



## Warrington

### Joint Strategic Needs Assessment (JSNA)

#### Children and Young People Healthy Weight Chapter

2015

July 2015

## **Version control**

Version	Description of amendments	Date of amendment
1.0	Final	8/7/15

The Joint Strategic Needs Assessment (JSNA) considers a wide range of factors that affect the health and wellbeing of the people of Warrington. The objective of the JSNA is to involve partner organisations, such as the local NHS, local authorities, Police, Fire and third sector organisations in order to provide a top level, holistic view of current and future need within the borough. The JSNA is used to agree key priorities to improve the health and wellbeing of all our communities at the same time as reducing health inequalities

## **EXECUTIVE SUMMARY**

### **Scope of the Chapter**

This chapter examines the prevalence of obesity in children. It also looks at diet and levels of physical activity. It is acknowledged that this chapter does not address issues relating to underweight children. Whilst there is brief reference to parental obesity and breastfeeding, this is covered in more detail in the 0-5 years JSNA chapter.

Obesity prevalence rates are sourced from the Health Survey for England (HSE) data (on children aged 2 to 10 years, and 11 to 15 years), and from the National Child Measurement Programme (NCMP) which annually weighs and measures children in Reception (aged 4/5) and Year 6 (aged 10/11). A limitation of the NCMP is that it only weighs and measures two year groups within schools; therefore underweight, overweight and obesity prevalence is not known for the school year groups between Reception and Year 6. The rates for Warrington are compared to national figures and analysed by gender, deprivation and geographical area. Results from a local school survey (Warrington Children and Young People's Health-related Behaviour Survey 2014) have also been considered in this chapter.

### **Introduction**

Childhood obesity is a serious public health challenge. Overweight and obese children are likely to stay obese into adulthood, and this persistence of obesity into adulthood is of significant concern. According to the World Health Organisation (WHO, 2015), “*Childhood obesity is associated with a higher chance of premature death and disability in adulthood. Overweight and obese children are more likely to stay obese into adulthood and to develop non-communicable diseases (NCDs) like diabetes and cardiovascular diseases at a younger age. For most NCDs resulting from obesity, the risks depend partly on the age of onset and on the duration of obesity. Obese children and adolescents suffer from both short-term and long-term health consequences*”.

Overweight and obesity, as well as their related diseases, are largely preventable. Prevention of childhood obesity therefore needs high priority.

Excess weight is caused by an imbalance between energy in what is consumed through eating, and energy expenditure (what is used by the body, over a prolonged period). An individual's biology (genetics and metabolism) and/or behaviour (eating and physical activity habits) are primarily responsible for maintaining a healthy body weight. In addition, there are significant external influences such as environmental and social factors.

The causes of overweight and obesity are multi-faceted and will require multi-faceted solutions. Causes depend on a wide range of factors including physiological, psychological, social and environmental (WBC, 2014a). Eating, sedentary behaviour and physical activity habits developed in childhood affect an individual's long-term health. Social determinants and emotional factors play significant roles in eating habits. Emotional health and wellbeing can influence a person's readiness to make lifestyle changes, and other issues may need tackling before raising the issue of unhealthy weight. Obesity prevalence is strongly linked to socio-economic deprivation; as deprivation rises, so does obesity prevalence. Economic factors can affect the ability to choose a healthy diet and can reduce opportunities to be physically active. People need good access to sport and leisure facilities, parks and open spaces. Concerns about safety and crime can deter people from being physically active. Design of the built environment can encourage or deter people to walk and cycle. There have been changes over recent decades in food production, motorised transport and work/home lifestyle patterns that affect body weight. Growing portion sizes distort our view of what is a 'normal' and healthy amount to eat (BHF, 2013). Social norms are changing and to many people, overweight now looks 'normal'.

The Chief Medical Officer's Report 2012 (DH, 2013a) estimates (at 2012 prices) the short-term costs of treating child obesity to be £51 million and the long-term health and societal costs to be £588–686 million.

"*Healthy Weight, Healthy Lives: a Cross-Government Strategy for England*" (Cross-Government Obesity Unit, DH and DCSF, 2008, p.xi) states the previous (Labour) government's long-term ambition: "*to reverse the rising tide of obesity and overweight in the population by ensuring that all individuals are able to maintain a healthy weight*". The initial focus would be on children, so that by 2020, the proportion of overweight and obese children would have reduced to 2000 levels."

In "*Healthy Lives, Healthy People: A call to action on obesity in England*" (DH, 2011a, p3), the Conservative government's ambition was to achieve a "*sustained downward trend in the level of excess weight in children by 2020*". It advocated a life-course approach and stressed the importance of striking a balance between treating those who are already obese and taking measures to prevent those currently of a healthy weight from becoming overweight.

The Public Health Outcomes Framework (PHOF) (DH, 2012) contains the following outcomes relating to healthy weight in children:

- Excess weight (i.e. both overweight and obese) in 4-5 and 10-11 year olds
- Breastfeeding initiation and prevalence of breastfeeding continuation at 6-8 weeks after birth.

## **Key Findings and Gaps**

National Child Measurement Programme (NCMP) shows that:

- Participation in Warrington schools has consistently been higher than in England overall. In 2013/14, 97.8% of eligible Reception children (93.8% nationally), and 96.4% of eligible Year 6 children (93.6% nationally) were measured.
- In Warrington in 2013/14, 7.8% of Reception children were classed as obese; this was statistically significantly lower than both England (9.5%) and the North West (9.9%). A further 12.4% were classed as overweight, i.e. 20.2% were either overweight or obese (compared to 22.5% in England and 23.6% in the North West).
- 16.2% of Year 6 children were classed as obese; this was significantly lower than both England (19.1%), and the North West (19.8%). A further 15.1% were classed as overweight, i.e. 31.3% were either overweight or obese (compared to 33.5% in England and 34.4% in the North West).
- Generally, both nationally and in Warrington, a higher proportion of Year 6 boys than girls are in the overweight category and in the obese category. On the whole this is also true of boys and girls in Reception, although the gap is narrower than in Year 6.
- A link between deprivation and obesity prevalence has been identified nationally, and local analysis of Warrington's NCMP data also suggests that obesity prevalence is higher in the more deprived areas of Warrington.

The Warrington Children and Young People (CYP) Health-Related Behaviour Survey 2014 shows that:

- 25% of Year 6 boys and 36% of Year 6 girls wanted to lose weight. (NB it is not possible to link the NCMP data with the CYP survey data; i.e. it is not known whether those who said they wanted to lose weight, are those identified as overweight or obese in the NCMP data).

- 61% of Year 6 pupils (age 10/11) were happy with their weight, compared with 42% of Year 8 (age 12/13) pupils and only 28% in Year 10 (age 14/15). 68% of Year 10 wanted to lose weight. In girls particularly, the proportion happy with their weight drops significantly as they get older (61% in Y6, 42% in Y8 and only 28% in Y10).
- Only 5% of pupils reached Chief Medical Officer's guidelines of at least 60 minutes physical activity every day in the previous week. 33% of pupils overall didn't manage at least 60 minutes on any days in the previous week. 11% overall said that they didn't get out of breath for any time on any days.
- The proportion of pupils who said they ate 5 or more portions of fruit/veg the previous day was 20% in 10/11 year-olds, 19% in 12/13 year-olds, and dropped significantly to 13% in 14/15 year-olds. Warrington was substantially lower than national figures for 10/11 year-olds and 14/15 year-olds.
- Pupils were asked about consumption of snacks and fizzy drinks. Looking at the percentage who ate 6 or more snacks/drinks, girls' consumption changed little over the year groups (approximately 15%), whereas boys' consumption changed dramatically from 19% in 10/11 year-olds, 27% in 12/13 year-olds and 31% in 14/15 year-olds.
- 24% said they ate takeaway meals at least once a week. 2% said 3 times/week or more. There was little variation between year groups or between girls/boys.

Whilst progress has been made, in that obesity prevalence in children appears no longer to be rising, the aim must now be to *reduce* prevalence.

There has been limited capacity within services to proactively follow up children identified as being underweight, overweight or obese. There needs to be services or pathways developed for proactive follow up, involving contacting parents of those children identified as having a potential weight issue to offer personalised advice and support or group-based support.

As of September 2014 there has been a gap in provision of an age-appropriate targeted weight management service for CYP. The school nursing service contract April 2015-March 2016 includes proactive follow up for those pupils who are identified as being obese through the National Child Measurement Programme. Warrington Borough Council has commenced the process to procure an integrated 0 to 19 public health service which will go live in April 2016. This includes a number of services which are required to deliver the Healthy Child Programme 0-5 years and 5-19 years, some of which are available to all CYP, and others provide more intensive support for those children and young people and their families based on need.

Recruitment was an issue for a pilot of a weight management programme in 2013, 'Live Life The Wolves Way', offered to 7-13 year olds who were above a healthy weight.

It would be useful to have a better understanding of the frequency and quality of physical education delivered in both primary and secondary schools. The primary school sports premium is given to schools to increase capacity and delivery of PE; it is used to employ external providers. A partnership between LiveWire, Wolves Foundation and Warrington Schools Partnership, are currently working with approximately 40 schools.

### **Summary of Recommendations for Commissioning**

- Continue to produce detailed analysis of local datasets at a sub-Warrington level (e.g. the NCMP and the Warrington CYP Health-Related Behaviour Survey) in order to build local intelligence.
- To share this intelligence and evaluation from local datasets to improve the targeting of resources and commissioning of services.

- Undertake data collection and analysis to determine the kind of physical activities that young people would like to participate in, and the potential barriers to participation, in particular for the groups of young people that participate least (e.g. older girls in secondary schools).
- Ratify a CYP's healthy weight care pathway.
- Ensure that there are age-appropriate targeted services for CYP up to age 18, based on need and on the type of services families would be interested in. As of September 2014 there has been a gap in provision until the new 0 to 19 public health service goes live in April 2016. It is Warrington Borough Council's responsibility to commission this service and the Public Health Team is looking to create additional capacity by investing from savings already made from the ring fenced public health grant.
- Develop a single point of access for members of the public and health care professionals for information and signposting in relation to healthy weight (that yield value for money and contribute to healthy weight outcomes).
- To effectively monitor the delivery of Public Health commissioned services to ensure that key performance indicators are achieved in relation to healthy lifestyles/healthy weight.
- Develop an effective mechanism to ensure that Local Authority (LA) commissioned services, community projects, and programmes relating to healthy lifestyles, are audited and evaluated to ascertain whether the resource invested is yielding value for money and contributing to the desired outcome of improved healthy lifestyles. National Institute for Health and Clinical Excellence guidance (NICE, 2007) on behaviour change at population, community and individual levels recommends the evaluation of all behaviour change interventions. Appraisal tools for this purpose have been developed by NICE, the World Health Organisation (WHO, 2011), and Public Health England (2014c).
- Ensure that front line staff have the confidence to raise the issue of healthy weight and deliver brief interventions. NICE (2013b) recommend that health professionals are trained in how to make referrals to a healthy lifestyle weight management programme.

## **1) WHO'S AT RISK AND WHY**

The broad set of social and environmental factors influencing individuals to make healthy choices about maintaining a healthier weight can be considered under four headings: human biology, culture and individual psychology, the food environment and the physical environment.

A key underlying issue is the proportion of children living in poverty. Obesity prevalence is higher in more deprived areas; this is true locally, regionally and nationally, and holds for girls and for boys, and for different age groups. The relationship between obesity and socio-economic inequalities is not well evidenced or understood. Social determinants play a key role in the choices that individuals are able to make concerning their diet and activity (NICE, 2006; NICE, 2014a), and parental social class is linked to lower consumption of healthier food options, poor access to sports facilities and less physical activity outside work.

There are also links between being overweight or obese, and mental health and well-being, including stigmatisation, poor self-esteem, depression, bullying and social exclusion. Good mental health is a protective factor against obesity (NOO, 2011b).

There is an increased risk of children being overweight or obese where one or both parents are obese.

Obesity in pregnancy can have an adverse effect on pregnancy outcomes for mothers and babies, and increases pressure on, and cost of, services.

There is evidence that obesity is more prevalent among certain ethnic groups, particularly African Caribbean and Pakistani women. There is also evidence that adults from some ethnic groups are at an equivalent risk of diabetes, other health conditions or mortality at a lower BMI than the white European population (NICE, 2013a; NICE, 2014b). However, the relationship between ethnicity, overweight and obesity in children is less well understood.

Obesity is more common in people with learning disabilities than in the general population; children with a limiting illness are more likely to be obese or overweight, particularly if they also have a learning disability. Although there is an established link with weight gain associated with medication, poor diet and lack of exercise are also contributing factors. Access and support for children and adults with physical disabilities to participate in sport and physical activities will impact on fitness and the risk of being overweight or obese.

## **2) THE LEVEL OF NEED IN THE POPULATION**

It is acknowledged that this chapter does not address issues relating to the prevalence of underweight children, other than the following. Nationally, the overall prevalence of underweight children in the 2013/14 academic year was statistically significantly higher in year 6 (1.4%) than in reception (0.9%). In reception, a significantly higher percentage of boys were underweight than girls (1.2% and 0.7% respectively); whereas in year 6, a significantly higher percentage of girls were underweight than boys (1.6% and 1.2% respectively). However, there are no significant differences in Warrington.

### **2.1) Data sources**

Three main data sources have been used in most of the analyses in this chapter:

- The National Child Measurement Programme (NCMP) has been run annually since the 2006/07 academic year. Almost all children in Reception Year (aged 4/5) and Year 6 (aged 10/11) are weighed and measured. The NCMP uses the British 1990 population monitoring definition of obesity (on or above the 95th centile); this takes into account the child's height, weight, sex and age in months to allocate each child to a category of underweight, normal weight, overweight, or obese (based on BMI reference curves, Cole et al (1995)). Because the pupil-level data is collected by Local Authorities, and includes a child's postcode, it can be analysed locally in detail, for example by electoral ward, or by level of deprivation. National indicators are based on this data, and monitor the proportion of obese children, and the proportion of "all excess weight" (i.e. the overweight and obese categories combined). (NB Data is for pupils who attend Warrington schools, apart from special schools; it does not include children who live within Warrington borough but attend a school outside Warrington; it does include children who attend a Warrington primary school but who live outside Warrington borough).
- The Health Survey for England (HSE) routinely collects child obesity data (on children aged 2 to 10 years, and 11 to 15 years). This data is only available at a national, regional, and Local Authority level, and so cannot be analysed at the same level of detail as the NCMP data.
- The Children and Young People's Health-Related Behaviour Survey 2014 is a large scale survey of CYP in primary and secondary schools in Warrington. It was undertaken by the Schools Health Education Unit (SHEU) in Spring/Summer 2014 on behalf of the

Public Health Team in Warrington Borough Council. There were 926 Year 6 respondents from 28 (out of 67) Warrington primary schools, and 1251 Year 8 and 1302 Year 10 respondents from 10 (out of 12) Warrington secondary schools. A broad range of topic areas were covered in the questionnaire, including weight, physical activity and diet. SHEU have a bank of commonly used questions, and the Warrington survey contained some of these standard questions, plus others specific to Warrington. National benchmark data is available for some questions, calculated from schools across the country for which SHEU undertook the survey in 2013 (almost 31,000 pupils in Years 6, 8 and 10).

## 2.2) Participation levels in the National Child Measurement Programme

Table 1 shows that Warrington consistently achieved higher participation rates than the North West and nationally. The main reasons for non-participation are absence from school on the day measurements are taken, parental opt-out and child opt-out.

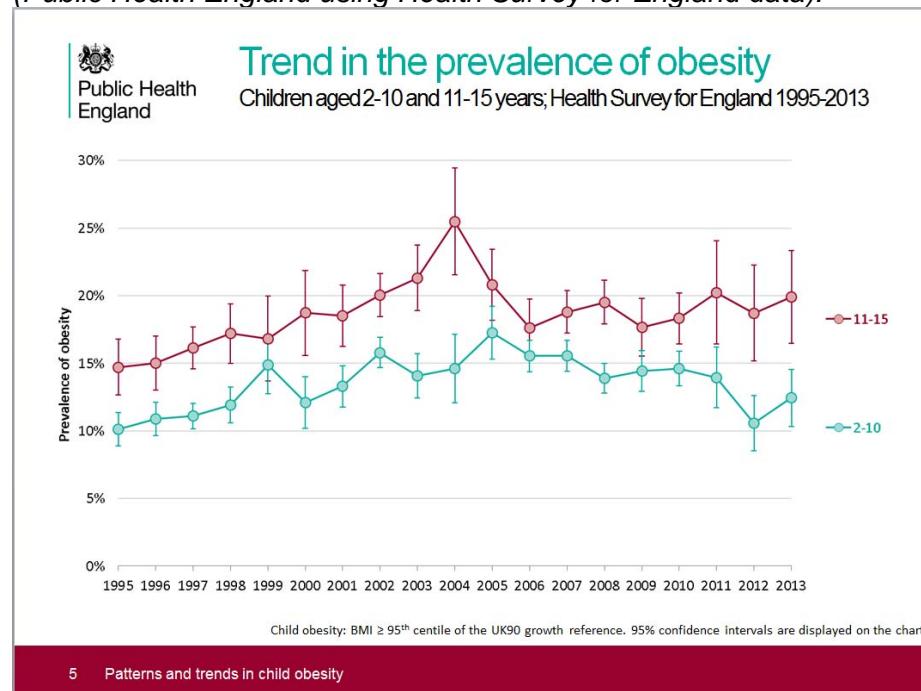
**Table 1: Participation levels in the National Child Measurement Programme**

	2009/10		2010/11		2011/12		2012/13		2013/14	
	R	Y6								
Warrington	96.6%	95.2%	95.9%	92.0%	95.8%	95.9%	96.5%	96.1%	97.8%	96.4%
North West	94.2%	91.7%	94.8%	93.2%	94.4%	92.4%	95.1%	93.8%	95.8%	94.7%
National	92.9%	89.9%	93.4%	91.8%	94.2%	92.4%	94.0%	92.7%	93.8%	93.6%

## 2.3) National and local trends in child obesity

Chart 1, based on Public Health England (PHE) analysis of HSE data, shows the national trend in obesity prevalence estimates for children aged 2-10 and 11-15. In children aged 11-15, the upward trend appears to have peaked in approximately 2004, but then levelled off from 2005 onwards. In children aged 2-10, the upward trend peaked in approximately 2005, but then levelled off, or has possibly started to show a slight downward trend.

**Chart 1: Trend of estimated prevalence of child obesity in England (Public Health England using Health Survey for England data).**

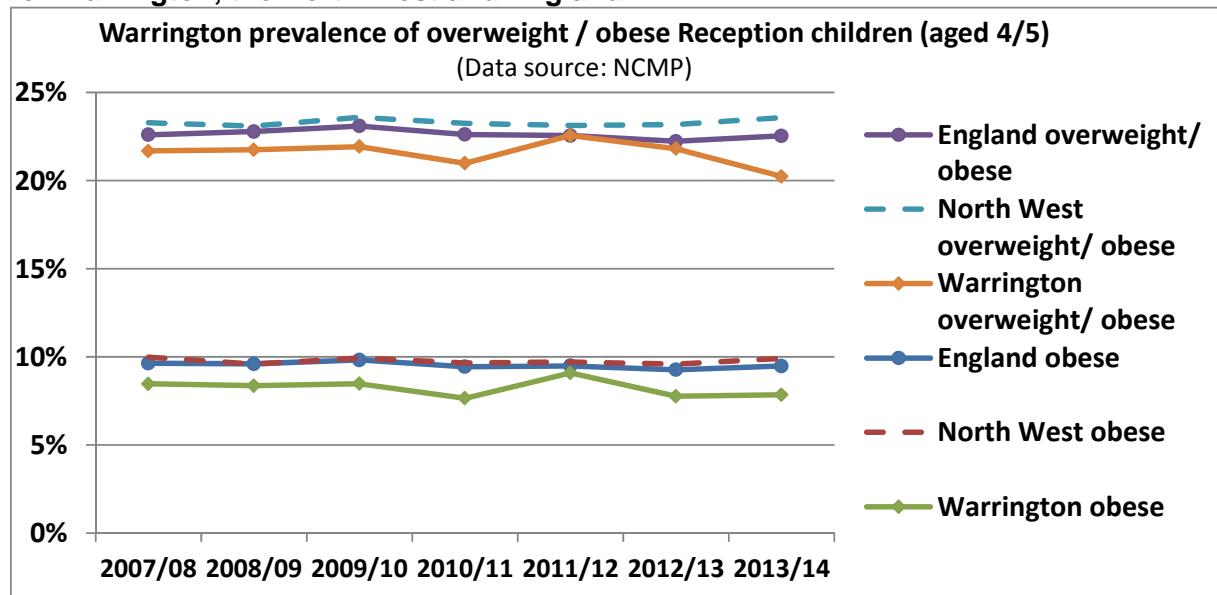


Charts 2 and 3, and tables 2 and 3, show obesity prevalence in Warrington, national and regional for academic years 2007/08 to 2013/14 (NCMP data).

#### **Reception (aged 4/5):**

- In Warrington, prevalence of obesity, and of overweight/obesity (i.e. all excess weight) has been consistently lower than England and the North West, except in 2011/12.
- In 2013/14, at 20.2%, Warrington *overweight/obesity* prevalence was at its lowest level since the NCMP programme started in 2007/08. Comparative figures are 22.5% in England and 23.6% in the North West, and Warrington *obesity* prevalence was 7.8%, compared to 9.5% in England and 9.9% in the North West.
- Although Warrington had lower prevalence than the North West and England, it still means that approximately 1 in 13 Reception children were obese, and 1 in 5 were either overweight or obese.

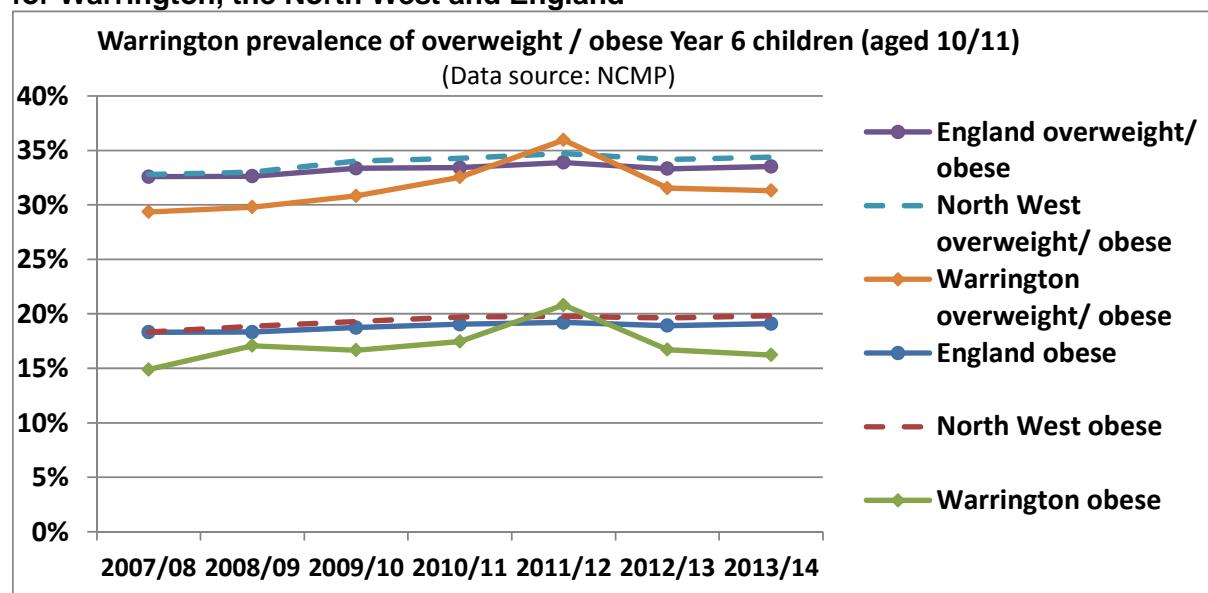
**Chart 2: Trend in overweight/obese prevalence in Reception children for Warrington, the North West and England**



#### **Year 6 (aged 10/11)**

- Prevalence of obesity, and prevalence of overweight/obesity in Warrington has been consistently lower than England and the North West, except in 2011/12.
- In 2013/14, Warrington *obesity* prevalence was 16.2%, compared to 19.1% in England and 19.8% in the North West, and *overweight/obesity* prevalence was 31.3%, compared to 33.5% in England and 34.4% in the North West.
- Although Warrington had lower prevalence than the North West and England, it still means that over 1 in 6 children in Year 6 were obese, and almost 1 in 3 were either overweight or obese.
- The proportion of children who are obese in Year 6 is approximately double that in Reception (in 2013/14, 7.8% in Reception and 16.2% in Year 6).

**Chart 3: Trend in overweight/obese prevalence in Year 6 children for Warrington, the North West and England**



## 2.4) NCMP Local Authority Profile

The Public Health England NCMP Local Authority Profile (PHE, 2014b) show that for both Reception and Year 6, Warrington rates are better than England for prevalence of healthy weight, all excess weight (i.e. combined overweight and obese), and obese. Warrington is similar to England in the percentage of underweight children in both Reception and Year 6.

Public Health England

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## NCMP Local Authority Profile

Indicator keywords

Prevalence data Data quality

Overview Map Trends Compare areas Area profiles Definitions Download

Area type: County & UA  Benchmark: England

Area:   Warrington Region: North West

Search for an area

Compared with benchmark: ● Better ● Similar ● Worse ○ Not compared

Benchmark Value: | Worst/Lowest 25th Percentile 75th Percentile Best/Highest

Indicator	Period	Warrington		Region		England		England	
		Count	Value	Value	Value	Worst	Range	Best	
Reception: Prevalence of underweight	2013/14	25	1.02%	0.88%	0.95%	2.95%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: yellow;">●</span>	0.28%
Reception: Prevalence of healthy weight	2013/14	1,926	78.7%	75.6%	76.5%	70.4%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: green;">●</span>	81.6%
Reception: Prevalence of overweight (including obese)	2013/14	495	20.2%	23.6%	22.5%	29.5%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: green;">●</span>	15.9%
Reception: Prevalence of obesity	2013/14	192	7.8%	9.9%	9.5%	14.4%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: green;">●</span>	5.5%
Year 6: Prevalence of underweight	2013/14	26	1.21%	1.29%	1.36%	3.44%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: yellow;">●</span>	0.50%
Year 6: Prevalence of healthy weight	2013/14	1,444	67.5%	64.3%	65.1%	55.0%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: green;">●</span>	74.5%
Year 6: Prevalence of overweight (including obese)	2013/14	670	31.3%	34.4%	33.5%	43.8%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: green;">●</span>	24.4%
Year 6: Prevalence of obesity	2013/14	347	16.2%	19.8%	19.1%	26.7%	<div style="width: 100px; height: 10px; background-color: #ccc;"></div>	<span style="color: green;">●</span>	11.1%

Data source: PHE 2014b

## 2.5) Child obesity in boys/girls/all

Tables 2 and 3 show the percentage in each weight category in Warrington and England for girls/boys/all, from 2007/08 to 2013/14. In general, obesity prevalence is higher in boys than girls (although for the first time, this was not true in Warrington at Reception age).

**Table 2: Obesity Prevalence in Reception, Boys/Girls/All 2007/08 to 2013/14**

		NCMP: % of Reception children (aged 4/5)					
		Under-weight	Healthy Weight	Over-weight	Obese	All excess Weight (Overweight/ Obese)	No. measured
Warrington 2013/14	Boys	1.5%	78.2%	12.8%	7.6%	20.3%	1268
	Girls	0.5%	79.4%	12.0%	8.1%	20.1%	1178
	Both	1.0%	78.7%	12.4%	7.8%	20.2%	2446
National 2013/14	Boys	1.2%	75.4%	13.5%	9.9%	23.4%	299603
	Girls	0.7%	77.7%	12.6%	9.0%	21.6%	287733
	Both	0.9%	76.5%	13.1%	9.5%	22.5%	587336
Warrington 2012/13	Boys	0.5%	76.8%	13.9%	8.7%	22.7%	1235
	Girls	0.7%	78.3%	14.2%	6.8%	20.9%	1227
	Both	0.6%	77.6%	14.1%	7.8%	21.8%	2462
National 2012/13	Boys	1.1%	75.7%	13.5%	9.7%	23.2%	300337
	Girls	0.7%	78.1%	12.5%	8.8%	21.2%	287341
	Both	0.9%	76.9%	13.0%	9.3%	22.2%	587678
Warrington 2011/12	Boys	0.7%	76.6%	13.4%	9.3%	22.7%	1220
	Girls	0.7%	76.9%	13.4%	9.0%	22.4%	1147
	Both	0.7%	76.7%	13.4%	9.2%	22.6%	2367
National 2011/12	Boys	1.1%	75.4%	13.6%	9.9%	23.5%	289302
	Girls	0.7%	77.8%	12.5%	9.0%	21.6%	276360
	Both	0.9%	76.5%	13.1%	9.5%	22.6%	565662
Warrington 2010/11	Boys	0.4%	77.6%	13.9%	8.1%	22.0%	1129
	Girls	0.6%	79.4%	12.7%	7.2%	20.0%	1106
	Both	0.5%	78.5%	13.3%	7.7%	21.0%	2235
National 2010/11	Boys	1.2%	75.0%	13.8%	10.1%	23.9%	276750
	Girls	0.8%	77.9%	12.6%	8.8%	21.3%	264505
	Both	1.0%	76.4%	13.2%	9.4%	22.6%	541255
Warrington 2009/10	Boys	0.7%	75.9%	14.7%	8.8%	23.5%	1172
	Girls	0.5%	79.2%	12.2%	8.1%	20.3%	1094
	Both	0.6%	77.4%	13.5%	8.5%	21.9%	2266
National 2009/10	Boys	1.1%	74.5%	13.9%	10.5%	24.3%	269246
	Girls	0.7%	77.5%	12.7%	9.2%	21.8%	257253
	Both	0.9%	76.0%	13.3%	9.8%	23.1%	526499
Warrington 2008/09	Boys	0.7%	76.6%	14.2%	8.5%	22.7%	1145
	Girls	0.5%	78.7%	12.5%	8.3%	20.8%	1103
	Both	0.6%	77.6%	13.4%	8.4%	21.8%	2248
National 2008/09	Boys	1.2%	74.8%	13.8%	10.2%	24.0%	259008
	Girls	0.8%	77.7%	12.6%	8.9%	21.5%	247161
	Both	1.0%	76.2%	13.2%	9.6%	22.8%	506169
Warrington 2007/08	Boys	0.6%	74.9%	14.2%	10.4%	24.6%	1002
	Girls	0.6%	80.6%	12.2%	6.5%	18.8%	996
	Both	0.6%	77.7%	13.2%	8.5%	21.7%	1998
National 2007/08	Boys	1.5%	74.5%	13.6%	10.4%	24.0%	244587
	Girls	1.0%	77.9%	12.3%	8.8%	21.1%	233065
	Both	1.3%	76.2%	13.0%	9.6%	22.6%	477652

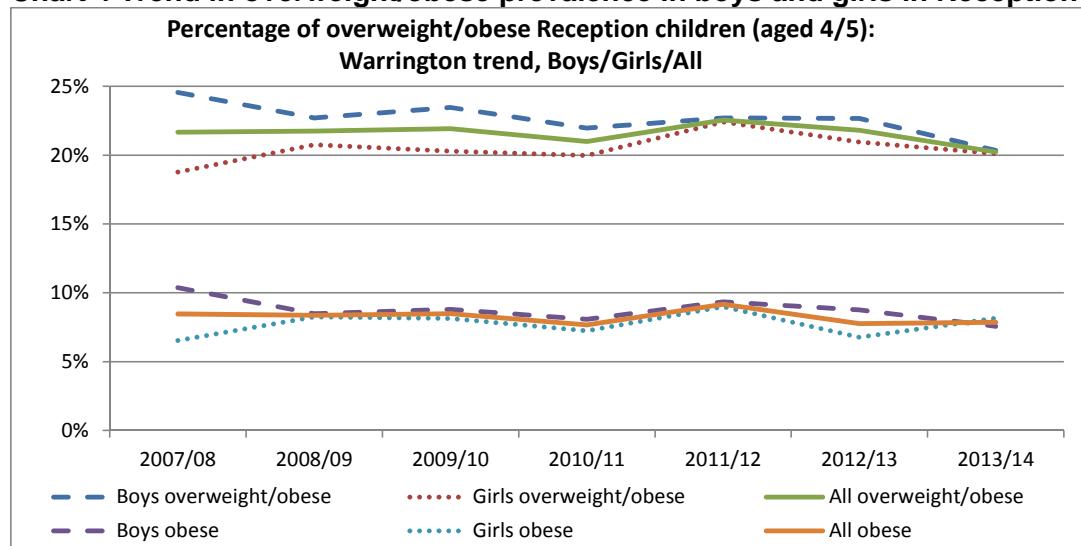
**Table 3: Obesity Prevalence in Year 6, Boys/Girls/All 2007/08 to 2013/14**

		NCMP: % of Year 6 children (aged 10/11)					
		Under-weight	Healthy Weight	Over-weight	Obese	All excess Weight (Overweight/ Obese)	No. measured
Warrington 2013/14	Boys	0.9%	66.5%	14.6%	18.0%	32.5%	1091
	Girls	1.5%	68.4%	15.6%	14.4%	30.0%	1049
	Both	1.2%	67.5%	15.1%	16.2%	31.3%	2140
National 2013/14	Boys	1.2%	63.6%	14.4%	20.8%	35.2%	263316
	Girls	1.6%	66.7%	14.4%	17.3%	31.7%	250959
	Both	1.4%	65.1%	14.4%	19.1%	33.5%	514275
Warrington 2012/13	Boys	0.8%	66.1%	15.8%	17.3%	33.1%	1177
	Girls	1.2%	69.1%	13.7%	16.0%	29.8%	1042
	Both	0.9%	67.5%	14.8%	16.7%	31.5%	2219
National 2012/13	Boys	1.1%	64.1%	14.4%	20.4%	34.8%	250725
	Girls	1.5%	66.7%	14.4%	17.4%	31.8%	238421
	Both	1.3%	65.4%	14.4%	18.9%	33.3%	489146
Warrington 2011/12	Boys	1.3%	59.5%	16.2%	23.0%	39.2%	1102
	Girls	1.3%	66.1%	14.1%	18.5%	32.6%	1028
	Both	1.3%	62.7%	15.2%	20.8%	36.0%	2130
National 2011/12	Boys	1.1%	63.6%	14.7%	20.7%	35.4%	251274
	Girls	1.5%	66.2%	14.7%	17.7%	32.4%	239844
	Both	1.3%	64.9%	14.7%	19.2%	33.9%	491118
Warrington 2010/11	Boys	1.2%	65.3%	14.2%	19.4%	33.6%	1120
	Girls	0.6%	68.0%	16.0%	15.4%	31.4%	1022
	Both	0.9%	66.6%	15.1%	17.5%	32.5%	2142
National 2010/11	Boys	1.1%	64.0%	14.3%	20.6%	34.9%	254006
	Girls	1.5%	66.6%	14.4%	17.4%	31.8%	241347
	Both	1.3%	65.3%	14.4%	19.0%	33.4%	495353
Warrington 2009/10	Boys	0.7%	67.1%	14.8%	17.4%	32.2%	1164
	Girls	1.4%	69.3%	13.5%	15.9%	29.4%	1110
	Both	1.0%	68.2%	14.2%	16.7%	30.8%	2274
National 2009/10	Boys	1.1%	63.9%	14.6%	20.4%	35.0%	256848
	Girls	1.5%	66.9%	14.6%	17.0%	31.6%	243019
	Both	1.3%	65.4%	14.6%	18.7%	33.4%	499867
Warrington 2008/09	Boys	0.8%	68.9%	12.6%	17.7%	30.3%	1082
	Girls	0.6%	70.1%	12.9%	16.4%	29.3%	1086
	Both	0.7%	69.5%	12.7%	17.1%	29.8%	2168
National 2008/09	Boys	1.1%	64.5%	14.4%	20.0%	34.5%	256338
	Girls	1.6%	67.7%	14.2%	16.5%	30.7%	241342
	Both	1.3%	66.1%	14.3%	18.3%	32.6%	497680
Warrington 2007/08	Boys	1.0%	68.3%	15.2%	15.4%	30.7%	1083
	Girls	1.7%	70.4%	13.6%	14.3%	27.9%	1000
	Both	1.3%	69.3%	14.5%	14.9%	29.3%	2083
National 2007/08	Boys	1.2%	64.5%	14.4%	20.0%	34.3%	255302
	Girls	1.6%	67.6%	14.2%	16.6%	30.7%	240119
	Both	1.4%	66.0%	14.3%	18.3%	32.6%	495421

**Reception - all excess weight (overweight and obese combined):** in the past, overweight/obesity prevalence has generally been higher in boys than girls, but in 2013/14 it was very similar for boys and girls. There is fluctuation from year to year, but there is possibly a slight downward trend in boys (see chart 4).

**Reception – obesity:** in most years obesity prevalence has been very similar for girls and boys, and has been fairly steady over time (see chart 4).

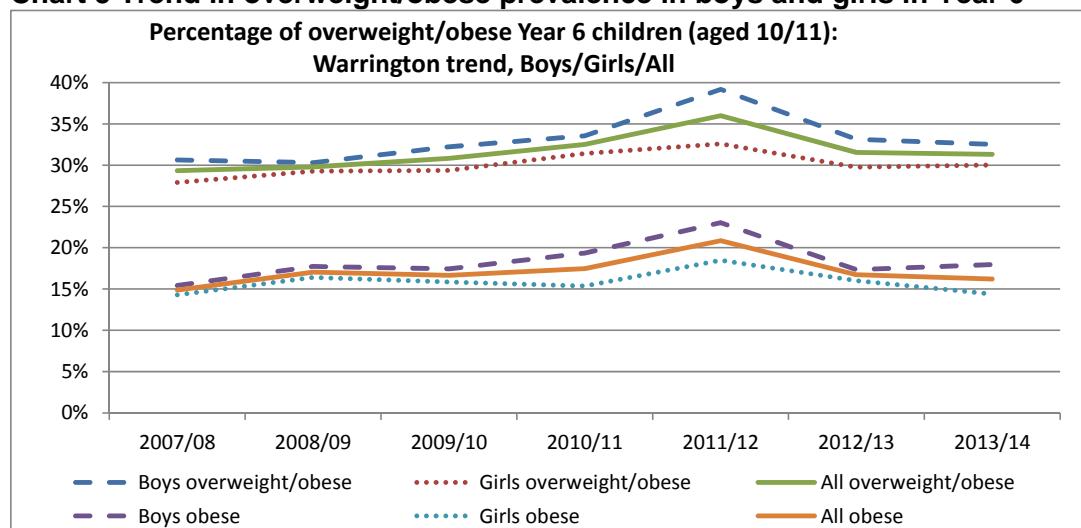
**Chart 4 Trend in overweight/obese prevalence in boys and girls in Reception**



**Year 6 - all excess weight (overweight and obese combined):** there was an upward trend from 2007/08 to 2011/12, with a particularly big jump (mostly in boys) in 2011/12. However, in 2012/13, prevalence dropped substantially to previous levels (more of this decrease was seen in boys), and has remained steady in 2013/14. Generally there is higher prevalence in boys than in girls (see chart 5).

**Year 6 - obesity:** there was a statistically significant increase from 2010/11 to 2011/12. However in 2012/13, prevalence dropped substantially to previous levels (more of this decrease was seen in boys). The slight increase in boys and the slight decrease in girls in 2013/14 are not statistically significant. Generally there is higher prevalence in boys than girls (see chart 5).

**Chart 5 Trend in overweight/obese prevalence in boys and girls in Year 6**



## **2.6) Child obesity by level of socio-economic deprivation**

There are significant socio-economic inequalities in obesity prevalence among children for both girls and boys, and across different age groups; this is true locally, regionally and nationally. The pattern of these inequalities and obesity is consistent across a variety of measures of deprivation using three different data sets: the National Child Measurement Programme, the Health Survey for England and the Millennium Cohort Study (NOO, 2010a).

Research has shown that children living in poorer areas are more likely to be overweight or obese compared to those living in more affluent areas. Results suggest that there is a relationship between being overweight/obese and household income, but this relationship is not straightforward and differs between the sexes (NOO, 2012a). According to HMRC child poverty data, in 2012, approximately 1 in 5 children aged under 16 in England lived in low-income families, although this was significantly lower in Warrington at approximately 1 in 7 (HMRC, 2014).

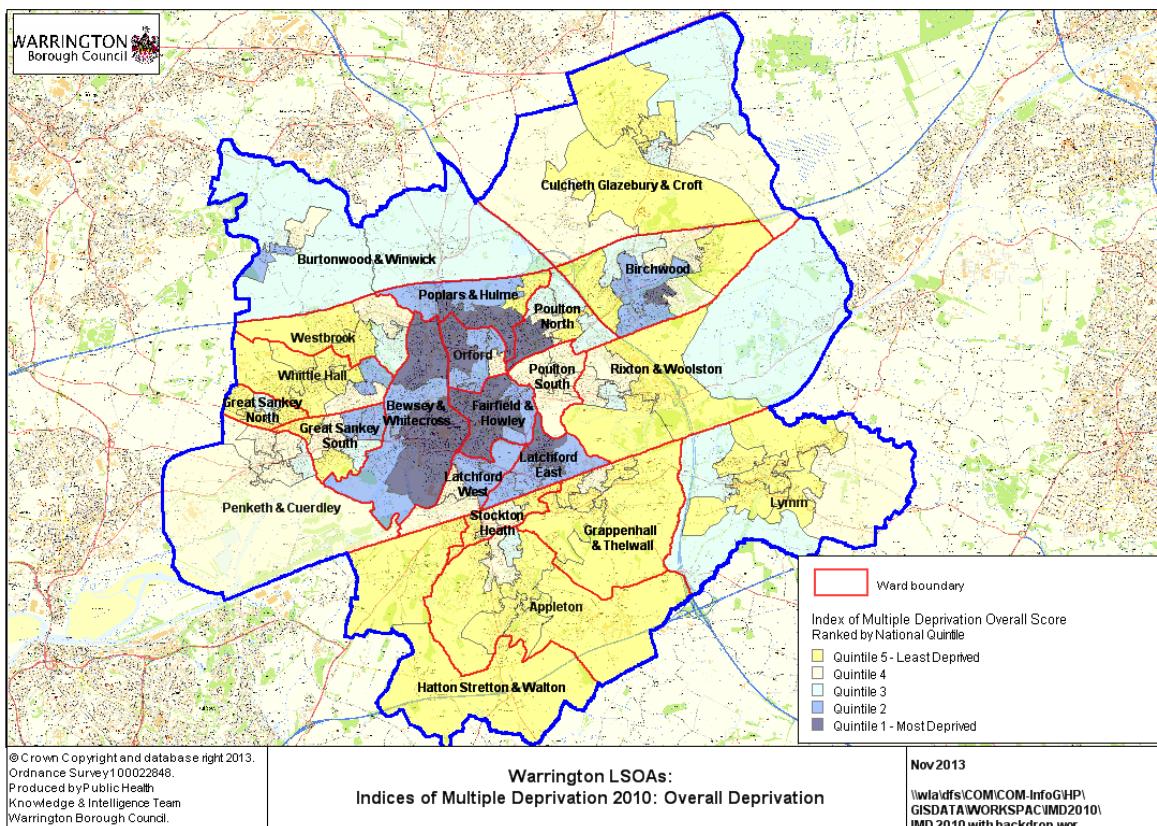
The relationship between socio-economic inequalities and obesity in children is not yet fully understood, but evidence indicates there is a relationship and that this is likely to increase with children's age (NHS North West, 2008). Social determinants play a key role in the choices that individuals are able to make concerning their diet and activity (NICE, 2006; NICE, 2014a), and parental social class is linked to lower consumption of healthier food options, poor access to sports facilities and less physical activity outside work.

### **Socio-economic deprivation in Warrington.**

Deprivation is measured using the Index of Multiple Deprivation (IMD) 2010. Deprivation covers a broad range of issues - this index uses data on income, employment, health and disability, education and skills, barriers to housing and services, crime, and living environment to calculate an overall deprivation score. Lower Super Output Areas (LSOAs) are the lowest geographical units for which deprivation indices are calculated. All LSOAs in England are ordered by IMD score, and then split into 5 equal sized groups (called quintiles), or into 10 equal sized groups (called deciles). There are 127 LSOAs within Warrington, and these LSOAs 'nest' within Warrington's 22 electoral wards. These 127 LSOAs are grouped according to which national quintile or decile they are in. (See the JSNA chapter on deprivation for more detail).

Map 1 shows levels of deprivation across Warrington (using the Index of Multiple Deprivation 2010). The most deprived areas are shaded dark blue, and the least deprived dark yellow. The most deprived areas tend to be in the centre of Warrington borough, plus the Oakwood area located in Birchwood ward.

**Map 1: Warrington by Index of Multiple Deprivation (IMD2010)**



Data source: Department of Communities and Local Government (DCLG), Indices of Deprivation 2010, © Crown Copyright.

Many of the measures of ill-health and health-related lifestyle factors follow patterns of socio-economic deprivation, with more ill-health in the more deprived areas.

Nationally, there is a strong correlation between socio-economic deprivation and obesity prevalence, with higher prevalence in more deprived areas. Across England, obesity prevalence in the most deprived decile (i.e. most deprived 10% of areas in England) is approximately twice that in the least deprived decile, and the slope from most to least deprived can be clearly seen in chart 6 and chart 7.

In the national data, children's records were allocated to a deprivation decile based on the IMD score of the child's school location (not the child's home postcode). In these nationally produced charts, decile 1 is defined to be the least deprived and decile 10 is the most deprived (NB In locally produced analysis of Warrington data, quintile 1 and decile 1 are defined to be *most* deprived).

Charts 6 and 7 show analysis of national data. In both Reception and in Year 6, there are only relatively small differences in the percentage of *overweight* children across the 10 deprivation deciles; the biggest difference is that the least deprived decile is statistically significantly lower than all other deciles.

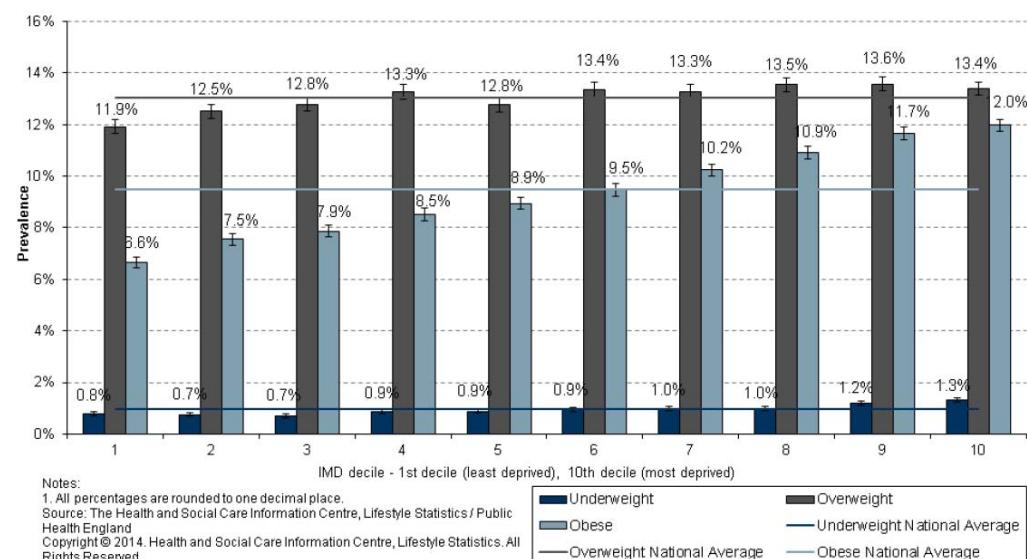
However, in both age groups, the slope of inequality between more and less deprived areas can clearly be seen in *obesity* prevalence, where a very strong positive correlation exists; obesity prevalence is almost twice as high in the most deprived decile, compared to the least deprived decile (in Reception, 6.6% of children attending schools in the least deprived decile compared to 12.0% in the most deprived; in Year 6 13.1% of children attending schools in the least deprived decile compared to 24.7% in the most deprived).

There are also significant differences in underweight prevalence, with higher prevalence in the more deprived areas.

### Chart 6 (PHE figure 16): Prevalence of obesity, by deprivation decile, England, Academic Year 2013/14 (based on deprivation level of school location)

National Child Measurement Programme:  
England, 2013/14 school year

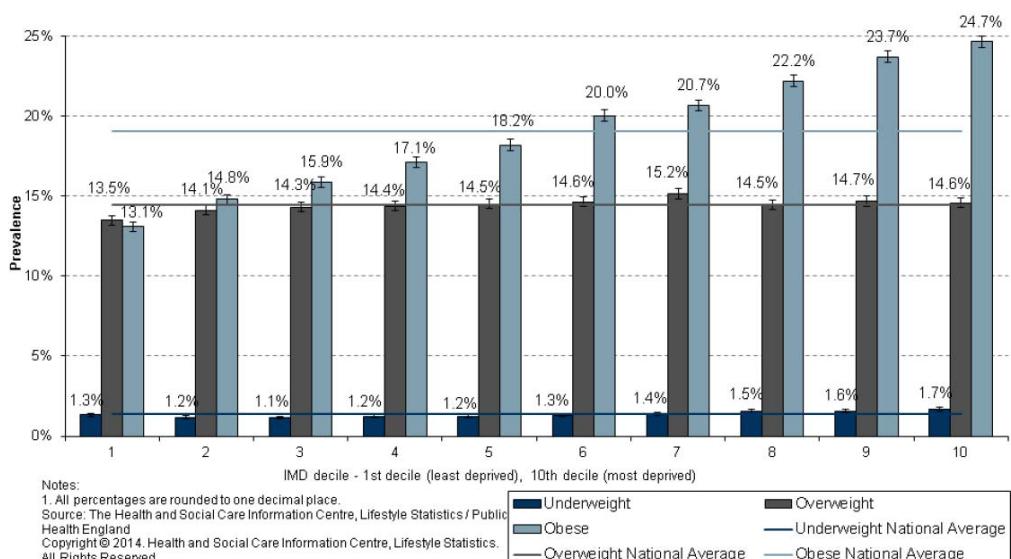
**Figure 16: Prevalence of underweight, overweight and obese children in reception by school area 2010 IMD decile, England, 2013/14**



(Source: HSCIC, 2014a)

### Chart 7 (PHE figure 17): Prevalence of obesity, by deprivation decile, England, Academic Year 2013/14 (based on deprivation level of school location)

**Figure 17: Prevalence of underweight, overweight and obese children in year 6 by school area 2010 IMD decile, England, 2013/14**



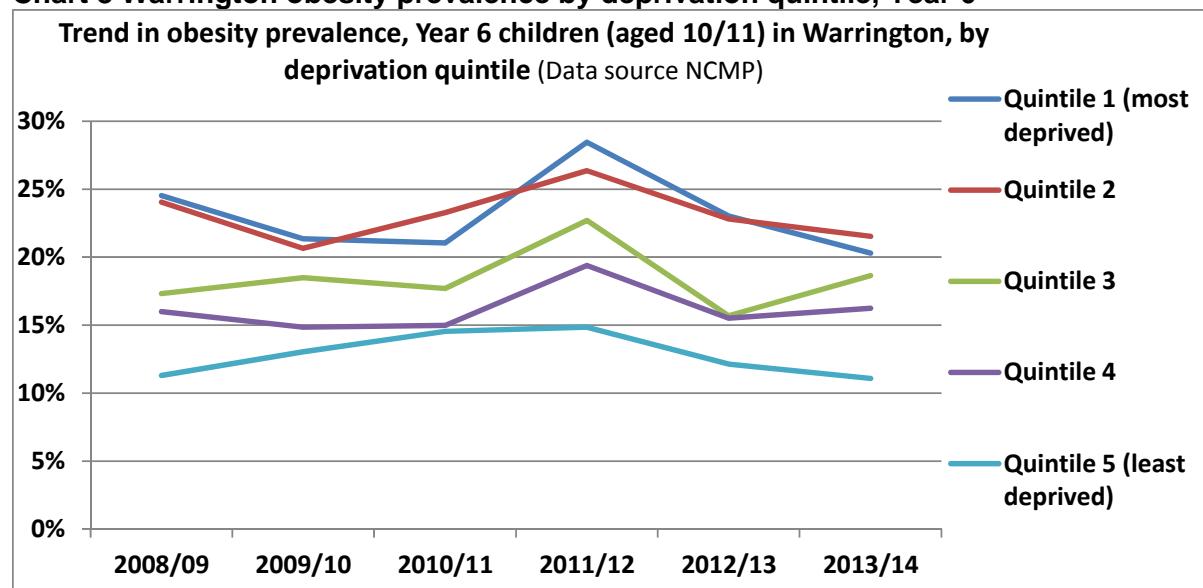
(Source: HSCIC, 2014a)

## **Warrington obesity prevalence by deprivation quintile**

The pattern of higher obesity prevalence in more deprived areas is also seen within Warrington. (NB In locally produced analysis of Warrington data, children's records were allocated to a deprivation quintile based on the child's home postcode, not the child's school location. Quintile 1 is defined to be *most* deprived).

In all quintiles, prevalence estimates vary substantially from year to year. However, as chart 8 shows, in Year 6, quintile 5 (least deprived) consistently has lowest prevalence, then quintile 4, then quintile 3; together, quintiles 2 and 1 (most deprived) consistently have highest prevalence. This pattern of higher obesity prevalence in the more deprived areas is less pronounced in Reception, although quintile 1 (most deprived) fairly consistently has highest prevalence.

**Chart 8 Warrington obesity prevalence by deprivation quintile, Year 6**



## **2.7 Child obesity in Warrington by electoral ward**

In any particular ward, prevalence can vary substantially from year to year.

In Reception, wards that have had significantly higher obesity or overweight/obesity than Warrington overall, at some point in the last 4 years are: Bewsey & Whitecross, Fairfield & Howley, Great Sankey North and Poplars & Hulme. Significantly lower prevalence has been seen at some point in the last 4 years in Appleton, Lymm and Westbrook. For the last 2 years, Bewsey and Whitecross has had a significantly higher percentage of obese Reception children than Warrington overall.

In Year 6, the only wards that have had significantly higher prevalence of obesity or overweight/obesity than Warrington overall, at some point in the last 4 years are Bewsey & Whitecross and Poplars & Hulme. Wards that have had significantly lower obesity or overweight/obesity prevalence than Warrington overall, at some point in the last 4 years are: Burtonwood & Winwick, Hatton Stretton & Walton, Lymm, Poulton South, Stockton Heath and Whittle Hall. For 3 of the last 4 years, Bewsey and Whitecross has had a significantly higher percentage of obese Year 6 children than Warrington overall.

## 2.8) Child obesity by ethnic group

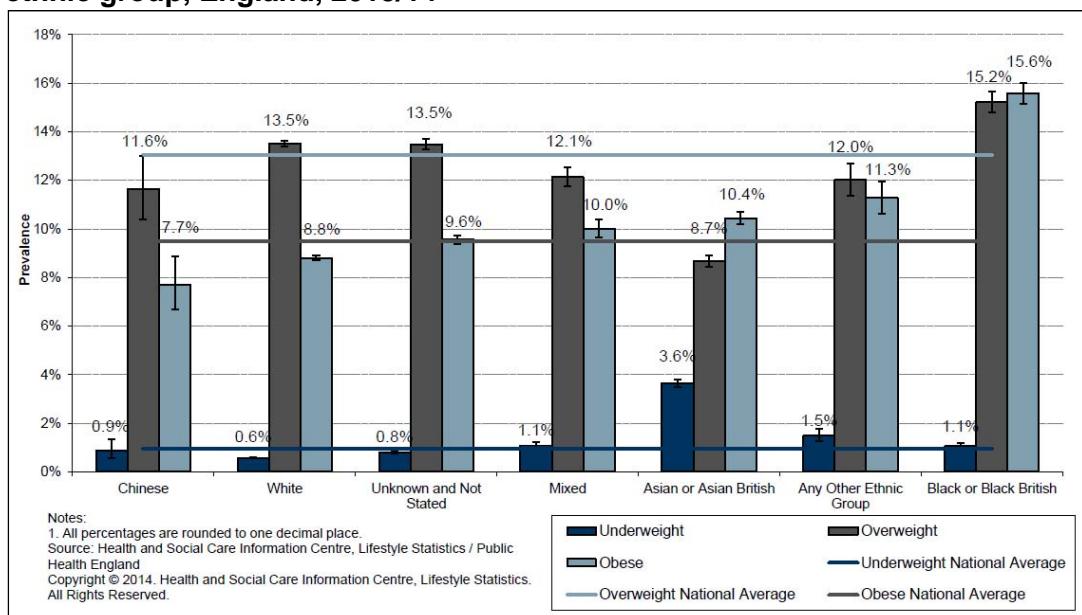
There is evidence that obesity is more prevalent among certain ethnic groups, particularly African Caribbean and Pakistani women. However, the relationship between ethnicity, overweight and obesity in children is less well understood.

Reports by PHE and HSCIC state that “Analyses of NCMP and HSE data have shown that child obesity prevalence varies substantially between ethnic groups; generally, children classed as White British have lower prevalence than most other ethnic groups” (PHE, 2014a, p23 and NOO, 2008), and that “Obesity prevalence was significantly higher than the national average for children in both school years in the ethnic groups ‘Asian or Asian British’, ‘Any Other Ethnic Group’, ‘Black or Black British’ and for the ethnic group ‘Mixed’. Obesity prevalence was significantly lower than the national average for children in both years in the ‘White’ ethnic group; and for ‘Chinese’ in Reception.” (HSCIC, 2013a, p38).

There are known associations between ethnicity and area deprivation (Noo, 2008). Deprived urban areas in England tend to have a higher proportion of individuals from non-White ethnic groups, so it is likely that there are confounding factors which affect obesity prevalence by ethnic group. However, even when confounding factors such as deprivation and urban environment are controlled for, there are still differences between ethnic groups.

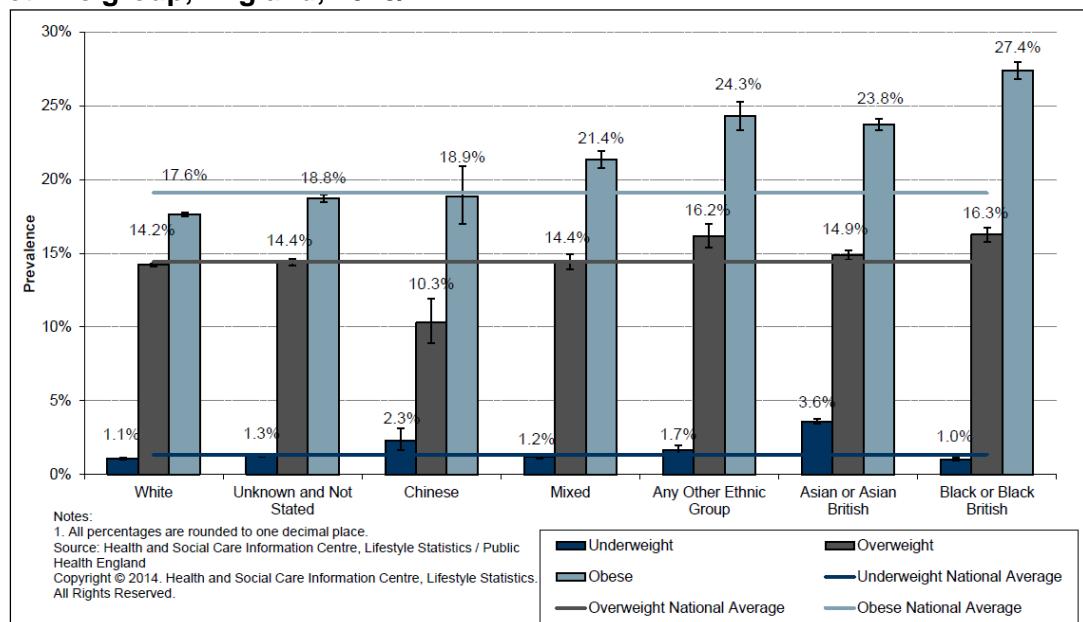
Charts 9 and 10 show that nationally in both Reception and Year 6, statistically significant differences between ethnic groups can be seen in the proportion of underweight, overweight, and obese children.

**Chart 9: Prevalence of underweight, overweight and obese children in Reception, by ethnic group, England, 2013/14**



Data source: PHE 2015

**Chart 10: Prevalence of underweight, overweight and obese children in Year 6, by ethnic group, England, 2013/14**



Data source: PHE 2015

There is no reason to believe that the variation seen nationally would be any different in Warrington. However, in Warrington, there are so few children in most ethnic groups (other than White British) that usually no significant differences can be seen, as the small number of children in most ethnic groups make confidence intervals extremely wide.

## 2.9) Learning disabilities, physical disabilities and limiting illness

Obesity is more common in people with learning disabilities than in the general population; children who have a limiting illness are more likely to be obese or overweight, particularly if they also have a learning disability. Children who have a limiting illness are more likely to be obese or overweight, particularly if they also have a learning disability. 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 (Chimat, 2011). The percentage of children classified as overweight or obese in the 8 to 13 years old age category with a limiting illness and a learning disability increased to almost 45%. Although there is an established link with weight gain associated with medication, poor diet and lack of exercise are also contributing factors. Access and support for children and adults with physical disabilities to participate in sport and physical activities will impact on fitness and the potential risk of being overweight or obese.

Health checks have also shown that people with learning disabilities have a higher rate of obesity than the general population (HSCIC, 2010).

As part of the National Child Measurement Programme, the School Health Team will offer to measure children's height and weight in Reception Year and Year 6, in Warrington special schools, if the child can stand unaided (as outlined in NCMP Guidance (PHE, 2014e)).

## 2.10) Underweight prevalence

It is acknowledged that this chapter does not address issues relating to the prevalence of underweight children, other than the following. Nationally, the overall prevalence of underweight children in the 2013/14 academic year was statistically significantly higher in Year 6 (1.4%) than in reception (0.9%). In Reception, a significantly higher percentage of boys were underweight than girls (1.2% and 0.7% respectively); whereas in year 6, a

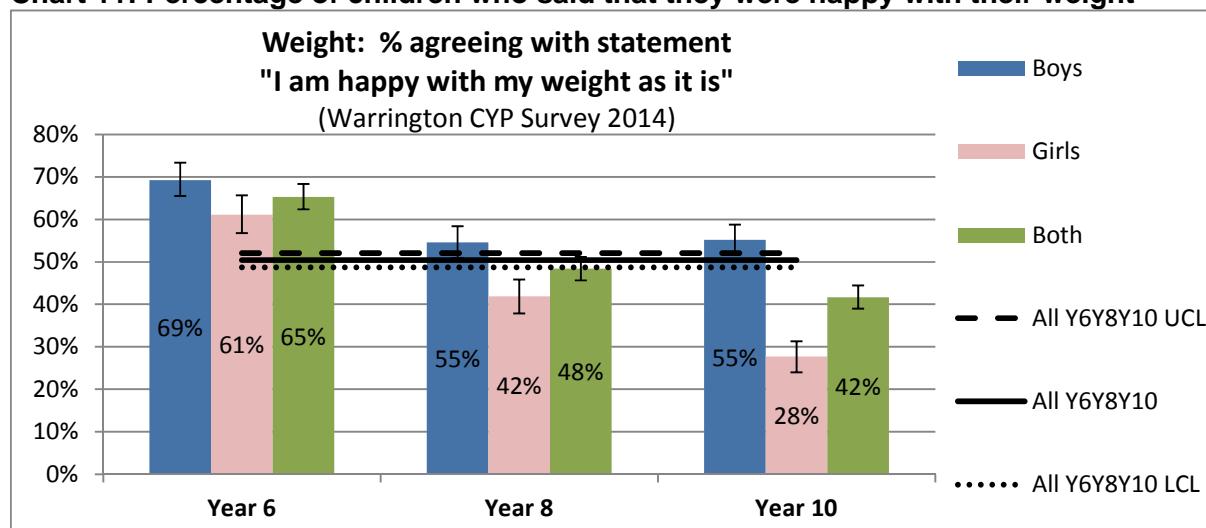
significantly higher percentage of girls were underweight than boys (1.6% and 1.2% respectively). However, there are no significant differences in Warrington.

### **2.11) Warrington CYP Health-related Behaviour Survey 2014: Happy with weight?**

Pupils were asked if they were happy with their weight, or whether they would like to lose/gain weight. Chart 11 shows the proportion of pupils who said they were happy with their weight:

- Comparing girls and boys in each year group, a higher proportion of boys than girls said they were happy with their weight (significantly higher in Y8 and Y10).
- In girls particularly, the proportion happy with their weight drops significantly as they get older (61% in Y6, 42% in Y8 and only 28% in Y10).
- The gap between boys and girls happy with their weight grows substantially as they get older.
- Only 28% of girls in Y10 said they were happy with their weight (68% wanted to lose weight, and 5% wanted to gain weight).

**Chart 11: Percentage of children who said that they were happy with their weight**



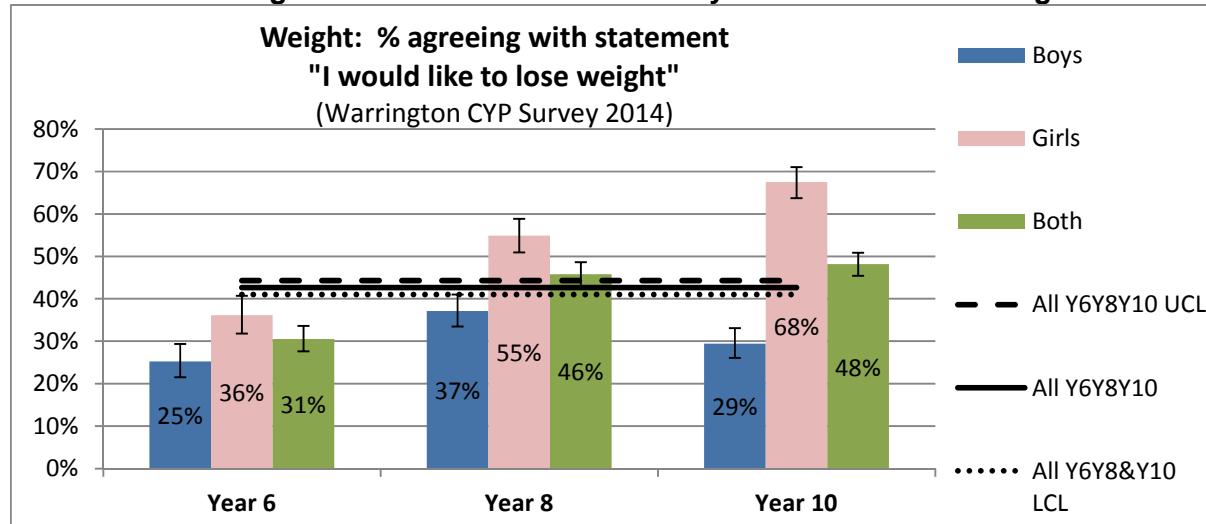
Data source: Warrington CYP Health-Related Behaviour Survey 2014 (WBC). Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

Chart 12 shows the proportion of pupils who said they would like to lose weight:

- Even as young as Y6, 36% of girls and 25% of boys said they would like to lose weight. To put some context around the desire of Y6 to gain/lose weight, in Warrington 2013/14 NCMP data, 15.6% of girls and 14.6% of boys and were overweight, and a further 14.4% of girls and 18.0% of boys and were obese. NB Although the 2013/14 NCMP cohort is the same Year 6 cohort that participated in the CYP survey, it is not possible to link the two datasets to see whether the children who said they'd like to lose weight are categorised as overweight/obese in the NCMP data.
- Comparing girls and boys in each year group, a significantly higher proportion of girls than boys said they wanted to lose weight.
- The proportion of girls who say they want to lose weight increases significantly from Y6 to Y8 to Y10 (36%, 55% and 68% respectively).
- In boys, 25% in Y6 want to lose weight, rising significantly to 37% in Y8, but then reducing significantly to 29% in Y10 (mainly due to the 15% of Y10 boys who want to gain weight).

- A higher proportion of Y6 girls (36%) said that they wanted to lose weight than were classed as overweight/obese in the NCMP (30%). A lower proportion of Y6 boys (25%) said that they wanted to lose weight than were classed as overweight/obese in the NCMP (33%). This appears to illustrate differing perspectives on ideal weight amongst boys and girls as young as 10/11.

**Chart 12: Percentage of children who said that they would like to lose weight**



Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

Y10 boys stood out as the group with a significantly high proportion wanting to gain weight (15%).

Warrington is fairly similar to national in terms of being happy with their weight, wanting to gain weight, or lose weight.

## 2.12) Parental Obesity

There is an increased risk of children being overweight or obese where one or both parents are obese. One study (McLoone et al, 2012) of children aged 2 to 15, found that 26% of children with at least one obese parent were obese, compared to 12% of children with at least one overweight (but not obese) parent, and 12% of children whose parents were of a healthy weight (or underweight). (If BMI was known for both parents, then the highest BMI was used to categorise parental BMI).

Obesity in pregnancy can have an adverse effect on pregnancy outcomes for mothers and babies, and increases pressure on, and cost of, services. Numbers of women reaching maternity services with a high BMI are increasing. For further information see the JSNA Chapter on Children 0-5. During 2013, 3,408 pregnant women had their Body Mass Index (BMI) recorded at antenatal clinics in Warrington hospital. Of these women, 2,181 provided a valid Warrington postcode (from which level of deprivation in the area of residence could be determined); analysis of data from these 2,181 women showed that:

- 22% were obese and a further 26% were overweight, i.e. 48% were of excess weight.
- Obesity was higher in those who had given birth previously (24.7%) when compared to those who had not (18.3%). Further, as the number of previous births increased, the percentage of obese women also increased. Almost a third (30.7%) of women who had 2 or more previous births were obese.
- The percentage of overweight women did not vary much by deprivation quintile (ranging from 25% to 29%). There were bigger differences between quintiles in the percentage of

obese women; 14% in quintile 5 (least deprived) compared to between 20% and 29% in the other quintiles.

- Grouped by the age-bands under-19, 20-24, 25-29, 30-34, 35-39 and 40+, only the under-19 age-band was substantially different. 19% of the under-19s were overweight compared to between 24% and 28% of the 20+ age-bands. 15% of the under-19s were obese compared to between 21% and 26% of the 20+ age-bands. In terms of all excess weight, 35% of the under-19s were overweight/obese; the other age-bands were fairly similar at approximately 50%.

The Warrington Health and Wellbeing survey 2013 (WBC, 2013), a large scale survey of almost 6,700 Warrington residents, estimated that 14.9% of Warrington women aged 18-39 (the age-band that most closely fits women of childbearing age) were obese. However there were differences across Warrington; 21.0% of those living in the most deprived areas (quintile 1) were obese, compared to 7.6% in the least deprived areas (quintile 5).

NICE have produced commissioning guidelines for weight management before, during and after pregnancy (NICE, 2011).

### **2.13) Breastfeeding Initiation and Continuation Rates**

There is evidence to suggest that breastfed babies are less likely to be obese in later life. (Ip et al, 2007). The Healthy Child Programme '*Pregnancy and the first five years of life*' (DH, 2009) highlights breastfeeding as a protective factor and a priority for improving health and reducing health inequalities.

In 2013/14, the breastfeeding initiation rate in Warrington was 68.1% (England 74.3%). The breastfeeding continuation rate (where babies are breastfed partially or totally at 6-8 weeks old) was 37.6% in Warrington (England 43.8%).

A valid Warrington postcode is not available for all mothers included in the data above, but those records that have a valid postcode can be analysed by deprivation quintile. As table 4 shows, initiation rates and continuation rates increase, as deprivation decreases. There are much higher rates of both initiation and continuation in the least deprived areas; only 54% initiation in the most deprived areas compared to 79% in the least deprived, and only 26% continuation in the most deprived areas compared to 54% in the least deprived.

<b>Table 4</b>	<b>Breastfeeding initiation 2014/15</b>			<b>Breastfeeding continuation 2014/15</b>		
	<b>No. Initiated Breast- Feeding</b>	<b>Total No.</b>	<b>% who Initiated Breast- Feeding</b>	<b>No. fully/partially breastfeeding at 6-8 weeks</b>	<b>Total No.</b>	<b>% fully/partially breastfeeding at 6-8 weeks</b>
Quintile 1 (most deprived)	300	551	54%	164	574	29%
Quintile 2	266	457	58%	132	463	29%
Quintile 3	117	183	64%	88	199	44%
Quintile 4	232	322	72%	154	380	41%
Quintile 5 (least deprived)	372	484	77%	293	593	49%
<b>Total</b>	<b>1,287</b>	<b>1,997</b>	<b>64%</b>	<b>831</b>	<b>2,326</b>	<b>38%</b>

(Data sources: breastfeeding initiation - Warrington and Halton Hospital Foundation Trust, and breastfeeding continuation – Bridgewater NHS Foundation Trust. NB The table shows more mothers in the continuation data than the initiation data: this is partly due to different data sources, different data collection methods, and that only records with valid Warrington postcodes can be included in analysis by deprivation level.)

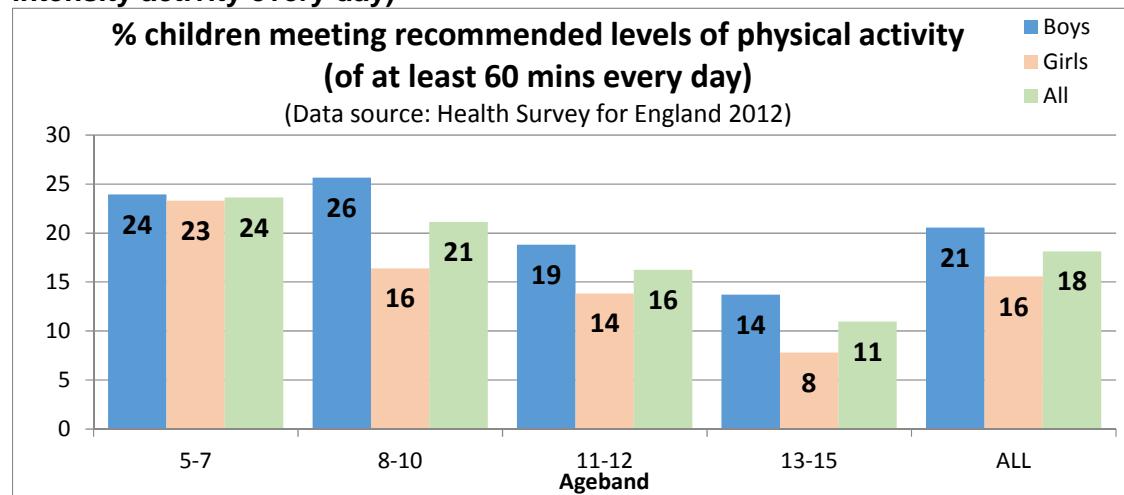
## 2.14) Physical activity

The Chief Medical Officer (CMO) gives guidelines for levels of physical activity for under-5 year-olds and for 5-18 year-olds (DH, 2011b). For 5-18 year-olds, the recommended amount is moderate to vigorous intensity physical activity for at least 60 minutes and up to several hours every day.

In 2012 the Health Survey for England (HSE) contained questions on levels of physical activity in children aged 2-4 and 5-15. *Physical activity in children* (HSCIC, 2013b) contains analysis for England as a whole (data is not available at a Local Authority level), including time spent on physical activity, travel to school, and sedentary behaviour. Nationally, the proportion meeting the CMO's recommended levels of physical activity by age-band is shown in chart 13:

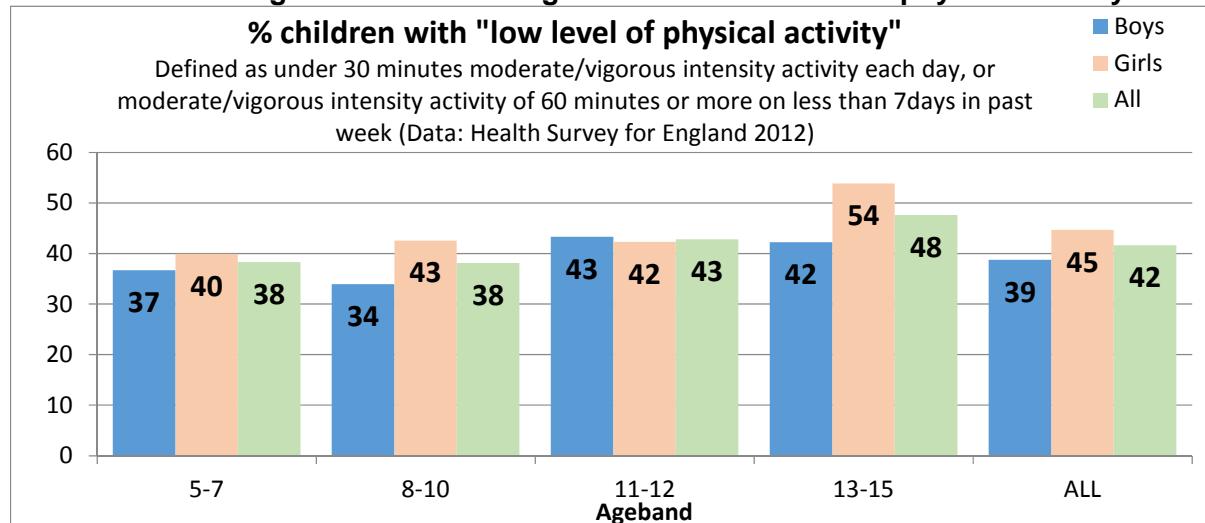
- Boys: a similar proportion of 5-7 year-olds (24%) and 8-10 year-olds (26%) meet the guidelines, but this reduces to 19% of 11-12 year-olds, and only 14% of 13-15 year-olds.
- Girls: a steady reduction is seen in the proportion meeting the guidelines, from 23% of 5-7 year-olds, to 16% of 8-10 year-olds, to 14% of 11-12 year-olds, and only 8% of 13-15 year-olds.
- In children aged 5-7, a similar proportion of girls and boys meet the guidelines, but in the other 3 age-bands, a much lower proportion of girls than boys meet them.

**Chart 13: Percentage of children in England meeting the Chief Medical Officer's recommended level of physical activity of at least 60 minutes moderate to vigorous intensity activity every day)**



A “low level of activity” was defined as “less than 30 minutes of moderate to vigorous intensity activity on each day, or moderate to vigorous intensity activity of 60 minutes or more on fewer than seven days in the last week”. Looking at low levels of physical activity (see chart 14), girls aged 13-15 stand out from the other groups, with 54% having low levels of activity; the other groups ranged between 34% (8-10 year-old boys) to 43% (8-10 year-old girls and 11-12 year-old boys).

**Chart 14: Percentage of children in England with a “low level of physical activity”**



Physical inactivity in childhood has direct health consequences. In pre-school children, physical activity is critical for healthy weight, improved bone and muscle strength, motor development, and psychosocial health, as well as being important for cardio-metabolic health (blood pressure, blood lipids (fats) and insulin sensitivity). There is increasing evidence that sedentary behaviour, i.e. activity with very low energy expenditure, undertaken primarily sitting or lying down, is itself unhealthy, independent of physical activity (HSCIC, 2014b). Sedentary time is at least as important as moderate physical activity as a disease risk factor. It is not merely the absence of physical activity, but is a class of behaviours that involve low levels of energy expenditure (HSCIC, 2013b). The HSE 2012 asked children about the amount of time spent in sedentary pursuits outside of school, including watching TV, other screen time, reading and other sedentary pursuits. Average total sedentary time (excluding time at school) was similar for boys and girls. The average number of hours spent watching TV increased as household income decreased. Among children aged 2-10, the average number of sedentary hours on a typical weekday was almost 3 hours and almost 4 hours on a weekend day. Among children aged 11-15, the average number of sedentary hours on a typical weekday was almost 4 hours; on a weekend day this increased to 4.5 hours in girls and 5 hours in boys.

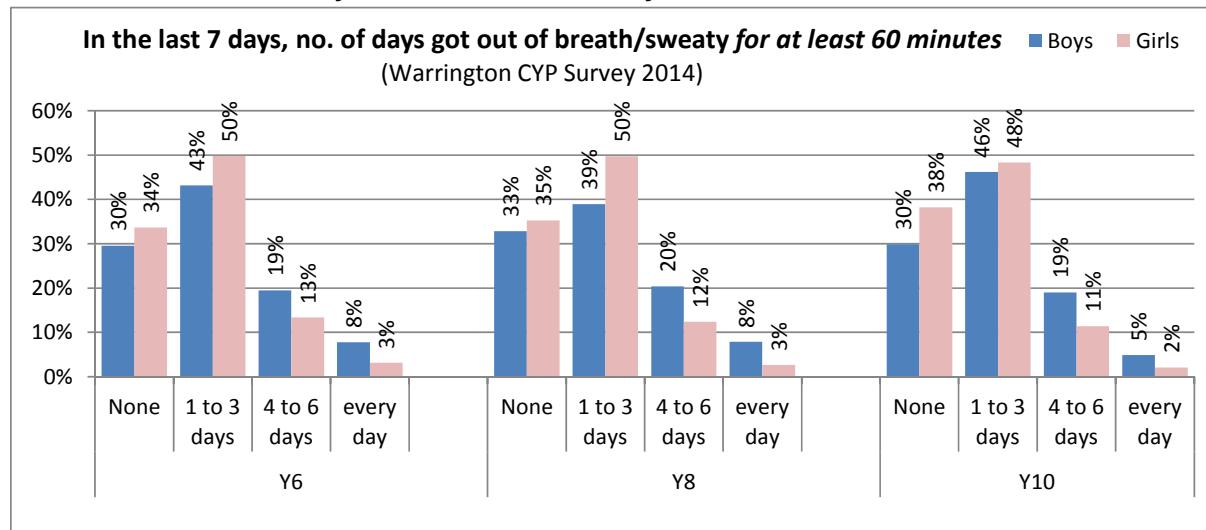
The 2012 Health Survey for England does not provide data on physical activity at a Local Authority level. However, local data is available from the Warrington CYP Health-Related Behaviour Survey 2014. (NB data from the two surveys are not directly comparable.)

CYP Health-Related Behaviour Survey 2014: amount of physical activity

Pupils were asked how many days they got out of breath and/or sweaty for a total of at least an hour while doing physical activity, in the last 7 days. (*The 60 minutes did not have to be all in one session – the time from several bouts of activity could be added together*). Chart 15 shows the number of days they got out of breath / sweaty for at least 60 minutes:

- Only 5% overall (i.e. girls and boys in all 3 year-groups) reached the CMO guidelines of at least 60 minutes physical activity every day in the previous week. A slightly higher percentage of boys than girls in each year group achieved the guidelines.
  - 33% of pupils overall didn't manage at least 60 minutes on any days in the previous week. There was relatively little variation between year groups. There was a difference between girls and boys only in Y10 (30% boys and 38% girls).
  - 11% overall said that they didn't get out of breath for any time on any days.
  - In general, more boys than girls were in the '4-6 days' category and the 'every day' category; more girls than boys were in the 'none' category and the '1-3 days' category.
  - No nationally comparable figures are available.

**Chart 15: Number of days out of breath/sweaty for a total of at least 60 minutes**



Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

#### CYP Health-Related Behaviour Survey 2014 data: Enjoyment of physical activity

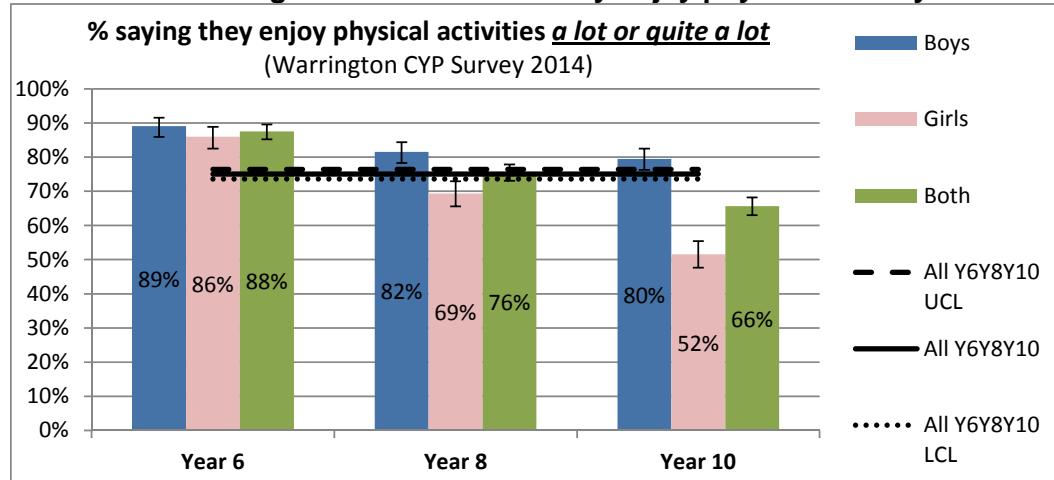
Pupils were asked how much they enjoyed physical activity. Pupils who responded that they enjoy physical activity *a lot*:

- In all year groups, a significantly higher proportion of boys than girls said they enjoyed physical activities *a lot*. This difference becomes more extreme, the higher the year group; by Y10, only 20% of girls compared to 49% of boys said they enjoy physical activity *a lot*.
- Both for boys and for girls, as year group increases, the proportion who say they enjoy physical activity *a lot*, decreases; for boys 65% Y6, 53% in Y8 and 49% in Y10, and for girls 52% in Y6, 32% in Y8 and only 20% in Y10.

Pupils who responded that they enjoy physical activity *a lot or quite a lot* (see chart 16):

- In Y8 and Y10, a significantly higher proportion of boys than girls said they enjoyed physical activities *a lot or quite a lot* (in Y6 girls and boys were similar). This difference becomes more extreme, the higher the year group; by Y10, only 52% of girls compared to 80% of boys said they enjoy physical activity *a lot or quite a lot*.
- In girls there is a significant reduction from Y6 (86%) to Y8 (69%), and again from Y8 to Y10 (52%). In boys, Y6 (89%) is significantly higher than both Y8 (82%) and Y10 (80%).

**Chart 16: Percentage of CYP who said they enjoy physical activity *a lot or quite a lot***



Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

Pupils who responded that they *don't enjoy physical activity*: 8% of Y10 girls said they don't enjoy physical activity at all, and a further 40% said they only enjoy it a little.

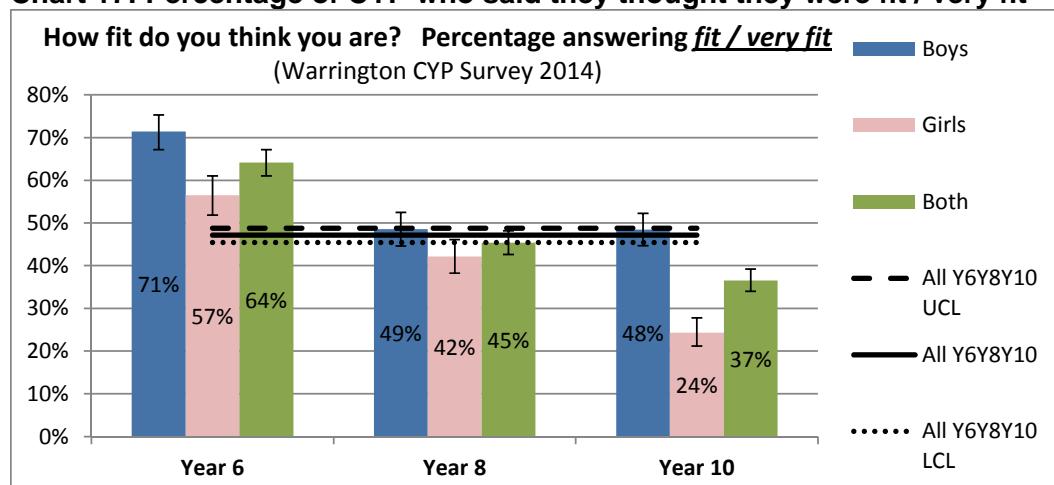
Warrington was broadly in line with national figures (SHEU), although more Y6 girls in Warrington (86%) said they enjoyed physical activity a lot / quite a lot, compared to national (80%), but less Y10 girls in Warrington (52%) did so (national 58%).

### CYP Health-Related Behaviour Survey 2014 data: perception of fitness

Pupils were asked "How fit do you think you are?" (See chart 17).

- In Y6, significantly more boys (71%) than girls (57%) said fit/very fit. However, significantly more girls (37%) than boys (22%) answered "Don't know".
- In Y8, 49% of boys and 42% of girls said fit/very fit (this difference was not statistically significant).
- In Y10, there was a highly significant difference, 48% boys but only 24% girls.
- Broadly similar to national (SHEU data) except 66% Y6 girls (vs 57% Warrington) and 35% Y8 girls (vs. 42% Warrington) thought they were fit / very fit.

**Chart 17: Percentage of CYP who said they thought they were fit / very fit**



Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

### CYP Health-Related Behaviour Survey 2014 data: sports/activity clubs

Year 6 pupils were asked "Are you a member of a sports or activity club e.g. Judo, swimming, dance etc?" (Secondary school pupils weren't asked this question). 74% of Y6 said they were a member of a sports/activity club (77% of boys and 71% of girls).

### CYP Health-Related Behaviour Survey 2014 data: barriers to physical activity

Pupils were asked "Does anything stop you from taking part in more physical activities, e.g. sport, dance, judo, etc?"

- There was a lot of variation between girls and boys and between year groups in the reasons they gave for not taking part in more physical activities.
- For all bar one small exception (parents/carers won't let me), Y10 girls had the highest proportion agreeing with each reason.
- In Y6, the main reasons were that they just don't like it (9%), lack of time (9%), cost (8%), and for girls only, their friends don't go (12%).

- In Y8, the main reasons were that they just don't like it (13%), lack of time (13%), and for girls only, their friends don't go (19%) and embarrassment (13%).
- In Y10, girls and boys answered very differently. Y10 boys said the main reasons were that they just don't like it (10%), lack of time (11%), and their friends don't go (9%). Y10 girls said the main reasons were that their friends don't go (27%), lack of time (19%), embarrassment (18%), they just don't like it (15%), cost (13%), and they don't like the people that go there (10%).
- Focussing on those who said they do very little exercise, data was analysed to see whether they gave lots of reasons why not. 660 pupils (girls and boys, all year groups) who fully answered the question said that they got out of breath / sweaty for more than an hour on no days in the past week, and a further 335 said 1 day, i.e. 995 pupils said no days or only one day in the past week. Of these 995 pupils, 407 (41%) didn't give a reason, and a further 326 (33%) gave only one reason. Of the 326 who gave one reason, the main reasons were: 52 said no time, and 44 said none of their friends go. Of those who gave multiple reasons: 151 gave 2 reasons, 61 gave 3 reasons, 44 gave between 4 and 7 answers. (6 pupils missed out the question entirely).

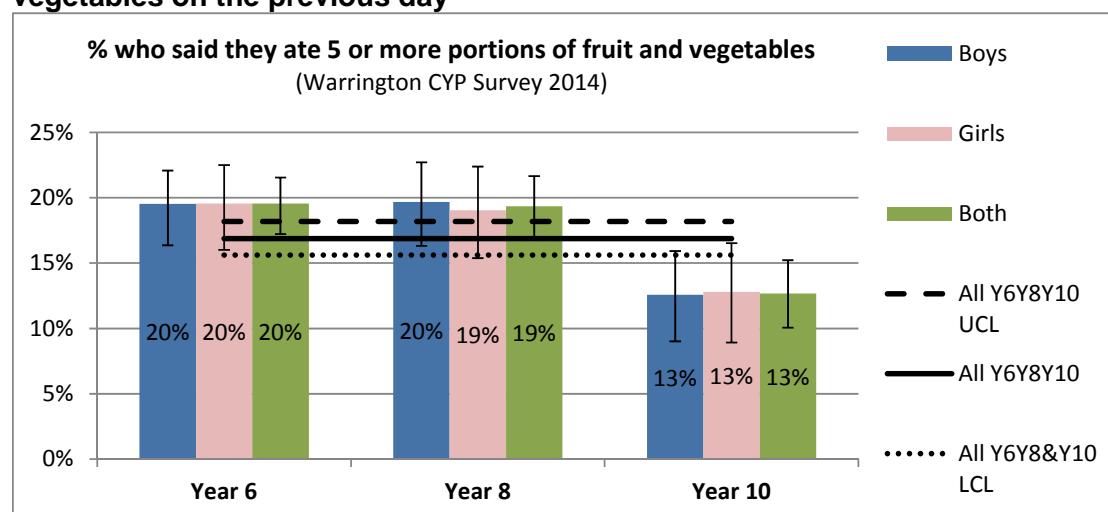
## 2.15) Diet

### Fruit and vegetable consumption

Pupils were asked how many portions of fruit and vegetables they had eaten the previous day (see chart 18):

- In each year group, there was very little difference between girls and boys, in the proportion that ate 5+ portions of fruit/veg.
- The proportion that said they ate 5+ portions of fruit/veg yesterday was 20% in Y6, 19% in Y8 and 13% Y10 (Y10 was significantly lower than Y6 and Y8).
- Warrington was substantially lower than national figures in Years 6 and 10 (29% in Y6, 22% in Y8, and 18% in Y10).
- The proportion who said they ate no portions of fruit/veg was similar to national figures. (Warrington 7% Y6, 8% Y8 & 12% Y10).

**Chart 18: Percentage of CYP who said they ate 5 or more portions of fruit and vegetables on the previous day**

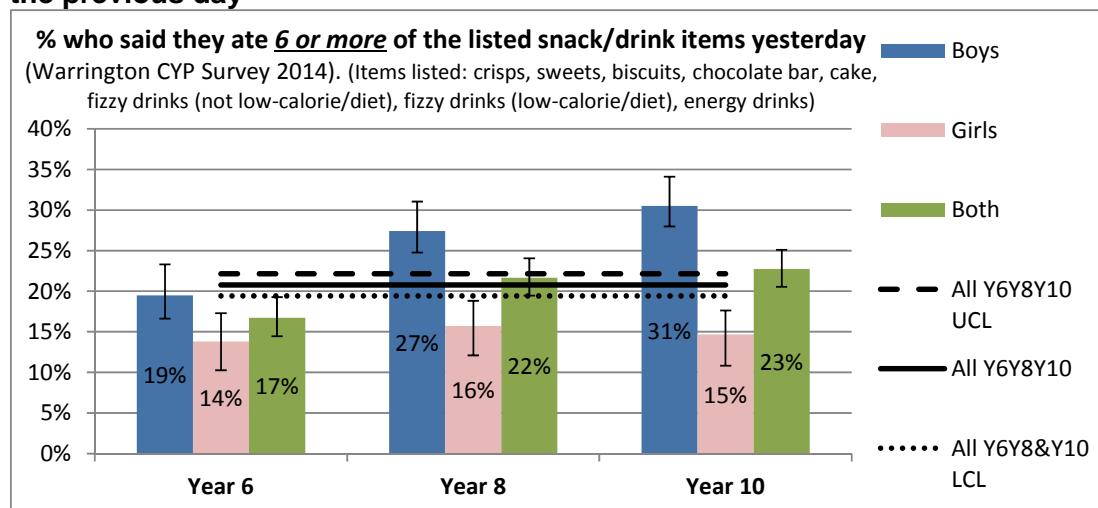


Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

**Snacks and fizzy drinks:** Pupils were asked how many times they ate or drank any of the following snacks and fizzy drinks the previous day: a) Crisps; b) Sweets, biscuits, chocolate bar, cake; c) Fizzy drinks (not low-calorie/diet); d) Fizzy drinks (low-calorie/diet; e) Energy drinks e.g. Monster, Relentless etc). For each option, pupils could answer 0 to 7, or 8+.

- In all year groups, boys said they had more snacks; 8% of Y6 boys, 11% of Y8 boys and 11% of Y10 boys said that yesterday they had 10 or more of the snacks/drinks listed (compared to 4% Y6, 6% Y8 and 2% Y10 girls).
- Looking at 6 or more snacks (see chart 19): girls' consumption changed little over the year groups (14% in Y6, 16% in Y8, 15% in Y10.), whereas boys' consumption changed dramatically over the year groups (19% in Y6, 27% in Y8, 31% in Y10). This rise in boys' consumption was significantly higher in Y8 and Y10 boys compared to Y6 boys.

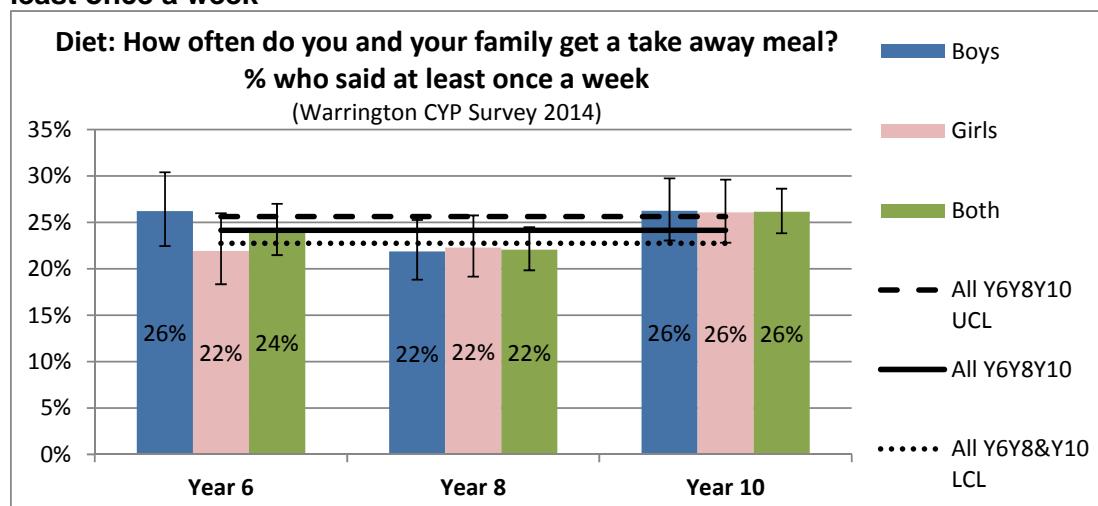
**Chart 19: Percentage of CYP who said they ate at least 6 of the listed snack/drinks on the previous day**



Percentages calculated from valid answers (i.e. invalid answers are excluded from denominator)

**Takeaways:** Pupils were asked how often they and their family got a takeaway meal (e.g. buy fish and chips, a Chinese or an Indian meal from a takeaway). There was little variation between year groups or between girls/boys. 24% of Y6, 22% of Y8 and 26% of Y10 said at least once a week (see chart 20). 2% overall said 3 times/week or more.

**Chart 20: Percentage of CYP who said they and their family get a takeaway meal at least once a week**



### **3) CURRENT SERVICES IN RELATION TO NEED**

Change4Life is a Public Health England national campaign that has been running since 2009. It has become one of the most instantly recognisable brands in health improvement. It enjoys high levels of trust and involvement from both the public and private sectors. Its ambition is to create a movement in which everyone in society plays their part, helping to create fundamental changes to those behaviours that can help people lead healthier lives, encouraging them to eat well, move more and live longer.

Warrington's Healthy Weight Strategy 2014-2018 includes measures to help prevent people becoming overweight, and measures to help those CYP who are overweight/obese To tackle overweight and obesity effectively the strategy has adopted a life course approach, from pre-conception, through pregnancy, infancy, early years, childhood, adolescence, teenage years, to adulthood, as suggested in the government's "*Healthy Lives, Healthy People: A call to action on obesity in England*" (DH, 2011a).

The strategy focusses on 3 key strategic themes:

1. Early intervention and prevention
2. Supporting people to maintain a healthy weight by tackling the wider obesogenic and built environment
3. Ensuring adequate provision of appropriate weight management services

Its delivery is supported by 4 cross cutting themes:

1. Workplace health
2. Training and communications
3. Policy and practice
4. Monitoring and evaluation.

#### **Current services within the strategy's key themes relevant to CYP**

**Theme 1: Early intervention and prevention** Place preventative measures as far 'upstream' as possible.

##### Within schools and children's settings:

- All CYP settings are encouraged to sign up as a local Change4Life supporter and actively promote Change4Life in their settings. Within Warrington there are 54 local registered supporters of Change4Life.
- Change4Life sports clubs are delivered by the Youth Sport Trust in primary and secondary schools across the country. An evaluation (SPEAR, 2013) suggests that the clubs are having positive impact in increasing levels of physical activity, improving positive attitudes to being active and to sport, increasing knowledge of healthy lifestyles, developing and improving physical skills, increasing confidence and developing a sense of belonging. Nationally, in 2012/13 over 70,000 children participated in over 4,000 Change4Life Primary School Sport Clubs. In 2014, there were 28 of these clubs at primary schools within Warrington borough.
- Schools will be supported to update their school's physical activity policy and whole school food policy, ensuring curriculum delivery and school practice provides a health-promoting environment.
- Warrington School Sports Partnership was set up in 2000 to give more opportunity in sport to all young people in the Warrington borough. They offer local schools the resources needed to increase participation in physical activity within their school environment and support teachers to help deliver quality competitions that young people

are comfortable and happy to be involved in. Staff are all fully qualified while keeping the element of fun for young people.

- Active Warrington, Warrington Borough Council's strategy on physical activity (WBC, 2012; WBC, 2014b), has been extended to 2020. As part of its implementation, the Schools PE and Sports Reference Group, comprising WBC, Active Cheshire, Livewire and staff from several schools, aim to maximise opportunities for CYP to be involved in PE and to take part in competitive games at a town and county level. It also aims to ensure that any sports or PE delivered in local schools is of a high standard.
- There are also a number of one-off activities throughout the year that engage schools, families and young people. For example Cheshire Warrington will work with five local schools in the 2015/16 academic year to do the 'Walk a Hundred Miles' challenge, which challenges classes, individuals or families to clock up 100 miles within the year.

Commissioned services:

- The Breastfeeding Peer Support Service (volunteer) complements current universal services provided by midwives and health visitors. It provides additional and targeted breastfeeding support to new mothers to increase initiation, prevalence and duration of breastfeeding in Warrington mothers, especially in those mothers who are least likely to breastfeed, such as teenage mothers and mothers living in the most socio-economically deprived areas in Warrington.
- School Health Service (5-19). During April 2015 – March 2016 the service will provide time for young people to talk about any issues concerning them including healthy eating, physical activity and healthy weight. The service provides feedback to the parents/carers of all children (i.e. not only to those identified as overweight/obese) measured in the National Child Measurement Programme, as soon as possible, and at most within six weeks after the measurements. The service will proactively follow up children identified as being obese; this involves contacting the parents/carers of those children to offer advice and services to help control their child's weight. The service will offer children and families brief one-to-one healthy weight interventions, and healthy weight group sessions for CYP. The team will promote and signpost to appropriate healthy lifestyle / weight management services.
- The Oral Health Improvement Service deliver evidence-based interventions for children to improve oral health and to reduce health inequalities. The oral health messages link to the Change4Life principles.
- The Maternity Service, commissioned by Warrington's Clinical Commissioning Group, is responsible for providing healthy weight/lifestyles advice during pregnancy and should refer to appropriate services for support.
- Health Visiting. NHS England is the lead commissioner for Health Visiting with the Local Authority as an associate commissioner until October 2015, when the service will be commissioned in full by the Local Authority. The service delivers the full Healthy Child Programme (DH, 2009) to 0-5 year-olds, which includes breastfeeding, weaning and healthy weight/lifestyles interventions.

Training:

- Training for front line staff. The training module "Making Every Contact Count Level 2 – Raising the Issue of Obesity" has been delivered to 57 staff including School Nurses and Health Visitors.
- Developing Change4Life workshop sessions to enable and equip the children's workforce to deliver campaign messages / healthy eating information within their setting.

- Additional training programmes will be available to enable community workers to deliver a short, community based ‘cook and eat’ programme to families.

**Theme 2: Supporting people to maintain a healthy weight by tackling the wider obesogenic and built environment:** priority work areas include:

- The restriction of access to fast food (development of localised Supplementary Planning Document - SPD);
- Reduction in sugary drinks sale & consumption – particularly close to schools and at shops on route to school;
- Healthy Vending projects (within the workplace and beyond);
- Maximisation of parks and open spaces for play/physical activity;
- Encouraging active travel – to work, school and other destinations;
- Linking health more explicitly to planning (Health Impact Assessment).

**Theme 3: Ensure adequate provision of appropriate weight management services:** priority work areas include:

- To commission, monitor and evaluate a multi-component child/family based weight management service targeting those in greatest need.
- Healthy lifestyles (weight management) community programme. This multi-component intervention has been delivered for children aged between 7 and 11 years old, identified as being overweight or obese through the National Child Measurement programme. Children and their families were referred to the programme by health professionals and the weekly sessions focus on nutritional education, physical activity, motivation and behaviour change.

#### **4) PROJECTED SERVICE USE AND OUTCOMES IN 3-5 YEARS AND 5-10 YEARS**

The National Child Measurement Programme has been in place since 2006. However, the methodology of measuring the height and weight of children accurately and consistently has only been achieved in recent years. Nationally, this has resulted in robust data for the academic years 2007/08 to 2013/14. Levels of obesity and of overweight/obesity have been relatively steady in the past few years (see charts 2 and 3) for both England and the North West. Although Warrington figures vary more from year to year than national or regional, on the whole, there is nothing to suggest that this isn't just random variation due to Warrington estimates being based on a much smaller number of children than England.

Previous projections at a national level from the Foresight Report (Butland et al, 2007) were based on Health Survey for England (HSE) data from 1993 to 2004; these projections suggested that if no action was taken, there would be a steep increase in obesity prevalence. However, much more recent data is now available, and it appears that the previous upwards trend in child obesity may be flattening out (NOO, 2011a) (see chart 1).

Whilst progress has been made in that obesity prevalence in children appears no longer to be rising, the aim must now be to *reduce* prevalence.

## **5) EVIDENCE OF WHAT WORKS**

The National Obesity Observatory website is regularly updated with relevant information, research and evidence, national reports and policies, and various other resources and tools.

### **5.1) National and Regional Strategies and Reports**

Some evidence helps shape national and regional strategies:

*Healthy Weight, Healthy Lives: a cross-government strategy for England* (Cross-Government Obesity Unit, DH and DCSF, 2008) set out a plan for action to achieve healthy weight including prevention, identification, management and treatment of obesity. Guidance includes promised action on advertising and promotion of foods to children, simplified food labelling, obesity education and prevention, and nutritional standards in schools, hospitals and workplaces.

*A North West Framework: To achieve healthy weight for children & families* (NHS North West, Government Office North West and DH, 2008) stated that interventions at a local level need to also incorporate direction from the Marmot Review (Marmot, 2010), calling for a reduction in the steepness of health gradients associated with socio-economic inequalities.

In recognition of the importance of tackling obesity, '*Healthy Lives, Healthy People; a call to action on obesity in England*' (DH, 2011a) was launched in November 2011, the key elements of which are:

- A focus on a lifecourse approach that tackles obesity in all age groups.
- Treatment for those who are already overweight or obese will be increasingly important alongside preventative action.
- In line with the Foresight Report (Butland et al, 2007), that a range of partners have responsibility to help individuals and address the many determinant factors in obesity.
- Increasing physical activity is important but, for most people who are overweight or obese, eating less is key to weight loss.
- A new level of ambition for children; a sustained downward trend in levels of excess weight in children by 2020. This ambition is underpinned by the obesity indicators in the Public Health Outcomes Framework (DH, 2012).

Public Health England, in conjunction with the Local Government Association (LGA), has produced briefing papers aimed at local authorities, on topics including regulating the growth of fast food outlets (PHE, 2013a) and increasing physical activity and active travel (PHE, 2013b).

A report by the Academy of Medical Royal Colleges (AOMRC, 2013) suggests 10 key steps for tackling the obesity crisis. These steps fall into three areas:

- Education of healthcare professionals, especially those who have most influence on patient behaviour, to have more confidence in discussing weight issues; increase provision of weight management programmes; improve nutritional standards of hospital food; and increase support for new parents regarding their child's diet.
- Change the 'obesogenic' environment: improve nutritional standards in schools, and teach cooking and growing food skills, along with knowledge of the long-term effects of food on health; reduce the proximity of fast food outlets to schools, colleges, leisure centres and other places where children gather; and ban junk food advertising before 9pm.

- Make the healthy choice the easy choice: introduce a sugary drinks tax; improve food labelling and introduce calorie indicators for restaurants, especially fast food outlets; encourage active travel; protect or increase green spaces; and make local authority planning decisions subject to a mandatory health impact assessment, in order to evaluate potential impact on the populations' health.

There is a Cheshire and Merseyside Public Health Collaborative (ChaMPs) CYP's healthy weight pathway.

### **5.2) Research and Evidence**

Recent research looked at almost 3,000 children aged 4/5 years and 10/11 years, who were weighed and measured in the NCMP (Black et al, 2015). It found that most parents of those children classified as overweight/obese do not recognise this until the excess weight is extreme. This may be because obesity has become so common that society no longer recognises what 'healthy weight' looks like. If parents do not recognise that their child is obese, they are unlikely to do anything to help them achieve a healthy weight. Parents were more likely to underestimate a child's weight if the child was black or South Asian, male, from a more deprived background, or if the child was older.

Some evidence suggests that amongst children, many diet and exercise interventions are ineffective in preventing weight gain but can be effective in increasing physical activity levels and promoting a healthy diet (Summerbell et al, 2009). However, a Cochrane review (Waters et al, 2011) of studies on child obesity prevention programmes found evidence to suggest that interventions were beneficial, particularly those aimed at children aged 6 – 12 years. The prevention programmes in the review covered a broad range of components, and although the review did not distinguish which components were most effective, it suggested the following to be of value:

- *School curriculum that includes healthy eating, physical activity and body image*
- *Increased sessions for physical activity and the development of fundamental movement skills throughout the school week*
- *Improvements in nutritional quality of the food supply in schools*
- *Environments and cultural practices that support children eating healthier foods and being active throughout each day*
- *Support for teachers and other staff to implement health promotion strategies and activities (e.g. professional development, capacity building activities)*
- *Parental support and home activities that encourage children to be more active, eat more nutritious foods and spend less time on screen based activities.*

National Obesity Observatory (NOO, 2010b) guidance suggests that weight management components of behaviour change interventions should focus on helping an individual decide what best suits their circumstances and what they may be able to sustain in the long-term, including a motivational interviewing approach. The physical activity component should focus on activities that fit easily into people's everyday lives and are tailored to individual circumstances. The dietary component should combine targeted advice, dietary modification and goal setting to create an individual and flexible approach tailored towards achieving a balanced, healthy diet in the long-term. Changing behaviours such as poor diet requires a long-term commitment to changing complex behaviours (Boyce et al, 2008).

A small study on the WATCH IT community weight management intervention for obese children and their families looked at which characteristics might predict an unsuccessful treatment outcome (Fassihi et al, 2012). Age, gender, severity of obesity and duration of previous weight management attempts were not predictive of treatment outcome. However, children from families where both parents reported having a weight problem were six times more likely to be unsuccessful than children from families where neither parent reported

weight problems. To increase the overall success rate of such interventions, approaches to behaviour change may need to be tailored for those families who are less likely to be successful, and could include supporting overweight parents to make their own successful lifestyle changes.

A recent study (Law et al, 2014) evaluated the Mind, Exercise, Nutrition, Do it! (MEND) programme, a multicomponent family-based intervention for overweight/obese 7-13 year-olds, in order to assess how outcomes varied with the characteristics of the children (sex, socioeconomic circumstances and ethnicity), characteristics of the MEND centres (type of facility, funding source and programme group size), and where children lived (deprivation and the obesogenic environment).

- Those less likely to complete the programme were: boys; children who were psychologically distressed; children who lived in socioeconomically deprived circumstances; children who attended large MEND groups; MEND groups whose managers had delivered several programmes
- On average, BMI reduced by  $0.76 \text{ kg/m}^2$  over the 10-week programme.
- Self-reported participant self-esteem, psychological distress, physical activity and diet also improved overall.
- Average BMI reduced in all groups, but was greater for: boys; children with a higher baseline BMI; younger; white; or less socio-economically deprived; those who attended more sessions; those who participated in smaller programmes.
- Recruitment and retention of participants was often challenging. Exercising with others of a similar build, tips for parents and cooking lessons for children were all valued, but many parents had issues with time, access/transport, and the cost of transport and higher quality food. At least one individual in every family felt that MEND had been beneficial, but few had managed long-term change, with many finding it difficult to maintain behaviour-change that was generally unsupported by the wider environment.

Several other recent studies investigate effectiveness of various aspects of weight management interventions, including school-based and family-based interventions (Avery et al, 2012; Baxter et al, 2013; Fairclough et al, 2013; Grydeland et al, 2013; Jinks et al, 2013; Kuo et al, 2013; Upton et al, 2013; Visram et al, 2013).

### **5.3) NICE Guidance**

NICE guidelines (NICE 2006) recommend regular audits of the implementation of the guidelines, including monitoring the implementation of the local obesity strategy (which should include the creation and management of safe spaces for incidental and planned physical activity in public places and in schools). This should also ensure that healthy eating policies and procedures are available and followed by NHS organisations and the Local Authority with regard to food supplies, procurement and catering provision. It also includes assessing the percentage of children identified as overweight or obese who are offered a multi-component weight management plan, which includes lifestyle changes within the family and social settings, and the percentage of those children with significant comorbidities or complex needs who have been referred to an appropriate specialist for assessment.

NICE recommends that weight management programmes should include multi-component behaviour change strategies aimed at increasing physical activity levels, improving eating behaviour, and the quality of diet energy intake (NICE, 2006; NICE 2014), and provides recommendations for commissioners of services that take a lifestyle approach to helping overweight or obese CYP manage their weight (NICE, 2013b).

NICE guidance relating to weight management in CYP includes:

- NICE (2006) *Clinical Guidelines CG43: Guidance on the prevention of overweight and obesity in adults and children*
- NICE (2007) *Public Health Guidance PH6: Behaviour change: the principles for effective interventions*
- NICE (2008) *Public Health Guidance PH11: Maternal and child nutrition*
- NICE (2010a) *Public Health Guidance PH27: Weight management before, during and after pregnancy*
- NICE (2010b) *Public Health Guidance PH25: Prevention of cardiovascular disease.*  
NICE (2011) *Commissioning Guidelines CG36: Commissioning for weight management before, during and after pregnancy*
- NICE (2012a) *Public Health Guidance PH42: Obesity: working with local communities*
- NICE (2012b). *Public Health Guidance 41 Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation*
- NICE (2013a). *Public Health Guidance PH46: BMI and waist circumference - black, Asian and minority ethnic groups*
- NICE (2013b) *Public Health Guidance PH47: Managing overweight and obesity among children and young people: lifestyle weight management services*
- NICE (2014a) *Clinical Guidelines CG189: Obesity: identification, assessment and management of overweight and obesity in children, young people and adults*
- NICE (2014b). *Local government briefing: Body mass index thresholds for intervening to prevent ill health among black, Asian and other minority ethnic groups*
- NICE (2015a). *NG7 Maintaining a healthy weight and preventing excess weight gain among adults and children.*
- NICE (2015b) *QS84: Physical activity: encouraging activity in all people in contact with the NHS*
- NICE (Expected July 2015). *Obesity: prevention and management in children.*

#### **5.4) Cost effectiveness**

In its review of the cost-effectiveness of individual level behaviour change interventions, the North West Public Health Observatory (NWPHO, 2011, p10) states that “*There are many individual barriers to preventing obesity and achieving healthy weight. Possible barriers include lack of time, lack of knowledge about the effect of diet and exercise on health, buying and cooking healthy foods, the cost and availability of healthy foods and opportunities for exercising, personal tastes, the views of family and community members, low levels of fitness, disabilities and low self-esteem (NICE 2006). There is good evidence to suggest that multicomponent approaches which provide support on both physical activity and diet together produce more effective weight outcomes than single component interventions (NOO, 2010b)*”.

NOO have produced 3 Standard Evaluation Frameworks (SEFs) to support evaluation of weight management interventions (NOO, 2009), physical activity interventions (NOO, 2012b) and dietary interventions (NOO, 2012c). They give guidance on the principles of evaluation, and list essential criteria (the minimum recommended data for evaluating interventions) and desirable criteria (additional data that would enhance the evaluation).

Public Health England has developed a Weight Management Economic Assessment Tool to help make economic assessments of existing or planned weight management interventions (PHE, 2014c). (Phase One of the tool is available, and Phase Two will be available later in 2015.) PHE have also produced a guide to several online tools for evaluating physical activity, sport and obesity programmes (PHE, 2014d).

The NICE Physical Activity Return on Investment Tool (NICE, 2015c) has been developed to help decision making in physical activity programme planning. Users can evaluate a range of interventions in their geographical area and models the economic returns that can be expected in different payback timescales.

## **6) (TARGET) POPULATION/SERVICE USER VIEWS**

### **Year 5 children focus groups in a Community Primary and Nursery School**

To help inform the update of the healthy weight strategy, Warrington Borough Council Public Health undertook a number of focus groups. One of these was in a Warrington primary school in the summer term 2014. The focus group findings from the year 5 pupils are summarised into six topics:

- The children expressed interest in 4 week cookery clubs in partnership with parents/carers. These would take place on school premises outside of formal school hours.
- The children were interested in what constituted a healthy snack and supported the idea of a discussion with the head teacher.
- Following on from the above, there was agreement that more needed to be done to educate parents/carers about what should be in lunch boxes for those not having school meals.
- The children expressed a desire to find out about what activities were available and suggested school websites and newsletters as appropriate channels.
- The children supported the concept of 'play leaders' – children who would encourage others to join in physical activities.
- The children wanted information about 'outside of school' clubs and gyms that were suitable for them.

## **7) UNMET NEEDS AND SERVICE GAPS**

At the time of writing, Warrington Borough Council has a '0-19 integrated Public Health' contract out to tender. The new contract will include both the Health Visiting Team and School Health Team. The successful provider will be expected to meet the NHS England requirements for both these roles but also to deliver an additional Public Health programme across the borough. Part of this wider public health delivery will include an evidence-based weight management programme to help support overweight children and their families. The new contract will come into effect in April 2016, and until then, there is no weight management offer for children and young people in the town.

## **8) RECOMMENDATIONS FOR COMMISSIONING**

- Continue to produce detailed analysis of local datasets at a sub-Warrington level (e.g. the NCMP and the Warrington CYP Health-Related Behaviour Survey) in order to build local intelligence.
- To share this intelligence and evaluation from local datasets to improve the targeting of resources and commissioning of services.
- Undertake data collection and analysis to determine the kind of physical activities that young people would like to participate in, and the potential barriers to participation, in particular for the groups of young people that participate least (e.g. older girls in secondary schools).
- Ratify a CYP's healthy weight care pathway.

- Ensure that there are age-appropriate targeted services for CYP up to age 18, based on need and on the type of services families would be interested in. As of September 2014 there has been a gap in provision until the new 0 to 19 public health service goes live in April 2016. It is Warrington Borough Council's responsibility to commission this service and the Public Health Team is looking to create additional capacity by investing from savings already made from the ring fenced public health grant.
- Develop a single point of access for members of the public and health care professionals for information and signposting in relation to healthy weight (that yield value for money and contribute to healthy weight outcomes).
- Develop an effective mechanism to ensure that Local Authority (LA) commissioned services, community projects, and programmes relating to healthy lifestyles, are audited and evaluated to ascertain whether the resource invested is yielding value for money and contributing to the desired outcome of improved healthy lifestyles. National Institute for Health and Clinical Excellence guidance (NICE, 2007) on behaviour change at population, community and individual levels recommends the evaluation of all behaviour change interventions. Appraisal tools for this purpose have been developed by NICE, the World Health Organisation (WHO, 2011), and Public Health England (2014c).
- Ensure that front line staff have the confidence to raise the issue of healthy weight and deliver brief interventions. NICE (2013b) recommend that health professionals are trained in how to make referrals to a healthy lifestyle weight management programme.

## **9) RECOMMENDATIONS FOR NEEDS ASSESSMENT WORK**

To further build on local intelligence by making better use of local datasets including, for example, uptake of free school meals, NCMP obesity data, and breastfeeding rates.

To use the PHE Weight Management Economic Assessment Tool and the NICE Physical Activity Return on Investment Tool to calculate benefits of interventions on local population, in order to give commissioners more information on the impact that initiatives and services are having on the long term health of residents.

It would be useful to have a better understanding of the frequency and quality of physical education delivered in both primary and secondary schools.

It would also be useful to gain a better understanding of the kind of physical activities that young people would like to participate in, and the potential barriers to participation, in particular for the groups of young people that participate least (e.g. older girls in secondary schools).

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## **Useful websites**

Department of Health. Change4Life Available at  
<http://www.nhs.uk/Change4Life/Pages/change-for-life.aspx>  
National Obesity Observatory (NOO) <http://www.noo.org.uk/>  
National Institute for Health and Clinical Excellence (NICE) <http://www.nice.org.uk/>  
NHS Evidence <https://www.evidence.nhs.uk/>  
Public Health England <https://www.gov.uk/government/topics/public-health>  
National Child and Maternal Health Intelligence Network (now incorporated into Public Health England) <http://www.chimat.org.uk/obesity>

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