activity is incorporated into services for groups that are particularly likely to be inactive. This includes people aged 65 years and over, people with a disability and people from certain minority ethnic groups. Ensure systems such as Read Codes are being used to identify opportunities to assess people's physical activity levels and deliver brief advice. Ensure resources (for example, standard documents a Provide information and training for primary care practitioners to do the above

Communities	
Obesity: working with local communities- [PH42] November 2012 http://www.nice.org.uk/guidance/ph42	This guidance aims to support effective, sustainable and community-wide action to prevent overweight and obesity in adults and overweight and obesity in children. It sets out how local communities, with support from local organisations and networks, can achieve this.
	Guiding principles • Community Engagement
	Behaviour Change
	 Cultural appropriateness (to take account of the community's cultural or religious beliefs and language and literacy skills)
	Recommendations
	 Develop a sustainable, community-wide, multi-agency, approach
	 Support leadership at all levels to tackle obesity
	 Work with local champions
	 Fund small-scale community led projects
	Effective communications
	 Involve the community, local businesses and social enterprises- integrated approach in identifying their priorities in relation to weight issues, co-produce action
	 Local authorities and the NHS can be exemplars of good practice (help staff / service users and wider community to achieve a healthy weight)
	Monitor and evaluate appropriately
	Embed organisational development and training
Preventing obesity and helping people to manage their weight	This briefing summarises NICE's recommendations for local authorities and partner organisations on preventing people becoming overweight and obese and helping them to manage their
NICE advice [LGB9] Published date: May 2013 https://www.nice.org.uk/advice/lgb9	weight.
	Basic principles
	Obesity is a complex problem for which there is no simple solution. It cannot be
	addressed through single interventions undertaken in isolation.

- NICE recommendations on preventing obesity and helping people to manage their weight should be undertaken in parallel, wherever possible. They should also:
 - be implemented as part of a broad approach, which involves a variety of organisations, community services and networks operating at a range of levels
 - be implemented as part of integrated programmes that address the whole population, but also address local health inequalities, for example, within specific neighbourhoods
 - be underpinned by a robust, community-wide approach that includes monitoring and evaluation
 - comprise specific actions commissioned to meet local needs and priorities, for example, to encourage healthy eating and physical activity and to develop community programmes to combat obesity.

Specific actions to meet local needs

Encouraging healthy eating

- Make people aware of their eligibility for welfare benefits and other schemes that supplement the family food budget.
- Use existing powers to control the number of take-aways and other food outlets in a given area, particularly near schools.
- Local authority and NHS commissioners could make a difference by ensuring healthier choices are included in catering contracts and are promoted through pricing and educational initiatives.

Encouraging physical activity

- Work in partnership to create and manage more safe spaces for incidental and planned physical activity, addressing any concerns about safety, crime and inclusion. Audit and amend bye laws that prohibit games. For details see public open spaces and children and young people on NICE's 'Physical activity' pathway.
- Plan local facilities and services to ensure they are accessible on foot or by bicycle. For details see environment and physical activity on NICE's 'Physical activity' pathway.
- Ensure leisure services are affordable, culturally acceptable and accessible by public transport or by safe 'active travel' routes. Ensure provision is made for women who wish

- to breastfeed. For details see local strategy, policy and commissioning for physical activity and women before, during and after pregnancy on NICE's 'Physical activity' pathway.
- Consider pedestrians and cyclists when designing, developing or maintaining streets or roads, for example, by introducing traffic calming measures.

Developing community programmes to combat obesity

- Ensure obesity prevention programmes are highly visible and easily recognisable. Consider adapting a widely known brand for use locally (such as the Department of Health's Change4Life). For details see branding on NICE's 'Obesity: working with local communities' pathway.
- Consider the type of language and media used to communicate about obesity, tailoring language to the situation or intended audience. Ensure messages are consistent and clear. For details see language on NICE's 'Obesity: working with local communities' pathway and conveying healthy lifestyle messages to the local community on NICE's 'Preventing type 2 diabetes' pathway.
- Address local people's concerns about issues such as the cost of eating more healthily or being more physically active and the perceived dangers of children playing outside. For details see recommendations for local authorities about community programmes to improve diet on NICE's 'Diet' pathway.
- Train lay or peer workers from black and minority ethnic communities and lower socioeconomic groups to promote physical activity and healthy eating.

Commissioning community weight management programmes

- Commission lifestyle weight management services from either NHS or non-NHS
 providers. Ensure they meet the needs of high risk groups . For details see using
 community resources and lay and peer workers to tailor interventions and target
 communities at high risk of type 2 diabetes on NICE's 'Preventing type 2 diabetes'
 pathway.
- Ensure lifestyle weight management services meet current best practice guidance.
- Work in partnership with NHS colleagues, leisure services and providers of weight management services to support women who wish to lose weight after childbirth.

Ensuring local authorities and their NHS partners are exemplary employers

- Set an example by ensuring on-site catering offers healthier choices.
- Encourage physical activity by improving the décor and signposting of stairs, and by providing showers and secure cycle parking to encourage active travel.
- Offer lifestyle weight management services for overweight or obese staff who would like support to manage their weight.

Involving local businesses and social enterprises

- Encourage local organisations and businesses to recognise their corporate social responsibilities in relation to health and wellbeing. For example, they should ensure the range and content of the food and drink sold does not create an incentive to over-eat and gives people the opportunity to eat healthily.
- For details see involving local businesses and social enterprises on NICE's 'Obesity: working with local communities' pathway.
- Encourage local organisations to provide information, such as the calorie content of meals, on menus. For details see promoting a healthy diet – local action on NICE's 'Preventing type 2 diabetes' pathway.
- Encourage venues frequented by children and young people to resist sponsorship and product placement from companies associated with foods high in fat, sugar and salt.

Community-wide actions to prevent obesity

Developing a sustainable, community-wide approach

- Adopt a coherent multi-agency approach. Ensure activities on obesity are integrated within the joint health and wellbeing strategy, the joint strategic needs assessment (JSNA) and broader regeneration and environmental strategies.
- Make action on obesity prevention and management a strategic priority and align it with other disease-specific prevention strategies.
- Work in partnership. This includes working with local clinical commissioning groups.

Providing and supporting leadership

• Ensure the needs and priorities of the local community, as outlined by the JSNA, are understood by all those who may take action on obesity.

- Ensure elected members are briefed on the local picture and help them ensure obesity prevention is integrated within all council strategies and plans.
- Ensure all management, staff and partners working with local communities are aware of the importance of preventing and managing obesity.
- Support senior and middle management and frontline staff of partnerships involved in local action on obesity.
- Provide opportunities for partners to meet to share learning and to enhance cooperation and joint working.
- Identify and work with 'champions' within local authorities, NHS groups and public, private, community and voluntary sector bodies.

Coordinating local action

Ensure the public health team includes:

- a director of public health or lead public health consultant who, as part of their role, provides strategic direction on obesity
- a senior coordinator with expertise in obesity prevention and community engagement and with dedicated time to oversee the local programme
- community 'health champions' and others who work directly with the community.

Involving the community

- Work with local people, groups and organisations to decide what action to take.
- Use community engagement and capacity-building methods to identify networks of local people, champions and advocates who can help.
- Work with local clinical commissioning groups to ensure GP practices are aware of local obesity prevention and treatment initiatives.
- Council leaders and elected members should raise the profile of obesity prevention initiatives through informal and formal meetings with local people.

Integrated commissioning

- Foster an integrated approach to commissioning which supports a long-term (beyond 5 years) health and wellbeing strategy It should involve a variety of organisations, community services and networks operating at a range of levels
- Focus on the most effective 'packages' of interventions to meet local needs. This includes awareness-raising and environmental interventions that support changes in behaviour and lifestyle weight management services for adults, children and families.
- Allocate resources to local community engagement activities and to innovative approaches which are likely to be effective and which have the support of the local community.
- Ensure flexibility in contracts to allow programmes or services to be adapted and improved. Consider extending effective programmes and services, or commissioning effective small-scale projects or prototypes.

Monitoring and evaluation

- Ensure all strategies, policies and activities that may impact on obesity are monitored in a proportionate manner. This includes taking into account their impact on inequalities.
- Build monitoring into all contracts and simple tests used to assess value for money.
- Set aside sufficient time and resources to thoroughly evaluate new or innovative pieces of work (for example, 10% of project budgets).
- Ensure the results of monitoring and evaluation are easy to use and made available to all those who could benefit.

Scrutiny and accountability

Health overview and scrutiny committees and others with a scrutiny responsibility should assess local action on preventing obesity. This includes:

- assessing the priority given to obesity
- ensuring the local community's views have been taken into account
- ensuring local obesity strategies have been implemented by local health and wellbeing boards.

Organisational development and training

• Ensure all partners have an opportunity to increase their awareness of, and develop their skills in, obesity prevention.

 Ensure all relevant professionals are trained to be aware of the health risks of being overweight and obese and the benefits of preventing and managing obesity. Ensure all relevant staff who are not specialists in weight management or behaviour change can give people details of local services that can help them maintain a healthy weight. For examples, see training and development on NICE's 'Obesity: working with local communities' pathway. Ensure the links between nutrition and health are an integral part of training for catering
managers.

1.

• Sarah's client - "You've [Sarah] been the nudge that I needed to help change my lifestyle, not the doctor... You've convinced me of the benefits of change and I'm glad I've taken that first step."

He is half way through the programme now and his mind-set has already changed and he's on board with changes taking months not weeks. He is trying new varieties of foods now, he's got more energy to do things, no longer needs his shoehorn to put his trainers on in the morning plus he's now teaching his sister-in-law all about food labels.

- "I have really taken on board what you have been saying. Differently to going to the doctors
 or my diabetic nurse, I like that we are able to have a conversation surrounding my
 challenges with weight-loss. I find this approach far more beneficial as weight loss for me
 has always been more than 'eating too much' something which I can comfortably say I
 have addressed and continuing to address".
- The client had an operation around 4 months ago and as a result has since suffered diabetes insipidus. During our sessions she had mentioned about the bloat feeling around her waist and just generally feeling low and unwell. As the client usually gets on the scales bare foot, I noticed considerable swelling in her feet, compared to when the client first started, along with weight gain client. Her food diary the previous week did not justify the weight gain and with this I asked the client to please contact the surgery and explain the above. The client consequently contacted her consultant, who immediately changed her medication and brought her appointment forward to august instead of October. She says she is feeling the best she had and the consultant was pleased she had contact him. She was very thankful for advice given.

• 'Thank you for your continue encouragement. I am feeling much more positive about my health and now I've also started seeing an osteopath to sort out my trapped nerve in my neck. My energy levels have improved and I'm even losing weight. I'm trying to go to the toning suit 3 times a week. Thank you once again, even though we have only met 3 times, it has had such a positive impact. Even my wife is surprised and hugely impressed with the difference!'

Appendix 4 – Quotes for Healthy Mums Programme

"At the start of the program I was feeling deflated and uncomfortable in my skin. I had very little energy and low mood. I just wanted to get back to feeling like myself."

"With the help of the Healthy Mums program I have been able to exercise in a friendly, nonjudgemental environment, where I have not felt self-conscious about my appearance."

"The trainers Sarah, Zoe and Becky have helped me to identify the reasons why I wasn't losing weight as quickly as I would have liked, and they have helped me understand how to have a healthy relationship with food. I don't feel as though I am denying myself foods I enjoy, but rather I am having them in moderation and finding healthier alternatives that I previously wouldn't have found appealing."

"I now feel physically and mentally healthier and more optimistic about my weight loss journey. I would strongly recommend this course to fellow mums wanting that support. I have had great fun and would happily take part again if given the chance. Thank you Ladies!"