Lifestyles: Healthy Eating, Physical Activity and Healthy Weight
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Please quote the JSNA

We would like to know when and how the JSNA is being used. One way, is to ask people who use the JSNA when developing strategies, service reviews and other work to quote the JSNA as their source of information.
List of Abbreviations

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<tr>
<td>BAPEN</td>
<td>British Association of Parenteral and Enteral Nutrition</td>
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<td>BFI</td>
<td>Baby Friendly Initiative</td>
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<tr>
<td>BME</td>
<td>Black &amp; Minority Ethnic</td>
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<td>BMI</td>
<td>Body Mass Index</td>
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<tr>
<td>CCG</td>
<td>Clinical Commissioning Group</td>
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<tr>
<td>CHIMAT</td>
<td>Child and Maternal Health Observatory</td>
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<tr>
<td>COMA</td>
<td>Committee on Medical Aspects of Food Policy</td>
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<tr>
<td>DH</td>
<td>Department of Health</td>
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<tr>
<td>GP</td>
<td>General Practitioner</td>
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<tr>
<td>HBC</td>
<td>Halton Borough Council</td>
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<td>HSCIC</td>
<td>Health and Social Care Information Centre</td>
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<td>HSE</td>
<td>Health Survey for England</td>
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<td>ICD-10</td>
<td>International Classification of Disease, version 10</td>
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<tr>
<td>IGR</td>
<td>Impaired Glucose Regulation</td>
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<td>IMD</td>
<td>Index of Multiple Deprivation</td>
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<tr>
<td>IOM</td>
<td>(US) Institute of Medicine</td>
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<tr>
<td>JSNA</td>
<td>Joint Strategic Needs Assessment</td>
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<td>LAIT</td>
<td>Local Area Interactive Tool</td>
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<td>NCMP</td>
<td>National Child Measurement Programme</td>
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<td>NHS</td>
<td>National Health Service</td>
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<td>NICE</td>
<td>National Institute for Health and Clinical Excellence</td>
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<td>NOO</td>
<td>National Obesity Observatory</td>
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<td>ONS</td>
<td>Office for National Statistics</td>
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<td>PCT</td>
<td>Primary Care Trust</td>
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<td>PCMD</td>
<td>Primary Care Mortality Database</td>
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<td>PE</td>
<td>Physical Education</td>
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<td>SPOT</td>
<td>Spend and Outcomes Tool</td>
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<td>UK</td>
<td>United Kingdom</td>
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| **Intelligence**                              | A dataset that enables a full understanding of the prevalence of various aspects of healthy eating, physical activity and weight as well as outcomes and inequalities | • Data is available on a regular basis on both adult physical activity, obesity and smoking prevalence at a borough level and adult specialist weight management service outcomes. A full dataset is available from the National Child Measurement Programme (NCMP). However, lack of locally driven data collection limits the ability to fully understand the varying adult prevalence and needs of different groups within the borough  
• Additional outcomes data, including at lower-level geography, would enable need and outcomes to be assessed in comparable ways to determine gaps |
| **Level of Need: Maternity and Early Years**  |                                                                      | • There have been small incremental changes at both a national, regional and local level in breastfeeding initiation and at 6-8 weeks. However, Halton rates remain below comparators, probably reflecting both levels of deprivation and social complexity of the local population |
| **Level of Need: School-age children**        | Reduce the level of overweight and obesity in both adults and children. Improve levels of healthy eating and physical activity across all ages. Reduce inequalities amongst different groups within the borough and between Halton and comparators | • A greater percentage of Halton children are eligible for and claim free school meals than borough comparators. This is true for both primary and secondary school children  
• 88% of Year 9 pupils drink at least one sweet drink (not fruit juice) per day; 83% eat at least one take-away meal a week; only 21% eat 5 or more portions of fruit or vegetables per day; 57% eat breakfast everyday whereas 19% never do  
• Up to Years 7-9 over 90% of Halton children participate in at least two hours of high quality physical activity/school sports in a typical week. However, in keeping with the North West and England picture this drops for Year 10-11 (75%) and drops again for Year 12-13 (42.4%). Across all year groups levels in Halton are higher than the North West and England rate  
• There has been an increase in the percentage of Halton Reception year children with excess weight and the levels have been consistently higher in Halton than England. Whilst levels have also been higher in Halton than England for Year 6, rates have been falling slightly and for 2013/14 were similar to the England average  
• There is a relationship between overweight and obesity and deprivation across both Reception and Year 6. This is especially seen in obesity levels amongst Year 6 pupils where the levels are almost twice as high in the most deprived quintile compared to the least deprived quintile. The Halton patterns are the same as the national ones  
• Being underweight is linked with child poverty and neglect. Halton has less children who are underweight than England and the difference is statistically better |
| **Level of Need: working age adults and older people** |                                                                      | • Fruit and vegetable consumption (5-a-day) is lower in Halton adults than for Merseyside  
• As with the national survey, the local lifestyles survey showed that more women than men consume at least 5 portions of fruit or vegetable a day  
• older residents eat more fruit or vegetables than younger people  
• non-smokers, ex-smokers and those who do moderate intensity activity consume more fruit and vegetables than smokers and those who lead a more sedentary lifestyle |
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|           |      | • Just over half of all Halton adults add salt to their food during cooking, the highest proportion across Merseyside; men use it more than women and those over aged 65 more than young people  
• 29% eat fast food at least once a week, more often from non-chain outlets  
• young people are more likely to eat fast food than older people and single people more than married people  
• Moderate intensity physical activity levels are slightly higher in Halton than Merseyside, although the reverse is true for vigorous intensity activity  
• For both levels of activity a greater percentage of men achieve recommended levels than women and more younger people than older people  
• 36% of Halton residents are overweight and 25% are obese. Levels of obesity are higher than in other local authorities in Merseyside  
• Nearly two in five adults fall into the healthy weight category (37%) which is lower than the Merseyside average  
• More young adults are in the healthy weight category than older adults  
• More men than women are overweight but more women than men are obese |
| Level of Need: Vulnerable groups |      | • People with long-term illness, disability or poor general health are significantly more likely to be obese than those without (33% compared to 21%)  
• Older adults eat more fruit and vegetables, eat less fast food and are less likely to be current smokers; however, they are more likely to be overweight or obese and to lead more sedentary lifestyles; they are most likely to use animal fats for cooking but also more likely to use cholesterol lowering spreads  
• Disabled children unable to stand unaided are excluded from the annual NCMP. However, national research suggests that around 40% of disabled children may be overweight/obese, much more than their non-disabled peers  
• People with learning disabilities tend to be more overweight and obese, possibly associated with relative inactivity and poor diets  
• Regional and local survey data shows that people with low levels of mental wellbeing are less physically active and have poorer diets  
• National research shows that nearly half of people with a diagnosis of severe mental illness also have long-term physical health problems yet they have less access to preventative and early interventions  
• Malnutrition is a common problem amongst people who are homeless; they face significant barriers to meeting a healthy diet, eating for fullness rather than nutritional value  
• Oral health of older people in care homes is poorer than the general population  
• Many older people, including those in care homes, suffer with loss of appetite and reduced opportunities to undertake enough physical activity  
• Frailty can increase the risk of falls. Regular exercise can reduce this risk as well as improve cardiovascular fitness  
• National research suggests as many as 41% of people living in care homes who are admitted to hospital are malnourished at time of admission  
• Poverty is a major barrier to ability to eat a healthy diet and is associated with increased levels of obesity and more sedentary lifestyles. Both national, regional and local data shows that a lower percentage of people in the lower socio-economic groups participate in sport at least once a |
## Priority

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<td><strong>Service Provision: Adult Specialist Weight Management Service</strong></td>
<td>Ensure that Halton continues to provide services that meet people’s needs and produce recommended outcomes</td>
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<td><strong>Service Provision: Obesogenic environments</strong></td>
<td>Ensure that Halton continues to be at the forefront of action to tackle the obesogenic environment through planning and environmental health</td>
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<tr>
<td><strong>Impacts</strong></td>
<td>Reduce the impact poor diets, sedentary lifestyle and overweight/obesity has on morbidity, mortality and wider factors through continued action to reduce obesity prevalence and improve diet and physical activity levels</td>
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### Impact

- The increase in use of food banks indicates more single people and families are unable to buy enough food to meet basic needs
- Analysis of Halton’s Adult Specialist Weight Management Service shows that whilst there is not a perfect match between need and access there is a good match. Uptake rates are highest in the most deprived wards and lowest in the least deprived wards
- Outcomes data is not available at postcode level so cannot be mapped against need. However, borough level data shows that over half (58%) of those completing the full 12 weeks of sessions lose at least the NICE recommended level of 3% weight loss and a third loose 5% or more. The majority also report increased fitness, diet and self-esteem (75%, 57% and 65% respectively)
- Halton has been active in action to tackle the obesogenic environment. It was one of the early adopters of a Supplementary Planning Document to restrict new fast food outlets opening near schools. Halton’s Core Strategy and Local Travel Plan both have a strong emphasis on health.
- Environmental Health and Trading Standards are part of the Public health team within Halton Borough Council, which offers further opportunities to integrate action on healthy weight
- Obesity, poor diet and sedentary lifestyles continue to have a significant impact on illness (morbidity) and death rates (mortality) locally
- For example hospital admissions rates for both men and women due to obesity (primary or secondary diagnosis and/or bariatric surgery) are higher in Halton than in the North West and England
- Obesity contributes to around 100 deaths per year in the borough
- Obesity is associated with educational attainment. Around a third of adults who leave school with no qualifications are obese compared to less than a fifth of adults with degree level qualifications. This may be because of associated levels of inequality and deprivation but psychological, social and health factors may also contribute
- The costs to the NHS and wider society of dealing with overweight and obesity are rising and this trend is predicted to continue as obesity levels continue to rise
1. Introduction

Being able to eat a diet rich in fruit and vegetables, low in animal-derived fats, with sufficient levels of protein and high in complex carbohydrates offers a range of protective and health promoting benefits at all stages of life. Physical activity is beneficial to both physical and mental health and wellbeing, especially when the recommended levels of activity are reached on a regular basis. Both these factors, preferably in tandem, help people to maintain a healthy weight and not become overweight or obese.

A basic definition of obesity is: the excess accumulation of body fat which takes time to develop and is caused by a positive energy imbalance where more energy is consumed than expended. However, this simple definition doesn’t adequately explain and define the complex societal and environmental factors which have contributed to the rise in levels of obesity over the last 20-30 years.

In spite of recent improvements, at a national level more than one in five children in Reception year and nearly a third of children in Academic Year 6 are considered either overweight or obese.\[^1\]

In 2007, the Foresight report on obesity, predicted that if existing trends continued, 60% of men, 50% of women and 25% of children in the UK would be obese by 2050 at an annual cost of £50 billion.\[^2\] However, a more recent report by the National Obesity Forum concluded that these figures may now be an underestimate of the true scale of the problem.\[^3\]

Being overweight and obese shortens life expectancy and increases the risk of developing many diseases including coronary heart disease (CHD), type 2 diabetes, stroke and some cancers. There is strong evidence to link childhood obesity with increased risk of elevated blood pressure, glucose intolerance, adverse blood lipid profiles and adverse changes to the heart. Also obese children are more likely to become obese adults, increasing the likelihood of developing health problems in later life (DH, 2011).\[^4\] The specific causes of obesity at an individual level are many and varied; they differ between population groups and across a person’s life course, with the accumulation of excess weight, being the end result of a variety of causal pathways.
2. Policy Context

2.1 National Policy
In 2011, the Government produced *Healthy Lives, Healthy People: A call to action on obesity*. This overarching national strategy promotes key actions to address the issue including adopting a “life-course” approach and incorporating actions around prevention, treatment and support. The Strategy also emphasises the importance of creating an environment that supports action, including effective national policy and leadership, empowering local people and communities, adopting a partnership approach, increasing the role of local government and developing a robust evidence base.

2.2 Local Policy
At a local level, the Halton and St. Helens Healthy Eating and Weight Strategy 2011-15 forms the over-arching document for reducing levels of obesity. As this strategy covers the old PCT footprint a new Halton Strategy is currently being developed. This strategy is also supported by the Halton Sports Strategy and the Council’s Core Strategy (the key planning document for the borough).
3. Level of need in the population

3.1 Risk factors for poor diet, physical inactivity and obesity

3.1.1. General factors
Excess weight accumulates when there is an imbalance between calorie intake and expenditure. In recent decades, a global increase in the number of high fat/“energy-dense” foods and a decrease in physical activity have added to the global burden of obesity.[5]

However, whilst energy intake is clearly the over-arching cause, the wider influences are extremely complex and are affected by a combination of societal, environmental, behavioural and biological factors.

The Foresight report 2007[6] referred to a “complex web of societal and biological factors that have, in recent decades, exposed our inherent human vulnerability to weight gain”. The report goes on to present an obesity systems map with energy intake at the core surrounded by over 100 variables that affect energy imbalance.

The Foresight map has been divided into 7 key cross-cutting themes. These are:

- **Biology**: an individual’s starting point - the influence of genetics and ill health;

- **Activity environment**: the influence of the environment on an individual’s activity behaviour, for example a decision to cycle to work may be influenced by road safety, air pollution or provision of a cycle shelter and showers;

- **Physical Activity**: the type, frequency and intensity of activities an individual carries out, such as cycling vigorously to work every day;

- **Societal influences**: the impact of society, for example the influence of the media, education, peer pressure or culture;

- **Individual psychology**: for example a person’s individual psychological drive for particular foods and consumption patterns, or physical activity patterns or preferences;

- **Food environment**: the influence of the food environment on an individual’s food choices, for example a decision to eat more fruit and vegetables may be influenced by the availability and quality of fruit and vegetables near home;

- **Food consumption**: the quality, quantity (portion sizes) and frequency (snacking patterns) of an individual’s diet.

3.1.2. Who is at risk and why
Being overweight or obese is now the norm amongst adults. According to the 2010 Health Survey for England 68 % of men and 58% of women were either overweight or obese. Between 1993 and 2010 rates have increased from 53% to 63% in all adults. The rate of increase in levels of obesity has slowed since 2001 compared to the 1990s but the levels of overweight for all adults have remained steady at between 36% and 39%.
This information tells us that the whole population is at risk of unhealthy weight and so a whole population preventative approach is required rather than solely action focussed at groups most at risk.

**Sex differences:** Men are more likely to be overweight than women (42% of men were overweight compared to 32% of women) but there are similar proportions of men and women who are obese (26%). Rates of unhealthy weight increased fastest amongst men in the 1990s compared to women. In the 2000s rates slowed in both sexes.

**Age differences:** Levels of unhealthy weight within the population increase with age and then decrease at the age of 75 years.

**Parental obesity and child obesity:** A child’s risk of obesity increases if their parents particularly their same sex parent is obese. A study found that a mother who is obese is ten times more likely to have an obese child than healthy weight parents.\(^7\)

**Maternal Obesity:** The proportion of pregnant women in England who are obese has doubled between 1989 and 2007 from 8% to 16%. Rates are highest amongst women living in more deprived areas.\(^8\)|\(^9\)

**Ethnic minorities:** The 2004 Health survey for England\(^10\) showed higher levels of obesity in Black Caribbean men and Irish men compared to the England average. For women, Black African, Black Caribbean and Pakistani women had higher rates of obesity than the national average.

**Socio-economic status:** Rates of obesity are significantly higher in lower income households amongst women but there is no apparent pattern amongst men. The proportion of men who are overweight however is highest amongst men in higher income households but there is no pattern amongst women.

**Disability:** Obesity is associated with a number of disabling conditions (arthritis, mental health disorders, learning disabilities and back problems). Among obese people the risk of having a disability was higher compared with the healthy weight population. There was twice the risk of having a physical disability, 84% increased risk of musculoskeletal ill health, 35% increased risk of back problems, 2.5 times risk of having a disability requiring personal care.\(^11\)

### 3.1.3. What are the risks of being overweight or obese?

Having a BMI $\geq 40$ has been shown to reduce median survival by 8-10 years. The risk of developing type 2 diabetes is 20 to 80 times higher for people who are obese compared with non obese people. The risk of hypertension is 5 times higher amongst obese people The risk of heart disease and stroke is 2.4 times higher in obese women and 2 times higher in obese men. 10% of all cancer deaths amongst non-smokers are related to obesity Risks are not associated to adults of a BMI above 30 alone. Evidence suggests that some health risks become evident during childhood, for example type 2 diabetes. It is also evident that health risks such as coronary heart disease and gall bladder disease increase with increasing BMI. For example for each unit change in BMI the risk of coronary heart disease increases by 3.6 times.\(^12\)|\(^13\)
3.2. Overweight and Pregnancy

About half of all childbearing women are overweight or obese. At the start of pregnancy 15.6% of women in England are obese.[14] Based on 2,007 conceptions and 1,603 live births (2013 figures) this would equate to 250-313 pregnant women in Halton who are obese in a year. Given that there is a relationship with deprivation, this may be a conservative estimate.

Maternity services work on a one-to-one basis with a mother and will give advice and support around maintaining healthy weight during pregnancy, keeping active and the importance of a nutritionally balanced diet.

A number of pilots have been run in Halton, inviting pregnant women who are obese to access dietetic support. To date take up of these has been very low.

Approximately 650,000 women give birth in England and Wales each year, and 2–5% of pregnancies involve women with diabetes. This equates to between 32-80 pregnancies in Halton annually (based on 1,603 live births). Approximately 87.5% of pregnancies complicated by diabetes are estimated to be due to gestational diabetes (which may or may not resolve after pregnancy), with 7.5% being due to type 1 diabetes and the remaining 5% being due to type 2 diabetes. The prevalence of type 1 and type 2 diabetes is increasing. In particular, type 2 diabetes is increasing in certain minority ethnic groups (including people of African, black Caribbean, South Asian, Middle Eastern and Chinese family origin).

Being overweight or obese can affect reproductive health of women in a number of ways. It can affect a woman’s fertility,[15] the outcomes of her pregnancy for both her and the child. Excessive weight gain during pregnancy will need to be addressed in a sensitive way post-natally.[16]

Overweight and obese women are at greater risk of increased morbidity and mortality for both mother and baby: These are summerised in the 2010 NICE guidance[17] on weight management before, during and after pregnancy and are shown in Table 1.

Table 1: Obesity complications during and after pregnancy

<table>
<thead>
<tr>
<th>Antenatal</th>
<th>Gestational diabetes mellitus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-eclampsia</td>
<td></td>
</tr>
<tr>
<td>Maternal hypertension</td>
<td>Abnormal fetal growth: either macrosomia or intra-uterine growth restriction</td>
</tr>
<tr>
<td>Sleep apnoea</td>
<td>Congenital abnormality</td>
</tr>
<tr>
<td>During labour</td>
<td></td>
</tr>
<tr>
<td>Induction of labour</td>
<td>Shoulder dystocia</td>
</tr>
<tr>
<td>Difficulties monitoring fetal heart rate</td>
<td>Inadequate analgesia</td>
</tr>
<tr>
<td>Increase in instrumental-assisted births, including emergency caesarean section. These can be technically difficult caesarean sections.</td>
<td></td>
</tr>
<tr>
<td>Postnatal</td>
<td></td>
</tr>
<tr>
<td>Postpartum haemorrhage</td>
<td>increased risk of wound infection following delivery</td>
</tr>
<tr>
<td>Birthweight above the 90th centile</td>
<td>Increased risk of foetal death</td>
</tr>
<tr>
<td>Difficulty latching the baby on to the breast</td>
<td>Postnatal depression</td>
</tr>
</tbody>
</table>

NICE recommends that health professionals should give advice to women with a Body Mass Index (BMI) over 30 on the benefits of loosing weight, both to their health generally and on the chances of
getting pregnant. This should follow evidence-based behaviour change techniques outlined in NICE guidance PH6.

NICE do not recommend that pregnant women who are obese should follow a weight loss programme as it may harm the baby. However, they should have their BMI recorded and be advised on a healthy diet and being physically active. Repeated weighing during pregnancy should be confined to circumstances where clinical management is likely to be influenced e.g. for women whose nutrition is of concern.\cite{18}

There is no reason why healthy women cannot exercise throughout their pregnancy.\cite{19} However, for those who were not physically active before becoming pregnant they should build up to the 30 minutes a day moderate intensity activity gradually. For those women unable to undertake moderate intensity activity, even at 15 minutes 3 times a week, then health professionals should encourage them to try to be more active during daily life i.e. not to be sedentary. Walking is ideal and all women should be informed of the benefits of starting or maintaining exercise unless there are contraindicated obstetric or medical conditions. For those who are sedentary prior to pregnancy exercise levels should be built up gradually. Advice on healthy eating should be tailored to the needs of pregnant women but myths around “eating for two” should be addressed.\cite{20}

Although the US Institute of Medicine (IOM) guidance on weight gain during pregnancy has been revised to reflect women’s weight at the start of pregnancy (women who are obese are recommended to gain less weight than those of normal weight at the start of pregnancy) NICE note that they have not included this in their recommendations as the IOM guidance is based on observational studies and the findings may not be generalisable to the UK population.

Recommendations 3-5 of the NICE 2010 guidance cover the timing and nature of advice health professionals should give to women after childbirth. Using the 6-8 week check advice should be tailored to women’s needs including caring for the baby and other children as well as any health problems the woman may be experiencing. Again evidence-based behaviour changes techniques should be used. If a woman’s BMI is over 30 it may be appropriate to refer her to a dietitian.

### 3.3. Early Years

In the early years children are learning habits for life. It is important at this time that consideration is given to the development of all bodily systems. Children need plenty of energy (calories) and nutrients to ensure they grow and develop well; they need to eat a wide variety of foods, including lots of fruits and vegetables, to make sure they get the other important dietary components needed for healthy growth and development. Optimal infant nutrition is essential for the health and wellbeing of children, the prevention of childhood obesity and other health-related childhood conditions.

Mothers in lower socio economic groups are less likely to breastfeed and more likely to introduce solid foods earlier than recommended and their children are at a greater risk of both ‘growth faltering’ (that is, they gain weight too slowly) in infancy and obesity in later childhood.\cite{21} In addition, average daily intakes of iron and calcium are significantly lower, and rates of dental caries (tooth decay) are significantly higher among children from manual groups compared with those from non-manual groups.\cite{22}
3.3.1. Breastfeeding

Why breastfeeding is important

Breastfeeding has been identified as a priority locally and nationally. It is a key early intervention that improves the infant’s health and mother’s risk of ill health. Encouraging families to breastfeed can impact upon child poverty in a number of ways. Firstly breastfeeding enables the family to offer the child the best possible start in life.

There is increasing evidence that breastfed babies born into the lowest socio-economic groups have better health outcomes than formula fed babies born into the highest socioeconomic groups.\[^23\] As such increasing breastfeeding rates in poor families can do much to address inequalities. Financially it is estimated that a family can save approximately £500 in the first year if they breastfeed.

UNICEF Baby Friendly initiative (BFI)

All maternity units and community health care trusts that work with mothers and baby’s are encouraged to be assessed by UNICEF, to determine if their policies, staff and practice support women to breastfeed, and to gain ‘UNICEF Baby Friendly status’. This is an evidence based award that ensures that organisationally there is a culture of breastfeeding, and staff are confident, competent and consistent in supporting women. In Halton the community midwives and health visitors have achieved Stage 2 of the assessment, and are due to be assessed for stage 3, the final stage in 2015.

Breastfeeding Initiation

Breastfeeding initiation is the percentage of babies who are put to the breast, or receive any breastmilk within 48 hours of birth, out of the total number of babies born during that period. It is a useful measure to determine the number of babies who have received colostrum, and at least one breastfeed, but it does not measure the number of babies for whom breastfeeding has been established. In some areas breastfeeding at the time of discharge from hospital is also collated locally to give an indication of the number of babies who have established breastfeeding.

Until 2013/14 Halton’s data was presented as part of Halton & St Helens PCT. It showed that the PCT rate was below the North West and England rates, but showed improvement over time from just under 40% to just over 50%. The 2013/14 Halton CCG rate was 51.6%.
For the first time, the 2013/14 national dataset also included analysis at GP practice level. It showed a range in initiation from 35.5% to 64.6% with only Beaconsfield having a rate statistically better than the CCG as a whole.

**Breastfeeding 6-8 weeks**

This is a measure of the percentage of babies who are partially or exclusively breastfed at 6-8 weeks, out of the number of babies due their 6-8 week developmental check in that period. In order to ensure that this measure is accurate the percentage of infants for whom the method of feeding is known at 6-8 weeks is also reported. To ensure the accuracy of the data, if the feeding status is known for less than 95% of the eligible population the Department of Health (DH) will not accept the data and data is not published.
Figure 3: Annual trend in breastfeeding prevalence at 6-8 weeks

Figure 3 shows that rates of breastfeeding at 6-8 weeks have been consistently below both the England and the North West average. As with breastfeeding initiation, from 2013/14 data is also available by GP practice. Figure 4 shows only one practice, Beaconsfield, with a percentage statistically better than the Halton average. The percentage ranged from 13.2% to 35%.

Figure 4: Percentage mothers breastfeeding at 6-8 weeks, by GP practice, 2013/14

3.3.2 Formula Feeding

In the national Infant Feeding Survey 2010 almost half (49%) of all mothers who had prepared powdered infant formula in the last seven days had followed all three recommendations for making up feeds (only making one feed at time, making feeds within 30 minutes of the water boiling and adding the water to the bottle before the powder). This is a substantial increase since 2005 when 13% did so.\cite{24} Parents need advice from independent, qualified professionals about the importance of following Department of Health recommendations to reduce the risk of infection and
over or under-concentrated feeds. Formula fed babies are more likely to develop constipation so powdered formula milk must be prepared carefully in an hygienic environment with the correct powder/water ratio, stored at the correct temperature and used within the specified time.

3.3.3. Introducing solid food

Introducing solid food is the transition from an exclusive milk diet to a diet based on solid food.\textsuperscript{[25]} UK policy recommends that this should not begin until an infant is at least 6 months old. However in some instances it may be introduced a few weeks earlier. In these cases it is recommended that the parents seek advice from their GP or health visitor.\textsuperscript{[26]}

UK dietary recommendations for children aged 6–24 months are, for the most part, based on the 1994 COMA report ‘Weaning and the weaning diet’ and its subsequent updates.\textsuperscript{[27]} This process involves a gradual transition from an exclusively milk-based diet to one based, for the most part, on foods other than milk.

The most up to date nutritional information for pre-school children is available from the Caroline Walker Trust, and the British Dietetic Association.

Individual children will vary slightly as to when they are ready to begin weaning and parents should watch their children’s cues to identify the right time to start introducing solid food. Ideally children over 6 months of age should be introduced to family foods with a variety of textures and tastes. It is important to ascertain what the family are eating when making recommendations as the nutritional standards for under 5’s are not the same as for older children and adults.

First foods should include soft cooked vegetables and fruit such as carrot, parsnip, sweet potato, yam, ripe pear, banana, or cooked apple. Baby rice could be mixed with a little breast or formula milk and given on a spoon. Children are very active and need a calorific diet but they should have a portion size which is appropriate for their age and development. As a general rule young child need full fat milk and dairy foods, a variety of protein, vitamins, minerals, carbohydrate, fruit and vegetables.

Healthy eating is an important part of a healthy lifestyle. Eating the right foods may help to reduce the risk of heart disease, diabetes, obesity and many cancers. Eating healthy food is particularly important during the early years as food intake at this time can have long-term effects on physical and emotional wellbeing. Babies and young children develop likes and dislikes as part of a family, so the environment in which families eat is important as well as the food served. It is beneficial if families can make time to eat together.

3.3.4 Active Play

Active play is any form of regular physical activity that babies and children do, which includes moderate to vigorous bursts of high energy, and which raises their heart rate and makes them "huff and puff". For a baby, active play may include reaching out to touch something, rolling over or balancing in a sitting position. For a child it may include running or jumping. Active play can occur indoors or outdoors, alone or with family or friends.

Active play may be structured or unstructured. Structured active play is generally some kind of organised play or activity such as swimming lessons or a game that involves rules, time limits or
special equipment. Unstructured active play is generally some kind of spontaneous or opportunistic play or activity such as dancing to music at home or playing in a park.

Based on the 2012 Health Survey for England the percentage of children meeting the current guidelines for children aged under five of at least three hours of physical activity per day was:

- 9% of boys aged 2-4 years
- 10% of girls aged 2-4 years
- 28% in both sexes by age 4 years
- 32% of boys and 31% of girls at age 5 years.

The percentage of children that were classified as having low activity levels (achieving less than 60 minutes a day) was:

- 85% of boys aged 2-4 years
- 83% of girls aged 2-4 years
- 53% of boys aged 2-4 years walked to/from school*
- 25% of boys aged 2-4 years walked to/from school at least five days a week
- 56% of girls aged 2-4 years walked to/from school
- 21% of girls aged 2-4 years walked to/from school at least five days a week.

*refers to children who had attended school, playgroup or nursery (hereafter called ‘school’)

Total accelerometer assessed physical activity (light, moderate and vigorous intensity combined) was reported in the 2008 Health Survey for England. Findings indicated:

- boys aged 4-7 years were active for 397 minutes (6.6 hours) per day
- girls aged 4-7 years were active for 375 minutes (6.3 hours) per day
- approximately 70% of this activity was of light intensity, for both sexes.

Local data is not available on active play or physical activity levels amongst this age group. The Early Years Foundation Stage Profile includes measures on physical development, which include this.

Physical development has two components, ‘moving and handling’ and ‘health and self-care’ At the end of the foundation stage by the age of five, children are expected to:-

**Early learning goal – moving and handling**
...show good control and co-ordination in large and small movements. They move confidently in a range of ways, safely negotiating space. They handle equipment and tools effectively, including pencils for writing.

**Early learning goal – health and self-care**
...know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. They manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently.

Statistical data combines these two goals so it is difficult to isolate the element of active play as this relates primarily to the goal of moving and handling.

To achieve the goals in moving and handling, teachers and practitioners must provide opportunities for children to engage in active play. This should include both gross motor skills such as running, climbing, jumping and balancing and fine motor skills such as using pencils and scissors. It is the gross motor element of the moving and handling aspect of physical development which has an impact on healthy weight.
It is difficult therefore to provide a direct correlation between the children attaining a good level of development in physical development and obesity measures. This is because a child may achieve the goal whilst being overweight or conversely not achieve the early learning goal whilst being an acceptable weight. Nevertheless it is important that physical activity is provided in the early years which should theoretically help to reduce obesity.

The profile criteria has changed during its lifetime and this data is only comparable for the last two reporting periods. However, it shows a lower percentage of Halton children reach the expected level of physical development for their age (the assessment takes place at the end of school Reception Year).

### Table 2: Early Years Foundation Stage Profile: Percentage of children reaching the expected level of Physical Development

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halton</td>
<td>77.00</td>
<td>80.00</td>
</tr>
<tr>
<td>North West</td>
<td>81.00</td>
<td>84.00</td>
</tr>
<tr>
<td>Statistical Neighbours</td>
<td>80.00</td>
<td>82.30</td>
</tr>
<tr>
<td>England</td>
<td>83.00</td>
<td>86.00</td>
</tr>
</tbody>
</table>

*Source: LAIT, Department of Education 2015*

Whilst the Halton data shows an improvement of three percentage points between 2013 and 2014, this is also reflected in the North West and England figures with a 2.3 point increase amongst the borough’s statistical neighbours grouping. Thus Halton’s relative position remains unchanged. The trajectory is in a positive direction but Halton LA currently ranks 135 nationally falling into quartile band D. Consequently Halton has not narrowed the gap in 2014.

This does not entirely correlate with the 29.47% of children in reception who are overweight or obese but does correlate to the local authority ranking 150 quartile banding D. This is an upward trajectory which is rising faster than statistical neighbours and national.

### 3.4. School Age Children

#### 3.4.1. Healthy Eating

**Introduction**

Poor diet is responsible for over half of all coronary heart disease and also contributes to stroke, hypertension, obesity, diabetes and some cancers. It is estimated that 70,000 premature deaths in the UK could be avoided each year if UK diets matched nutritional guidelines. Healthy eating and being physically active are particularly important for children and adolescents. This is because their nutrition and lifestyle influence their wellbeing, growth and development. The nutritional requirements of children and adolescents are high in relation to their size because of the demands for growth, in addition to requirements for body maintenance and physical activity.

A sufficient supply of calcium and vitamin D, as well as being physically active, is important for healthy bone development. Estimates of the prevalence of food allergy in the UK vary, but have been suggested to be around 5–8% in children, the incidence of perceived food allergies and
intolerances usually being considerably greater than the actual prevalence. It has been suggested that avoidance of certain allergens at an early age may decrease the risk of food allergy, although not all experts share this view, some suggesting that there are critical periods in early life when exposure triggers normal immune system tolerance. It has also been suggested that diet affects mental health, including cognitive function and depression, although there is limited evidence.

One way to improve dietary habits of schoolchildren is via food provided in schools. Standards for school food are available in all UK countries. Nutritional standards for packed lunches prepared at home have not been set, and research in England has shown that the composition of these lunches is less favourable than lunch provided at school. Ways of improving the quality of packed lunches have been investigated, with only limited success. Other schemes, such as fruit and vegetable schemes, removal of vending machines, work to increase access to and consumption of water and breakfast clubs, have also been initiated with the aim to improve the dietary habits and hydration of schoolchildren. In England all infants receive a free portion of fruit or vegetable as a snack during the school day. From September 2014 free school meals were offered to all infants (aged 4-7: Reception, Year 1 and Year 2). Teaching about food and nutrition within the school curriculum is also important.

**National Picture**

The latest HSE 2011 data shows that between 2010 and 2011, the percentage of 5-15 year old boys consuming 5 or more portions of fruit and vegetables decreased from 19% to 16%. For 5-15 year old girls the corresponding percentages showed no change between this period with the percentage remaining at 20%. Overall, the average number of portions consumed was 3.0 portions for boys and 3.3 portions for girls in 2011.

The average consumption of fruit and vegetables for children aged 11 to 18 years was 3.0 portions per day for boys and 2.8 portions per day for girls. Only 11% of boys and 8% of girls in this age group met the “5-a-day” recommendation.

Despite this when asked about healthy eating:

- Around two in three boys and three in four girls accurately reported that five portions of fruit and vegetables should be consumed each day. However, only 22% of boys and 21% of girls could correctly identify what a portion was.
- More than four in five children regarded their diet as healthy with most saying it was “quite healthy” (70% of boys and 72% of girls) rather than “very healthy” (13% of both boys and girls). Only 1% thought that their diet was “very unhealthy”.
- The majority of children aged 11-15 agreed that “Healthy foods are enjoyable” (72% of girls and 64% of boys). There was a more even spread of agreement, disagreement and neutral views about the statement “The tastiest foods are the ones that are bad for you”.

Research shows that adequate nutrition and hydration is important for children’s ability to concentrate and learn. Whilst it is clear that much of the groundwork in cultivating food preferences in children occurs outside school - early in life, before the start of school, and through parenting, advertising and marketing – the school environment nevertheless provides an important opportunity to address knowledge and attitudes towards healthy eating. Some recent studies have also started to indicate a link between adequate nutrition and anti-social behaviour. In particular studies conducted with violent young adult prisoners (18–21 years) have demonstrated reductions in
subsequent offending amongst those given nutritional supplements.\textsuperscript{[31]} However, currently there is an insufficient quantity of high-quality evidence to draw definitive conclusions from this research.

**Halton Picture**

Unfortunately there is no local routinely collected data on the nutritional status of Halton children. There are a range of local programmes available to schools includes:

- The national scheme for a portion of free fruit or vegetable to all infants (aged 4-7)
- A healthy snacks programme in all primary schools across Halton
- Family cook and taste sessions across Halton
- Fit for Life Programme for all Primary Schools – diet, exercise & cookery
- Passport to Health – a training programme for all working with children and young people and their families that is designed to motivate individuals to make positive behaviour changes regarding their health focusing on areas of weight management
- A pilot of school cooks supporting families to develop their cooking skills and nutritional knowledge

An additional programme is being delivered called **Healthitude** which links to Personal Social and Health education curriculum and has healthy eating component to it. This has been offered to all schools with 100% uptake. All schools are fully accredited as part of the Healthy Schools Programme and all 54 schools remain engaged with it. In the 2012 Halton schools survey 70% of respondents said the information and advice they get in schools about healthy food and lifestyles was helpful.

**Free School Meals**

Children who living in low income families in receipt of a range of benefits are eligible for free school meals (FSM) each day they attend school. Historical data shows that Halton has much higher levels of eligible pupils who claim FSM than any of its comparators. This is true for both primary and secondary school children.

**Figure 5: Primary pupils eligible for and claiming free school meals**

![Figure 5](image)

**Figure 6: Secondary pupils eligible for and claiming free school meals**

![Figure 6](image)
The percentage of pupils who have been eligible for FSM at any point in the last 6 years has been higher than comparators during the 3 years the data has been collected.
As of September 2014 FSM were introduced across England for all infants i.e. those in Reception Year, Year 1 and Year 2 (aged 4 to 7 years). This new policy was established following an independent review of a number of pilots run from 2009 to 2011. It is estimated this will save parents around £300 per child per year and provide children with a nutritionally balanced meal to help their physical development, improve health and attentiveness (and thus is linked to attainment).

**The importance of social norms in children and young people’s beliefs**

Norms have a strong influence on 11-17 year olds behaviour: those thinking that lots of their friends are doing something were more likely to do it themselves. Social norms refers to our perceptions of what is ‘normal’ behaviour in the people around us and can be defined as,

“...cultural phenomena (that) prescribe and proscribe behaviour in specific circumstances. As such they have long been considered to be at least partly responsible for regulating social behaviour”\[32\]

Halton Borough Council’s Public Health Team commissioned the social norms project RU Different? to work with secondary schools across the borough. It aims to promote positive behaviours and dispel myths that may become apparent from the data through the delivery of tailored interventions. The R U Different? survey covers all the main risk taking behaviours. The social norms questions allow young people to measure their own behaviours against the perceived behaviours of their peers.

Most of the interventions are based on the fact that most young people significantly overestimate the participation of others in risk behaviours, placing themselves in the minority when in fact they are in the majority if they are making positive health and behaviour choices. The survey can be repeated post intervention to measure ‘distance travelled’ among young people.

The evidence shows that the presence and quantity of interventions directly correlates with the level of attitude, perception and behaviour change of those taking part.\[33\]

Halton’s baseline survey commenced in October 2014. The main target area was year 9s (72% aged 13 and 28% aged 14), with 1264 students in total completing the baseline survey, 46% of which were male and 54% were female. Results showed:
In terms of how many sweet drinks a young person consumes, a combined 37% said they drink only 1 (25%) or 0 (12%) a day.

The perception is that only 10% of others in their year drink only 1 or 0 sweet drinks a day, so there is generally a perception that others consume more sweet drinks than is actually the case.

21% of students enjoy their 5 a day daily with 11% saying they never eat fruit or vegetables.

57% say they eat breakfast every day and 19% never eat breakfast. The perception is that 47% of others in their year eat breakfast daily.

89% said they exercise for 20 minutes at least once a week or more.

The detailed responses were as follows.

Table 3: RU Different? Baseline survey, Autumn 2014. Q112. How many servings of fruits and vegetables do you think students usually have per day

<table>
<thead>
<tr>
<th>Choice</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yourself</td>
<td>88</td>
<td>21</td>
<td>87</td>
<td>14</td>
<td>109</td>
<td>27</td>
<td>138</td>
<td>22</td>
<td>94</td>
</tr>
<tr>
<td>Your friends</td>
<td>71</td>
<td>11</td>
<td>97</td>
<td>15</td>
<td>155</td>
<td>25</td>
<td>134</td>
<td>21</td>
<td>83</td>
</tr>
<tr>
<td>Others in your year</td>
<td>95</td>
<td>15</td>
<td>117</td>
<td>19</td>
<td>148</td>
<td>24</td>
<td>114</td>
<td>18</td>
<td>78</td>
</tr>
<tr>
<td>Males in your year</td>
<td>168</td>
<td>17</td>
<td>149</td>
<td>24</td>
<td>118</td>
<td>19</td>
<td>112</td>
<td>18</td>
<td>65</td>
</tr>
<tr>
<td>Females in your year</td>
<td>85</td>
<td>13</td>
<td>123</td>
<td>19</td>
<td>143</td>
<td>23</td>
<td>117</td>
<td>19</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 4: RU Different? Baseline survey, Autumn 2014. Q 113. On an average day, how many sweet drinks (such as soda, pop, soft drinks, flavoured drinks, energy drinks, sweet tea) do you think students drink per day?

<table>
<thead>
<tr>
<th>Choice</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yourself</td>
<td>81</td>
<td>12</td>
<td>169</td>
<td>25</td>
<td>130</td>
<td>21</td>
<td>100</td>
<td>15</td>
<td>54</td>
</tr>
<tr>
<td>Your friends</td>
<td>29</td>
<td>4</td>
<td>102</td>
<td>15</td>
<td>143</td>
<td>21</td>
<td>117</td>
<td>17</td>
<td>84</td>
</tr>
<tr>
<td>Others in your year</td>
<td>30</td>
<td>4</td>
<td>42</td>
<td>6</td>
<td>82</td>
<td>12</td>
<td>110</td>
<td>16</td>
<td>117</td>
</tr>
<tr>
<td>Males in your year</td>
<td>29</td>
<td>4</td>
<td>34</td>
<td>5</td>
<td>65</td>
<td>9</td>
<td>110</td>
<td>15</td>
<td>104</td>
</tr>
<tr>
<td>Females in your year</td>
<td>30</td>
<td>4</td>
<td>64</td>
<td>10</td>
<td>100</td>
<td>15</td>
<td>104</td>
<td>15</td>
<td>105</td>
</tr>
</tbody>
</table>
Table 5: RU Different? Baseline survey, Autumn 2014. Q 118. How many take-away meals do you think students eat per week, including McDonalds, KFC, Chip Shop, Chinese and Indian take-aways etc?

<table>
<thead>
<tr>
<th>Choice</th>
<th>0</th>
<th>1</th>
<th>2 or 3</th>
<th>4 or more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>%</td>
</tr>
<tr>
<td>Yourself</td>
<td>196 17</td>
<td>341 55</td>
<td>137 22</td>
<td>40 6</td>
<td>624</td>
</tr>
<tr>
<td>Friends</td>
<td>45 7</td>
<td>287 46</td>
<td>218 35</td>
<td>60 11</td>
<td>619</td>
</tr>
<tr>
<td>Other Students in Year</td>
<td>28 5</td>
<td>170 29</td>
<td>296 48</td>
<td>117 19</td>
<td>619</td>
</tr>
<tr>
<td>Boys in year</td>
<td>32 5</td>
<td>175 28</td>
<td>288 47</td>
<td>122 20</td>
<td>617</td>
</tr>
<tr>
<td>Girls in year</td>
<td>58 6</td>
<td>232 58</td>
<td>237 58</td>
<td>106 18</td>
<td>616</td>
</tr>
</tbody>
</table>

Table 6: RU Different? Baseline survey, Autumn 2014. Q 115. How often do you think students eat breakfast each day?

<table>
<thead>
<tr>
<th>Choice</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
<td>Never</td>
<td>once or twice per year</td>
<td>once a month</td>
<td>twice a month</td>
<td>once a week</td>
<td>twice a week</td>
<td>daily</td>
</tr>
<tr>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
<td>Total %</td>
</tr>
<tr>
<td>Yourself</td>
<td>126 19</td>
<td>17 3</td>
<td>17 3</td>
<td>16 2</td>
<td>27 4</td>
<td>16 2</td>
<td>653</td>
</tr>
<tr>
<td>Friends</td>
<td>64 10</td>
<td>25 4</td>
<td>14 3</td>
<td>18 3</td>
<td>35 4</td>
<td>95 15</td>
<td>649</td>
</tr>
<tr>
<td>Other Students in year</td>
<td>59 9</td>
<td>21 3</td>
<td>34 5</td>
<td>21 3</td>
<td>67 10</td>
<td>140 22</td>
<td>649</td>
</tr>
<tr>
<td>Boys in year</td>
<td>55 9</td>
<td>29 4</td>
<td>15 2</td>
<td>30 6</td>
<td>69 11</td>
<td>140 22</td>
<td>651</td>
</tr>
<tr>
<td>Girls in year</td>
<td>68 10</td>
<td>25 4</td>
<td>24 4</td>
<td>31 5</td>
<td>69 11</td>
<td>132 20</td>
<td>649</td>
</tr>
</tbody>
</table>

3.4.2. Physical Activity

Introduction

In 2011 new guidance was produced by the Chief Medical Officers of the four home countries of the UK[34] on physical activity. ‘Start Active, Stay Active’ focuses on achieving health gains through a life course approach to physical activity, including the full range of human movement, from competitive sport and exercise to active hobbies, walking, cycling, or activities of daily living. In terms of school-age children, it is recommended that all children and young people aged 5-18 should engage in moderate to vigorous activity for at least 60 minutes a day, as well as high impact activities and resistance exercise three times a week.

Health benefits include:
- Prevention of obesity and Type 2 diabetes;
- Improvements in bone health;
- Psychological health benefits, particularly for self-esteem and depression;

Health indicators such as obesity track from childhood to adulthood, and establishing a physically active lifestyle in childhood can lead to a more active lifestyle as an adult, thus extending the benefits of exercise into adulthood.
The impact of socio-economic status, ethnicity and culture, and socialisation is evident in the development of knowledge and attitudes to, and ultimately patterns of, physical activity. Girls (aged 10+), children from lower socio-economic groups, children from BME groups, and overweight and obese children tend to have lower levels of participation and drops off in the transition from primary to secondary school.

**National, Regional and Halton Picture**

- Data on the percentage of children participating in at least 3 hours per week of high quality physical education (PE) and sport at school age (5-18) is no longer collected. The last year it is available for is 2009/10. This showed that levels were significantly higher in Halton at 66.4% than the national average at 55.1%
- From the same data collection, statistics on participation in at least 2 hours per week of high quality PE and sport at school age (5-18) is available by Year groups and shows that participation rates are high from Year 1 through to Year 9, they start to decline from Year 10 and by Year 12 less than half of children are participating in at least 2 hours a week physical activity. However, it also shows that despite this, participation levels in Halton were higher than for the North West and England across each year group.

![Figure 8: Percentage of school children who participate in at least 2 hours of high quality physical activity / School sport in typical week, 2009/10](image)

<table>
<thead>
<tr>
<th>Year 1-11</th>
<th>Year 1-13</th>
<th>Year 1-2</th>
<th>Year 3-6</th>
<th>Year 7-9</th>
<th>Year 10-11</th>
<th>Year 12-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halton</td>
<td>92.0</td>
<td>91.0</td>
<td>94.0</td>
<td>95.0</td>
<td>99.0</td>
<td>74.8</td>
</tr>
<tr>
<td>North West</td>
<td>83.7</td>
<td>81.2</td>
<td>88.8</td>
<td>93.8</td>
<td>85.2</td>
<td>56.4</td>
</tr>
<tr>
<td>England</td>
<td>86.0</td>
<td>82.0</td>
<td>93.0</td>
<td>95.0</td>
<td>87.0</td>
<td>64.0</td>
</tr>
</tbody>
</table>

*Source: CHIMAT*

The RU Different baseline survey 2014 confirmed that most Year 9s undertake some form of physical activity every week, 40% every day and 49% more than once a week.

**Table 7: RU Different? Baseline survey, Autumn 2014. How regularly do you exercise (i.e. a physical activity of 20 minutes or more).**

<table>
<thead>
<tr>
<th>Choice</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>every day</td>
<td>426</td>
<td>40</td>
</tr>
<tr>
<td>once or more a week</td>
<td>527</td>
<td>40</td>
</tr>
<tr>
<td>less than once a week</td>
<td>71</td>
<td>7</td>
</tr>
<tr>
<td>never</td>
<td>43</td>
<td>4</td>
</tr>
</tbody>
</table>

This shows that the collaborative approach between Sports Development, schools, the Health Improvement Team and School Health has been successful but that more still can be done.

The Halton Sports Strategy 2012-2015[35] details the borough’s approach to enabling all its residents to take part in sports and physical activity. It takes a holistic definition to sport from the Council of Europe’s European Sports Charter (which has also been adopted by Sport England):
“Sport means all forms of physical activity which through casual or organised participation, aim at expressing or improving fitness and mental well-being, forming social relationships or obtaining results in competition at all levels.”

It sets out the work programmes aimed at increasing participation and access, developing local facilities, clubs and developing the coaching workforce. It includes ensuring opportunities exist for disabled children to participate in sports and that clubs are child friendly, as well as programmes delivered through schools. Sign posted walking and joggings sites utilising Halton’s green space locations have been developed. The importance of active travel has been incorporated in to Halton Borough Council’s Local Transport Plan and the use of green and open space to improve physical and mental health features in Halton’s Core Strategy.

3.4.3. Childhood Obesity

Nationally, data from the Health Survey for England (HSE) 2011 showed that the majority of children and their parents thought they were about the right weight. Although this reflects the fact that most are indeed a healthy weight, it does also show that some overweight and obese children lack awareness of what it means to be overweight and this is seen even more clearly amongst the parents of overweight and obese children:

- Overall, 60% of boys and 53% of girls aged 8-15 felt that they were about the right weight, while 11% of boys and 14% of girls felt that they were too heavy, and 10% of boys and 5% of girls thought they were too light (19% of boys and 28% of girls were not sure). The majority of children who thought themselves too heavy were obese (68%). Of those children who thought of themselves as about the right weight, 30% were overweight or obese.
- The majority of children aged 8-15 said that they were not trying to change their weight (64% of boys and 60% of girls); while 25% of boys and 35% of girls said they were trying to lose weight. Among those who said they were trying to lose weight, 20% were overweight and 50% were obese.
- Parents of children aged 4-15 were asked whether they felt their child was about the right weight or too heavy or too light. The majority of parents thought that their child was about the right weight (78% for both boys and girls), while around one in ten parents thought their child was too heavy (8% for boys, 10% for girls). Parents were more likely to consider children aged 11-15 to be too heavy than those aged 4-10. 91% of parents who thought their child was too heavy were correct. However, almost half of parents whose child was obese misjudged them to be about the right weight (47%), and similarly the majority of parents whose child was overweight thought they were about the right weight (84%).

The National Child Measurement Programme (NCMP) is a surveillance programme, introduced by the Department of Health in 2006 to measure obesity levels in the population. This was in response to research identifying that obesity increases an individual’s risk of serious and potentially life threatening conditions such as diabetes, coronary heart disease and some cancers.

The NCMP involves school nurses measuring the height and weight of all children in reception (aged 4-5) and year 6 (aged 10-11) annually. Using these figures the child’s BMI (Body Mass Index) is

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a For more detailed analysis see separate NMCP report
calculated, and this provides a measure of the proportion of children who are overweight or obese in these year groups. Permission is obtained from the family and individuals may opt out of the programme should they choose to do so.

In Halton there have been increases in both excess weight and obesity amongst Reception age children but reductions in both measures amongst year 6 children in 2013/14 data when compared to the 2012/13 figures.

Table 8: changes in excess weight and obesity amongst school age children 2013/14 compared to 2012/13

<table>
<thead>
<tr>
<th>Overweight and obese (excess weight)</th>
<th>Reception 2013/14</th>
<th>Change from 2012/13</th>
<th>Year 6 2013/14</th>
<th>Change from 2012/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halton (school)</td>
<td>29.5%</td>
<td>↑ 25.1%</td>
<td>33.7%</td>
<td>↓ 36.5%</td>
</tr>
<tr>
<td>Halton (resident)</td>
<td>28.8%</td>
<td>↑ 24.6%</td>
<td>33.3%</td>
<td>↓ 36.2%</td>
</tr>
<tr>
<td>Obese</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Halton (school)</td>
<td>13.3%</td>
<td>↑ 12.0%</td>
<td>21.1%</td>
<td>↓ 23.9%</td>
</tr>
<tr>
<td>Halton (resident)</td>
<td>12.8%</td>
<td>↑ 11.8%</td>
<td>20.4%</td>
<td>↓ 23.1%</td>
</tr>
</tbody>
</table>

Source: Public Health Evidence & Intelligence Team, HBC 2014

Figure 9 shows how levels of excess weight increased in Reception Year up to 2009/10, then reduced but has now increased again to the highest level since the NCMP began. This means that the percentage is now significantly worse than the national average. On the other hand, the year 6 excess weight percentage for Halton decreased during 2013/14 to its lowest since the NCMP was first introduced.

This can be broken down into overweight and obese categories for both year groups. Figure 10 shows that for both overweight and obese, the Halton reception percentages increased, maintaining
the gap between Halton and England, and for obese reception year children this gap has been widening for the last three years.

The percentage of Halton year 6 pupils who were overweight has decreased for each of the last three years remains lower than the England average and widening the gap in a positive way between the borough and England average experience. However, even though the percentage of year 6 pupils who were obese decreased for Halton during 2013/14, it remains higher than the national average, although the gap between the two has narrowed.

**Figure 10: Trend in percentage of Halton children who were overweight or obese, compared to England, 2006/07 to 2013/14**

![Graph showing percentage of children who were overweight or obese in Halton and England, 2006/07 to 2013/14.](image)

**Figure 11: Comparison of percentage of children with excess weight (overweight and obese) in reception and year 6, 2013/14**

![Graph showing percentage of children with excess weight in Reception and Year 6, 2013/14.](image)

During 2013/14, Halton had a significantly higher percentage of children with excess weight compared to the national and regional averages.

The Halton reception percentage was also the highest out of the five Merseyside local authorities.
However, for year 6 children in Halton, the excess weight percentage was lower than the North West average and only slightly higher than the England value. The Halton percentage was also the lowest in Merseyside.

Figure 12: Percentage of overweight and obese children in each National Deprivation Quintile split by reception and Year 6, compared to England 2013/14 (child’s residence)

Map 1: Percentage of children with excess weight, by ward of residence, Reception year, 2013/14
The ward with the lowest percentage of Reception children with excess weight was Hale (10%), followed by Birchfield with 17.6%. The ward with the highest percentage was Halton Brook, where 40% of Reception year children were overweight or obese. Ditton had the 2nd highest percentage (38.8%).

The ward with the lowest percentage of overweight and obese Year 6 children was Daresbury (14.7%), whose percentage was significantly lower than the Halton average. Broadheath had the highest percentage of Year 6 children with excess weight (46.8%). Hale, Kingsway and Windmill all had percentages between 40% and 41%. However, care must be taken with the Hale percentage, due to the small number of children in Year 6 who live there.

The number of children who are underweight is also important, not only in terms of physical development but there is also a link to child poverty and neglect. In 2012/13 for Halton the percentage of underweight children has stayed the same for reception aged children as it was in 2010/11, and reduced from 1.3% in 2010/11 to 0.7% in Year 6. There are less children who are underweight in Halton than the England average and the difference is statistically better.
Halton had a significantly lower percentage of underweight reception year children compared to England and the North West. The reception percentage for Halton was also the joint lowest in Merseyside.

The Halton year 6 percentage was also lower than the regional and national percentages, but not significantly so.

The NCMP data analysis shows that:
- The levels of children who are overweight or obese are high in Halton and the levels increase as children get older.
- While progress has been made commissioners should continue to focus on reducing levels of childhood obesity in Halton.
- Children living in deprived areas of Halton in poorer households have a greater risk of being overweight or obese and are therefore at greater risk of certain diseases.
- Due to the economic climate, work is required to minimise the impact of food poverty and child poverty on child development, including maximising access to healthy food.

The importance of tackling environmental factors which may encourage a poor diet and increase levels of obesity can be seen in Halton’s Core Strategy and the development of a Supplementary Planning Document to limit the opening of new hot food take-aways near schools.
3.5. Working Age Adults

3.5.1. Healthy Eating

5-A-day Fruit and vegetable consumption

Government guidelines state that everyone should eat at least five portions of a variety of fruit and vegetables every day. The ‘5 A DAY’ guidelines were developed based on the recommendation from the World Health Organisation that consuming 400g fruit and vegetables a day can reduce risks of chronic diseases, such as heart disease, stroke, and some cancers.

The Health Survey for England (HSE) 2011 provides a useful comparative measure, and shows that consumption of at least five portions of fruit and vegetables per day is higher in Halton than is common across the country. The latest available data, shows 27% of adults in England consume five or more portions of fruit and vegetables a day, with an average consumption of 3.6 portions. This compares to 35% of residents in Halton consuming at least five per day and an average consumption of 4.0 portions.

Figure 14: ‘5-a-day’ consumption levels

The HSE 2011 also shows that a higher percentage of women eat at least 5 portions of fruit or veg a day compared to men; 29% and an average of 3.9 portions a day for all women compared to 24% and 3.5 portions for all men. The Halton survey also showed this, with women eat more fruit and vegetables a day than men (4.2 portions versus 3.7). Older residents tend to eat more fruit and vegetables than their younger counterparts with those aged 55-64 consuming 4.4 pieces of fruit and vegetables on average and those over 65 consuming 4.3 portions compared to 3.5 portions among 18-24 year olds. Indeed, one in ten 18-24 year olds eat no portions of fruit or vegetables at all.

Owner-occupiers eat significantly more fruit and vegetables than both social renters and private renters (4.3 portions compared to 3.4 and 3.7 respectively).
Those who do some form of moderate intensity sport consume significantly more portions of fruit and vegetables than those who do no sport (4.6 compared to 3.6). People who used to smoke and those who have never smoked eat significantly more portions than those who currently smoke daily (4.4 and 4.3 respectively compared to 3.0).

Salt consumption
Just over half of adults in Halton add salt to their food during cooking (52%), the highest proportion of people out of all local authorities in Merseyside. Halton also has the lowest proportion of residents who use a Lo-Salt or salt alternative (2%). Men are significantly more likely to use salt in their cooking than women (56% compared to 49%). Over 65s are the most likely age group to use salt in their cooking (59%).

Half of residents in Halton rarely or never add salt at the table; this is in line with the average across the whole of Merseyside (both 52%). In total, 31% of people in Halton add salt to their food depending on taste (11% generally add salt; 20% occasionally add salt) and 17% generally add salt to their food without tasting it first.

Fast food consumption
Overall, 29% of adults in Halton consume fast food at least once a week. A further 59% eat fast food once a month or less, and 12% never eat any fast food.

People in Halton are more likely to consume a hot food take-away from a local non-chain outlet, such as a chip shop, Chinese, Indian or Pizza restaurant, than to have a hot food take-away from a large chain restaurant such as McDonalds, KFC, Burger King or Dominos. A quarter of people in Halton have a take-away meal from a local non-chain restaurant at least once a week (25%) compared to 17% who have a take-away from a large chain restaurant.

16% of people say that they never eat take-away food from a non-chain take-away, compared to 33% who never have a take-away from a large chain restaurant.

Figure 15: consumption of fast food

Fast food consumption

Q25. How often, if at all, do you eat each of the following?

- Any fast food
- A hot food take-away from a large chain restaurant
- A hot food take-away from a local (non-chain outlet)

Base: All Halton residents aged 18+ (1,200); 3 September 2012 - 27 January 2013
Younger people are significantly more likely to eat fast food. Half of 18-24 year olds (50%) and 41% of 25-34 year olds eat fast food at least once a week, compared to 13% of 55-64 year olds and 15% of those aged 55 and over.

This is true of fast food from both large chain restaurants and local non-chain restaurants. For example, when considering take-away meals from a large chain restaurant, 35% of 18-24 year olds and 29% of 25-35 year olds have one at least once a week, compared to 5% of those aged 55 and over. When considering take-away meals from non-chain restaurants, 33% of those aged 18-34 have at least one a week compared to 13% of those age 55 and over.

Single people were also more likely to have take-away food than married people. 33% of single people have fast food at least once a week compared to 26% of married people.

**3.5.2. Physical Activity**

Revised physical activity recommendations for adults are that they should achieve a total of at least 150 minutes over a week of at least moderate activity, in bouts of at least 10 minutes duration. Moderate activity can be achieved through brisk walking, cycling, gardening and housework, as well as various sports and exercise. Alternately 75 minutes of vigorous intensity activity across the week such as running, football or swimming. All adults should also aim to improve muscle strength on at least two days a week and minimise sedentary activities.

Results from the Merseyside lifestyles survey 2012/13 show that just over one in three residents in Halton takes part in moderate-intensity sports or activities (36%). This is slightly higher than the average across Merseyside where 33% of residents taking part in moderate-intensity activity.

Men are more likely than women to do moderate intensity sports or activities (39% compared to 33%). Younger people are also more likely to do moderate intensity activity (42% of those aged between 18 and 44 are active compared to 30% of those aged over 45).

Those in full time work are significantly more likely to do moderate-intensity activity than those not working (43% compared to 29%). There is also a big difference between tenure related to uptake of moderate activity with one in five social renters taking part in moderate intensity activity compared to two in five owner-occupiers and private renters (20% compared to 42% and 39% respectively).

Those who consider themselves to have ‘good’ general health are significantly more likely to take part in moderate activity than those who consider themselves to have ‘poor’ health (42% compared to 13%).
Of those who do participate in moderate intensity activity, the majority do this kind of activity on one or two days a week. The average number of days residents take part in moderate activity in Halton is 3.4, only slightly lower than the average across the whole of Merseyside (3.5).

It is recommended that adults should engage in moderate intensity activity for 150 minutes over a week. Among those in Halton who are active, the average weekly time spent engaged in moderate intensity sport activities is 291 minutes, based on the average number of days and the average number of minutes spent on an average day, well in excess of the target. However, just 36% of residents do moderate-intensity sports or activities. If all those who are inactive are included in the calculation, the average amount of time spent engaged in moderate-intensity activity across Halton falls to 103 minutes, significantly lower than the Government recommended average.

Fewer people in Halton take up vigorous intensity activity than those who do moderate activity. One in five people take part in vigorous activity for at least 10 minutes (19%), marginally lower than the average for the whole of Merseyside (21%).

Figure 17: Levels of vigorous activity by gender, age and other key demographics
Younger people are much more likely to take part in vigorous activity with nearly two in five 18-24 year olds stating that they take part in some form of vigorous exercise (36%). This figure decreases to 4% of over 65s. Private renters and owner occupiers are significantly more likely to do some form of vigorous intensity activity than social renters (29% and 22% respectively compared to 8%).

Men are significantly more likely to take up some form of vigorous exercise than women (26% compared to 13%). Also, those who are single are significantly more likely to do this form of exercise than those who are married (28% compared to 18%).

A third of those who do some form of vigorous activity also undertake some form of moderate intensity sport (33%). As well as this, a quarter (26%) of those in good health take part in some form of vigorous activity with only 3% of those who consider themselves to be in poor health taking part in some form of vigorous exercise.

Those who have never smoked are significantly more like to do vigorous exercise than those who smoke daily (26% compared to 12%).

Residents in Halton who do vigorous intensity sports do so for an average of 3.3 days a week, higher than the average number of days across the whole of Merseyside (3.1). Over a quarter of residents do either two (27%) or three (28%) days of vigorous physical activity, while one in ten do vigorous-intensity activity every day of the week (10%).

3.5.3. Obesity levels
Residents’ height and weight can be used to calculate Body Mass Index (BMI). BMI is an estimate of body fat, calculated by dividing mass (kg) by height (m) squared. The higher someone’s BMI, the higher their risk for certain diseases such as heart disease, high blood pressure, type 2 diabetes, gallstones, breathing problems, and certain cancers.

A BMI of less than 18.5 is generally regarded as underweight and may indicate malnutrition, an eating disorder, or other health problems. In total, 2% of residents in Halton are considered to be underweight, and this rate is in-line with the average across Merseyside.

A BMI greater than 25 is considered overweight and above 30 is considered obese. More than half of residents in Halton fall into one of these two categories: 36% are overweight and 25% are obese. The levels of obesity are the highest of all local authority areas in Merseyside.

Nearly two in five adults in Halton fall into the ‘healthy’ category (37%), which is lower than the average across Merseyside (41%).
Within Halton, men are significantly more likely to be overweight than women. In total, 40% of men are classified as overweight, compared to 33% of women. However, the level of obesity is higher in women than men (28% compared to 22%).

A greater proportion of younger adults in Halton tend to be a healthier weight. More than half of those aged 18-24 (55%) and 43% of those aged 25-34 are in the healthy weight bracket, compared to 31% of those aged 45-54, 26% of those aged 55-64 and 32% of those aged 65 and over. Just 13% of 18-24 year olds are obese, compared to 30% of those aged between 45 and 64.

People with a long-term illness, disability or health problem are significantly more likely to be obese than those without (33% compared to 21%). Similarly, those who say their overall general health is poor are significantly more likely to be obese than those who consider their health to be good (40% compared to 20%).

**Table 9: weight category by key characteristics**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Underweight</th>
<th>Healthy</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2%</td>
<td>36%</td>
<td>40%</td>
<td>22%</td>
</tr>
<tr>
<td>Female</td>
<td>2%</td>
<td>38%</td>
<td>33%</td>
<td>28%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Underweight</th>
<th>Healthy</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>7%</td>
<td>55%</td>
<td>25%</td>
<td>13%</td>
</tr>
<tr>
<td>25-34</td>
<td>3%</td>
<td>43%</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>35-44</td>
<td>0%</td>
<td>39%</td>
<td>36%</td>
<td>24%</td>
</tr>
<tr>
<td>45-54</td>
<td>2%</td>
<td>32%</td>
<td>35%</td>
<td>30%</td>
</tr>
<tr>
<td>55-64</td>
<td>*</td>
<td>26%</td>
<td>43%</td>
<td>31%</td>
</tr>
<tr>
<td>65+</td>
<td>1%</td>
<td>32%</td>
<td>45%</td>
<td>22%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long term illness or disability</th>
<th>Underweight</th>
<th>Healthy</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2%</td>
<td>31%</td>
<td>34%</td>
<td>33%</td>
</tr>
<tr>
<td>No</td>
<td>2%</td>
<td>40%</td>
<td>37%</td>
<td>21%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General health</th>
<th>Underweight</th>
<th>Healthy</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>2%</td>
<td>39%</td>
<td>39%</td>
<td>20%</td>
</tr>
<tr>
<td>Poor</td>
<td>3%</td>
<td>30%</td>
<td>28%</td>
<td>40%</td>
</tr>
</tbody>
</table>

* numbers less than 5 suppressed

Source: Merseyside Lifestyles Survey 2012/13
Using data from the Merseyside Lifestyles Survey it is possible to estimate ward level both overweight (BMI $\geq 25$) and obesity (BMI $\geq 30$) rates. This shows that whilst the overall overweight and obesity level was 60.6%, this ranges across the borough of between 44.6% in Appleton to 74.6% in Mersey ward.

**Map 3: Level of overweight and obesity amongst Halton adults, ward level, 2012/13**

The pattern when just considering obesity shows some similarities but also differences, with rates of obesity generally much lower in the more affluent wards than the more deprived wards, although this pattern is not clear cut. With a borough average of 24.5%, the rate is lowest in Farnworth at 9.3% and highest in Norton North at 37.5%.

All of these findings are indicative only as the survey was not powered (i.e. did not have a sample size sufficient to detect statistically robust differences) to demonstrate statistically significant differences are ward level.
3.6. Older People

As seen in the previous section, the results of the Merseyside lifestyles survey show that both overweight and obesity increase with age. Obesity levels were highest in the 45 to 65 age group then reduced in the 65-plus age band. The prevalence of long-term conditions and poor health also increase with age. There was a stepped reduction in physical activity levels across each age group, with 30% of those aged 65+ undertaking moderate intensity activity and only 4% undertaking vigorous intensity activity. For moderate level activity those aged 35-44 undertook the most at 44% with the youngest age band 18-24 being the group that saw the highest levels of vigorous activity at 36%.

Conversely, the survey also showed that older residents tend to eat more fruit and vegetables than their younger counterparts with those aged 55-64 consuming 4.4 pieces of fruit and vegetables on average and those over 65 consuming 4.3 portions compared to 3.5 portions among 18-24 year olds. Older people eat significantly more fruit. Those aged 55 and over eat an average of 2.1 portions of fruit a day compared to 18-24 year olds, who eat an average of 1.6 portion a day. Younger people (aged 18-44) are significantly more likely to drink whole milk (18%) than those aged 55-64 (nine per cent), whilst those over 65s were the most likely to drink skimmed milk with one in five (18%) drinking this milk the most regularly. The over 65s were also most likely to rarely or never add salt at the table with 58% stating this compared to just 43% of 18-24 year olds.

A mixed pattern was seen for questions relating to fat/oil intake. Younger people in Halton, specifically those aged 18-34, are significantly more likely to say that they do not use fat at all in
their cooking (18%), with over 65s are the most likely to use butter or lard like fat for cooking with seven per cent stating they use these compared to just two per cent of 35-44 year olds and one per cent of 18-24 year olds. However, over 65s were the most likely to use cholesterol lowering spreads. Those over the age of 65 are more likely to use cholesterol lowering spreads (13% compared to 3% of those aged 18-44).

Older people were much less likely to eat ‘fast foods’, from both major chains and non-chain, just 13% of those aged 55-64 and 15% of all those over the age of 55, compared to half (50%) of 18-24 year olders and 41% of 25-34 year olds.

This is also true when looking at ‘at least once a week consumption, with 35% of 18-24 year olds and 29% of 25-35 year olds have ‘fast food’ from major chains at least once a week, compared to five per cent of those aged 55 and over. When considering take-away means from non-chain restaurants, 33% of those aged 18-34 have at least one a week compared to 13% of those age 55 and over.

3.7. Vulnerable Groups

All the information so far in this chapter relates to total population results. However, we need to consider that some groups in society face greater challenges to keeping healthy, due to other conditions and/or social circumstances.

3.7.1. Disabled children

Research has shown that children with either physical or mental disabilities or both have higher prevalence of obesity than their non-disabled peers.\[40\]

While children in Reception Year (aged 4 to 5) and Year 6 (aged 10 to 11) are measured and weighed as part of the NCMP, it is recommended that those children not able to stand unaided are excluded.\[41\] However, key finding from CHIMAT analysis shows that children who have a limiting illness are more likely to be obese or overweight, particularly if they also have a learning disability. Their analysis used HSE participant data for those aged 3 to 18 years analysed in four groupings: children with both a limiting illness and learning difficulties, children with a limiting illness but without learning difficulties, children with neither limiting illness nor learning difficulties, and all children. It showed 40% of children aged under 8 years old with a limiting illness and learning disability are obese or overweight compared to 22.4% of children who have neither condition. Considering the whole age cohort 3-18, this rose to almost 45%, with boys more likely to be obese or overweight than girls, especially where they also had a learning disability. Unlike the general cohort where the percentage of obese or overweight children decreases as the family’s household income increases, there is no obvious pattern when looking at those children with a limiting illness.

Where a child has both a limiting illness and a learning disability the pattern is more erratic, possibly as a result of the population size.\[42\] A proportion of this may be related to genetic or metabolic factors as some chromosomal disabilities pre-dispose children to overeat and for other conditions limited mobility reduces opportunities to be physically active. Attitudes of parents and service providers as well as neighbourhood facilities may also play an important role.\[43\]

As the research suggests this means there is no routine data collection on levels of obesity and overweight amongst Halton children with disabilities. However, the NCMP data does show this is a
significant issue for local children and as such there is nothing to suggest local children with disabilities are not experiencing high, if not higher levels of obesity than the national research shows. As such appropriate services should exist to support disabled children and their families to maintain or achieve a healthy weight.

3.7.2. Adults with disabilities

There is a two-way relationship between obesity and disability among adults. Adults with disabilities appear to be at higher risk of obesity than those without disabilities, and obese adults may experience disabilities related to their weight. A Public Health England report found: [44]

- Obesity is associated with the four most prevalent disabling conditions in the UK: arthritis, back pain, mental health disorders and learning disabilities
- One third of obese adults in England have a limiting long term illness or disability compared to a quarter of adults in the general population
- The prevalence of obesity-related disabilities among adults is increasing
- Adults with disabilities have higher rates of obesity than adults without disabilities
- For those adults who are disabled and obese, social and health inequalities relating to both conditions may be compounded. This can lead to socioeconomic disadvantage and discrimination
- The combination of rising obesity and disability has significant implications for health and social care services in England

3.7.3. Learning Disabilities

Emerson et al (2012) [45] carried out analysis of the Millennium cohort study, which tracks children born between 2000 and 2002. They found that more than half of seven year olds with learning disability (56%) never do sport/exercise, compared to a quarter (25%) of those with no learning disability.

Amongst adults with learning disability some risk-taking behaviour has been found to be lower than that seen in the general population, such as smoking and drinking alcohol. However:

- obesity rates tend to be higher amongst those with learning disabilities. The NHS Information Centre study into access to healthcare also noted that people with learning disability have been found to have higher rates of obesity, possibly associated with relative under activity and poor diet [46]
- 4 in 5 adults with learning disability (80%) have lower levels of physical activity than recommended, compared to 53-64% amongst the general population

There is no routinely collected data on the health status of people with learning disabilities. However, a health needs assessment carried out in Knowlsey found that those with learning disability were more likely to be obese (BMI>30) than the total Knowsley population (40.5% compared to 20%). They were also more likely to be underweight (BMI<20) than the total Knowsley population (8.7% compared to 2%). [47]
3.7.4. Mental Wellbeing and lifestyles

Mental wellbeing has been defined as

“a dynamic state in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others and contribute to their community. It is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society.”

Thus, rather than focusing on the negative aspects of mental illness, mental wellbeing refers to positive attitudes and situations that promote happiness, health and prosperity, and can be thought of simply as feeling good and functioning well. An individual with good mental wellbeing is better able to cope with daily life, engage fully in society and be productive. Critically, mental wellbeing is also strongly related to health; good mental wellbeing is associated with better mental and physical health, fewer risky health behaviours and greater life expectancy. Thus improving mental wellbeing should have major impacts on health across a population, and improve economic and social returns.

Results of NW Mental Wellbeing Survey 2012/13

Physical activity: participants were asked on how many days in the past week they had accumulated at least 30 minutes of moderate intensity physical activity (e.g. brisk walking, cycling, sport, exercise and active recreation). They were then grouped as no days of activity, one to four days and five or more days. 26.3% of Halton respondents had met the physical activity target of five or more days. There were no differences when compared to the North West. Those who did no exercise were most likely to have low mental wellbeing (17.3%) and least likely to have high mental wellbeing.

Sedentary behaviour: The amount of time respondents spent sitting or reclining was similar between Halton and the North West (Table 10). Respondents who spent the less than two hours sitting were most likely to have high mental wellbeing (32.4%), whilst those who spent more than four hours were least likely to have high mental wellbeing.

Fruit and vegetable consumption: 3.4% of Halton respondents reported eating no portions of fruit and vegetables on a typical day, whilst 75.7% consumed between one and four portions and 20.9% consumed five or more portions. Fruit and vegetable consumption was significantly associated with mental wellbeing, with nearly a third (31.3%) of those reporting consumption no fruit and vegetable having low mental wellbeing, and a similar proportion of those who consumed five or more portions having high wellbeing.
Table 10: Mental wellbeing in Halton participants by exercise and diet, 2012/13

<table>
<thead>
<tr>
<th>Mental Wellbeing Category</th>
<th>n</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days of physical activity</td>
<td>None</td>
<td>16</td>
<td>17.3%</td>
<td>66.7%</td>
<td>16.0%</td>
</tr>
<tr>
<td></td>
<td>One to four</td>
<td>191</td>
<td>11.0%</td>
<td>60.2%</td>
<td>28.8%</td>
</tr>
<tr>
<td></td>
<td>Five or more</td>
<td>127</td>
<td>11.8%</td>
<td>61.4%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Time spent sitting or reclining</td>
<td>Less than 2 hours</td>
<td>108</td>
<td>14.8%</td>
<td>52.8%</td>
<td>31.4%</td>
</tr>
<tr>
<td></td>
<td>2 to 4 hours</td>
<td>169</td>
<td>10.7%</td>
<td>61.5%</td>
<td>27.8%</td>
</tr>
<tr>
<td></td>
<td>More than 4 hours</td>
<td>204</td>
<td>14.2%</td>
<td>69.1%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Daily portions of fruit and vegetables</td>
<td>None</td>
<td>16</td>
<td>31.3%</td>
<td>56.3%</td>
<td>12.5%</td>
</tr>
<tr>
<td></td>
<td>1 to 4</td>
<td>367</td>
<td>13.4%</td>
<td>64.9%</td>
<td>21.8%</td>
</tr>
<tr>
<td></td>
<td>Five or more</td>
<td>101</td>
<td>10.9%</td>
<td>56.4%</td>
<td>32.7%</td>
</tr>
</tbody>
</table>

3.7.5. Mental Illness and lifestyles

Mental health problems have increasingly been shown to precede, and be important in the recovery from, physical health problems. For example, the Whitehall Study showed that emotional health, especially negative affect – a general tendency to report ‘distress, discomfort, dissatisfaction, and feelings of hopelessness’ – predicts the onset of heart disease and recovery from heart attack independently of other risk factors. [51]

For people with a diagnosis of severe mental illness such as depression, the risk of physical illness is high: 46% of people with a mental health problem have a long-term physical health problem such as coronary heart disease or chronic obstructive pulmonary disease. [52] Death rates are also higher in people with mental illness compared to people without mental illness, especially deaths from cardiovascular, respiratory and infectious diseases. [53]

Physical health problems are often associated with mental health problems

People with physical health problems, especially chronic diseases, are at increased risk of poor mental health, particularly depression and anxiety; around 30% of people with a long-term physical health condition also have a mental health problem. [54] In some cases, depression appears to result from specific biological effects of chronic illness.

In other cases, the association between depression and chronic illness appears to be mediated by behavioural mechanisms, the limitations on activity imposed by the chronic illness leading to gradual withdrawal from rewarding activities. [55] Mental health problems can also increase the overall burden of illness in patients with chronic medical conditions, including the need for healthcare services.

Recent evidence has shown that despite the high risk of physical ill-health, people with mental health problems have less access to preventative and early interventions for physical illness including coronary angioplasty. [56][57]

Unhealthy lifestyles are often a response to stress

The unhealthy lifestyles and behaviours—smoking, excess alcohol consumption, misuse of illicit drugs, consumption of, sugary foods and over-eating in general—are often used because they are effective in managing stress. For example, eating carbohydrates increases serotonin levels, which may boost mood. [58] People find it very difficult to stop these behaviours because they can be addictive.
Other factors like social norms, availability, price and legality also play a role and provide important opportunities for regulation, but a key reason most people find it difficult to change their lifestyle is because the lifestyle eases emotional distress.

- Obesity is more prevalent among people with mental illness[^59]
- Mental health problems in childhood predict the adoption of unhealthy lifestyles in adolescence[^60]
- Healthy foods, particularly it would seem fruit and vegetable consumption up to eight portions a day[^61] can positively affect mental as well as physical health
- Levels of physical activity can also impact on mental wellbeing in terms of mood, stress, self-esteem, anxiety, dementia and depression[^62]
- Current NICE guidance recommends the use of structured physical activity in the treatment of depression[^63]

### 3.7.5. People who are homeless

Malnutrition is a common problem amongst homeless people, particularly serious amongst children and the elderly. Homeless people are more likely than the general population to drink excessively and this drinking has a greater impact on the body such as the kidneys or liver, when the person has malnutrition. Because the choices of food that homeless people are offered are usually pre-packaged items such as canned meals or fast food, people who are homeless are likely to be eating more sodium and less likely to have the recommended levels of calcium and fibre.

The Queens Nursing Institute (2012)[^64] reported on current evidence for nutrition and homelessness. They discuss how previous research has focused on diet, nutrition and healthy eating amongst low income households but not amongst homeless people. They discuss research evidence that suggests single people and families who live in low income households have been found to have a reduced intake of vitamins and minerals and have been found to eat more high fat, processed foods or fast food/snack food. They are also less likely to eat food recommended for healthy living e.g. low fat milk, and plenty of fruit, vegetables and wholemeal products.

The report examines the barriers to meeting a healthy diet from the perspective of single homeless people and families. Some of these barriers include: having limited money to buy food, sharing food preparation areas and cooking facilities or having no fixed abode in which to prepare meals, limited food storage spaces and relying on hostels meals, meeting children’s food needs first (meaning parents become poorly nourished), eating for fullness rather than nutritional value and the general lack of knowledge about healthy eating. In the Liverpool Homeless Link Audit, 28% of clients reported not eating any of the recommended ‘5 a day’.[^66] Nationally, the picture was worse, at 1 in 3 of all respondents.[^67][^68]

### 3.7.6. Older people in care homes

Key findings from the 2011 census compared to the 2001 census showed:[^69]

- The care home resident population for those aged 65 and over has remained almost stable since 2001 with an increase of 0.3%, despite growth of 11.0% in the overall population at this age
• Fewer women but more men aged 65 and over, were living as residents of care homes in 2011 compared to 2001; the population of women fell by around 9,000 (-4.2%) while the population of men increased by around 10,000 (15.2%)
• The gender gap in the older resident care home population has, therefore, narrowed since 2001. In 2011 there were around 2.8 women for each man aged 65 and over compared to a ratio of 3.3 women for each man in 2001
• The resident care home population is ageing: in 2011, people aged 85 and over represented 59.2% of the older care home population compared to 56.5% in 2001

Section 3.4. detailed the eating, activity and weight levels of older people living in their own residence, whether this is rented or owner-occupied accommodation. Despite relatively poorly understood, knowledge about the nutritional, physical activity and weight levels of older people in care homes is even more limited. The oral health of older people in care homes is poorer than amongst the general population. A recent report of a survey of 230 care home managers across the North West revealed:

• Over three-quarters of care homes conducted a formal assessment of each resident’s oral care needs on admission, as part of their care plan (77.1%). A number also conducted an assessment but not as part of a care plan (12.4%), while 10.4% did not conduct any formal assessment
• Of those who conducted assessments, the ability of the resident to clean their own teeth was checked by 94.7% of care homes, while the presence or absence of dentures and the ability of the resident to eat food was checked by 94.3%
• The majority of care homes had a protocol or system in place to ensure that residents have the opportunity to clean their teeth twice a day (83.8%)
• Respondents were asked ‘what proportion of nutrition programmes for residents are altered as a result of their dental status?’ The majority (76.9%) said that less than half of their residents would require such a change

Many older people, including those in care homes, suffer with a loss of appetite and reduced opportunities to undertake enough physical activity.

Frailty is a state of vulnerability associated with increased level of disability, risks of falls, hospitalisation, cognitive deficits, and psychological distress, the prevalence of which increases with age. The good news is there is emerging evidence supporting the health benefits of exercise and physical activity in frail older people. For example, studies have shown that a variety of physical exercise programmes can lead to improvements in cardiovascular fitness, muscle strength, mobility and balance, as well as psychological aspects, including mood and cognitive function. All these factors will ultimately lead to an enhanced quality of life. The UK Chief Medical Officer Guidelines for Older Adults in 2011 are based on evidence from research and provide information on how much physical activity is required to achieve health and other benefits.

Results from a recent Italian study showed that the physical activity intervention had a positive effect on physical functions. There was a statistically significant change between the means of the two groups over time; the intervention groups showed a stable condition with respect to overall mobility function, balance, and gait while the control group showed decreased performance at the
post-test. These results underline that, even in critical conditions, relatively simple training may promote a more positive adjustment to old age.\[72\]

Many older people in residential care accommodation are undernourished, either through previous poverty, social isolation, or personal or psychological problems, or due to the effects on appetite of illness or medication.\[74\]

The BAPEN (British Association of Parenteral and Enteral Nutrition) report summarised the UK’s largest nutritional screening survey in hospitals, care homes and mental health units. The 2011 survey found that, of 523 residents recently admitted, to one of 84 care homes across the UK and Republic of Ireland, and screened 41% were ‘malnourished’ (25% high risk, 16% medium risk) which was higher than in the 2010 and 2007 surveys but similar to the 2008 survey. In 2008, 42% residents were at risk (30% high risk, 11% medium risk), in 2010, 37% residents were at risk (23% high risk, 15% medium risk) and in 2007 30% residents were ‘malnourished’ (20% high risk, 10% medium risk). This may be due to the difference in the mix of care homes that took part in the 4 surveys.\[75\]

The Food Standards Agency’s advice for food served to older people in residential care aims to support the wider care standards and provide the basis of assessment for residents, their family, care home staff and those responsible for commissioning and monitoring standards. This document provides specific guidance to care homes for older people who do not have nutritional requirements due to illness or disease.\[76\] The nutrient standards provided by the Food Standards Agency are based upon the needs of older people aged 75 and over. The guidance given in this document will be sufficient, in most cases, for all those older people in residential care.\[77\]

Appetite and weight may fall in late life but protein needs remain high and advice on adjusting the balance of foods may be needed. Many people who lose weight or eat too little will simply become deficient in some standard requirements, such as folic acid; and most housebound older people are short of vitamin D. This justifies routine supplementation or at least measurement to check whether it is needed, before it causes problems.\[77\]

3.7.7. People living in poverty

In the UK, the poorer people are, the worse their diet, and the more diet-related diseases they suffer from. This is known as food poverty. Yet it is only in the past decade or so that the immense contribution it makes to poor health has been quantified with poor diet being related to 30% of life years lost in early death and disability.\[78\] Thus, inequalities in people’s diets can result in inequalities in people’s health.

Obesity

Obesity prevalence in England is associated with measures of socioeconomic position – with higher levels of obesity found among more deprived groups. This association is stronger for women than for men, a pattern that has been observed in many other developed countries. Data from the HSE indicate that for women, obesity prevalence increases with decreasing socioeconomic position, regardless of the measure used. For men however, only occupation-based and qualification-based measures show a consistent inverse correlation. Figure 19 shows the relationship between obesity and highest level of educational qualification.
Halton analysis of obesity shows broadly similar patterns even though a different indicator for socioeconomic deprivation is used, the Index of Multiple Deprivation (IMD). Analysing obesity prevalence against IMD scores at Lower Super Output levels, divided into deprivation deciles, showed a clear relationship between deprivation and obesity. However, repeating this analysis for overweight and obese adults together, i.e. all adults with a BMI ≥25, shows there is no overall pattern with deprivation, with rates fluctuating across the deciles and the highest rate being in the second least deprived decile. As with the overall analysis seen in section 3.5.3, caution is needed when interpreting these results as the survey was powered to detect differences at a deprivation quintile level only.

Figure 20: Proportion of Halton adults overweight and obese, by local deprivation decile
Physical activity

The relationship between socioeconomic position and physical activity is more complicated. The 2012 HSE showed that the proportion of participants meeting the current UK guidelines for aerobic activity increased as equivalised\(^b\) household income increased. 76% of men and 63% of women in the highest income quintile met the new guidelines, falling to 55% of men and 47% of women in the lowest quintile. However, the early 2008 survey showed that while there is some evidence of a social gradient in participation in total physical activity, the pattern is different for men and women.

For men there was little variation with income in the top four quintiles, while men in the lowest income quintile were least likely to meet the recommended levels of physical activity (31%). For women the proportion meeting the recommended levels was highest in the top quintile (34%), and there was little variation in the lowest four.

Figure 21: Proportion of participants meeting the recommended amount of physical activity by equivalised household income and sex, 2008 Health Survey for England

Local data from the Active People Survey is limited to the most affluent and least affluent socioeconomic groups due to data suppression of small numbers. Despite this it does show that activity levels were less amongst the least affluent compared to most affluent, thus following the regional and national pattern.

Table 11: Adult (16+) Participation in Sport (at least once a week\(^^\)), by year, and demographic breakdown

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>33.0%</td>
<td>30.5%</td>
<td>33.7%</td>
<td>35.8%</td>
<td>34.2%</td>
<td>35.7%</td>
</tr>
<tr>
<td>NS SEC 1-2</td>
<td>35.3%</td>
<td>31.1%</td>
<td>39.7%</td>
<td>44.0%</td>
<td>40.1%</td>
<td>42.1%</td>
</tr>
<tr>
<td>NS SEC 3</td>
<td>33.0%</td>
<td>*</td>
<td>32.6%</td>
<td>34.9%</td>
<td>32.3%</td>
<td>34.7%</td>
</tr>
<tr>
<td>NS SEC 4</td>
<td>*</td>
<td>*</td>
<td>31.6%</td>
<td>31.8%</td>
<td>32.4%</td>
<td>33.6%</td>
</tr>
<tr>
<td>NS SEC 5-8</td>
<td>25.9%</td>
<td>23.0%</td>
<td>26.2%</td>
<td>28.8%</td>
<td>26.9%</td>
<td>28.7%</td>
</tr>
</tbody>
</table>

\(^1\) session a week (at least 4 sessions of at least moderate intensity for at least 30 minutes in the previous 28 days)

\(^\text{Source: Active People Survey, Sport England 2014}\)

\(^\text{NB: * indicates that data has been suppressed due to sample size}\)

\(^b\) Equivalised income is adjusted household income to account for size and composition so that the incomes of all households are comparable
Healthy Eating

Data from the HSE 2011 indicate that fruit and vegetable consumption varies significantly by equivalised household income. Adults in the higher income quintiles were more likely than those in lower income quintiles to report eating the recommended five or more portions per day. Figure 21 shows the proportion of men and women eating five or more portions of fruit and vegetables per day by equivalised household income: 34.6% in the highest quintile did so, compared with 19.7% in the lowest quintile.

**Figure 22: Proportion of adults (aged 16+ years) eating five or more portions of fruit and vegetables per day by equivalised income quintile, with 95% confidence limits (Health Survey for England 2011)**

The mean number of portions of fruit and vegetables consumed by adults aged 16 and over per day also increased from the lowest to highest income quintiles, with a mean of 3 in the lowest quintile and 4.3 in the highest. The differences between quintiles are statistically significant. Expenditure on fruit and vegetables as a proportion of all food and non-alcoholic drink expenditure shows that the proportion of food spent on fruit and vegetables increases as equivalised income increases. The proportion of spend on fruit and vegetables in decile one was statistically significantly lower than all the other deciles with the exception of decile two.⁷⁹

In Halton, the pattern is not quite so clear but does nevertheless broadly follow that seen nationally, apart from lower than expected levels in quintile 5.

**Figure 23: Proportion of Halton adults (aged 18+ years) eating five or more portions of fruit and vegetables per day, by deprivation quintiles**

[Diagram showing data]
4. Service provision

The 2011 to 2015 Halton and St Helens Healthy Weight Strategy outlines a coordinated approach to tackling overweight and obesity in a way that recognises the barriers local people face when trying to practice a healthy diet or undertake regular physical activity, within a wider context of action to tackle health inequalities. The focus on healthy weight rather than obesity reflects intentions to encourage people from an early age to maintain a healthy weight, to minimise the stigma attached to the term obese and encourage people to see their weight in a positive way.

The approach is based on tackling obesity using the life course, primarily using age groups within the population to identify what is required to address the key components of individual’s lives to structure a response to this problem. The 5 life course age groups identified either relate to critical periods of metabolic change, are linked to spontaneous changes in behaviour, or periods of significant shifts in attitudes. The 5 age periods are:

1. Pregnancy and the first year of life
2. Early years
3. Childhood
4. Teenage years
5. Adulthood

It also recognises that there is a need to target services to population groups who are more at risk of developing obesity.

Figure 24: Tiered approach to healthy weight
4.1 Outcomes of Weight Management Services

4.1.1. Child and Adolescent Weight Management

All schools in Halton are committed to the Fit 4 Life schools programme which delivered in 31 schools during 2014/15. The programme is divided into three age cohorts:

- **Key Stage 1 (4-7 years)** is a 1-2 week programme comprising of healthy eating and active play
- **Key Stage 2 (7-11 years)** is a 4 week programme comprising of energy balance, eat well plate and food groups, fats, sugars and salt, food labelling and parent presentations
- **Key Stage 3 and 4 (11-16 years)** is a 1-2 week programme comprising of benefits of a healthy lifestyle, sugary drinks, healthy eating, key messages to feeling good, physical activity health messages, and food labelling

Outputs and outcomes for 2014/15:

- 979 children & young people engaged in Fit 4 Life Schools
- 91% of those engaged report increased knowledge of healthy eating and physical activity
- 184 parents/carers attended early years Fit 4 Life programme
- 1243 children and young people took part in 31 Healthitude programmes
- 97% of these reported increased knowledge of health matters as a result

The Children and Family Weight Management (Fit 4 Life Community) programme comprises various programmes of activities and education, which encourages children, young people and their families to exercise regularly, eat a nutritionally-balanced diet while helping overweight children to achieve a healthy weight. The Fit 4 Life community programme is delivered as a partnership between the Health Improvement Team and the Widnes Vikings. All families accessing the Fit 4 Life community programme are now offered a one to one consultation. This allows for the family to learn more about the programme and for staff to answer any questions/alleviate any anxieties in accessing the programme. This has helped with recruitment onto the programme. The programme was delivered to 44 beneficiaries during 2014/15 with all of them reporting positive changes to their lifestyle. Additionally 138 children and young people and their families have accessed Family Cook and Taste sessions.

4.1.2. Adult Weight Management

For 2013/14 the rate of people accessing the specialist weight management services is higher in the more deprived areas. The areas with higher obesity levels are also those with higher rates of people accessing the NHS weight management services ie Windmill Hill and Norton South. Other areas with high obesity prevalence, Halton Castle and Grange, also have fairly higher access rates. However, Halton Lea also has fairly high obesity prevalence but uptake rate is below the Halton average (but not statistically different). This demonstrates that the specialist weight management services are reaching the right people.
Assessing the influence of deprivation on weight management service uptake shows little relationship, with the rate per 1,000 people accessing the adult specialist weight management service spread fairly evenly across all areas, as Figure 24 shows.

Weight management service outcomes data is based on NICE\(^{[81]}\) and Department of Health\(^{[82]}\) guidance that an effective programme should aim to elicit a 3% to 5% weight reduction in obese adults during a 3 month period. Performance data is not currently available at postcode level so it has not been possible to map local outcomes. There is a rolling programme of people completing the programmes, with data collection at 12 weeks and follow up at 6 months and 2 years for complex clients. Overall for 2014/15 this showed that over half of clients completing the 12 week programme had lost 3% of more weight and had made substantial improvements to their health scores including self esteem scores. A third had lost 5% or more weight.
Table 12: Adult Specialist Weight Management (SWM) outcomes 2014/15, as at August 2014

<table>
<thead>
<tr>
<th></th>
<th>Number completing ASWMS</th>
<th>Percentage achieving improvements in health status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number</td>
<td>231</td>
<td></td>
</tr>
<tr>
<td>Decreased weight by up to 3%</td>
<td>66</td>
<td>25.6%</td>
</tr>
<tr>
<td>Decreased weight by 3% - 5%</td>
<td>60</td>
<td>26.0%</td>
</tr>
<tr>
<td>Decreased weight by 5% or more</td>
<td>74</td>
<td>32.0%</td>
</tr>
<tr>
<td>Decreased weight by 3% or more</td>
<td>134</td>
<td>58.0%</td>
</tr>
<tr>
<td>Increased fitness level</td>
<td>174</td>
<td>75.3%</td>
</tr>
<tr>
<td>Increased diet score</td>
<td>131</td>
<td>56.7%</td>
</tr>
<tr>
<td>Increased self-esteem score</td>
<td>150</td>
<td>64.9%</td>
</tr>
</tbody>
</table>

|                      | 276                     |                                                  |
| Decreased weight by up to 3% | 57                       | 20.6%                                           |
| Decreased weight by 3% - 5% | 40                       | 14.5%                                           |
| Decreased weight by 5% or more | 112                      | 40.6%                                           |
| Decreased weight by 3% or more | 152                      | 55.1%                                           |
| Increased fitness level | 154                     | 55.8%                                           |
| Increased diet score  | 187                     | 67.8%                                           |
| Increased self-esteem score | 152                     | 55.1%                                           |

4.2. Foodbanks

In response to growing concern about the impact of poverty the Trussell Trust foodbanks have been set up to provide a minimum of three days emergency food and support to people experiencing crisis in the UK. In 2012/13 foodbanks fed 346,992 people nationwide. Of those helped, 126,889 were children.

Rising food and fuel prices, static incomes, underemployment and changes to benefits are some of the reasons why increasing numbers are being referred to foodbanks for emergency food. The Trussell Trust partners with churches and communities to open new foodbanks nationwide. With almost 400 foodbanks currently launched, their goal is for every town to have one.[83] Recent research shows that the chances of food banks operating within a local authority area are 1.6 times more likely in areas with cuts to local authority spending and central welfare spending. The highest levels of food bank use have occurred where there have been the highest rates of sanctioning, unemployment, and cuts in central welfare spending.[84]

Foodbanks have been operating in Halton since the end of 2012. Foodbanks operate several distribution points organised across two foodbank sites (one in Widnes and one in Runcorn). The latest figures for 2014/5 for Widnes only show that a total of 831 vouchers were issued. Of these, 17% were issued to couple families, and 21% to single parent families. The most common reasons for crisis reported within the borough were problems with the social security system and low income. However the majority of clients were struggling with a number of other issues that

---

5 http://widnes.foodbank.org.uk/
6 http://runcorn.foodbank.org.uk/
compounded their situations. In Widnes, the wards receiving the greatest number of vouchers were Riverside and Hough Green. 2014/15 data is not available for Runcorn but earlier data (2013) shows the wards receiving the greatest number of vouchers there was Norton South and Grange.

4.3. Physical activity and sports

Halton School Games Programme

The School Games forms part of the Government’s programme to deliver a meaningful sporting legacy. The focus of the School Games aims to engage and enthuse more young people than ever before to participate in high quality school competitions as competitors and leaders, supporting them in their own personal best in sport and life.

The key supporting PE and school Sport areas available through the School Games programme are:

1. Driving participation in the School Games –
   - All schools are eligible to be a part of the School Games through www.yourschoolgames.com
   - School Games and competitive sport can contribute to school priorities and support the aspirations and achievements of young people in local schools

2. Developing competitive opportunities -
   - A structured and progressive competition calendar is available, that meets the needs of all young people and increases the number of competitive sporting opportunities
   - The Halton competition calendar is aligned to club pathways and competition priority formats as defined by the National Governing Bodies of Sport
   - The provision of inclusive and targeted opportunities is available for young disabled people to access through Halton’s Disability Sports Coordinator

3. Clubs - Increasing and sustaining participation -
   - The opportunity for sustaining young peoples’ commitment to an active lifestyle by ensuring all School Games activity links to a wide range of club and community sport opportunities
   - Primary schools can access the Change 4 Life clubs scheme which is aimed at providing activities and engaging your less active pupils, through mentor training and a free equipment bag

4. Workforce - Broadening the range of participation opportunities -
   - An annual programme of PE and School Sport CPD training is available for primary school staff to access

4.4. Tackling the Obesogenic Environment: Spatial Planning

Health inequalities are spatially apparent in Halton and much of the poor health experienced across the borough is closely related to the socio-economic characteristics of certain areas.

Spatial planning can help to address these kinds of disparities by addressing some of their root causes through the development and regeneration agenda. Most of the key determinants of health are outside the direct influence of health and social care, for example, education, employment, housing, and environment. The physical environment is shaped by planning decisions and can deter or enable a healthy lifestyle. The propensity of people to walk, cycle, or play in the open air is
affected by the convenience, quality and safety of pedestrian and cycling routes and by the availability of local open space. It is especially important that children are encouraged to adopt regular exercise in childhood – regular exercise ‘protects against heart disease and by limiting obesity, reduces onset of diabetes. It promotes a sense of wellbeing and protects older people from depression.

Table 10 details some of the ways in which spatial planning to be used to tackle obesity.\textsuperscript{[85]}

\begin{table}[h]
\centering
\begin{tabular}{|l|l|l|l|l|}
\hline
Health Issue & Where the issue is located & Pathway / causal link & Potential options for addressing the issue – actionable insights & Health objectives \\
\hline
High prevalence of obesity and type 2 diabetes. & • Particular neighbourhoods.  
• Rising rates in children & • Low levels of physical activity  
• Poor diet & • Access to good quality open space  
• Provide opportunities for physical activity  
• Create active travel routes  
• Encourage walking to school  
• Improve access to fresh good food & • To reduce rates of obesity  
• To increase levels of physical activity \\
\hline

\multicolumn{4}{|l|}{Spatial planning interventions} \\
\hline
• Have standards of open space been set for existing and new areas in terms of accessibility, quality and size? 
• Have standards of green space been set for existing and new areas in terms of accessibility, quality and size? 
• Will access to open space be enhanced for those communities that are deficient? 
• Will access to green space be enhanced for those communities that are deficient? 
• Will the management of open and green space ensure that the needs of all sections of the community be met? & • Will access to exercise opportunities be required from new development? 
• Will active travel be required in travel plans for major developments? 
• Are walking routes to centres, facilities and schools identified and protected and steps to enhance or provide them where deficient identified? 
• Will a safe and continuous cycle network be created? 
• Will good access to fresh food be achieved for all communities? 
• Will access to food growing opportunities be provided for all who need it? & \\
\hline
\end{tabular}
\end{table}

4.5. Tackling the Obesogenic Environment: Food laws and hot food take-aways

Traditional local authority public health interventions relating to the Food Environment have focussed on the enforcement of laws relating to the safety and composition of food. These local interventions to prevent food borne illness and protect consumers from fraud and adulteration will remain important. Regulatory services will also need to adapt and respond to new and emergent threats created by an increasingly globalised food distribution system. Such threats have recently been illustrated by the outbreak of a new highly pathogenic strain of E’coil in Germany in 2011 and the European wide adulteration of meat products with horsemeat.

However over recent years there is increased concern over the public health impact of rising levels of obesity within the population and how rates of obesity may be influenced by the local food environment and the wider social determinants of health. A number of influential studies – notably
the 2010 Marmott Review\textsuperscript{[86]} and the 2007 Foresight Report have highlighted how local policy can help shape the food environment and influence health outcomes.

The obesity epidemic is a national problem with local and regional variances in rates of obesity. These variances suggest a differing interaction of factors at a local level – although one common factor is the link between poor health outcomes and multiple deprivation. Treatment of individual cases of obesity will continue to be important, however from a public health perspective the trend in rising rates of obesity can only be addressed and reversed by a population based approach. Whilst some measures at a national level may help, such as public education and changes in the composition of mass produced food, population based measures at a local level will also be required.

The transfer of public health responsibility to local authorities has provided an opportunity to integrate measures to tackle obesity with existing local authority policy responsibilities such as planning, transportation and open spaces.

To date the Authority has adopted the following measures aimed at improving rates of obesity in the population.

- Supplementary planning document which limits the clustering of takeaways in town centres and prevents new takeaways from opening within 400m of schools and playgrounds
- Pre-school healthy food award promoting a healthy balanced diet in pre-school food settings

Halton is aware that other areas have adopted further measures

- Box schemes and food co-ops to improve access to healthy food
- Food Awards to promote the provision of healthy choices in restaurants and takeaways.
- Initiatives to reduce salt, saturated fat and portion size in takeaway food.

However there is very little evidence to support the impact these interventions can have on rates of obesity. This issue was highlighted by the Foresight Report of 2007 “The issue of obesity challenges the traditional research paradigm for clinical medicine and epidemiology. The collation of diverse data over long periods of time is at variance with the need for urgent action”. Both the Marmot and Foresight report advocate a precautionary approach to policy development. The precautionary principle states; “in cases of serious or irreversible threats to the health of humans or ecosystems, acknowledged scientific uncertainty should not be used as a reason to postpone preventive measures”

There is also concern over the sustainability of these interventions as they often rely on short term funding and can require significant input from health professionals, community workers and the voluntary sector to maintain their effectiveness.

Therefore Halton’s public health policy with respect to obesity will need to balance the usual demand for interventions that are sustainable and influenced by a strong evidence base with the need to take urgent action to improve levels of obesity.
Research is currently being undertaken by the Knowledge Exchange in Public Health at Durham University to evaluate the effectiveness of Food Awards and similar interventions. Halton will review the outcome of this research to inform future policy. To further inform policy the Environmental Health and Public Health teams will begin a process to systematically map and assess food availability across the borough.

4.6. Tackling the Obesogenic Environment: Active Travel
Both the Halton Local Transport Plan 3\cite{87} and the Liverpool City Region Transport Plan for Growth\cite{88} identify the role transport can have in promoting health and wellbeing. Part of this will be due to transport’s role in improving access to educational/training opportunities, employment and services. Both plans include health and wellbeing as a strategic priority with actions to promote walking, cycling and public transport use. Reducing emissions will also have a positive impact on cardiovascular and respiratory health and reduce accidental injury. School based projects will contribute to efforts to reduce childhood obesity levels.
5. Impacts of healthy eating, physical activity and obesity

5.1. Impacts on health

5.1.1. Main health impacts

Taking steps to tackle obesity is important because, in addition to causing obvious physical changes, it can lead to a number of serious and potentially life-threatening conditions, such as:\(^{(89)}\)

- type 2 diabetes
- coronary heart disease
- some types of cancer, such as breast cancer and bowel cancer
- stroke

**Figure 27: health problems associated with obesity**

Obesity can cause a number of further problems, from difficulties with daily activities to serious health conditions.
Some of the day-to-day problems that can be caused by obesity include:

- breathlessness
- increased sweating
- snoring
- difficulty doing physical activity
- feeling very tired a lot of the time
- joint and back pain
- low confidence and self-esteem
- feeling isolated

Obesity reduces life expectancy by an average of 3 to 10 years, depending on how severe the problem is. It’s estimated that being overweight or obese contributes to at least 1 in every 13 deaths in Europe.

5.1.2. Impaired glucose regulation (IGR)

Impaired glucose regulation (IGR) (or non-diabetic hyperglycaemia) describes blood glucose levels that are above the normal range but are not high enough for the diagnosis of Type 2 diabetes. The risk factors for IGR are the same as those for Type 2 diabetes – the greatest single risk factor being obesity. Women with a history of gestational diabetes are also at greater risk of developing IGR and diabetes. Before people develop Type 2 diabetes they almost always have IGR, although it is asymptomatic and can often go undiagnosed for many years. In the absence of intervention the majority of individuals with IGR are likely to develop Type 2 diabetes within 5-10 years. There is good evidence, however, to suggest that Type 2 diabetes can be prevented or delayed in people with IGR. Evidence shows that modest lifestyle changes can significantly postpone the onset of Type 2 diabetes in high risk individuals and that lifestyle intervention is more effective than diabetes drugs such as metformin in reducing the incidence of diabetes in IGR patients.\[90\]

During winter 2012, IGR specific insight work was undertaken across Merseryside (including Halton) with 65 people aged 40 and over who were overweight or obese, and included BME groups. It took the form of:

- Individual and paired interviews
- Completion and review of a personal health diary
- Eight focus groups

It found that only three out of the 60 people (including eight already thought to have IGR) had heard of the term pre-diabetes. It also revealed that any pathway needed to be flexible, enabling people to take up whichever elements of the offer of support that they felt able to.

Work co-ordinated by the Merseyside Diabetes Network and the Diabetes QIPP (Quality, Innovation, Prevention and Productivity) led to the introduction of a Merseyside IGR Pathway in Halton January 2014. This followed the insights work, audits of current practice in the identification and management of patients with IGR across GP practices and engagement with primary care and other key stakeholders including public health.
The audit of GP practices revealed a registered adult prevalence (17 years +) of IGR on Merseyside is 0.8% (9265 people). This is likely to be a significantly lower than the true prevalence. The Department of Health’s NHS Health Checks modelling assumes an IGR prevalence amongst adults aged 40-74 years of 2.3%. Table 2 shows data from the 2011 GP audit compared to estimates based on the NHS Health Check modelling suggests 874 people in Halton may have undiagnosed IGR (although it should be noted that this may be lower since the introduction of the IRG pathway and Health Checks programme).

Table 14: Summary of registered IGR prevalence compared to NHS Health Checks modelling

<table>
<thead>
<tr>
<th>Area</th>
<th>Halton</th>
<th>Knowsley</th>
<th>Liverpool</th>
<th>Southport and Fomby</th>
<th>St Helens</th>
<th>South Sefton</th>
<th>Merseyside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 17+</td>
<td>124,866</td>
<td>150,800</td>
<td>434,900</td>
<td>155,542</td>
<td>172,434</td>
<td>150,558</td>
<td>1,158,100</td>
</tr>
<tr>
<td>Registered prevalence</td>
<td>1998 (1.6%)*</td>
<td>1508 (-1%)</td>
<td>2175 (-0.50%)</td>
<td>1155 (1%)</td>
<td>2759 (1.6%)*</td>
<td>1596 (1%)*</td>
<td>9265 (0.8%)</td>
</tr>
<tr>
<td>NHS Health Check Modelling</td>
<td>2872</td>
<td>3468</td>
<td>10,003</td>
<td>2657</td>
<td>3966</td>
<td>3670</td>
<td>26,636</td>
</tr>
<tr>
<td>Potentially undiagnosed</td>
<td>874</td>
<td>1960</td>
<td>7828</td>
<td>1502</td>
<td>1207</td>
<td>2074</td>
<td>17,371</td>
</tr>
</tbody>
</table>

*based on original data for Sefton PCT and Halton & St Helens PCT

It is estimated that between 5-12% of people with IGR will go on to develop diabetes annually. Table 3 shows the estimates for Merseyside local authorities.

Table 15: Expected numbers of people with IGR across Merseyside local authorities

<table>
<thead>
<tr>
<th>Area</th>
<th>Adult Population</th>
<th>Expected Numbers with IGR</th>
<th>IGR patients expected to develop diabetes annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liverpool</td>
<td>434,900</td>
<td>10,003</td>
<td>500 – 1,200</td>
</tr>
<tr>
<td>Southport and Fomby</td>
<td>115,542</td>
<td>2,657</td>
<td>133 – 319</td>
</tr>
<tr>
<td>South Sefton</td>
<td>159,558</td>
<td>3,670</td>
<td>183 – 440</td>
</tr>
<tr>
<td>Knowsley</td>
<td>150,800</td>
<td>3,468</td>
<td>173 – 416</td>
</tr>
<tr>
<td>Halton</td>
<td>124,866</td>
<td>2,872</td>
<td>144 – 345</td>
</tr>
<tr>
<td>St Helens</td>
<td>172,434</td>
<td>3,966</td>
<td>198 – 475</td>
</tr>
<tr>
<td>Merseyside</td>
<td>1,158,100</td>
<td>26,636</td>
<td>1,331 – 3,139</td>
</tr>
</tbody>
</table>

5.2. Impacts on hospital admissions

There are several ways of estimating the burden obesity places on admissions to hospital. The condition has a separate ICD-10¹ code so it is possible to search local admissions data for obesity specific diagnosis codes. This will however, underestimate the overall contribution obesity plays in admissions as it is a risk factor for many diseases (see section 5.1.1.)

Population Attributable Fractions have been developed by Scottish Public Health Observatory using national and international research. These enable the relative risk of developing various diseases due to obesity to be applied to local hospital admissions data, thus calculating an aggregate estimate of the impact the conditions has on the NHS locally. The accuracy of such calculations depends on there being sufficient evidence in the recent epidemiological literature of a causal relationship between obesity and the disease or injury.

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¹ICD-10 = International Classification of Diseases, version 10, developed by the World Health Organisation
Data on hospital admissions where there is a primary (main reason for the admission) or secondary (not the reason for admission but the patient has the condition) diagnosis shows that Halton has much higher admission rates amongst both men and women than the England or North West averages and one of the highest amongst its statistical neighbours group of local authorities.

**Table 13: Finished Admission Episodes in an inpatient setting with a primary or secondary diagnosis of obesity, 2013/14**

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of admissions</th>
<th>Admissions per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
</tr>
<tr>
<td>England</td>
<td>365577</td>
<td>123423</td>
</tr>
<tr>
<td>North West</td>
<td>55848</td>
<td>19879</td>
</tr>
<tr>
<td>Halton</td>
<td>1158</td>
<td>437</td>
</tr>
<tr>
<td>Halton Rank of 16 LAs*</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Ranking amongst 16 LAs is based on CIPFA stats nearest neighbours 2014 method

Whilst North West rates for inpatient episodes that include bariatric surgery are nearly half the England rate Halton’s are higher than England and thus show a stark difference with the North West rates.

**Table 14: Finished Consultant Episodes in an inpatient setting with a primary diagnosis of obesity and a main or secondary procedure of Bariatric Surgery, 2013/14**

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of admissions</th>
<th>Admissions per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
</tr>
<tr>
<td>England</td>
<td>6384</td>
<td>1560</td>
</tr>
<tr>
<td>North West</td>
<td>439</td>
<td>131</td>
</tr>
<tr>
<td>Halton</td>
<td>18</td>
<td>8</td>
</tr>
</tbody>
</table>

Admissions due to obesity are higher in women than men and this is borne out when looking at those conditions were we know obesity has a causal relationship and it has been possible through the literature to develop population attributable fractions – certain cancers, diabetes and cardiovascular disease (see Table 15 in section 5.3 for list). Over the last three reporting periods available, the slight dip in 2012/13 reversed during 2013/14 with rates now higher in the last period than 2011/12 rates.
5.3. Impacts on mortality

Similar to hospital admissions, obesity/excess weight contributes to deaths from a range of diseases. Again, there are limits with the availability of robust estimates on which to base population attributable fractions. Nevertheless, they provide a useful indicator of the extent to which obesity is likely to be contributing to deaths locally.

Table 15: Estimated mortality in Halton attributable to obesity, 2010-2014

<table>
<thead>
<tr>
<th>ICD-10 Code</th>
<th>Disease</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>C18-C20</td>
<td>Colon and rectum cancer</td>
<td>21</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>C50</td>
<td>Breast cancer</td>
<td>-</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>C54</td>
<td>Corpus uteri cancer</td>
<td>-</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>E10-E14</td>
<td>Diabetes mellitus</td>
<td>22</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>I11</td>
<td>Hypertensive heart disease</td>
<td>6</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>I20-I25</td>
<td>Ischaemic heart disease</td>
<td>154</td>
<td>80</td>
<td>234</td>
</tr>
<tr>
<td>I60-I69</td>
<td>Cerebrovascular disease</td>
<td>23</td>
<td>37</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>227</td>
<td>187</td>
<td>414</td>
</tr>
</tbody>
</table>

Source: PCMD, 2015 and Department of Public Health, University of Cambridge, 2009

5.4. Educational, Economic and societal impacts

5.4.1. Education

Obesity is associated with educational attainment. Men and women who have fewer qualifications are more likely to be obese. Around a third of adults who leave school with no qualifications are obese, compared with less than a fifth of adults with degree level qualifications.

Part of the reason for this is that levels of educational attainment are linked to levels of inequality and deprivation. People who are socioeconomically deprived tend to have poorer health and lower levels of education. In addition, low achievement at school among obese children may be due to a variety of factors such as poor psychological health, teasing, bullying and discrimination, low self esteem, disturbed sleep, absenteeism and less time spent with friends or being physically active.
5.4.2. Economic

The consequences of obesity are not limited to the direct impact on health. Overweight and obesity also have adverse social consequences through discrimination, social exclusion and loss of or lower earnings, and adverse consequences on the wider economy through, for example, working days lost and increased benefit payments.

Estimates of the direct NHS costs of treating overweight and obesity and related morbidity in England have ranged from £479.3 million in 1998 to £4.2 billion in 2007. Estimates of the indirect costs (those costs arising from the impact of obesity on the wider economy such as loss of productivity) from these studies ranged between £2.6 billion and £15.8 billion. Modelled projections suggest that indirect costs could be as much as £27 billion by 2015. In 2006/07, obesity and obesity-related illness was estimated to have cost £148 million in inpatient stays in England. [91]

A recent systematic review [92] which aimed to assess the current published literature on the direct costs associated with obesity concluded that obesity was estimated to account for 0.7% (from a French study) to 2.8% (from a US study) of a country’s total healthcare expenditure. A third study estimated that including overweight, the proportion of expenditure was in the region of 9.1% (Canada). The modelling undertaken to inform the Foresight report quoted a figure of 6% as the projected proportion of NHS cost for 2007.
5.4.3. Social Care

As obesity is a contributory factor to the development of long term conditions such as diabetes and cardiovascular disease, resulting physical and social difficulties can impact on social care. Increasing obesity prevalence along with the growing needs of an ageing population, and rising public expectations for service intervention and treatment present significant challenges and cost implications to social care systems. Support needs may include:

- equipment
- help in the home or care home
- community support and activities
- day centres
- help for people with disabilities
- financial support
- information and advisory services, and advocacy
- support for carers

Currently in England, publicly funded social care services provide support to over 1 million adults, costing around £17 billion each year, with over half (52%) of the expenditure on people aged 65 and over.[93]

Work in progress in Public Health England initially suggests that severely obese people are over three times more likely to need formal social care than those who are a healthy weight.

5.5. Spend and Outcomes

The Spend and Outcome Tool (SPOT) gives local authorities in England an overview of spend and outcomes across key areas of business and for public health and its sub-programmes. The tool supports understanding of the overall relationship between spend and outcomes, by identifying areas of significant variance which are likely to require more in-depth analysis.

2013/14 budgeting data showed that Halton spends more on physical activity in children than comparators. However, it had a £0.00 spend against obesity in children. It may be that Halton’s budget line, labelled child weight management as physical activity. If spend on physical activity and obesity amongst children is taken together, Halton’s spend is less than comparators.

Figure 30: Spend on obesity and physical activity and key outcomes, Halton 2013/14 and comparators

Source: Public Health England
Further analysis of obesity spend against outcomes showed that Halton is generally in the low spend, worse outcomes quadrant for both child and adult obesity. In the quadrant charts (Figures 30 and 31) the red diamond represents Halton, the orange circles represent Halton’s comparator areas and the blue dots represent the spread of all local authorities in England.

A programme lying outside the solid green +/- 2 z scores box, may indicate the need to investigate further. If the programme lies to the left or right of the box, the spend may need reviewing, and if it lies outside the top or bottom of the box, the outcome may need reviewing. Halton lies near or just outside the dotted green +/- 1 z score box which means they may also warrant further exploration.

**Figure 31: Spend on child obesity against excess weight amongst children 4-5 years and 10-11 years, 2013/14**

**Figure 32: Spend on adult obesity against excess weight amongst adults (aged 16+), 2013/14**
6. Projected levels of need

In 2007, the Foresight report estimated that by 2025, 47% of men and 36% of women (aged between 21 and 60) will be obese. By 2050, it is estimated that 60% of males and 50% of females could be obese. More recent modelling suggests that by 2030, 41% to 48% of men and 35% to 43% of women could be obese if trends continue. In a few years it will be possible to compare actual data against these modeled estimates. To date data from the HSE 2012 shows that the current rate for obesity is 24% for men and 25% for women.

Figure 33: Obesity prevalence, percentage of all adults (16+), 1993 to 2012, England

The prevalence of obesity amongst children increased between 1995, when 11% of boys and 12% of girls aged 2-15 were obese, reaching a peak around 2004 and 2005, where obesity peaked at 18% to 19% among both boys and girls. Levels have been slightly lower than this peak in the last few years, with little change, with 17% of boys and 16% of girls obese in 2011. The levels in 2012, at 14% for both boys and girls, were lower than in 2011 though not statistically significant.

Figure 34: Children’s mean BMI, aged 2-15 years, boys and girls, Health Survey for England

Adult fruit and vegetable consumption has remained fairly steady, with slightly more women than men consuming at least 5 portions of fruit and vegetables per day.
A trend in physical activity levels is less easy to determine due to changes in both the recommended levels of activity and enhancements to the questionnaire used for the Health Survey for England. However, overall there does seem to have been an increase in the percentage of adults achieving the recommended levels, with levels consistently lower for women than men.

Table 16: Percentage of men and women meeting recommended levels of physical activity, Health Survey for England

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</thead>
<tbody>
<tr>
<td>Men</td>
<td>32</td>
<td>34</td>
<td>36</td>
<td>37</td>
<td>40</td>
<td>42</td>
<td>43</td>
<td>66</td>
<td>66</td>
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<td>Women</td>
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<td>24</td>
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<td>28</td>
<td>31</td>
<td>32</td>
<td>53</td>
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</table>

Despite what we know about the health and cognitive benefits of physical activity for children’s development, such as reduced adiposity, improved bone and muscle strength, motor development, increasing academic achievement improve behaviour and attitudes, levels of activity decreased between the 2008 Health Survey for England and the 2012 one.

Among both boys and girls, the decrease in the proportion meeting recommendations was particularly marked in the oldest age group. 28% of boys and 14% of girls aged 13-15 met the current guidelines in 2008, compared with 14% and 8% respectively in 2012. It should be noted that (in both years) these estimates exclude both activities during school hours and active travel to and from school, and thus potentially underestimate the proportion of children meeting current recommendations.

The National Obesity Forum report[^87] also highlights that evidence shows that BMI increases with age. Given that the UK has an ageing population, this would therefore contribute to increasing levels of obesity in the future.
7. User views

Information in the HSE 2012\textsuperscript{[95]} shows that a significant proportion of people who reach clinical definitions of overweight and obese see themselves as being a healthy weight. This and other research\textsuperscript{[96]} shows that whilst over half of the UK population is now an unhealthy weight, the majority do not see themselves in this way. Data from HSE 2012 shows gender differences in these perceptions; whilst a smaller proportion of women than men were an unhealthy weight, more women thought they were too heavy. Further research has shown that these perceptions have not changed significantly over the last five years even though overweight and obesity levels have risen.\textsuperscript{[97]}

This is also the case for young people and even more so for the parents of children and young people. It has been postulated that this may be because we judge ourselves against others and so as overweight has become more prevalent this has skewed our awareness of what it is to be an unhealthy weight.

Information from the RU Different? baseline survey showed that young people thought they were more likely to eat at least 5 portions of fruit and vegetables than their peers and that their peers were more likely to eat two or more take away meals per week than they did.

Whilst no local insights work has been undertaken recently in Halton feedback from young people, parents and those attending the adult specialist weight management services shows how these services have been able to improve awareness, knowledge and support people to change behaviours to more health promoting ones and that small changes can make a difference.

| Table 17: Feedback from clients of the Health Improvement Team healthy weight services |
| "The Fit 4 Life programme has changed our lives forever, since then I have myself been attending Fresh Start and Fresh Start Next Steps, as I feel like I’m ready to change our whole lives. Many many thanks for having such an impact on our family." |
| "The programme made us both look at physical activity differently – you don’t have to run round a field to be active. Emily now realises that running around playing with her mates counts as physical activity" |
| "It educated me, especially food labelling, because I didn’t have a clue about that. It made me question everything I buy" |
| "It helped us to tweak things. I thought we were eating healthy, it just helped us get a balance" |
| "I’m more aware of what I’m feeding the children. I’m on the ball regarding meals and snacks. I’ve realised that I’m the key to them adopting healthier choices – and it starts with me" |
| "The way we look at food is completely different. We’ve found out about hidden fats and sugars that we didn’t know were there" |
| "When I was told in December 2013 that I had Type 2 Diabetes I wasn’t sure which foods I could eat to keep my diabetes down. But with the help from Fresh start and the expert diabetes programme, I have seen my health benefit from both programmes and I continue with Fresh Start." |
| "Feel healthier and fitter since starting Fresh Start. I am no longer in the obese category. Thanks to the staff who have educated, trained and encouraged me to achieve my goal." |
8. Unmet need and service gaps

Reducing health inequalities as well as improving health overall remains a key priority for Halton. Data which enables analysis of healthy eating, physical activity and healthy weight across the lifecourse and inequalities is limited. There is a relationship between all these elements of healthy weight and deprivation however, further analysis would be needed to determine the elements that are driving this. National research suggests it is likely to be a combination of educational chances, material deprivation, attitudes and outlook on life opportunities and access to services.

It has not been possible to examine the specific needs of vulnerable populations such as Black and Minority Ethnic communities, people with physical and learning disabilities and chronic illness, and homeless people amongst others. Whilst data is collected routinely for some of these groups, the data is patchy and not of sufficient scope to determine the needs of such populations locally. Primary research would be needed and is beyond the scope of this JSNA.

However, overall, it does appear that Halton’s population has good access to a range of healthy weight, healthy eating and physical activity services and these produce good outcomes, for example, well over half to nearly three-quarters of those completing the 12 week adult weight management service achieve at least the NICE recommended 3% - 5% weight loss. However, Halton experiences hospital admission rates that are higher than its comparators for both primary, secondary and bariatric surgery admissions.

Most people are either overweight or obese. A whole population prevention approach is crucial and needs a wide range of actions to improve physical activity and diet. Whilst a range of partners are taking actions – this may not be co-ordinated or the impact being monitored. In addition the impact of policies that may exacerbate the situation may not be being recognised.

The level of unhealthy weight within the population; is large if 10% of people aged 18+ who are obese want support to change this would equate to 2,446 people. People who are overweight will also benefit from weight loss and so the potential numbers are even greater (an additional 3,522). This level of unmet need however needs to be balanced with the potential for support programmes to offer support that will actually improve outcomes cost-effectively and offer value for money.

Men are least likely to access weight loss programmes and there is potentially a gap in service provision. This will need to be monitored within the new commissioning arrangements.
## 9. Best practice interventions

<table>
<thead>
<tr>
<th>Type of Need</th>
<th>Guidance Title</th>
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<tbody>
<tr>
<td><strong>Population level interventions</strong></td>
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<tr>
<td>Identifying and supporting people most at risk of dying prematurely. NICE Public Health Guidance 15.</td>
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<tr>
<td>NICE pathway: Diet</td>
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<td>NICE pathway: Obesity</td>
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<td>NICE pathway: Obesity working with local communities</td>
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<td>NICE pathway: Physical activity</td>
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<tr>
<td>NICE pathway: Walking and cycling</td>
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<tr>
<td>Maintaining a healthy weight and preventing excess weight gain among adults and children (NG7) March 2015</td>
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<tr>
<td><strong>Pregnancy</strong></td>
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<td>NICE pathway: Maternal and child nutrition</td>
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<tr>
<td>NICE pathway: Postnatal care</td>
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<tr>
<td>Weight management before, during and after pregnancy (CMG36) March 2011</td>
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<tr>
<td><strong>School age children</strong></td>
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<tr>
<td>NICE pathway: Lifestyle weight management services for overweight or obese children and young people</td>
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<tr>
<td>Managing overweight and obesity among children and young people: lifestyle weight management services (PH47) October 2013</td>
<td></td>
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<tr>
<td>Promoting physical activity for children and young people (PH17) January 2009</td>
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<tr>
<td><strong>Adults living in the community</strong></td>
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<td>NICE pathway: Lifestyle weight management services for overweight or obese adults</td>
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<td>Managing overweight and obesity in adults – lifestyle weight management services (PH53) May 2014</td>
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<td>Body mass index thresholds for intervening to prevent ill health among black, Asian and other minority ethnic groups (LGB13) January 2014</td>
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<td>Exercise referral schemes to promote physical activity (PH54) September 2014</td>
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<td>Four commonly used methods to increase physical activity (PH2) March 2006</td>
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<td>Physical activity: brief advice for adults in primary care (PH44) May 2013</td>
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<tr>
<td><strong>Adults living in care homes</strong></td>
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<tr>
<td>Dignity in care - The Dignity Factors: Eating and nutritional care</td>
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<td><strong>Vulnerable people</strong></td>
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<td>NICE pathway: Vitamin d increasing supplement use among at risk groups</td>
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<td>NICE pathway: Nutrition support in adults</td>
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</table>
Nutrition support in adults (CG32) February 2006

Body mass index thresholds for intervening to prevent ill health among black, Asian and other minority ethnic groups (LGB13) January 2014

Tackling the obesogenic environment

Physical activity and the environment (PH8) January 2008

Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation (PH41) November 2012

Nutrition labels on pre-packaged foods: a systematic review.

Obesity & the built environment: Does the density of Neighbourhood Fast-Food outlets matter?

Further advise and evidence is available on the National Obesity Observatory website: NOO website

NICE Local Government Briefings

- Preventing obesity and helping people to manage their weight (LGB9) May 2013
- Physical activity (LGB3) July 2012
- Walking and cycling (LGB8) January 2013

NICE Quality Standards in development

- Maternal and child nutrition - improving nutritional status (GID-QSD104) July 2015 Quality standards
- Obesity - prevention and lifestyle weight management in children (GID-QSD80) July 2015 Quality standards
- Obesity: prevention and management in adults (GID-QSD120) TBC Quality standards
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