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National Child Measurement Programme: England, 2008/09 school year

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department for
children, schools and families

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Summary

- This report summarises the key findings from the Government's National Child Measurement Programme (NCMP) for England, 2008/09 school year. The report provides high-level analysis of the prevalence of 'underweight', 'healthy weight', 'overweight' and 'obese'¹ children, in Reception (aged 4–5 years) and Year 6 (aged 10–11 years), measured in state schools in England in the school year 2008/09. The report contains comparisons with 2007/08 and where appropriate comparisons have also been made with 2006/07 results.
- This report presents the headline findings for the 2008/09 NCMP. The National Obesity Observatory (NOO) will produce additional analysis in 2010 (expected publication date 30 April 2010), and the anonymised national dataset will be made available to Public Health Observatories (PHOs) to allow regional and local analysis of the data. In addition, NOO will also be presenting NCMP data in an e-Atlas – an interactive mapping tool that enables the user to compare a range of indicators and examine correlations and allows regional and national comparisons. The e-Atlas tool is expected to be available shortly after publication of the NCMP data and will be available on the following link:
<http://www.noo.org.uk/maps/eatlas>
- Information for 2008/09 is presented in Table B of Annex 1 by the new Local Authority areas (introduced in April 2009). Information is presented by the pre-2009 LA boundaries also.
- To counter the effect of natural year to year variation, confidence intervals are included around the figures in the tables and charts in this report where possible and should be considered when interpreting results. A confidence interval gives an indication of the likely error around the estimate calculated. As the sample sizes for NCMP are large (80% in 2006/07, 88% in 2007/08, and 90% in 2008/09) the 95% confidence intervals (see Annex 3) for prevalence estimates are very narrow (indicating a small margin of potential error).
- When examining prevalence rates it is also important to consider how the participation rate might affect the calculated prevalence figures. Analyses performed in 2007/08 concluded that a lower participation rate may lead to an underestimation of prevalence for obese children for Year 6, but had little or no effect on prevalence for Reception children. It is estimated that Year 6 obesity prevalence is underestimated by around 1.3 percentage points for 2006/07, around 0.8 percentage points for 2007/08, and around 0.7 percentage points for 2008/09 due to obese children being more likely to opt out of being measured than other children. Year 6 obesity confidence intervals have been extended to address this potential underestimation.

¹ Prevalence rates calculated using the age and sex-specific UK National Body Mass Index (BMI) centiles classification. Classification uses UK growth data from 1990 when a large representative sample of 37,700 children was constructed by combining data from 17 separate surveys. These data were then used to express BMI as a centile based on the BMI distribution, adjusted for skewness (using Cole's LMS method - *Growth monitoring with the British 1990 growth reference*. Cole Arch Dis Child.1997; 76: 47-49), age and sex.

- 'underweight' is defined as less than or equal to the 2nd centile;
- 'overweight' is defined as greater than or equal to the 85th centile but less than the 95th centile;
- 'obese' is defined as greater than or equal to the 95th centile;

Note 'overweight' means 'overweight but not obese'.

- When interpreting the prevalence figures contained in this report, it is important to consider the confidence intervals to determine the degree of accuracy within figures to determine whether any change in prevalence is real or might be affected by the participation rate. Where 95% confidence limits for two subgroups do not overlap, the difference can be said to be statistically significant.

Key Findings

- In total, 1,003,849 valid measurements were received for children, in England, in Reception and Year 6 – approximately 90% of those eligible². This represents an increased participation rate from 2007/08, when the corresponding rate was 88%, and 2006/07 when the rate was 80%.
- The prevalence of underweight, overweight and obese children by year and sex in England for 2008/09 is summarised in Table i.

Table i: Prevalence of underweight, healthy weight, overweight and obese children by year and sex, England, 2008/09

		per cent/ (number measured)					
		Underweight	Healthy Weight	Overweight	Obese	Overweight and obese combined	Number measured
Reception	Boys	1.2% (3,160)	74.8% (193,624)	13.8% (35,679)	10.2% (26,545)	24.0% (62,224)	259,008
	Girls	0.8% (1,945)	77.7% (192,121)	12.6% (31,065)	8.9% (22,030)	21.5% (53,095)	247,161
	Both	1.0% (5,105)	76.2% (385,745)	13.2% (66,744)	9.6% (48,575)	22.8% (115,319)	506,169
Year 6	Boys	1.1% (2,709)	64.5% (165,297)	14.4% (36,962)	20.0% (51,370)	34.5% (88,332)	256,338
	Girls	1.6% (3,758)	67.7% (163,508)	14.2% (34,235)	16.5% (39,841)	30.7% (74,076)	241,342
	Both	1.3% (6,467)	66.1% (328,805)	14.3% (71,197)	18.3% (91,211)	32.6% (162,408)	497,680

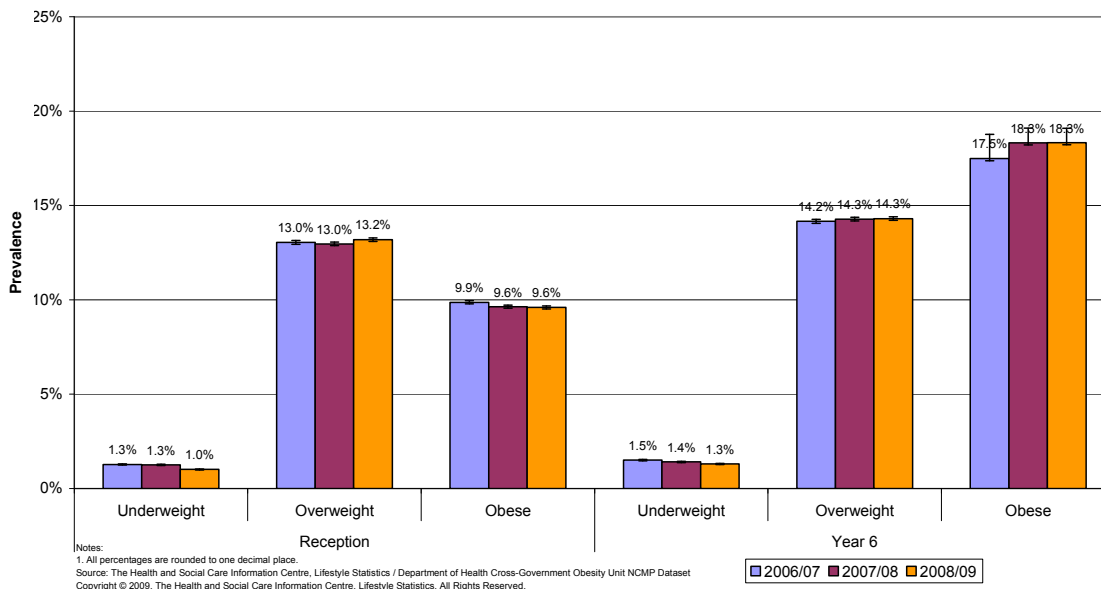
Source: The Health and Social Care Information Centre, Lifestyle Statistics / Department of Health Cross-Government Obesity Unit NCMP Dataset Copyright © 2009. The Health and Social Care Information Centre, Lifestyle Statistics. All Rights Reserved.

- In summary, the key findings for 2008/09 are that:
 - In Reception, more than one in five (22.8%) of the children measured were either overweight or obese. In Year 6, this rate was nearly one in three (32.6%);
 - The percentage of obese children in Year 6 (18.3%) is nearly double than that in Reception (9.6%);
 - The percentage of overweight children is higher in Year 6 (14.3%) than in Reception (13.2%);
 - The overall prevalence of underweight children is similar for both age groups (approx 1%). There were no significant differences in underweight prevalence between boys and girls in either age group.

² See The National Child Measurement Programme *Guidance for PCTs: 2008–09 school year* (www.dh.gov.uk/healthyliving) for further information on which children were eligible for inclusion

- The prevalence of underweight, overweight and obese children by NCMP year for 2006/07 to 2008/09 are shown in Figure i.

Figure i: Prevalence of underweight, overweight and obese children by NCMP year, 2006/07 to 2008/09



- The main findings when results from 2007/08 to 2008/09 are compared are:
 - In Reception, the proportions of underweight (1.0%), overweight (13.2%) and obese children (9.6%) in 2008/09 were similar to those in 2007/08 where the corresponding proportions were (1.3%, 13.0%, and 9.6%). None of the changes were significant;
 - In Year 6, the proportions of overweight (14.3%) and obese (18.3%) children were the same in 2007/08 and 2008/09. The percentage of underweight children was similar in 2008/09 (1.3%) and 2007/08 (1.4%);
 - Between 2007/08 and 2008/09 there were no significant changes in the prevalence rates for underweight, overweight, or obese children for both age groups. There were also no significant changes when comparing 2006/07 and 2008/09; all or some of the apparent difference of 0.8 percentage points in the proportion of obese children between 2006/07 and 2008/09 is estimated to be due to the higher participation rate for Year 6 in the later year's programme (as indicated by the expanded confidence interval).
- Obesity prevalence is significantly higher than the national average in the London, North East, and West Midlands SHAs for both age groups and in the North West SHA for Year 6 children.
- Obesity prevalence is significantly lower than the national average in the East of England, South East Coast, South Central, and South West SHAs for children in both age groups, and in the East Midlands SHA for Reception children.

- The 2008/09 SHA obesity patterns are similar to those for 2007/08.
- Obesity prevalence is significantly higher in urban areas than in rural areas, as was the case in NCMP 2007/08.
- As in the 2007/08 NCMP, a strong positive relationship exists between deprivation and obesity prevalence for children in Reception and Year 6.

1. Introduction

- 1.1. This publication was previously formally announced in the UK Statistics Authority (UKSA) publication hub release calendar and the NHS Information Centre release calendar as the 'National Child Measurement Programme – Statistics on child obesity 2008-09'. In response to comments received from the UKSA during the assessment of the publication for National Statistic status, the publication has been renamed to its current name 'National Child Measurement Programme: England, 2008/09 school year'. Following this assessment, this publication from this year is classified as a National Statistic.
- 1.2. Established in 2005, the National Child Measurement Programme (NCMP) for England³ weighs and measures children in Reception (typically aged 4–5 years) and Year 6 (aged 10–11 years). The findings are used to inform local planning and delivery of services for children and gather population-level surveillance data to allow analysis of trends in weight. The programme also engages with parents about the importance of healthy weight in children, since their children's results are shared with them.
- 1.3. The NCMP is part of the Government's Healthy Weight, Healthy Lives: a Cross-Government Strategy for England, published in January 2008⁴ following the announcement in September 2007, of an 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 Government's initial focus is on children, and by 2020 they aim: *to have reduced the proportion of overweight and obese children to 2000 levels*.
- 1.4. The Government's strategy is implemented by the Cross-Government Obesity Unit (CGOU), with the Department of Health (DH) responsible for overall policy on obesity and jointly responsible with the Department for Children, Schools and Families (DCSF) for policy on child obesity. Although the ambition covers a period of 12 years, progress from 2008-11 is being monitored through the inclusion of child obesity as one of the indicators in the child health Public Service Agreement (PSA).
- 1.5. Central collation and analysis of the NCMP data has been coordinated by the NHS Information Centre for health and social care (the NHS IC) since 2006/07. Data are supplied locally by Primary Care Trusts (PCTs) with the support and cooperation of schools, in line with guidance³ from the Cross-Government Obesity Unit.
- 1.6. This report presents the headline findings for the 2008/09 NCMP. The National Obesity Observatory (NOO) will produce additional analysis in 2010 (expected publication date 30 April 2010), and the anonymised national dataset will be made available to NOO and Public Health Observatories

³ See www.dh.gov.uk/healthyliving for more information about the National Child Measurement Programme, including guidance and resources for undertaking the exercise

⁴ http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_063565

(PHOs) to allow regional and local analysis of the data. In addition NOO will also be presenting NCMP data in an e-Atlas – an interactive mapping tool that enables the user to compare a range of indicators and examine correlations and allows regional and national comparisons. The e-Atlas tool is expected to be available shortly after publication of this report and will be available on the following link:

<http://www.noo.org.uk/maps/eatlas>

- 1.7. The NHS Information Centre for health and social care may also present further analysis of the data, including mean height and mean weight, and analysis by gender via a range of web based products to a restricted audience. This analysis will be available on request from early 2010.
- 1.8. The NCMP programme includes all state schools in England (unless the school declined to participate). Independent and special schools (those categorised as 'Community Special', 'Foundation Special', 'Independent School Approved for SEN Pupils', 'Non-Maintained Special', 'Other Independent', 'Other Independent Special School' or 'Pupil Referral Unit') are not formally required to participate although their participation is encouraged. Independent and special schools are excluded from the analysis in this report, but are included in the datasets provided to NOO and to PHOs for further analysis.
- 1.9. The NHS Information Centre are always looking for ways to improve our publications. Feedback can be provided via www.ic.nhs.uk/ncmp.

2. Methodology

Data collection and validation

- 2.1. Measurement of children's heights and weights, without shoes and coats and in normal, light, indoor clothing, was overseen by healthcare professionals and undertaken in school by trained staff. PCT staff entered these data into specially designed spreadsheets: the NCMP Upload Tool. Measurements could be taken at any time during the 2008/09 academic year. Consequently, some children were almost two years older than others in the same school year at the point of measurement; however, Body Mass Index (BMI) centile results are adjusted for age.
- 2.2. The data that PCTs uploaded to the NCMP database underwent a series of data quality checks before being included in the national dataset. Full details of these checks can be found in: *National Child Measurement Programme: NHS Information Centre validation process for NCMP data* (see Annex 7). This document was provided as guidance for PCTs. The validation process is summarised below.
- 2.3. Checks were done at each stage of the data submission:
 - i. *As the PCT entered data:* the Upload Tool checked that each variable met certain required conditions. For example, the height and weight were checked for extreme values;
 - ii. *Before the PCT uploaded data to the NCMP database:* the tool provided a data quality report to highlight if there were any possible areas of concern for the PCT to check and correct. For example, the percentage of duplicate records was calculated;
 - iii. *After the PCT uploaded data:* PCTs were given access to a secure website providing data quality information about their uploaded data. For example, PCTs were provided with a list of schools, within their boundary, for which no data had been returned. PCTs were able to review this information and correct their data or, if they were satisfied with data quality, they could confirm this and 'finalise' their data;
 - iv. *After the PCT had 'finalised' their data:* the NHS IC carried out further validation through, for example, comparing data across PCTs and over time. The NHS IC contacted a number of PCTs to query unexpected findings and, where necessary, requested that data be corrected.
- 2.4. PCTs' participation rates were assessed (see Annex 5). As discussed above, low participation rates may bias prevalence if the 'missing' data are atypical (Section 3).

Definitions of underweight, healthy weight, overweight and obese

- 2.5. Prevalence rates were calculated by deriving every child's Body Mass Index (BMI)⁵ and referencing the age and sex-specific UK National BMI centiles classification to count the number of children defined as underweight, healthy weight, overweight or obese.
- 2.6. The following thresholds for defining underweight, healthy weight, overweight and obese children were then used:
- **Underweight** is defined as a BMI less or equal to the 2nd centile;
 - **Healthy weight** is defined as a BMI greater than the 2nd centile but less than the 85th centile;
 - **Overweight** is defined as a BMI greater than or equal to the 85th centile but less than the 95th centile (i.e. overweight *but not* obese);
 - **Obese** is defined as a BMI greater than or equal to the 95th centile.

These thresholds are those conventionally used for population monitoring and are not the same as those used in a clinical setting (where overweight is defined as a BMI greater than or equal to the 91st but below the 98th centile and obese is defined as a BMI greater than or equal to the 98th centile).

Participation

- 2.7. Pupils eligible for inclusion in the NCMP were all children in Reception and Year 6 attending non-specialist maintained state schools in England⁶.
- 2.8. Numbers of pupils at each school were provided by DCSF, but PCTs could edit these figures if necessary. The PCT could also add or remove schools from their geographically assigned list if, despite being within their PCT boundary, another PCT had undertaken measurement in that school. PCT changes to DCSF pupil numbers and schools were validated by the NHS IC to ensure accuracy.
- 2.9. The participation rate is the proportion of eligible pupils who were measured (see Annex 5). Participation rates are estimates and should be treated with caution, particularly at smaller geographical levels, because of the difficulty in calculation of the number of pupils eligible for measurement. For example, in Reception, pupils might join the school throughout the year.
- 2.10. Records were assigned to a PCT, and thereby Strategic Health Authority (SHA), based on the PCT that returned the data. Geographical analyses, showing results by Local Authority (LA), are based on the location of the child's school rather than their home address, as home postcode was not provided for all child records.

⁵ Body-mass index (BMI) is an indicator of body fat based on height and weight. $BMI = \text{weight}(\text{kg}) / \text{height}(\text{m})^2$

⁶ The following institutions were excluded from the prevalence and participation rate calculations: 'Community Special', 'Foundation Special', 'Independent School Approved for SEN Pupils', 'Non-Maintained Special', 'Other Independent', 'Other Independent Special School' and 'Pupil Referral Unit'. PCTs were encouraged, but not obliged, to include independent schools and special schools in their NCMP measurements. Numbers of independent school pupils were not, however, included in participation rates used for performance management purposes.

2.11. Collection of a child's home postcode became a formal requirement from the 2007/08 NCMP and 98% of uploaded records in 2008/09 included a valid child postcode. This is an increase from 2007/08 data when 97% included a valid child postcode. These data were mapped to lower super output area (LSOA) to anonymise the data on upload and will be a valuable asset for local-level analyses by PHOs and PCTs.

3. Results

Participation

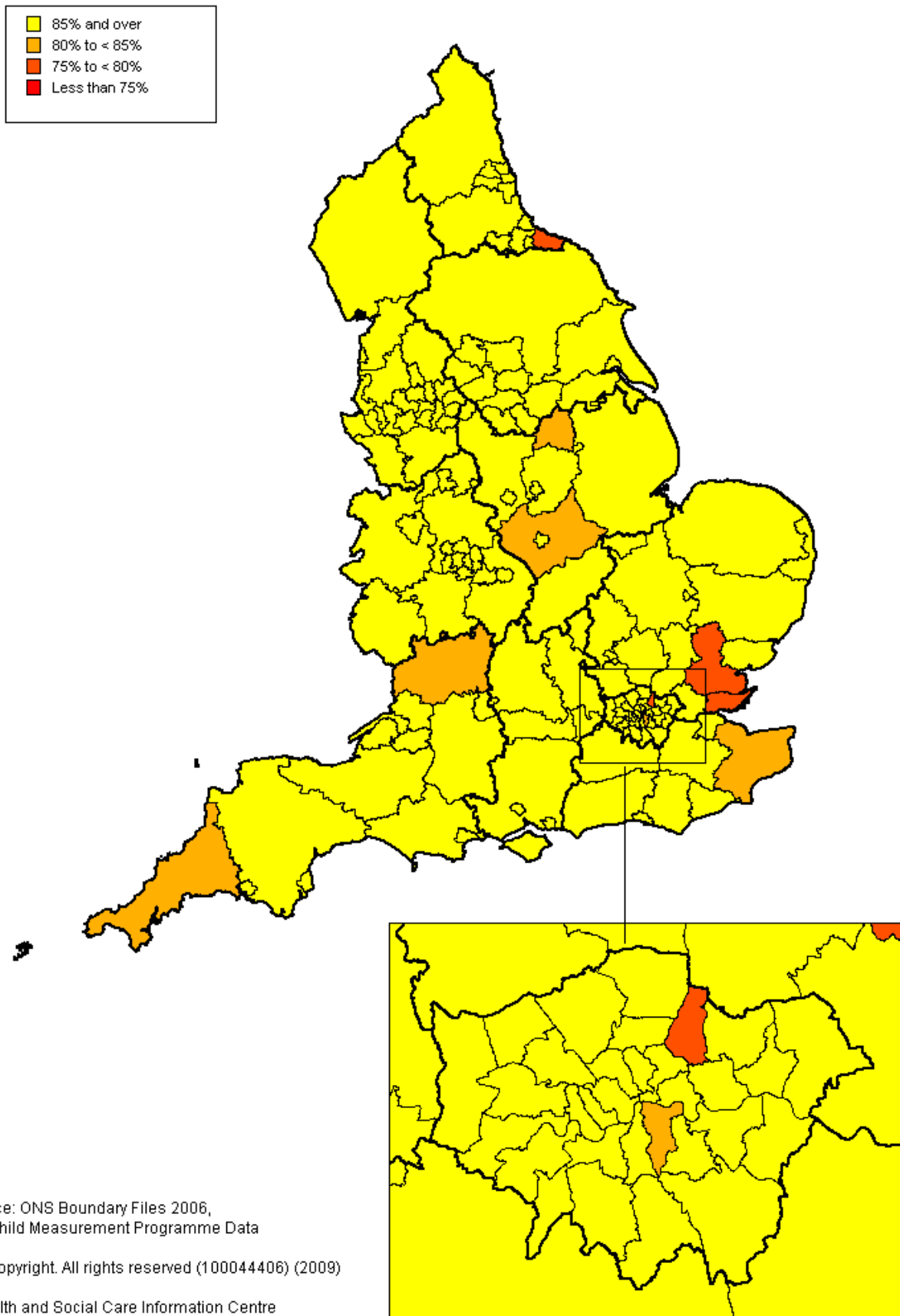
- 3.1. Participation rate is the percentage of eligible pupils who were measured. For NCMP 2008/09, PCTs were set a participation rate goal, for each age group, of 85%. Nationally, the participation rates for 2008/09 across all PCTs were:
 - 91% for Reception (506,169 children measured): a two percentage point increase from 2007/08;
 - 89% for Year 6 (497,680 children): a three percentage point increase from 2007/08;
 - 90% for Reception and Year 6 combined (1,003,849 children): a two percentage point increase from 2007/08.

- 3.2. All 152 PCTs provided data for NCMP 2008/09. Participation rates varied by PCT:
 - 93% of PCTs (142 PCTs) exceeded the 85% goal for Reception;
 - 89% of PCTs (135 PCTs) exceeded the 85% goal for Year 6;
 - Only four PCTs did not achieve a participation rate of at least 80% for Reception, and the lowest was 76%. This is an improvement on 2007/08, when the Reception year participation rate was lower than 80% in 13 PCTs and the lowest was 74%;
 - The picture is similar for Year 6, where only 7 PCTs did not achieve a participation rate of at least 80%, and the lowest was 74%. This is an improvement on 2007/08, when the Year 6 participation rate was lower than 80% in 15 PCTs and the lowest was 63%;
 - Annex 2 shows overall participation rates for all 152 PCTs.

- 3.3. Of the pupils measured, boys accounted for 51% in Reception and 52% in Year 6. It is not possible to calculate the participation rates by gender since the numbers of eligible pupils are not collected by gender.

- 3.4. Figure 1 shows the participation rates by PCT for Reception; Figure 2 shows the rates for Year 6:

Figure 1: Participation rate for Reception 2008/09, by PCT

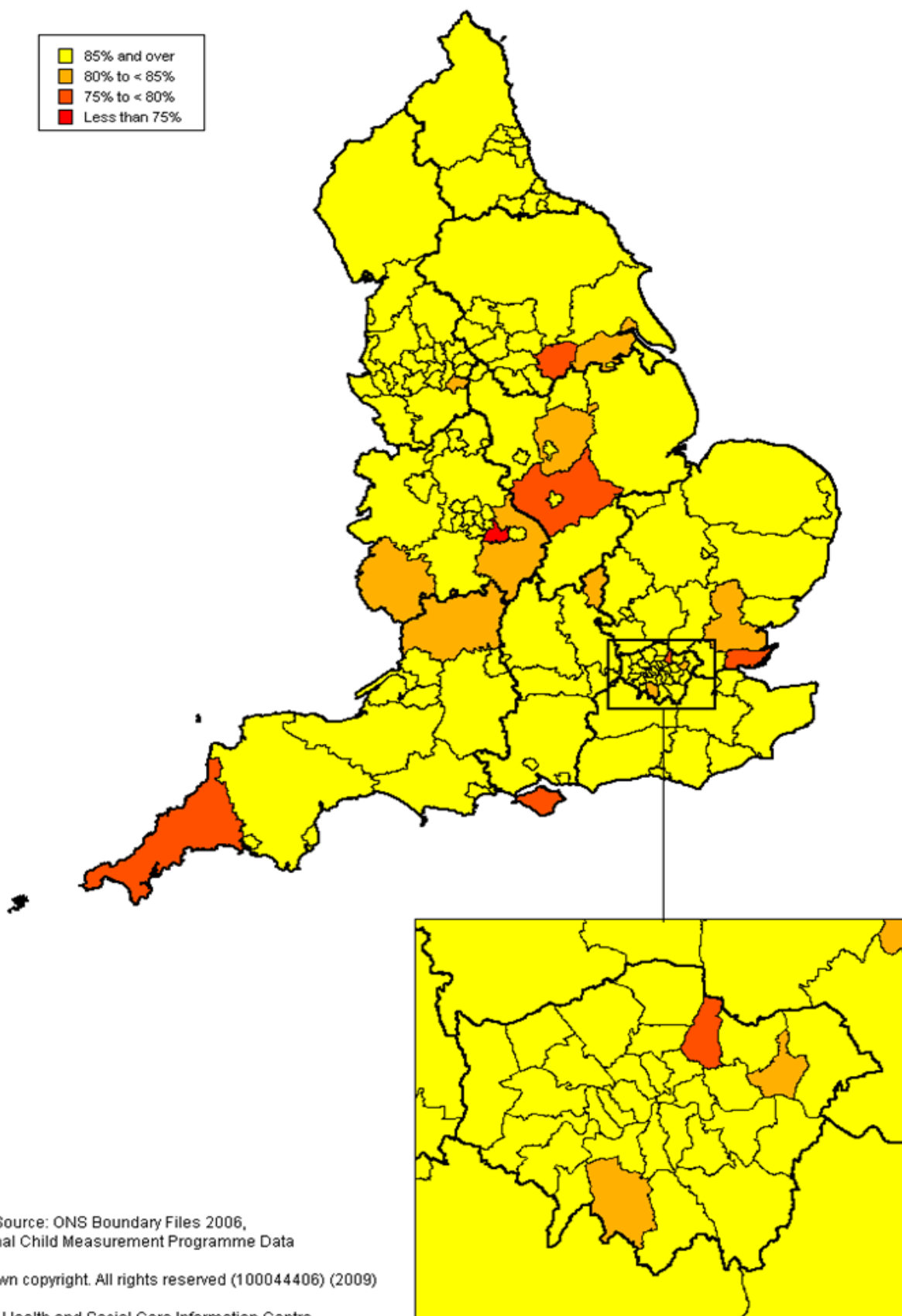


Data Source: ONS Boundary Files 2006,
National Child Measurement Programme Data

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Figure 2: Participation rate for Year 6 2008/09, by PCT



Data Source: ONS Boundary Files 2006,
National Child Measurement Programme Data

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The effect of participation rates on prevalence

- 3.5. For NCMP 2006/07, 80% of eligible pupils in Reception and Year 6 combined were measured. This figure increased to 88% in 2007/08 and to 90% in 2008/09.
- 3.6. In all three years, a proportion of eligible pupils were not measured. This section investigates whether results could have been biased through not including measurements from these 'missing' pupils, and looks at the possible effect of participation rate on the recorded prevalence of overweight and obese children.
- 3.7. Regression analysis of the 2007/08 data showed that, for Year 6, PCTs with lower participation rate also had lower levels obesity prevalence than those with a higher rate. It also showed PCTs whose participation rate increased the most from 2006/07 tended to have greater increases in recorded prevalence. This relationship suggests that obese children were more likely to opt out of being measured than were other children and that **a lower participation rate tends to lead to an underestimation of prevalence of obese children for Year 6**. However, **participation rate was shown to have little or no effect on prevalence for Reception children**. Findings from similar analysis performed in 2008/09 were consistent with these.
- 3.8. These analyses suggest that Year 6 obesity prevalence estimates are underestimated by around 1.3 percentage points in 2006/07, around 0.8 percentage points in 2007/08, and around 0.7 percentage points in 2008/09.
- 3.9. The possible effect of other factors, such as deprivation, on participation and prevalence has not been examined.
- 3.10. Annex 6 contains further information on the effect of participation rate on prevalence.

Prevalence of underweight, healthy weight, overweight and obese children: national findings

- 3.11. Prevalence rates have been calculated by first deriving every child's BMI and referencing the age and sex-specific UK National BMI centiles classification to count the number of children defined as underweight, healthy weight, overweight or obese according to the population monitoring criteria¹.
- 3.12. Since the NCMP sample size is large, the confidence intervals (Annex 3) of the prevalence estimates are very narrow. Where 95% confidence intervals for prevalence estimates do not overlap, it can be deduced that differences are statistically significant.
- 3.13. Tables A-B in Annex 1 show underweight, overweight, and obese prevalence, with associated 95% confidence intervals, by school year, at PCT, SHA and LA level.
- 3.14. Figures 3 and 4 show the prevalence of underweight, overweight and obese children, with associated 95% confidence intervals, by sex, in England, 2008/09.

Figure 3: Prevalence of underweight, overweight and obese children in Reception, by sex, England, 2008/09

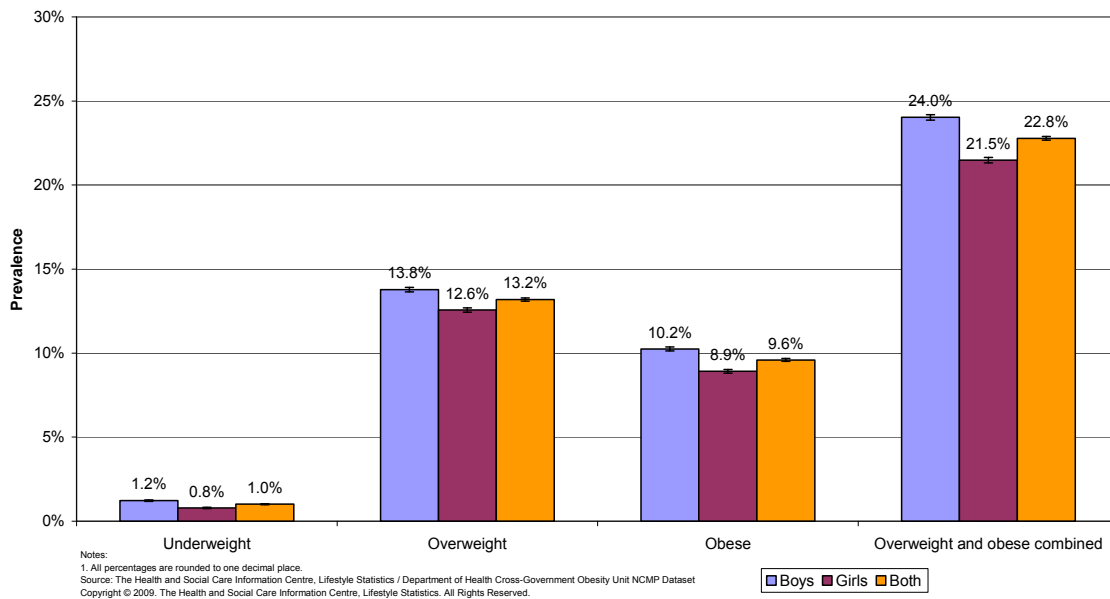
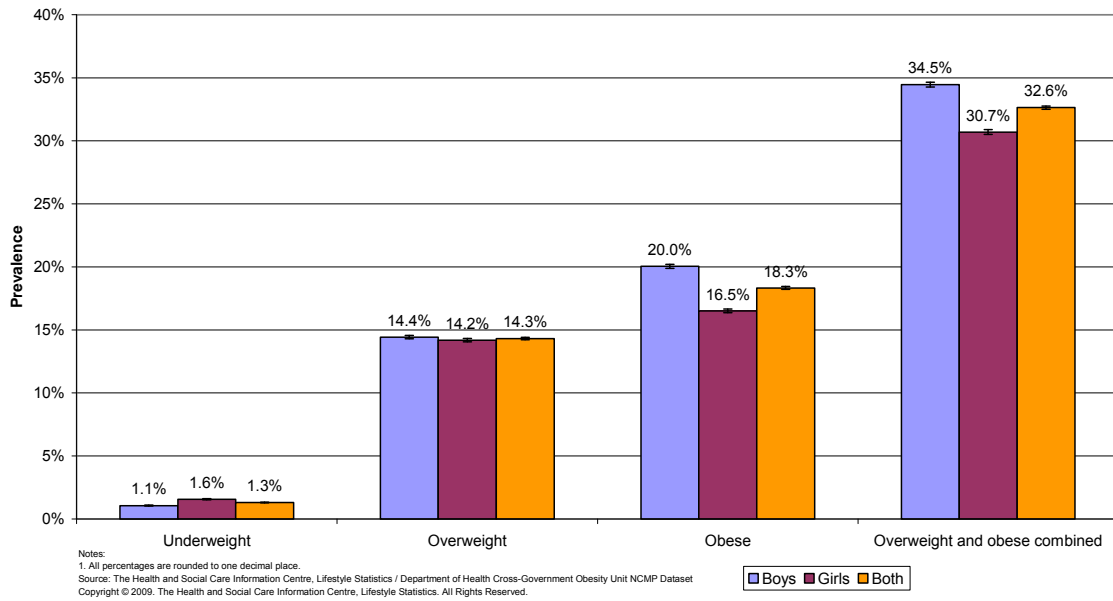
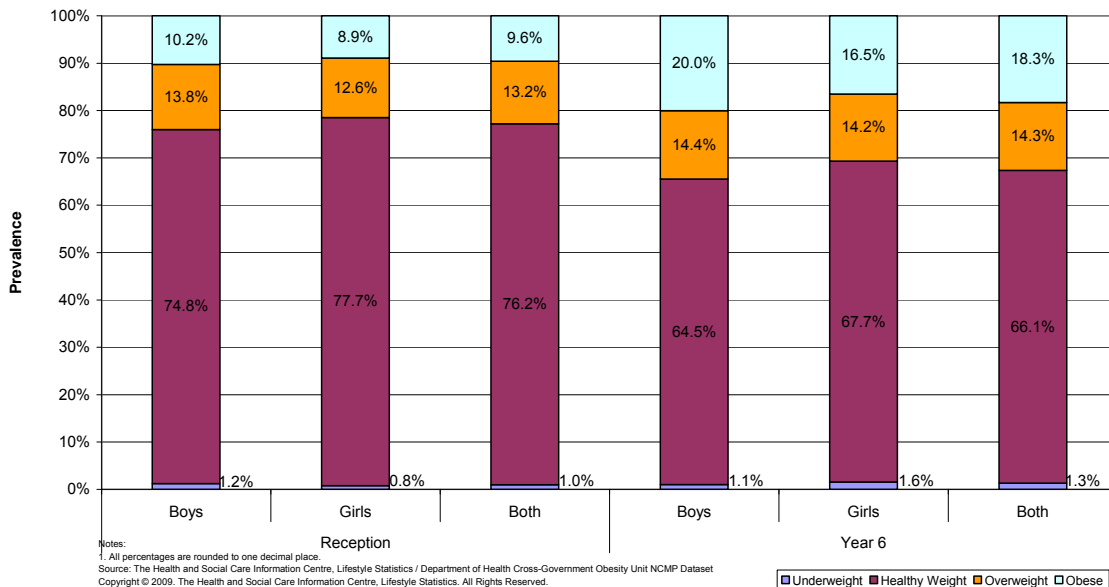


Figure 4: Prevalence of underweight, overweight and obese children in Year 6, by sex, England, 2008/09



3.15. Figure 5 shows the 2008/09 prevalence breakdowns including healthy weight.

Figure 5: Prevalence of underweight, healthy weight, overweight and obese children in Reception and Year 6, by sex, England, 2008/09



3.16.Key findings for 2008/09:

- In Reception more than one in five (22.8%) children were classified as either overweight or obese: in Year 6 this rate was nearly one in three (32.6%);
- The prevalence of obesity is significantly higher in boys than in girls in both age groups;
- The prevalence of obesity is significantly higher in Year 6 (18.3%) than in Reception (9.6%);
- The overall prevalence of underweight children is similar for both age groups (approx 1%). There were no significant differences in underweight prevalence between boys and girls in either age group;
- The percentage of children who are overweight is higher in Year 6 (14.3%) than in Reception (13.2%);
- The percentage of children who are overweight is similar for boys (14.4%) and girls (14.2%) in Year 6: in Reception, this rate is higher for boys (13.8%) than for girls (12.6%);
- In Reception the prevalence of overweight children (13.2%) is greater than the prevalence of obese children (9.6%). In Year 6, the opposite is true with prevalence of overweight children (14.3%) being lower than that for obese children (18.3%).

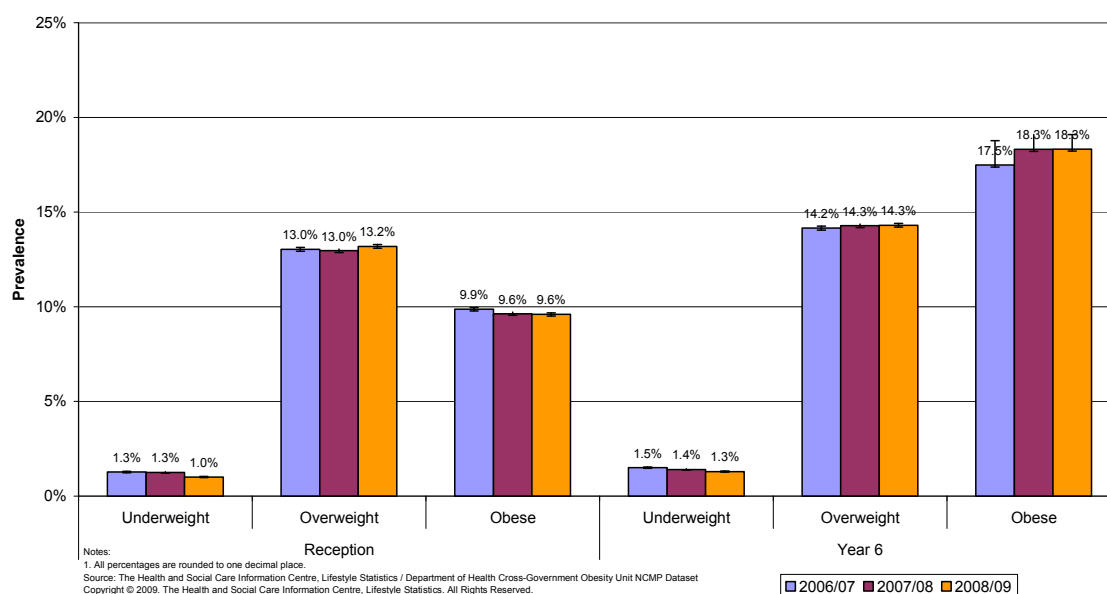
Comparisons of 2007/08 and 2008/09 Headline Findings

3.17. 2008/09 is the third year for which reliable data (with an overall response rate of 80% or higher) have been collected, therefore assessment of year-on-year changes in child obesity prevalence is possible.

3.18. Before making year-on-year comparisons, it is important to note the effect of participation rates on the Year 6 obesity prevalence estimates discussed in 3.5 – 3.10 (note: none of the other prevalence estimates are shown to be affected by participation rates). Analysis performed in 2007/08 contained detailed statistical analysis that estimated that for each 10 percentage point increase in the Year 6 participation rate, the true Year 6 obesity prevalence estimates will increase by 0.6 percentage points on average.

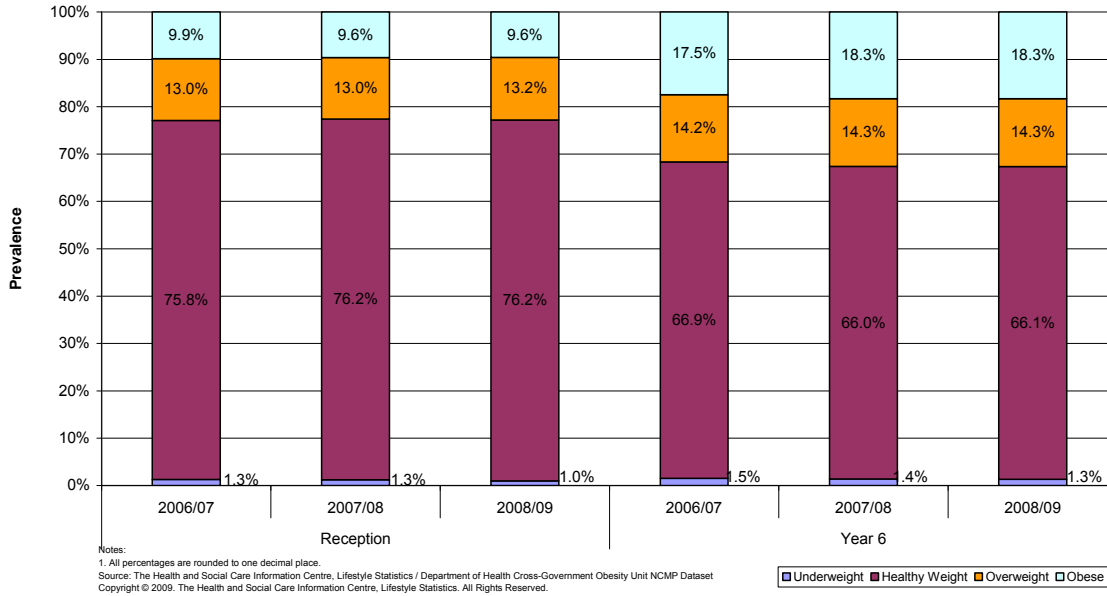
3.19. Figure 6 shows the prevalence of underweight, overweight, and obese children from 2006/07 to 2008/09.

Figure 6: Prevalence of underweight, overweight and obese children by NCMP year, 2006/07 to 2008/09



3.20. Figure 7 compares the 2006/07 to 2008/09 prevalence breakdowns for each BMI category.

Figure 7: Prevalence of underweight, healthy weight, overweight and obese children by NCMP year, 2006/07 to 2008/09



3.21. The key findings are as follows:

- In Reception, the proportions of underweight (1.0%), overweight (13.2%) and obese children (9.6%) in 2008/09 were similar to those in 2007/08 where the corresponding proportions were 1.3%, 13.0%, and 9.6%. None of the changes were significant;
- In Year 6, the proportions of overweight (14.3%) and obese (18.3%) children were the same in 2007/08 and 2008/09. The percentage of underweight children were similar in 2008/09 (1.3%) and 2007/08 (1.4%);
- Between 2007/08 and 2008/09 there were no significant changes in the prevalence rates for underweight, overweight, or obese children for both age groups. There were also no significant changes when comparing 2006/07 and 2008/09; all or some of the apparent difference of 0.8 percentage points in the proportion of obese children between 2006/07 and 2008/09 is estimated to be due to the higher participation rate for Year 6 in the later year's programme (as indicated by the expanded confidence interval).

Prevalence by Strategic Health Authority (SHA)

3.22. Prevalence of underweight, overweight and obese children, with associated 95% confidence intervals, by the SHA of the PCT which measured the child in 2008/09 are shown in Figure 8 for Reception and Figure 9 for Year 6. The bars are ordered by obesity prevalence. Detailed tables are in Annex 1 showing underweight, overweight, and obese prevalence, with associated 95% confidence intervals, by school year, at PCT, SHA and LA level.

3.23. NCMP data for 2008/09 in Table B of Annex 1 is presented by the new Local Authority areas (introduced in April 2009). The data is also presented by the pre-2009 LA areas as these are still recognised geographical areas. Information presented in an e-Atlas (hosted by NOO and available on <http://www.noo.org.uk/maps/eatlas>) also contains NCMP data for 2006/07 and 2007/08 recalculated to the 2009 LA areas to allow comparison over time.

3.24. The Office for National Statistics (ONS) is also expected to present prevalence information calculated from NCMP data via Neighbourhood Statistics. This might be provided at a smaller geographical area than those included in this report. This is expected to be published by the end of March 2010 and should be available on the following link: <http://www.neighbourhood.statistics.gov.uk>

Figure 8: Prevalence of underweight, overweight and obese children in Reception, by SHA, England, 2008/09

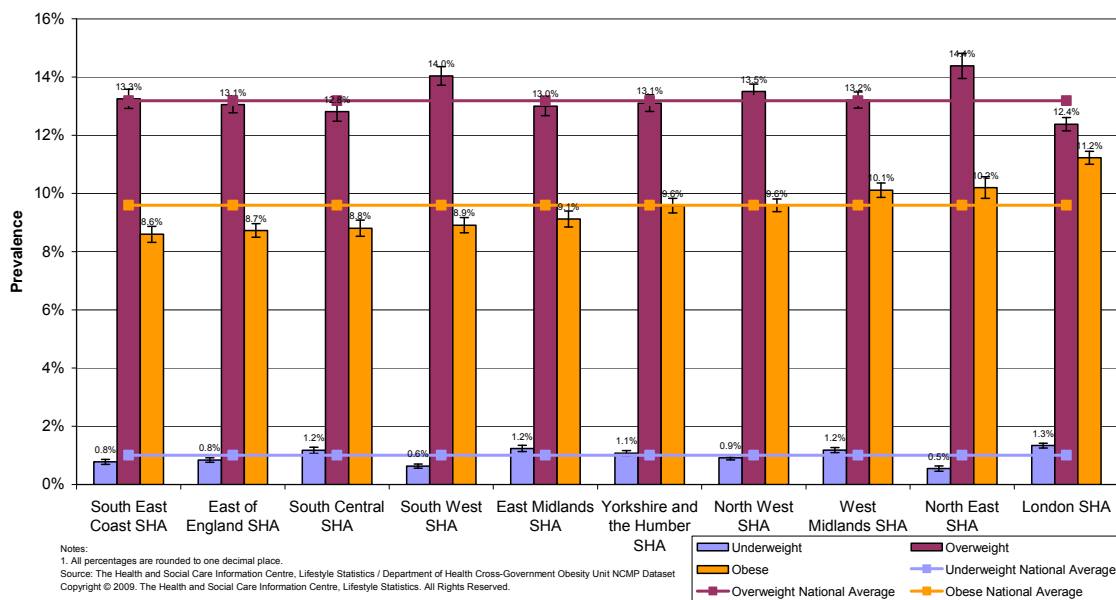
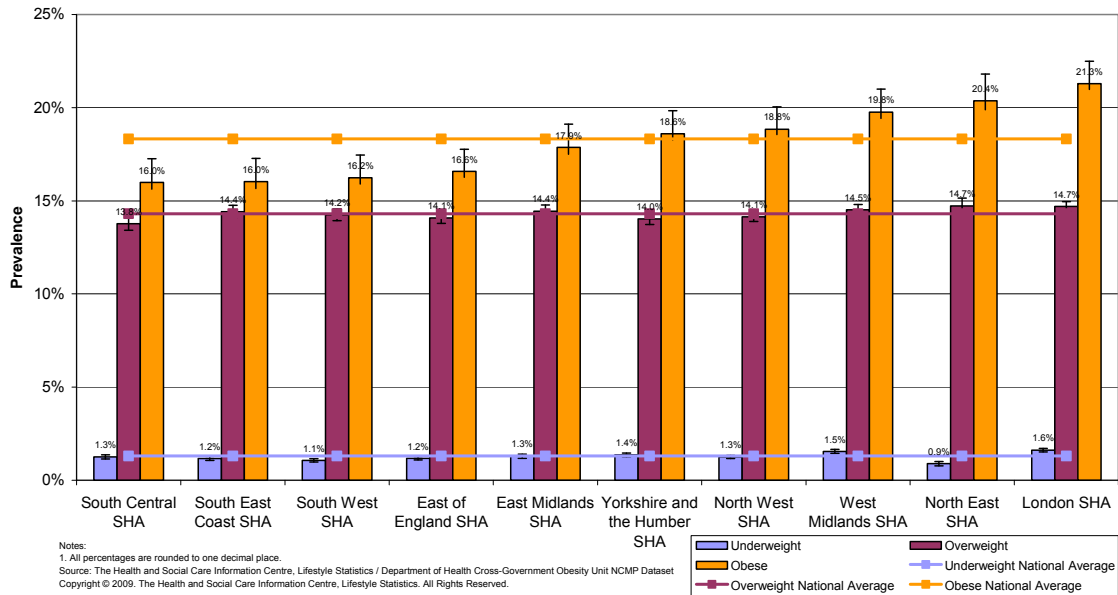
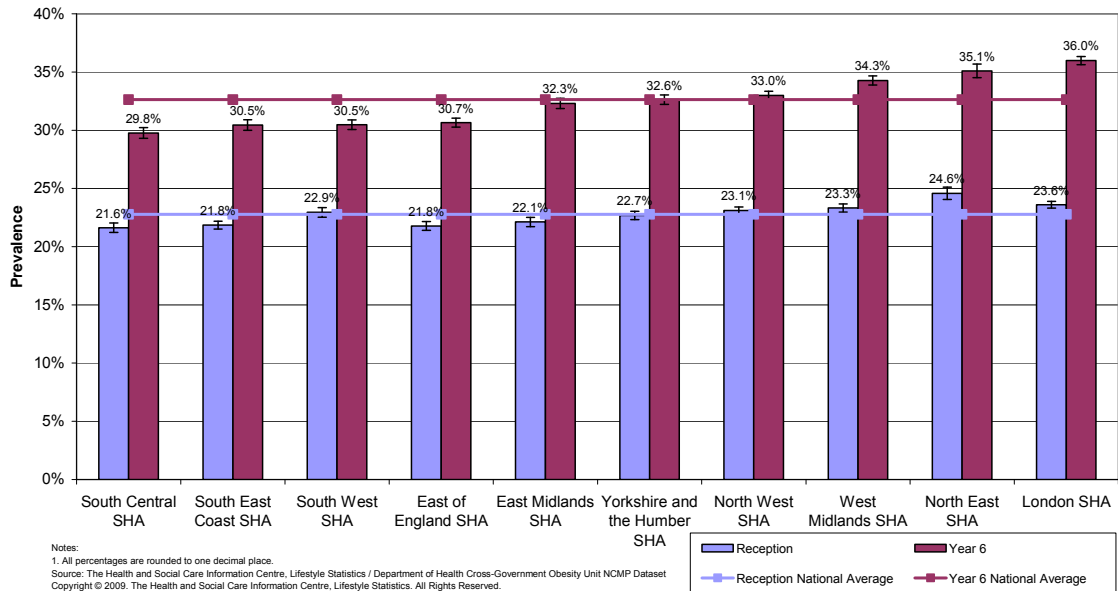


Figure 9: Prevalence of underweight, overweight and obese children in Year 6, by SHA, England, 2008/09



3.25. Figure 10 compares the prevalence of children who are overweight or obese ('overweight and obese combined'), with associated 95% confidence intervals, in Reception and Year 6, by SHA, in 2008/09. The bars have been ranked by prevalence in Year 6.

Figure 10: Prevalence of 'overweight and obese combined' children, by year and SHA, England, 2008/09



3.26.Key findings:

- Obesity prevalence is significantly higher than the national average in the London, North East, and West Midlands SHAs for both age groups and in the North West SHA for Year 6 children;
- Obesity prevalence is significantly lower than the national average in the East of England, South East Coast, South Central, and South West SHAs for children in both age groups, and in the East Midlands SHA for Reception children;
- The 2008/09 SHA obesity prevalence patterns are similar to those observed in 2007/08;
- Areas with high obesity prevalence in one year group tend to also have high obesity prevalence in the other year group. The order of SHAs, ranked by obesity prevalence, is similar for both school years, with the top three SHAs occupying the same rank order for children in both years;
- Analysis of 2006/07 and 2007/08 NCMP data showed that child obesity prevalence is correlated with area deprivation factors and child ethnicity. Areas with higher concentrations of deprived areas and particular ethnic profiles, such as London, would therefore be expected to have higher rates of child obesity;
- The National Obesity Observatory will be producing a separate publication based on NCMP data and this report will contain further analysis on the links between obesity and other factors. This is expected to be published on 30 April 2010 and will be available from the following link:
http://www.noo.org.uk/NOO_pub

Prevalence by PCT

3.27. Figures 11 and 12 show Reception and Year 6 obesity prevalence by PCT.

PCT prevalence estimates have been calculated on the basis of the PCT that measured the children. Annex 1 provides more detailed tables.

Figure 11: Prevalence of obese children in Reception, by PCT, England 2008/09

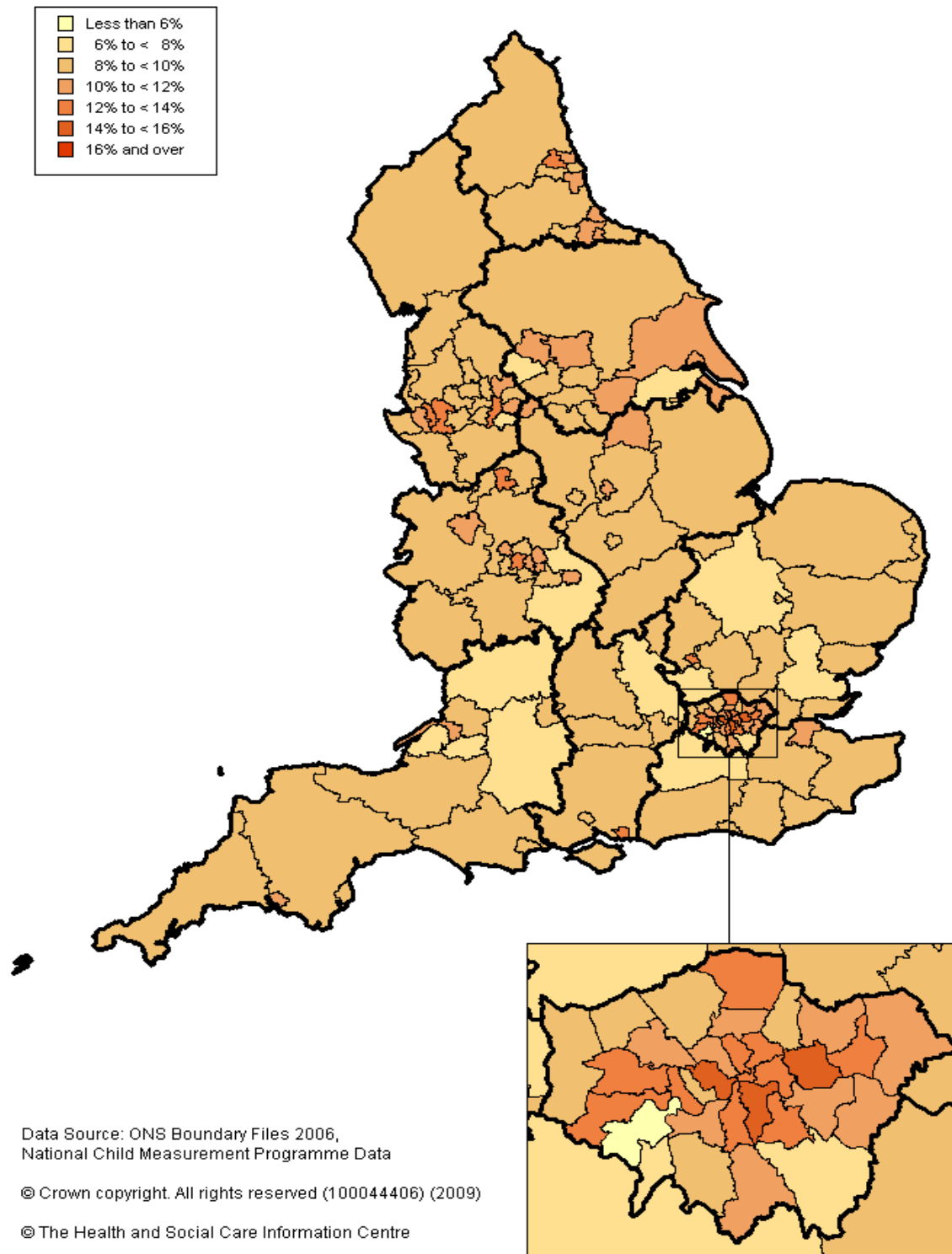
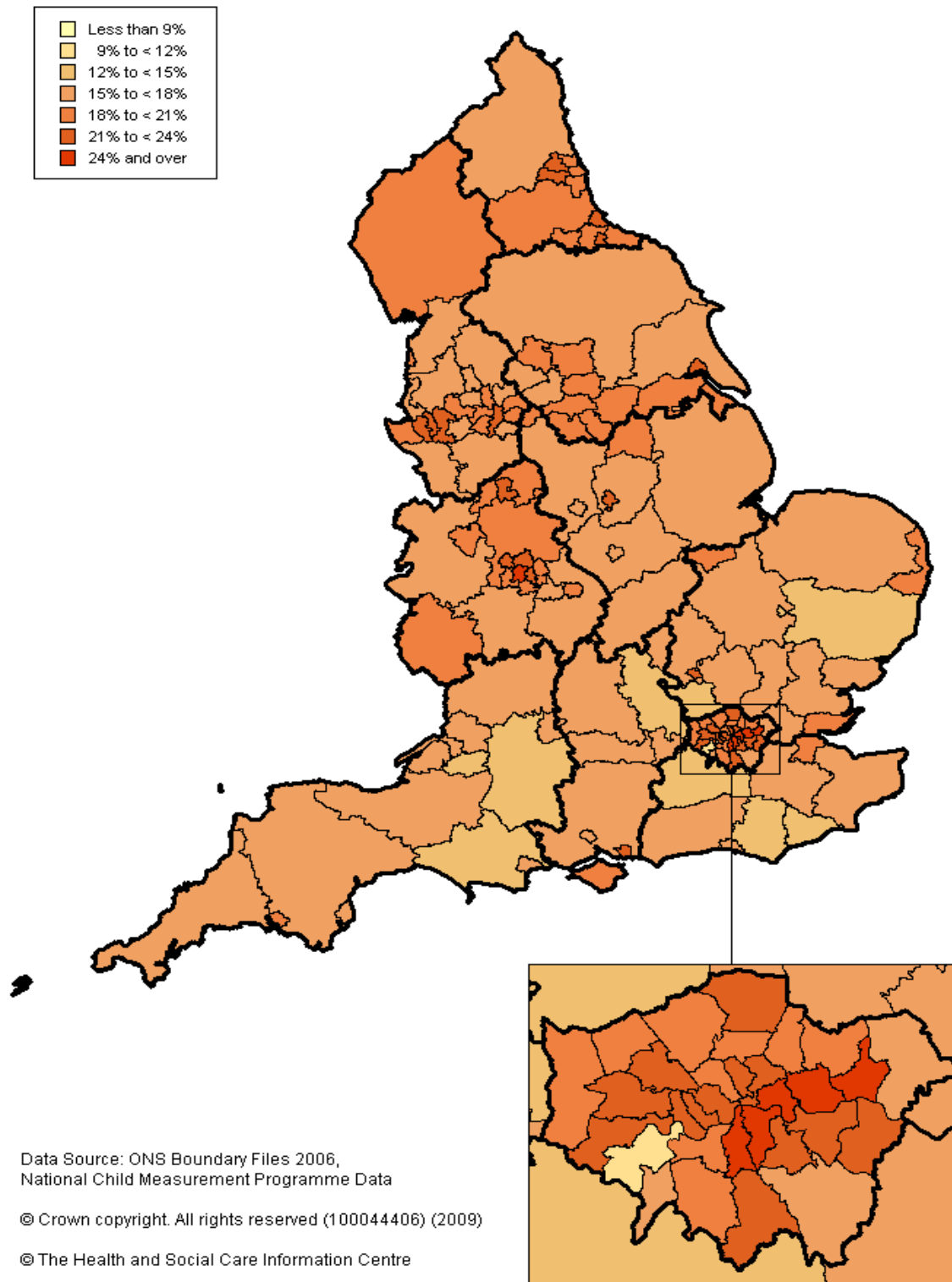


Figure 12: Prevalence of obese children in Year 6, by PCT, England 2008/09



Prevalence by area deprivation

3.28. Figures 13 and 14 investigate the relationship between deprivation as measured by the 2007 Index of Multiple Deprivation (IMD) and the prevalence of underweight, overweight and obese Reception and Year 6 children. Records have been placed into one of ten equal sized groups based on the IMD score of the child's school location. The prevalence of underweight, overweight and obese children within each group (where 1 is the most deprived) has then been calculated:

Figure 13: Prevalence of underweight, overweight and obese children in Reception against school area 2007 IMD group, England, 2008/09

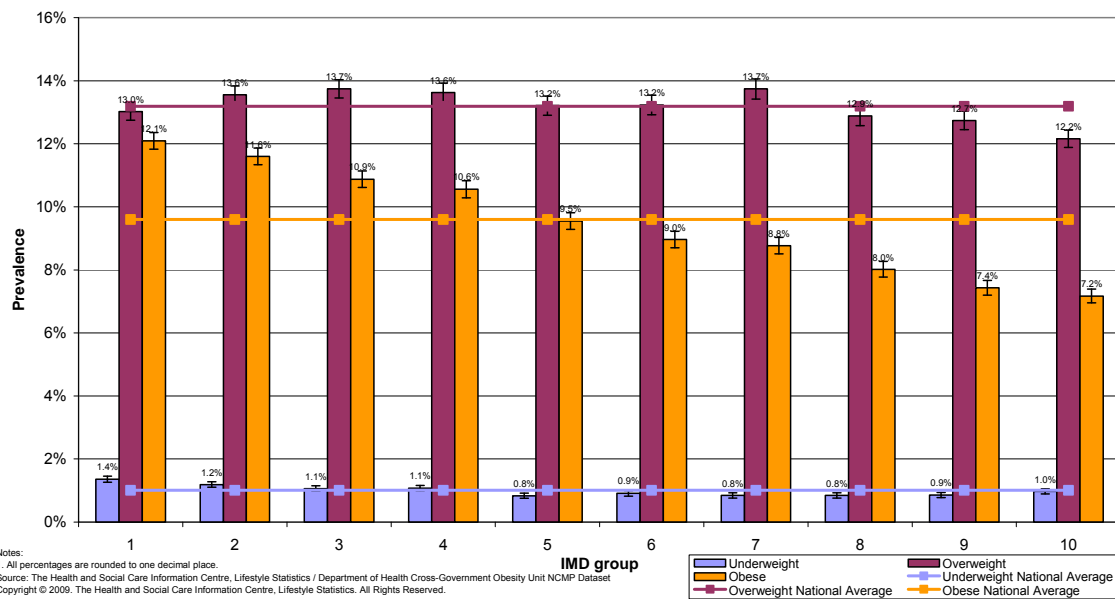
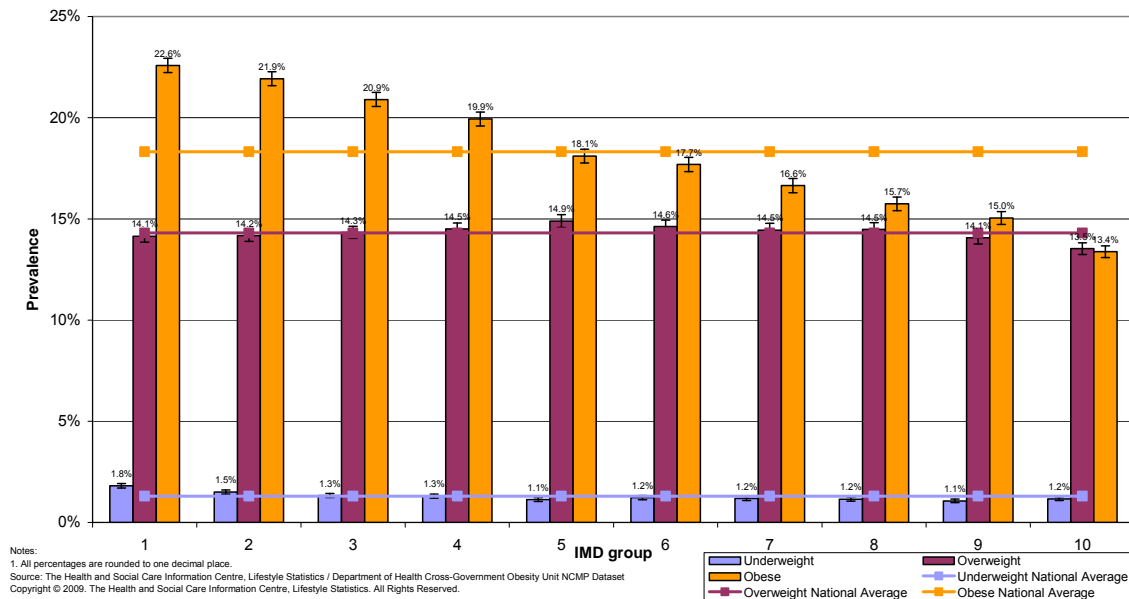


Figure 14: Prevalence of underweight, overweight and obese children in Year 6 against school area 2007 IMD group, England, 2008/09



3.29.Key findings:

- A link exists between deprivation (as measured by the 2007 IMD score) and obesity prevalence in children in both years;
- For both school years, the four most deprived groups have obesity prevalence that is significantly higher than the national average;
- For both school years, the five least deprived groups have obesity prevalence that is significantly lower than the national average;
- The two most deprived groups have a prevalence of underweight children that is very slightly higher than the national average for both school years;
- Overweight prevalence shows no obvious link to deprivation, although the least derived groups have a significantly lower prevalence figure than the national average for both school years.

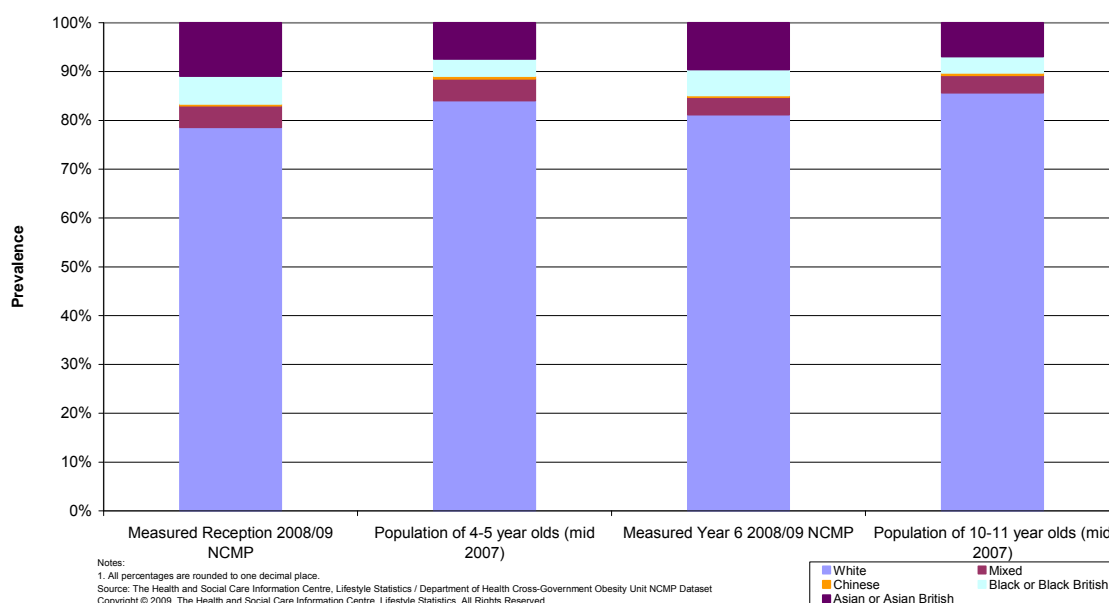
Prevalence by ethnicity

3.30. In the 2008/09 NCMP, collection of the ethnicity of participating children was a formal requirement. PCTs were able to supply ethnic codes using either the NHS or DCSF classification. These codes were grouped into seven categories for national analysis⁷.

3.31. Of the 1,003,849 children for whom valid measurements were submitted, 77% of records included valid ethnic codes (for the purpose of this report, 'not stated' is considered invalid). This is an improvement on 2007/08 when only 67% of records had valid ethnic codes.

3.32. In order to assess the quality of the 2008/09 ethnicity data, Figure 15 compares the ethnicity breakdowns for the children in the NCMP dataset with the mid-2007 national ethnicity profiles for the population of 4-5 and 10-11 year-olds for the 5 main specified ethnic groups⁸:

Figure 15: Comparison of 2008/09 NCMP ethnicity profiles and national population breakdowns for 4-5 and 10-11 year-olds



3.33. Whilst the population figures and NCMP figures relate to different time periods (mid-2007 and 2008/09 academic year respectively), and they relate

⁷ The seven ethnic categories used for analysis have been derived by combining the following NHS ethnic categories:

- **White:** White British, White Irish, White Any other White background;
- **Mixed:** Mixed White and Black Caribbean, Mixed White and Black African, Mixed White and Asian, Mixed Any other mixed background;
- **Asian or Asian British:** Asian and Asian British Indian, Asian and Asian British Pakistani, Asian and Asian British Bangladeshi, Asian and Asian British Any other Asian background;
- **Black or Black British:** Black or Black British Caribbean, Black or Black British African, Black or Black British Any other Black background;
- **Chinese:** Chinese;
- **Any other ethnic group:** Any other ethnic group;
- **Unknown:** Not Stated or data not returned by PCT

⁸ Excludes 'not provided', 'not stated' and 'any other ethnic group'. Source: ONS mid-year population estimates

to different population groups (all children aged 4-5 and 10-11 compared to children in Reception and Year 6) they do at least give an indicative comparison of the national and NCMP participant ethnicity profiles.

3.34. 'Asian or Asian British' and 'Black or Black British' groups accounted for higher proportions in the NCMP measured population than the population as a whole, whilst the 'White' ethnicity group accounts for a lower proportion in the NCMP data when compared to the whole population. It is important to note that nearly a quarter of NCMP measurements had missing or 'not stated' ethnic codes. It is possible that these records included a disproportionate number of measurements for children from particular ethnic groups. It must also be considered that the population figures are based on estimates.

3.35. Figures 16 and 17 show, for Reception and Year 6 respectively, the prevalence of underweight, overweight and obese children, with associated 95% confidence intervals, by ethnic category, in England, 2008/09. The bars have been ranked by obesity prevalence.

Figure 16: Prevalence of underweight, overweight and obese children in Reception, by ethnic category, England, 2008/09

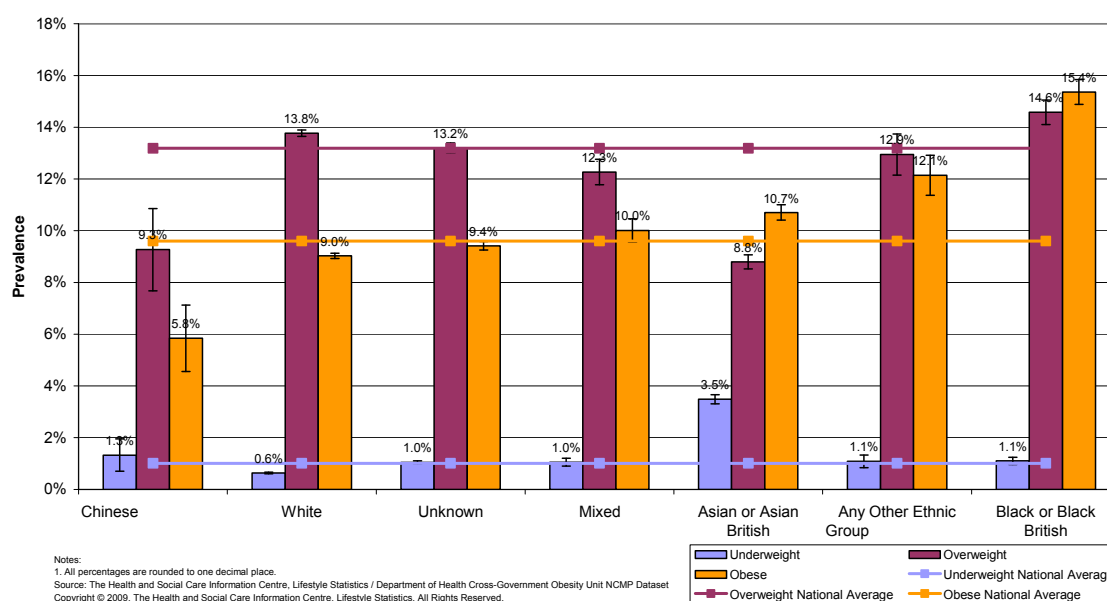
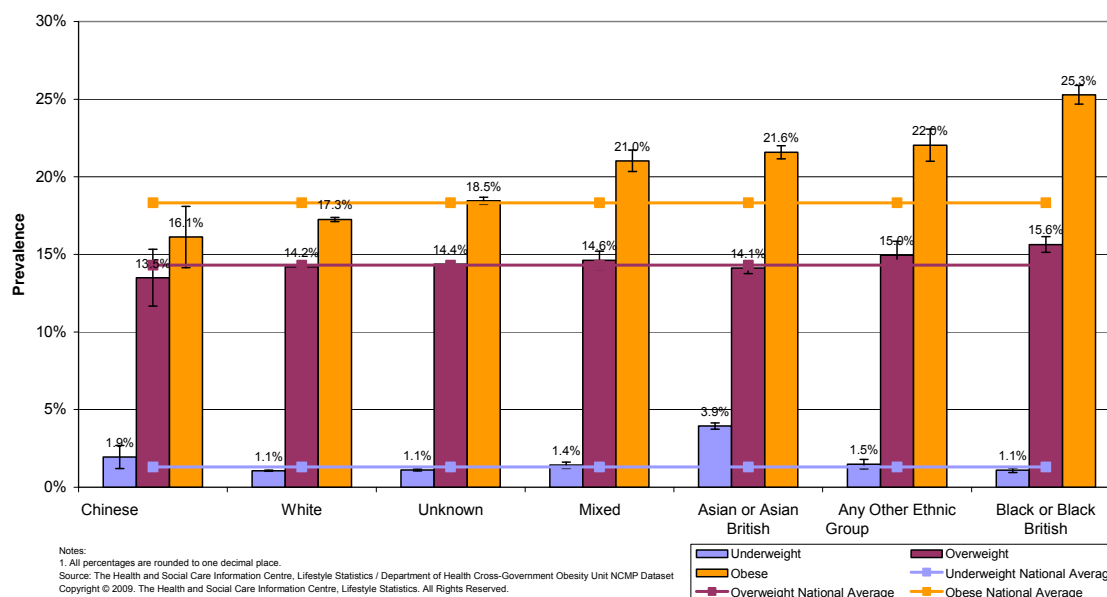


Figure 17: Prevalence of underweight, overweight and obese children in Year 6, by ethnic category, England, 2008/09



3.36. Key findings:

- Obesity prevalence is significantly higher than the national average for children in both years in the ethnic groups: ‘Asian or Asian British’, ‘Any Other Ethnic Group’ and ‘Black or Black British’.
- Obesity prevalence is significantly lower than the national average for children in both years in the ethnic groups: ‘Chinese’ and ‘White’;
- The prevalence of overweight Year 6 children is not significantly different to the national average for any ethnic group except ‘Black or Black British’. The prevalence of overweight Reception children varies considerably more by ethnic group.

3.37. There are known associations between ethnicity and area deprivation⁹. However, deprived urban areas in England tend to also have a higher proportion of individuals from non-White ethnic groups, so it is likely that there exist confounding factors which affect the obesity prevalence by ethnicity.

⁹ http://www.noo.org.uk/uploads/doc168_2_NOO_NCMP_report230608.pdf

Prevalence by rural/urban classification

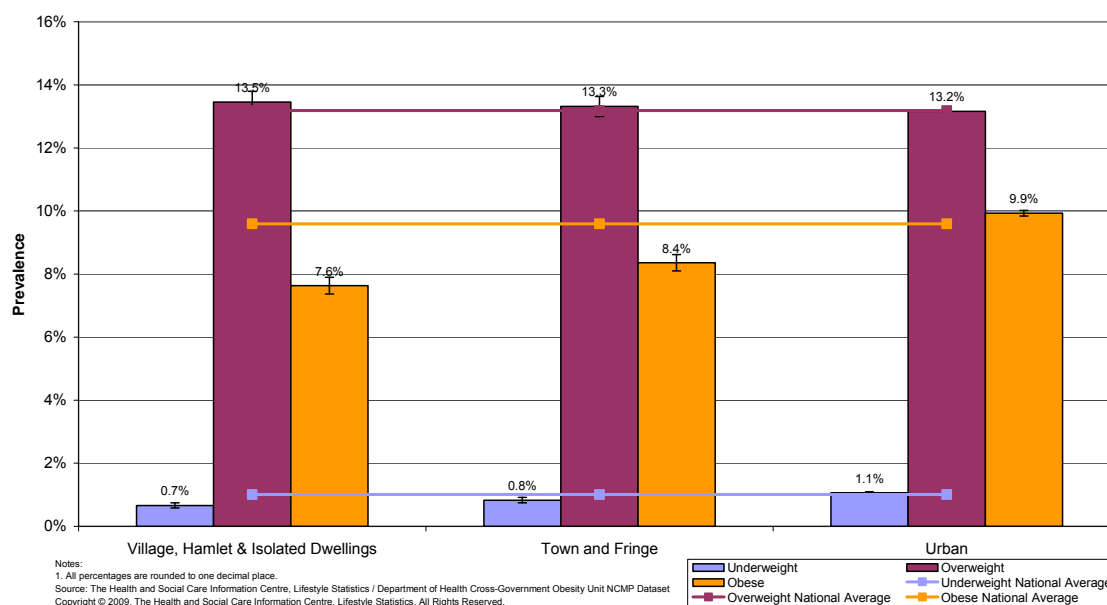
3.38. Collection of the home postcode of participating children was a formal requirement for the 2008/09 NCMP. Of the 1,003,849 children for whom valid measurements were uploaded to the NCMP Database, 98% of records included a home postcode.

3.39. To anonymise the data, postcodes were aggregated to the larger areas of LSOA when PCTs uploaded their data to the NCMP database. This meant that the NHS IC did not hold home postcode of any child.

3.40. Each record was assigned a rural/urban classification¹⁰ according to the settlement form of the LSOA of the child.

3.41. Figures 18 and 19 show, for Reception and Year 6 respectively, the prevalence of underweight, overweight and obese children, by rural/urban classification, in England, 2008/09.

Figure 18: Prevalence of underweight, overweight and obese children in Reception, by rural/urban classification, England, 2008/09



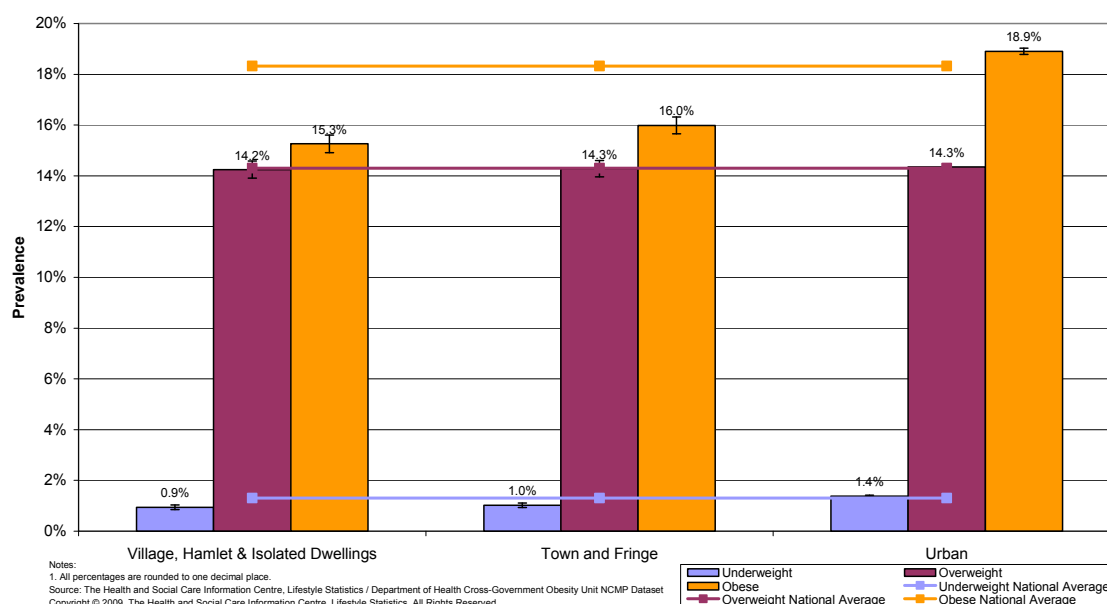
¹⁰ The Office for National Statistics (ONS) produced the Rural and Urban Classification in consultation with the Department for Environment, Food and Rural Affairs, the Department for Communities and Local Government and the Countryside Agency. Areas are defined through two measures:

- settlement form: dispersed dwellings, hamlet, village, small town, urban fringe and urban (>10,000 population);
- sparsity - each hectare grid square is assigned a sparsity score based on the number of households in surrounding hectare squares up to a distance of 30 km.

The analyses in this report have combined 'sparse' with 'less sparse' and classifications are purely based on settlement form.

Further details are available at: <http://www.statistics.gov.uk/geography/nrudp.asp>

Figure 19: Prevalence of underweight, overweight and obese children in Year 6, by rural/urban classification, England, 2008/09



3.42. Key findings for 2008/09:

- Obesity prevalence is significantly higher in urban areas than in non-urban areas for both age groups;
- The prevalence of underweight children is similar in urban areas and non-urban areas for both age groups;
- Overweight prevalence is similar between urban areas and non-urban areas for both age groups.

3.43. The National Obesity Observatory's 2006/07¹¹ and 2007/08¹² reports showed that confounding factors exist, and that variation in child obesity prevalence between urban and rural areas can possibly be explained by differences in the degree of deprivation and the ethnic mix in such areas.

¹¹ http://www.noo.org.uk/uploads/doc168_2_NOO_NCMP_report230608.pdf

¹² http://www.noo.org.uk/uploads/doc168_2_noo_NCMPreport1_110509.pdf

Comparison of results from the Health Survey for England

- 3.44. It is useful to compare the NCMP findings with the child obesity data from the Health Survey for England (HSE)¹³. The HSE is a series of sample-based surveys focusing on a range of health indicators including obesity in children.
- 3.45. The findings of the 2006/07 NCMP were compared to the 2006 HSE. It was shown that, apart from obese boys in Reception, the prevalence rates in the two studies are not statistically significantly different. The obesity prevalence estimate for boys in Reception was shown to be significantly higher in the HSE and warrants further investigation.
- 3.46. At the time of publication of this report, the results of the 2008 HSE had not been published and so comparison with the 2008/09 NCMP has not been possible.
- 3.47. A comparison between the data in the 2007/08 NCMP and the HSE 2007 and between the 2008/09 NCMP data and the HSE 2008, will be made in the Health Survey for England, 2008, due to be published in December 2009.

¹³ Source: Health Survey for England 2006, Joint Surveys Unit. <http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/health-survey-for-england>

Annex 1: Detailed tables

Tables A and B show the prevalence of underweight, overweight and obese children, by school year, at PCT, SHA and LA level respectively.

Table A: Prevalence of underweight, overweight and obese children, with associated 95% confidence intervals, by PCT and SHA, England, 2008/09

SHA/PCT Name	SHA/PCT Code	Underweight				Overweight				Obese				
		Reception		Year 6		Reception		Year 6		Reception	Year 6			
		Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	Lower 95% confidence interval (-)	Upper 95% confidence interval (+)		
England	ENG	1.0%	0.0%	1.3%	0.0%	13.2%	0.1%	14.3%	0.1%	9.6%	0.1%	18.3%	0.1%	0.8%
North East SHA	Q30	0.5%	0.1%	0.9%	0.1%	14.4%	0.4%	14.7%	0.4%	10.2%	0.4%	20.4%	0.5%	0.9%
County Durham PCT	5ND	0.5%	0.2%	0.9%	0.3%	14.4%	1.0%	14.9%	1.0%	9.4%	0.8%	20.3%	1.1%	1.3%
Darlington PCT	5J9	0.4%	0.4%	0.9%	0.6%	15.1%	2.1%	12.8%	2.0%	8.9%	1.7%	19.9%	2.4%	2.7%
Gateshead PCT	5KF	0.3%	0.2%	0.9%	0.4%	13.2%	1.5%	14.3%	1.5%	8.8%	1.3%	22.8%	1.8%	2.0%
Hartlepool PCT	5D9	0.3%	0.3%	1.0%	0.6%	17.4%	2.3%	16.7%	2.3%	10.8%	1.9%	22.8%	2.6%	3.1%
Middlesbrough PCT	5KM	0.5%	0.4%	1.3%	0.6%	13.2%	1.7%	15.0%	1.8%	11.5%	1.6%	21.9%	2.1%	2.7%
Newcastle PCT	5D7	0.6%	0.3%	1.2%	0.4%	15.2%	1.4%	14.6%	1.4%	12.3%	1.3%	21.9%	1.7%	2.0%
North Tyneside PCT	5D8	0.5%	0.3%	0.7%	0.4%	14.1%	1.5%	15.3%	1.5%	10.3%	1.3%	20.0%	1.7%	2.0%
Northumberland Care Trust	TAC	0.5%	0.2%	0.9%	0.3%	15.0%	1.3%	14.4%	1.2%	9.8%	1.1%	16.9%	1.3%	2.0%
Redcar & Cleveland PCT	5QR	2.1%	0.8%	0.9%	0.5%	15.4%	2.1%	14.8%	1.9%	9.9%	1.7%	19.7%	2.1%	2.9%
South Tyneside PCT	5KG	0.3%	0.3%	0.7%	0.4%	13.1%	1.7%	14.7%	1.8%	9.1%	1.5%	21.0%	2.0%	2.3%
North Tees PCT	5E1	0.6%	0.3%	0.8%	0.4%	14.0%	1.5%	15.5%	1.6%	10.5%	1.3%	20.3%	1.8%	2.2%
Sunderland Teaching PCT	5KL	0.5%	0.3%	0.6%	0.3%	13.8%	1.3%	14.1%	1.3%	11.0%	1.2%	20.2%	1.5%	1.9%
North West SHA	Q31	0.9%	0.1%	1.3%	0.1%	13.5%	0.3%	14.1%	0.3%	9.6%	0.2%	18.8%	0.3%	0.9%
Ashton, Leigh & Wigan PCT	5HG	0.5%	0.2%	1.0%	0.3%	16.2%	1.3%	14.2%	1.2%	9.2%	1.0%	18.4%	1.4%	2.0%
Blackburn with Darwen PCT	5CC	2.0%	0.6%	3.3%	0.9%	11.2%	1.5%	13.2%	1.6%	9.0%	1.3%	17.7%	1.8%	2.6%
Blackpool PCT	5HP	1.2%	0.5%	0.9%	0.5%	12.8%	1.7%	11.4%	1.6%	9.7%	1.5%	19.6%	2.0%	2.3%
Bolton PCT	5HQ	1.1%	0.4%	2.0%	0.5%	13.0%	1.2%	14.0%	1.2%	9.1%	1.0%	17.5%	1.3%	1.6%
Bury PCT	5JX	1.2%	0.5%	2.1%	0.6%	10.6%	1.4%	13.1%	1.5%	8.7%	1.2%	18.5%	1.7%	2.0%
Central & Eastern Cheshire PCT	5NP	0.3%	0.2%	1.2%	0.3%	14.8%	1.1%	13.8%	1.0%	8.6%	0.8%	17.9%	1.1%	1.8%
Central Lancashire PCT	5NG	0.8%	0.3%	1.3%	0.3%	12.2%	0.9%	14.1%	1.0%	8.5%	0.8%	17.2%	1.1%	1.7%
Cumbria PCT	5NE	0.4%	0.2%	0.5%	0.2%	14.4%	1.1%	15.6%	1.1%	9.2%	0.9%	19.7%	1.2%	2.0%
East Lancashire PCT	5NH	1.1%	0.3%	1.2%	0.3%	14.0%	1.0%	14.8%	1.1%	9.2%	0.9%	17.6%	1.1%	1.5%
Halton & St. Helens PCT	5NM	0.6%	0.3%	1.2%	0.4%	16.9%	1.3%	14.6%	1.2%	12.4%	1.2%	21.9%	1.4%	2.0%
Heywood, Middleton & Rochdale PCT	5NQ	0.7%	0.3%	1.9%	0.6%	14.2%	1.4%	15.2%	1.4%	10.3%	1.2%	17.3%	1.5%	2.1%
Knowsley PCT	5JA	0.3%	0.3%	0.9%	0.4%	14.8%	1.8%	15.4%	1.8%	12.0%	1.6%	23.2%	2.1%	2.7%
Liverpool PCT	5NL	1.9%	0.4%	1.3%	0.3%	11.4%	1.0%	14.5%	1.1%	10.4%	0.9%	22.6%	1.3%	1.8%
Manchester PCT	5NT	0.7%	0.2%	1.4%	0.4%	13.2%	1.0%	14.6%	1.1%	12.4%	0.9%	22.6%	1.2%	1.9%
North Lancashire PCT	5NF	0.2%	0.2%	1.0%	0.4%	14.7%	1.4%	12.9%	1.3%	9.5%	1.1%	16.1%	1.4%	2.1%
Oldham PCT	5J5	1.3%	0.4%	2.1%	0.5%	13.7%	1.3%	14.0%	1.3%	9.0%	1.1%	19.2%	1.5%	2.3%
Salford PCT	5F5	1.0%	0.4%	1.2%	0.5%	11.5%	1.3%	14.6%	1.5%	9.0%	1.2%	18.0%	1.6%	2.0%
Sefton PCT	5NJ	0.4%	0.2%	1.1%	0.4%	14.4%	1.3%	14.0%	1.3%	9.7%	1.1%	17.8%	1.4%	1.8%
Stockport PCT	5F7	2.4%	0.6%	1.2%	0.4%	8.9%	1.1%	13.4%	1.3%	6.1%	0.9%	16.1%	1.4%	2.4%
Tameside & Glossop PCT	5LH	0.5%	0.3%	0.8%	0.3%	15.5%	1.3%	15.8%	1.3%	11.3%	1.2%	18.6%	1.4%	1.9%
Trafford PCT	5NR	1.9%	0.5%	1.3%	0.5%	13.4%	1.3%	13.4%	1.4%	9.1%	1.1%	18.0%	1.6%	2.0%
Warrington PCT	5J2	0.6%	0.3%	0.7%	0.4%	13.4%	1.4%	12.7%	1.4%	8.4%	1.1%	17.1%	1.6%	2.0%
Western Cheshire PCT	5NN	1.1%	0.4%	0.5%	0.3%	13.6%	1.5%	14.3%	1.4%	9.7%	1.3%	16.7%	1.5%	2.2%
Wirral PCT	5NK	0.4%	0.2%	0.9%	0.3%	14.0%	1.2%	14.1%	1.2%	9.6%	1.0%	20.6%	1.4%	2.1%
Yorkshire & Humber SHA	Q32	1.1%	0.1%	1.4%	0.1%	13.1%	0.3%	14.0%	0.3%	9.6%	0.3%	18.6%	0.3%	1.0%
Barnsley PCT	5JE	0.6%	0.3%	0.9%	0.4%	13.3%	1.4%	15.0%	1.4%	9.5%	1.2%	19.6%	1.6%	2.2%
Bradford & Airedale PCT	5NY	2.0%	0.3%	2.3%	0.4%	11.7%	0.8%	13.6%	0.9%	10.0%	0.7%	19.9%	1.1%	1.9%
Calderdale PCT	5J6	2.7%	0.7%	1.7%	0.6%	10.4%	1.3%	12.7%	1.4%	8.0%	1.1%	16.6%	1.6%	2.3%
Doncaster PCT	5N5	0.6%	0.3%	0.9%	0.3%	15.4%	1.3%	15.1%	1.3%	10.3%	1.1%	19.4%	1.4%	2.5%
East Riding of Yorkshire PCT	5NW	0.3%	0.2%	0.9%	0.3%	15.3%	1.3%	14.6%	1.2%	10.2%	1.1%	16.7%	1.3%	2.0%
Hull PCT	5NX	0.5%	0.3%	0.8%	0.4%	15.2%	1.4%	14.0%	1.4%	10.3%	1.2%	21.5%	1.6%	2.8%
Kirkcaldy PCT	5N2	1.4%	0.3%	1.1%	0.4%	11.7%	0.9%	14.0%	1.0%	9.3%	0.8%	16.4%	1.1%	1.6%
Leeds PCT	5N1	0.8%	0.2%	1.2%	0.3%	13.2%	0.8%	14.2%	0.8%	10.3%	0.7%	20.9%	0.9%	1.3%
North East Lincolnshire Care Trust Plus	TAN	0.3%	0.3%	1.0%	0.5%	16.2%	1.8%	14.8%	1.7%	11.9%	1.6%	18.7%	1.8%	2.0%
North Lincolnshire PCT	5EF	2.3%	0.7%	2.1%	0.7%	11.6%	1.5%	13.2%	1.7%	7.6%	1.2%	18.5%	2.0%	3.0%
North Yorkshire & York PCT	5NV	1.0%	0.2%	1.2%	0.3%	12.5%	0.8%	13.9%	0.8%	8.2%	0.7%	16.3%	0.9%	1.4%
Rotherham PCT	5H8	0.7%	0.3%	1.1%	0.4%	14.4%	1.3%	14.3%	1.3%	10.0%	1.1%	19.0%	1.5%	2.0%
Sheffield PCT	5N4	0.9%	0.3%	1.4%	0.3%	13.3%	0.9%	13.8%	1.0%	9.4%	0.8%	18.7%	1.1%	1.8%
Wakefield District PCT	5N3	1.0%	0.3%	1.0%	0.3%	12.3%	1.1%	13.4%	1.2%	9.5%	1.0%	18.0%	1.3%	2.0%
East Midlands SHA	Q33	1.2%	0.1%	1.3%	0.1%	13.0%	0.3%	14.4%	0.3%	9.1%	0.3%	17.9%	0.4%	1.1%
Bassetlaw PCT	5ET	0.2%	0.3%	0.6%	0.5%	14.5%	2.2%	14.5%	2.0%	13.3%	1.9%	19.2%	2.3%	3.1%
Derby City PCT	5N7	0.7%	0.3%	1.9%	0.5%	12.2%	1.3%	14.8%	1.4%	9.5%	1.1%	17.2%	1.5%	2.1%
Derbyshire County PCT	5N6	0.5%	0.2%	0.8%	0.2%	14.1%	0.9%	14.5%	0.8%	8.6%	0.7%	17.8%	0.9%	1.3%
Leicester City PCT	5PC	2.2%	0.5%	3.3%	0.6%	11.2%	1.1%	14.5%	1.2%	10.0%	1.0%	17.8%	1.3%	2.1%
Leicestershire County & Rutland PCT	5PA	0.8%	0.2%	1.0%	0.3%	14.0%	0.9%	14.0%	0.9%	8.8%	0.7%	15.9%	0.9%	2.2%
Lincolnshire PCT	5N9	1.5%	0.3%	1.1%	0.3%	13.4%	0.8%	15.0%	0.8%	9.9%	0.7%	18.5%	0.9%	1.6%
Northampton PCT	5PD	2.3%	0.4%	1.0%	0.2%	11.2%	0.7%	14.6%	0.8%	8.3%	0.7%	17.8%	0.9%	1.5%
Nottingham City PCT	5EM	1.2%	0.4%	1.4%	0.5%	14.6%	1.4%	13.6%	1.3%	10.0%	1.1%	22.6%	1.6%	2.2%
Nottinghamshire County PCT ¹	5N8	0.7%	0.2%	1.3%	0.3%	12.8%	0.8%	14.5%	0.9%	8.9%	0.7%	17.3%	0.9%	1.9%
West Midlands SHA	Q34	1.2%	0.1%	1.5%	0.1%	13.2%	0.3%	14.5%	0.3%	10.1%	0.2%	19.8%	0.3%	1.0%
Birmingham East & North PCT	5PG	1.4%	0.4%	1.9%	0.4%	12.2%	1.0%	14.2%	1.1%	10.7%	0.9%	20.7%	1.2%	2.0%
Coventry Teaching PCT	5MD	1.0%	0.3%	1.2%	0.4%	12.8%	1.1%	15.5%	1.3%	10.6%	1.1%	19.4%	1.4%	1.9%
Dudley PCT	5PE	1.1%	0.4%	1.3%	0.4%	14.7%	1.2%	14.4%	1.2%	9.0%	1.0%	20.8%	1.4%	1.8%
Heart of Birmingham Teaching PCT	5MX	3.3%	0.5%	3.5%	0.6%	10.5%	0.9%	14.3%	1.1%	11.8%	0.9%	24.0%	1.3%	1.8%
Herefordshire PCT	5CN	0.3%	0.3%	1.2%	0.5%	14.7%	1.8%	13.7%	1.7%	9.0%	1.4%	18.9%	1.9%	3.0%
North Staffordshire PCT	5PH	0.8%	0.4%	1.3%	0.5%	14.3%	1.6%	14.1%	1.5%	9.6%	1.4%	19.2%	1.7%	2.1%
Sandwell PCT	5PF	2.1%	0.5%	1.4%	0.4%	13.3%	1.1%	14.4%	1.2%	12.9%	1.1%	24.6%	1.4%	1.9%
Shropshire County PCT	5M2	0.4%	0.3%	0.8%	0.3%	14.8%	1.4%	14.8%	1.4%	9.2%	1.1%	17.5%	1.4%	1.9%
Solihull Care Trust	TAM	0.6%	0.3%	1.7%	0.6%	12.5%	1.4%	14.4%	1.5%	8.8%	1.2%	15.6%	1.6%	3.2%
South Birmingham PCT	5M1	1.0%	0.3%	1.8%	0.4%	13.2%	1.1%	14.2%	1.2%	9.6%	1.0%	19.8%	1.3%	1.7%
South Staffordshire PCT	5PK	0.7%	0.2%	1.2%	0.3%	13.6%	0.9%	15.3%	0.9%	9.8%	0.7%	18.4%	1.0%	1.5%
Stoke on Trent PCT	5PJ	0.5%	0.3%	1.8%	0.5%	13.4%	1.3%	14.2%	1.4%	12.1%	1.2%	21.8%	1.6%	2.3%
Telford & Wrekin PCT	5MK	0.7%	0.4%	1.3%	0.5%	16.6%	1.7%	15.3%	1.7%	11.7%	1.5%	18.8%	1.8%	2.3%
Walsall Teaching PCT	5M3	1.6%	0.4%											

SHA/PCT Name	SHA/PCT Code	Underweight				Overweight				Obese				
		Reception		Year 6		Reception		Year 6		Reception		Year 6		
		Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	Lower 95% confidence interval (-)	Upper 95% confidence interval (+)
East England SHA	Q35	0.8%	0.1%	1.2%	0.1%	13.1%	0.3%	14.1%	0.3%	8.7%	0.2%	16.6%	0.3%	1.0%
Bedfordshire PCT	5P2	0.5%	0.2%	0.6%	0.2%	13.5%	1.0%	14.0%	1.1%	8.9%	0.9%	16.6%	1.1%	1.8%
Cambridgeshire PCT	5P3	0.6%	0.2%	0.8%	0.2%	12.9%	0.9%	14.8%	0.9%	7.8%	0.7%	15.7%	0.9%	1.5%
East & North Hertfordshire PCT	5P3	0.9%	0.2%	1.4%	0.3%	13.2%	0.9%	14.2%	0.9%	8.5%	0.7%	15.0%	0.9%	1.6%
Great Yarmouth & Waveney PCT	5FR	0.4%	0.3%	1.1%	0.4%	13.7%	1.4%	13.3%	1.4%	9.6%	1.2%	18.9%	1.6%	2.0%
Luton PCT	5GC	1.0%	0.4%	1.6%	0.5%	13.4%	1.3%	14.9%	1.4%	12.7%	1.3%	21.3%	1.6%	1.7%
Mid Essex PCT	5PX	1.4%	0.4%	2.1%	0.5%	10.0%	1.1%	13.2%	1.2%	6.4%	0.9%	15.0%	1.2%	2.4%
Norfolk PCT	5PQ	0.5%	0.2%	1.1%	0.3%	13.6%	0.9%	14.5%	0.9%	8.8%	0.7%	17.7%	0.9%	1.8%
North East Essex PCT	5PW	1.4%	0.4%	1.0%	0.4%	12.5%	1.2%	14.0%	1.2%	8.9%	1.0%	15.9%	1.3%	2.0%
Peterborough PCT	5PN	1.0%	0.4%	1.3%	0.5%	13.8%	1.5%	14.3%	1.6%	9.2%	1.2%	19.8%	1.8%	2.5%
South East Essex PCT	5P1	0.4%	0.2%	1.0%	0.3%	12.7%	1.2%	13.6%	1.2%	9.4%	1.0%	18.1%	1.3%	2.6%
South West Essex PCT	5PY	0.9%	0.3%	0.9%	0.3%	13.1%	1.0%	13.7%	1.0%	10.0%	0.9%	17.3%	1.1%	1.9%
Suffolk PCT	5PT	1.2%	0.3%	1.5%	0.3%	12.9%	0.9%	13.4%	0.9%	8.1%	0.7%	14.5%	0.9%	1.6%
West Essex PCT	5PV	0.9%	0.4%	0.9%	0.4%	13.4%	1.3%	14.3%	1.3%	8.6%	1.1%	17.6%	1.5%	2.1%
West Hertfordshire PCT	5P4	0.9%	0.3%	1.3%	0.3%	13.5%	0.9%	14.3%	1.0%	7.9%	0.7%	14.7%	1.0%	1.8%
London SHA	Q36	1.3%	0.1%	1.6%	0.1%	12.4%	0.2%	14.7%	0.3%	11.2%	0.2%	21.3%	0.3%	0.9%
Barking & Dagenham PCT	5C2	1.0%	0.4%	1.2%	0.5%	14.7%	1.5%	16.1%	1.6%	12.1%	1.3%	24.2%	1.9%	2.8%
Barnet PCT	5A9	1.4%	0.4%	1.2%	0.4%	13.0%	1.2%	14.2%	1.2%	9.2%	1.0%	18.3%	1.4%	1.7%
Bexley Care Trust	TAK	0.8%	0.4%	1.0%	0.4%	12.3%	1.4%	16.6%	1.5%	10.2%	1.2%	21.4%	1.6%	2.2%
Brent Teaching PCT	5K5	1.9%	0.5%	2.2%	0.6%	12.7%	1.2%	14.2%	1.3%	11.4%	1.2%	23.0%	1.6%	2.1%
Bromley PCT	5A7	0.7%	0.3%	1.2%	0.4%	12.3%	1.2%	15.5%	1.3%	7.3%	0.9%	16.0%	1.3%	2.1%
Camden PCT	5K7	1.7%	0.7%	1.6%	0.7%	11.3%	1.6%	16.6%	2.1%	11.6%	1.6%	20.1%	2.2%	2.6%
City & Hackney Teaching PCT	5C3	1.3%	0.5%	1.4%	0.5%	13.6%	1.4%	15.6%	1.6%	13.3%	1.4%	24.0%	1.8%	2.0%
Croydon PCT	5K9	0.7%	0.3%	1.1%	0.4%	12.9%	1.1%	14.6%	1.2%	11.1%	1.0%	21.3%	1.4%	2.1%
Ealing PCT	5HX	1.4%	0.4%	2.0%	0.5%	12.5%	1.1%	14.4%	1.2%	12.1%	1.1%	21.9%	1.4%	1.7%
Enfield PCT	5C1	1.2%	0.4%	1.8%	0.4%	12.9%	1.1%	15.8%	1.2%	13.5%	1.1%	22.9%	1.4%	2.0%
Greenwich Teaching PCT	5A8	0.8%	0.3%	1.2%	0.4%	14.0%	1.3%	14.2%	1.4%	12.0%	1.2%	22.9%	1.6%	2.0%
Hammersmith & Fulham PCT	5H1	1.6%	0.7%	2.1%	0.9%	11.1%	1.8%	14.2%	2.1%	12.0%	1.9%	22.4%	2.5%	3.2%
Haringey Teaching PCT	5C9	1.2%	0.4%	1.1%	0.4%	12.2%	1.2%	15.8%	1.4%	11.8%	1.2%	20.7%	1.6%	2.0%
Harrow PCT	5K6	2.4%	0.7%	2.9%	0.7%	11.5%	1.4%	14.4%	1.5%	9.8%	1.3%	18.2%	1.6%	2.3%
Havering PCT	5A4	0.8%	0.3%	1.4%	0.5%	14.9%	1.4%	14.7%	1.4%	10.7%	1.2%	17.6%	1.5%	2.2%
Hillingdon PCT	5AT	1.9%	0.5%	2.0%	0.5%	9.9%	1.1%	12.9%	1.2%	9.2%	1.0%	19.7%	1.5%	2.0%
Hounslow PCT	5HY	2.0%	0.5%	1.5%	0.5%	13.1%	1.3%	15.4%	1.5%	12.1%	1.3%	23.5%	1.8%	2.1%
Islington PCT	5K8	0.8%	0.4%	1.0%	0.5%	11.9%	1.6%	15.7%	1.8%	12.6%	1.6%	21.4%	2.1%	2.8%
Kensington & Chelsea PCT	5LA	0.6%	0.5%	1.3%	0.8%	14.3%	2.4%	14.7%	2.4%	8.7%	1.9%	22.4%	2.8%	3.3%
Kingston PCT	5A5	1.6%	0.6%	1.3%	0.6%	10.2%	1.5%	13.3%	1.8%	7.6%	1.3%	16.4%	2.0%	2.6%
Lambeth PCT	5LD	1.3%	0.4%	1.2%	0.5%	14.0%	1.4%	15.3%	1.5%	13.8%	1.3%	25.4%	1.8%	2.3%
Lewisham PCT	5LF	0.7%	0.3%	1.0%	0.4%	13.2%	1.2%	15.2%	1.4%	12.0%	1.2%	22.1%	1.6%	2.1%
Newham PCT	5C5	2.2%	0.5%	2.1%	0.5%	12.0%	1.1%	14.6%	1.2%	14.2%	1.1%	24.6%	1.4%	1.8%
Redbridge PCT	5NA	1.7%	0.5%	2.4%	0.8%	12.0%	1.1%	13.7%	1.3%	10.8%	1.1%	20.7%	1.5%	2.1%
Richmond & Twickenham PCT	5M6	0.7%	0.4%	1.3%	0.6%	11.2%	1.4%	12.2%	1.6%	5.9%	1.1%	11.7%	1.6%	2.0%
Southwark PCT	5LE	1.0%	0.4%	1.0%	0.4%	13.9%	1.4%	13.2%	1.4%	14.2%	1.4%	26.6%	1.8%	2.6%
Sutton & Merton PCT	5M7	1.5%	0.4%	1.6%	0.4%	11.6%	1.0%	14.7%	1.2%	8.5%	0.9%	18.5%	1.4%	2.3%
Tower Hamlets PCT	5C4	1.7%	0.5%	2.7%	0.6%	10.5%	1.2%	13.7%	1.4%	13.4%	1.3%	25.7%	1.7%	2.2%
Waltham Forest PCT	5NC	2.1%	0.6%	2.7%	0.7%	10.2%	1.2%	13.8%	1.5%	9.9%	1.2%	20.6%	1.7%	3.1%
Wandsworth PCT	5LG	1.0%	0.4%	1.6%	0.6%	10.9%	1.3%	15.4%	1.6%	10.2%	1.3%	20.0%	1.8%	2.3%
Westminster PCT	5LC	1.1%	0.6%	1.5%	0.7%	11.6%	1.7%	15.6%	2.1%	14.7%	1.9%	23.6%	2.4%	3.1%
South East Coast SHA	Q37	0.8%	0.1%	1.2%	0.1%	13.3%	0.3%	14.4%	0.3%	8.6%	0.3%	16.0%	0.4%	1.1%
Brighton & Hove City PCT	5LQ	0.6%	0.3%	1.3%	0.5%	13.7%	1.4%	15.2%	1.6%	8.9%	1.2%	16.4%	1.6%	2.2%
East Sussex Downs & Weald PCT	5P7	0.8%	0.3%	1.8%	0.5%	13.6%	1.3%	13.2%	1.2%	8.1%	1.0%	14.4%	1.3%	2.1%
Eastern & Coastal Kent PCT	5QA	0.4%	0.2%	1.2%	0.2%	13.9%	0.9%	14.2%	0.8%	8.4%	0.7%	17.5%	0.9%	1.6%
Hastings & Rother PCT	5P8	2.7%	0.8%	1.0%	0.5%	11.0%	1.6%	14.4%	1.7%	8.4%	1.4%	14.6%	1.7%	2.3%
Medway PCT	5L3	0.9%	0.4%	0.7%	0.3%	13.4%	1.3%	14.6%	1.3%	11.7%	1.2%	19.4%	1.5%	2.1%
Surrey PCT	5P5	0.6%	0.2%	1.3%	0.2%	13.0%	0.7%	14.0%	0.7%	7.6%	0.5%	14.2%	0.7%	1.5%
West Kent PCT	5P9	0.5%	0.2%	0.8%	0.2%	14.0%	0.8%	15.8%	0.9%	9.8%	0.7%	17.6%	0.9%	1.7%
West Sussex PCT	5P6	1.1%	0.2%	1.2%	0.3%	12.4%	0.7%	14.1%	0.8%	8.2%	0.6%	15.0%	0.8%	1.4%
South Central SHA	Q38	1.2%	0.1%	1.3%	0.1%	12.8%	0.3%	13.8%	0.3%	8.8%	0.3%	16.0%	0.4%	1.1%
Berkshire East PCT	5QG	2.2%	0.5%	1.6%	0.4%	11.5%	1.1%	14.1%	1.1%	9.5%	1.0%	16.1%	1.2%	1.8%
Berkshire West PCT	5QF	0.9%	0.3%	1.4%	0.4%	12.0%	0.9%	14.0%	1.0%	8.3%	0.8%	16.3%	1.1%	1.8%
Buckinghamshire PCT	5QD	2.3%	0.4%	1.7%	0.4%	9.7%	0.8%	13.2%	0.9%	7.1%	0.7%	14.0%	1.0%	1.6%
Hampshire PCT	5QC	0.9%	0.2%	1.1%	0.2%	13.5%	0.6%	13.3%	0.6%	8.6%	0.5%	15.5%	0.6%	1.3%
Isle of Wight PCT	5QT	0.3%	0.3%	0.6%	0.5%	16.1%	2.2%	14.6%	2.1%	9.9%	1.8%	19.1%	2.3%	3.7%
Milton Keynes PCT	5CQ	1.2%	0.4%	1.5%	0.5%	12.6%	1.2%	14.7%	1.5%	9.4%	1.1%	15.9%	1.5%	2.6%
Oxford PCT	5QE	0.5%	0.2%	1.2%	0.3%	14.6%	0.9%	14.2%	0.9%	8.7%	0.7%	16.0%	1.0%	1.7%
Portsmouth City Teaching PCT	5FE	0.6%	0.3%	0.5%	0.3%	15.4%	1.6%	15.3%	1.7%	12.5%	1.5%	21.4%	1.9%	2.4%
Southampton City PCT	5L1	1.9%	0.6%	1.1%	0.5%	11.4%	1.3%	12.7%	1.5%	9.3%	1.2%	17.0%	1.7%	2.3%
South West SHA	Q39	0.6%	0.1%	1.1%	0.1%	14.0%	0.3%	14.2%	0.3%	8.9%	0.3%	16.2%	0.3%	1.1%
Bath & North East Somerset PCT	5FL	0.4%	0.3%	0.9%	0.4%	16.5%	1.9%	14.2%	1.7%	7.9%	1.3%	13.4%	1.7%	1.8%
Bournemouth & Poole PCT	5QN	0.6%	0.3%	1.1%	0.4%	12.5%	1.3%	13.4%	1.3%	8.3%	1.1%	15.3%	1.4%	2.1%
Bristol PCT	5QJ	0.5%	0.2%	0.9%	0.3%	14.4%	1.1%	15.2%	1.2%	10.4%	1.0%	17.9%	1.3%	1.7%
Cornwall & Isles Of Scilly PCT	5QP	0.4%	0.2%	1.1%	0.3%	14.4%	1.1%	14.2%	1.0%	9.9%	0.9%	17.9%	1.1%	2.4%
Devon PCT	5QQ	0.5%	0.2%	1.0%	0.2%	15.4%	0.9%	14.3%	0.8%	9.8%	0.7%	16.1%	0.9%	1.6%
Dorset PCT	5QM	0.4%	0.2%	0.9%	0.3%	13.6%	1.2%	14.0%	1.1%	8.3%	0.9%	14.9%	1.1%	2.0%
Gloucestershire PCT	5QH	1.5%	0.3%	1.4%	0.3%	12.8%	0.9%	14.3%	1.0%	7.8%	0.7%	15.9%	1.0%	2.1%
North Somerset PCT	5M8	0.1%	0.1%	0.7%	0.4%	14.1%	1.5%	15.5%	1.6%	7.0%	1.1%	16.0%	1.6%	2.2%
Plymouth Teaching PCT	5F1	0.2%	0.2%	0.9%	0.4%	14.7%	1.4%	14.8%	1.4%	10.1%	1.2%	18.3%	1.6%	2.2%
Somerset PCT	5QL	0.7%	0.2%	1.4%	0.3%	14.9%	1.0%	14.1%	1.0%	8.7%	0.8%	16.7%	1.0%	1.7%
South Gloucestershire PCT	5A3	0.8%	0.3%	0.8%	0.3%	13.2%	1.3%	14.5%	1.3%	9.1%	1.1%	16.5%	1.4%	2.2%
Swindon PCT	5K3	0.2%	0.3%	1.0%	0.4%	13.6%	1.5%	14.4%	1.5%	9.5%	1.2%	16.5%	1.6%	2.3%
Torbay Care Trust	TAL	0.9%	0.6%	1.3%	0.6%	14.2%	2.0%	12.9%	1.8%	9.9%	1.7%	16.0%		

Table B: Prevalence of underweight, overweight and obese children, with associated 95% confidence intervals, by Government Office Region, Local Authority County/Unitary Authority and Local Authority District/Former District, England, 2008/09

Area	Code	Underweight				Overweight				Obese			
		Reception		Year 6		Reception		Year 6		Reception		Year 6	
		Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±
ENGLAND	64	1.0%	0.0%	1.3%	0.0%	13.2%	0.1%	14.3%	0.1%	9.6%	0.1%	18.3%	0.1%
NORTH EAST	A	0.5%	0.1%	0.9%	0.1%	14.4%	0.4%	14.7%	0.4%	10.2%	0.4%	20.4%	0.5%
County Durham UA	00EJ	0.5%	0.2%	0.9%	0.3%	14.4%	1.0%	14.9%	1.0%	9.4%	0.8%	20.3%	1.1%
<i>Former districts of:</i>													
Chester-le-Street	20UB	x	x	1.0%	0.8%	15.2%	3.0%	15.3%	2.9%	9.5%	2.4%	19.1%	3.1%
Deewentside	20UD	x	x	1.0%	0.7%	12.9%	2.4%	14.5%	2.4%	7.9%	1.3%	21.3%	2.8%
Durham	20UE	x	x	1.4%	0.7%	14.5%	2.4%	12.9%	2.3%	10.5%	2.1%	17.5%	2.6%
Eastington	20UF	0.8%	0.5%	1.1%	0.6%	16.0%	2.2%	14.6%	2.1%	9.3%	1.8%	21.6%	2.4%
Sadgellfield	20UG	x	x	1.1%	0.7%	15.3%	2.3%	16.1%	2.4%	10.5%	2.0%	19.4%	2.6%
Teesdale	20UH	x	x	x	x	11.6%	4.2%	13.7%	4.3%	7.6%	3.5%	21.0%	5.1%
Wear Valley	20UJ	x	x	x	x	12.5%	2.5%	16.6%	2.8%	9.2%	2.2%	22.1%	3.1%
Darlington UA	00EH	x	x	0.9%	0.6%	15.1%	2.1%	12.8%	2.0%	8.9%	1.7%	19.9%	2.4%
Hartlepool UA	00EB	x	x	1.0%	0.6%	17.4%	2.3%	16.7%	2.3%	10.8%	1.9%	22.8%	2.6%
Middlesbrough UA	00EC	0.5%	0.4%	1.3%	0.6%	13.2%	1.7%	15.0%	1.8%	11.5%	1.6%	21.9%	2.1%
Northumberland UA	00EM	0.5%	0.2%	0.9%	0.3%	15.0%	1.3%	14.4%	1.2%	9.8%	1.1%	16.9%	1.3%
<i>Former districts of:</i>													
Alnwick	35UB	x	x	2.3%	1.7%	10.2%	3.6%	10.8%	3.5%	6.9%	3.0%	11.1%	3.5%
Berwick-upon-Tweed	35UC	x	x	x	x	12.1%	4.3%	17.6%	5.2%	12.5%	4.3%	17.6%	5.2%
Blyth Valley	35UD	x	x	x	x	15.7%	2.4%	15.9%	2.5%	10.5%	2.1%	20.0%	2.7%
Castle Morpeth	35UE	x	x	x	x	14.8%	3.1%	15.1%	3.1%	8.2%	2.4%	14.1%	3.0%
Tynedale	35UF	x	x	x	x	15.6%	2.9%	13.1%	2.7%	7.9%	2.2%	13.1%	2.7%
Wansbeck	35UG	x	x	x	x	16.8%	3.0%	13.8%	2.7%	12.5%	2.6%	21.0%	3.1%
Redcar and Cleveland UA	00EE	2.1%	0.8%	0.9%	0.5%	15.4%	2.1%	14.8%	1.9%	9.9%	1.7%	19.7%	2.1%
Stockton-on-Tees UA	00EF	0.6%	0.3%	0.8%	0.4%	14.0%	1.5%	15.5%	1.6%	10.5%	1.3%	20.3%	1.8%
Tyne and Wear (Met County)	2D	0.5%	0.1%	0.2%	0.2%	14.0%	0.7%	14.6%	0.7%	10.5%	0.6%	21.1%	0.8%
Gateshead	00CH	x	x	0.9%	0.4%	13.2%	1.5%	14.3%	1.5%	8.8%	1.3%	22.8%	1.8%
Newcastle upon Tyne	00CJ	0.6%	0.3%	1.2%	0.4%	15.2%	1.4%	14.6%	1.4%	12.3%	1.3%	21.9%	1.7%
North Tyneside	00CK	0.5%	0.3%	0.7%	0.4%	14.1%	1.5%	15.3%	1.5%	10.3%	1.3%	20.0%	1.7%
South Tyneside	00CL	x	x	0.7%	0.4%	13.1%	1.7%	14.7%	1.8%	9.1%	1.5%	21.0%	2.0%
Sunderland	00CM	0.5%	0.3%	0.6%	0.3%	13.8%	1.3%	14.1%	1.3%	11.0%	1.2%	20.2%	1.5%
NORTH WEST	B	0.9%	0.1%	1.3%	0.1%	13.5%	0.3%	14.1%	0.3%	9.6%	0.2%	18.9%	0.3%
Blackburn with Darwen UA	00EX	2.0%	0.6%	3.3%	0.9%	11.2%	1.5%	13.3%	1.6%	8.9%	1.3%	17.9%	1.8%
Blackpool UA	00EY	1.2%	0.5%	0.9%	0.5%	12.8%	1.7%	11.4%	1.6%	9.7%	1.5%	19.6%	2.0%
Cheshire East UA	00EQ	0.4%	0.2%	1.1%	0.4%	14.8%	1.2%	14.4%	1.2%	8.2%	0.9%	17.7%	1.3%
<i>Former districts of:</i>													
Congleton	13UC	x	x	1.4%	0.8%	17.0%	2.6%	13.9%	2.3%	9.2%	1.9%	16.5%	2.5%
Croxteth and Nantwich	13UD	0.6%	0.5%	0.7%	0.5%	14.0%	2.0%	14.6%	2.0%	9.5%	1.7%	18.8%	2.3%
Macclesfield	13UG	x	x	1.3%	0.6%	14.1%	1.8%	14.5%	1.8%	6.7%	1.3%	17.5%	2.0%
Cheshire West and Chester UA	00EW	0.8%	0.3%	0.8%	0.3%	13.9%	1.2%	13.5%	1.2%	9.7%	1.0%	17.4%	1.3%
<i>Former districts of:</i>													
Chester	13UB	0.9%	0.6%	x	x	13.7%	2.1%	13.5%	2.0%	9.5%	1.8%	15.4%	2.1%
Ellesmere Port and Neston	13UE	x	x	x	x	14.0%	2.4%	16.1%	2.5%	12.3%	2.3%	18.8%	2.7%
Vale Royal	13UH	x	x	1.3%	0.6%	14.0%	1.9%	11.9%	1.7%	8.2%	1.5%	18.1%	2.1%
Halton UA	00ET	0.5%	0.4%	1.1%	0.6%	15.9%	2.0%	14.8%	2.0%	11.7%	1.8%	22.2%	2.3%
Warrington UA	00EU	0.6%	0.3%	0.7%	0.4%	13.4%	1.4%	12.7%	1.4%	8.4%	1.1%	17.1%	1.6%
Cumbria	16	0.4%	0.2%	0.5%	0.2%	14.4%	1.1%	15.6%	1.1%	9.2%	0.9%	19.7%	1.2%
Allerdale	16UB	x	x	0.9%	0.6%	15.2%	2.5%	15.3%	2.4%	6.4%	1.7%	20.0%	2.6%
Barrow-in-Furness	16UC	x	x	x	x	15.5%	2.7%	15.6%	2.7%	14.2%	2.6%	21.2%	3.0%
Carlisle	16UD	x	x	x	x	16.1%	2.3%	16.0%	2.3%	8.2%	1.7%	21.0%	2.5%
Copeland	16UE	1.0%	0.8%	x	x	11.9%	2.6%	16.6%	2.9%	11.9%	2.6%	19.6%	3.1%
Eden	16UF	x	x	x	x	10.6%	2.8%	15.8%	3.2%	7.6%	2.4%	19.2%	3.4%
South Lakeland	16UG	x	x	x	x	14.5%	2.7%	14.5%	2.4%	7.3%	2.0%	16.8%	2.6%
Greater Manchester (Met County)	2A	1.1%	0.1%	1.5%	0.1%	13.1%	0.4%	14.2%	0.4%	9.6%	0.3%	18.7%	0.5%
Bolton	00BL	1.1%	0.4%	2.0%	0.5%	13.0%	1.2%	14.0%	1.2%	9.1%	1.0%	17.5%	1.3%
Bury	00BM	1.2%	0.5%	2.1%	0.6%	10.5%	1.4%	13.1%	1.5%	8.7%	1.2%	18.5%	1.7%
Manchester	00BN	0.7%	0.2%	1.4%	0.4%	13.2%	1.0%	14.6%	1.1%	12.4%	0.9%	22.6%	1.2%
Oldham	00BP	1.3%	0.4%	2.1%	0.5%	13.7%	1.3%	14.0%	1.3%	9.0%	1.1%	19.2%	1.5%
Rochdale	00BQ	0.7%	0.3%	1.9%	0.6%	14.2%	1.4%	15.2%	1.4%	10.3%	1.2%	17.3%	1.5%
Salford	00BR	1.0%	0.4%	1.2%	0.5%	11.6%	1.3%	14.5%	1.4%	9.0%	1.2%	18.0%	1.6%
Stockport	00BS	2.4%	0.6%	1.2%	0.4%	8.9%	1.1%	13.4%	1.3%	6.1%	0.9%	16.1%	1.4%
Tameside	00BT	0.4%	0.3%	0.4%	0.4%	15.1%	1.4%	14.9%	1.4%	11.6%	1.3%	19.0%	1.6%
Trafford	00BU	1.9%	0.5%	1.3%	0.5%	13.4%	1.3%	13.4%	1.4%	9.1%	1.1%	18.0%	1.6%
Wigan	00BW	0.5%	0.2%	1.0%	0.4%	16.2%	1.3%	14.2%	1.2%	9.2%	1.0%	18.4%	1.4%
Lancashire	30	0.8%	0.2%	1.2%	0.2%	13.4%	0.6%	14.0%	0.6%	9.0%	0.5%	17.0%	0.7%
Burnley	30UD	0.8%	0.6%	1.1%	0.6%	15.8%	2.2%	15.3%	2.2%	9.6%	1.8%	18.1%	2.4%
Chorley	30UE	x	x	1.3%	0.7%	13.9%	2.0%	13.9%	2.0%	7.8%	1.5%	16.3%	2.2%
Fylde	30UF	x	x	1.1%	0.8%	14.7%	2.0%	14.2%	2.8%	8.1%	2.0%	14.1%	2.7%
Hindburn	30UG	2.0%	0.9%	1.4%	0.8%	12.0%	2.0%	15.8%	2.3%	11.2%	2.0%	19.4%	2.5%
Lancaster	30UH	x	x	1.0%	0.6%	15.4%	2.0%	12.1%	1.8%	10.9%	1.8%	16.5%	2.1%
Pendle	30UJ	1.3%	0.7%	1.3%	0.7%	13.3%	2.1%	12.3%	2.1%	8.0%	1.7%	16.3%	2.3%
Preston	30UK	1.8%	0.7%	1.9%	0.7%	10.9%	1.7%	13.1%	1.8%	8.5%	1.5%	17.3%	2.0%
Ribble Valley	30UL	x	x	1.0%	0.8%	13.7%	2.8%	14.3%	2.7%	7.4%	2.1%	15.3%	2.8%
Rossendale	30UM	x	x	1.4%	0.9%	15.3%	2.7%	16.2%	2.7%	9.4%	2.2%	17.9%	2.8%
South Ribble	30UN	0.5%	0.4%	1.1%	0.6%	11.5%	1.9%	15.6%	2.2%	6.8%	1.5%	16.3%	2.2%
West Lancashire	30UP	x	x	0.8%	0.5%	12.4%	1.9%	14.0%	2.0%	11.0%	1.8%	18.8%	2.3%
Wyre	30UQ	x	x	0.9%	0.6%	13.9%	2.3%	13.2%	2.2%	8.6%	1.8%	16.9%	2.4%
Merseyside (Met County)	2B	0.9%	0.2%	1.1%	0.2%	13.8%	0.6%	14.4%	0.6%	10.6%	0.5%	21.1%	0.7%
Knowsley	00BX	x	x	0.8%	0.4%	14.8%	1.8%	15.4%	1.8%	12.0%	1.6%	23.3%	2.1%
Liverpool	00BY	1.9%	0.4%	1.3%	0.4%	11.4%	1.0%	14.5%	1.1%	10.4%	0.9%	22.6%	1.3%
St. Helens	00BZ	0.7%	0.4%	1.3%	0.5%	17.6%	1.8%	14.5%	1.6%	12.9%	1.5%	21.7%	1.9%
Sefton	00CA	0.4%	0.2%	1.1%	0.4%	14.4%	1.3%	14.0%	1.3%	9.7%	1.1%	17.8%	1.4%
Wirral	00CB	0.4%	0.2%	0.9%	0.4%	14.0%	1.2%	14.1%	1.2%	9.6%	1.0%	20.6%	1.4%
YORKSHIRE AND THE HUMBER	D	1.1%	0.1%	1.4%	0.1%	13.1%	0.3%	14.0%	0.3%	9.6%	0.3%	18.6%	0.3%
East Riding of Yorkshire UA	00FB	0.3%	0.2%	0.9%	0.3%	15.3%	1.3%	14.6%	1.2%	10.3%	1.1%	16.7%	1.3%
Kingston upon Hull, City of UA	00FA	0.5%	0.3%	0.8%	0.3%	15.2%	1.4%	14.2%	1.4%	10.3%	1.2%	21.5%	1.7%
North East Lincolnshire UA	00FC	x	x	1.0%	0.5%	16.2%	1.8%	14.8%	1.7%	11.9%	1.6%	18.7%	1.8%
North Lincolnshire UA	00FD	2.3%	0.7%	2.1%	0.7%	11.6%	1.5%	13.2%	1.7%	7.6%	1.2%	18.5%	2.0%
York UA	00FF	1.6%	0.6%	2.0%	0.7%	10.1%	1.5%	12.3%	1.6%	6.7%	1.2%	16.7%	1.8%
North Yorkshire	36	0.8%	0.3%	0.9%	0.3%	13.3%	0.9%	14.4%	0.9%	8.6%	0.8%	16.2%	1.0%
Craven	36UB	1.2%	1.0%	x	x	12.0%	2.9%	13.5%	2.9%	9.6%	2.6%	14.8%	3.0%
Hambleton	36UC	1.5%	0.8%	1.5%	0.8%	11.2%	2.2%	15.0%	2.4%	8.0%	1.9%	16.7%	2.5%
Harrogate	36UD	x	x	0.7%	0.4%	13.5%	1.8%	13.8%					

Area	Code	Underweight				Overweight				Obese			
		Reception		Year 6		Reception		Year 6		Reception		Year 6	
		Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±
EAST MIDLANDS	E	1.2%	0.1%	1.3%	0.1%	13.0%	0.3%	14.4%	0.3%	9.1%	0.3%	17.8%	0.4%
Derby UA	00FK	0.7%	0.3%	1.9%	0.5%	12.2%	1.3%	14.8%	1.4%	9.5%	1.1%	17.2%	1.5%
Leicester UA	00FN	2.2%	0.5%	3.0%	0.2%	11.2%	0.3%	14.5%	1.0%	10.7%	1.0%	17.8%	1.3%
Nottingham UA	00FY	1.2%	0.4%	1.5%	0.5%	14.5%	1.3%	13.7%	1.3%	10.0%	1.2%	22.6%	1.6%
Rutland UA	00FP	x	x	x	x	13.5%	3.8%	13.7%	4.0%	7.2%	2.9%	15.1%	4.1%
Derbyshire	17	0.5%	0.2%	0.8%	0.2%	14.3%	0.9%	14.5%	0.8%	8.6%	0.7%	17.7%	0.9%
Amber Valley	17UB	x	x	0.7%	0.5%	16.2%	2.4%	14.4%	2.0%	9.8%	2.0%	15.3%	2.0%
Bolsover	17UC	x	x	0.7%	0.5%	13.4%	2.6%	14.0%	2.5%	8.6%	2.5%	19.7%	2.8%
Chesterfield	17UD	0.8%	0.6%	1.1%	0.7%	13.2%	2.2%	15.4%	2.3%	9.1%	1.9%	18.2%	2.4%
Derbyshire Dales	17UF	x	x	0.9%	0.7%	13.2%	2.7%	14.7%	2.6%	7.4%	2.1%	17.4%	2.7%
Erewash	17UG	0.9%	0.6%	1.1%	0.6%	11.3%	2.1%	14.0%	2.0%	7.3%	1.7%	18.3%	2.3%
High Peak	17UH	x	x	x	x	16.9%	2.5%	14.2%	2.2%	8.7%	1.9%	16.4%	2.3%
North East Derbyshire	17UJ	x	x	0.7%	0.5%	15.1%	2.3%	14.4%	2.1%	7.8%	1.7%	17.5%	2.2%
South Derbyshire	17UK	x	x	1.3%	0.8%	14.8%	2.6%	14.6%	2.4%	10.3%	2.2%	20.7%	2.8%
Leicestershire	31	0.8%	0.2%	1.0%	0.3%	14.0%	0.9%	14.0%	0.9%	8.9%	0.7%	16.0%	1.0%
Blaby	31UB	1.1%	0.6%	0.9%	0.6%	15.0%	2.2%	14.3%	2.4%	9.7%	1.8%	16.3%	2.6%
Charnwood	31UC	0.7%	0.5%	1.6%	0.7%	14.9%	2.0%	13.9%	2.0%	9.4%	1.6%	18.8%	2.2%
Harborough	31UD	x	x	x	x	11.4%	2.2%	13.2%	2.5%	7.0%	1.6%	11.4%	2.3%
Hinckley and Bosworth	31UE	x	x	x	x	14.9%	2.3%	13.8%	2.2%	9.4%	1.9%	16.8%	2.3%
Melton	31UF	x	x	x	x	13.5%	3.1%	14.3%	3.1%	8.8%	2.6%	16.7%	3.3%
North West Leicestershire	31UH	x	x	1.0%	0.7%	13.1%	2.2%	15.4%	2.4%	8.5%	1.8%	14.6%	2.4%
Oadby and Wigston	31UJ	2.5%	1.3%	2.3%	1.2%	14.6%	2.9%	12.9%	2.6%	8.5%	2.3%	15.4%	2.8%
Lincolnshire	32	1.5%	0.3%	1.1%	0.3%	13.4%	0.8%	15.0%	0.8%	9.9%	0.7%	18.5%	0.9%
Boston	32UB	1.0%	0.8%	1.0%	0.8%	10.0%	2.4%	14.4%	2.8%	11.1%	2.5%	17.8%	3.1%
East Lindsey	32UC	0.8%	0.5%	0.7%	0.5%	15.8%	2.1%	13.8%	1.8%	11.9%	1.9%	19.9%	2.1%
Lincoln	32UD	x	x	x	x	15.8%	2.6%	13.9%	2.4%	11.6%	2.2%	21.6%	2.9%
North Kesteven	32UE	0.7%	0.5%	1.1%	0.6%	13.1%	2.0%	15.1%	2.1%	6.7%	1.5%	15.2%	2.1%
South Holland	32UF	3.8%	1.5%	1.3%	0.8%	9.0%	2.2%	17.3%	2.7%	6.5%	1.9%	23.5%	3.0%
South Kesteven	32UG	3.7%	1.1%	2.1%	0.8%	12.0%	1.8%	14.8%	1.9%	15.5%	1.9%	15.5%	2.5%
West Lindsey	32UH	x	x	1.0%	0.6%	16.3%	2.5%	16.5%	2.4%	12.5%	2.2%	23.5%	2.5%
Northamptonshire	34	2.3%	0.4%	1.0%	0.2%	11.2%	0.7%	14.6%	0.8%	8.3%	0.7%	17.8%	0.9%
Corby	34UB	1.6%	1.0%	x	x	12.4%	2.6%	16.7%	2.9%	9.0%	2.2%	19.9%	3.2%
Daventry	34UC	1.4%	0.8%	x	x	11.3%	2.2%	13.3%	2.3%	8.3%	1.9%	14.4%	2.4%
East Northamptonshire	34UD	1.7%	0.9%	1.0%	0.7%	11.4%	2.2%	13.7%	2.2%	7.3%	1.7%	17.3%	2.5%
Kettering	34UE	0.7%	0.5%	0.9%	0.6%	12.8%	2.1%	14.7%	2.2%	9.6%	1.8%	18.8%	2.5%
Northampton	34UF	3.3%	0.8%	1.0%	0.5%	11.2%	1.5%	15.3%	1.7%	8.6%	1.3%	19.0%	1.8%
South Northamptonshire	34UG	3.5%	1.1%	1.4%	0.7%	9.4%	1.7%	13.0%	2.0%	5.8%	1.4%	14.9%	2.1%
Wellingborough	34UH	2.2%	1.1%	1.5%	0.8%	10.4%	2.2%	16.0%	2.6%	9.7%	2.1%	19.9%	2.8%
Nottinghamshire	37	0.7%	0.2%	1.2%	0.3%	13.1%	0.8%	14.3%	0.8%	9.1%	0.7%	17.6%	0.9%
Ashted	37UB	1.1%	0.6%	1.0%	0.2%	12.7%	2.3%	13.2%	2.3%	20.8%	2.8%	20.8%	2.8%
Bassettlaw	37UC	x	x	0.6%	0.5%	14.5%	2.2%	13.3%	2.0%	10.5%	1.9%	19.2%	2.3%
Broxtowe	37UD	1.2%	0.7%	1.5%	0.8%	12.6%	2.2%	14.9%	2.2%	7.7%	1.8%	16.9%	2.3%
Gedling	37UE	x	x	1.3%	0.7%	12.4%	2.0%	15.0%	2.1%	9.3%	1.7%	14.6%	2.1%
Mansfield	37UF	0.9%	0.6%	1.8%	0.8%	13.3%	2.1%	15.4%	2.3%	10.3%	1.8%	19.6%	2.5%
Newark and Sherwood	37UG	0.7%	0.5%	0.3%	0.3%	15.1%	2.3%	15.4%	2.3%	15.4%	2.3%	17.4%	2.3%
Rushcliffe	37UH	x	x	1.2%	0.7%	11.4%	1.8%	12.9%	2.0%	7.3%	1.5%	14.5%	2.1%
WEST MIDLANDS	F	1.2%	0.1%	1.5%	0.1%	13.2%	0.3%	14.5%	0.3%	10.1%	0.2%	19.8%	0.3%
Herefordshire, County of UA	00GA	x	x	1.2%	0.5%	14.7%	1.8%	13.7%	1.7%	9.0%	1.4%	18.9%	1.9%
Shropshire UA	00GG	0.4%	0.3%	0.8%	0.3%	14.8%	1.4%	14.8%	1.4%	9.2%	1.1%	17.5%	1.4%
<i>Former districts of:</i>													
Bridgnorth	39UB	x	x	x	x	11.0%	2.9%	17.8%	3.5%	9.4%	2.7%	18.1%	3.5%
North Shropshire	39UC	x	x	x	x	17.1%	3.4%	15.3%	3.2%	10.6%	2.8%	19.3%	3.5%
Oswestry	39UD	x	x	x	x	16.0%	3.8%	15.7%	3.9%	10.3%	3.2%	16.6%	4.0%
Shrewsbury and Aitcham	39UE	x	x	1.0%	0.6%	14.9%	2.4%	14.9%	2.4%	7.7%	2.0%	16.8%	2.8%
South Shropshire	39UF	x	x	1.0%	0.6%	15.0%	4.0%	14.6%	3.4%	9.6%	3.3%	20.1%	3.9%
Stoke-on-Trent UA	00GL	0.5%	0.3%	1.9%	0.5%	13.5%	1.3%	14.4%	1.4%	12.0%	1.2%	21.8%	1.7%
Telford and Wrekin UA	00GF	0.7%	0.4%	1.3%	0.5%	16.6%	1.7%	15.3%	1.7%	11.7%	1.5%	18.8%	1.8%
Staffordshire	41	0.7%	0.2%	1.2%	0.2%	13.7%	0.7%	14.9%	0.8%	9.9%	0.6%	18.6%	0.8%
Cannock Chase	41UB	x	x	0.7%	0.5%	14.7%	2.2%	15.3%	2.2%	9.4%	1.8%	21.7%	2.5%
East Staffordshire	41UC	1.0%	0.6%	0.7%	0.5%	14.6%	2.0%	15.7%	2.1%	15.7%	1.9%	15.2%	2.3%
Lichfield	41UD	0.8%	0.5%	0.7%	0.5%	11.9%	2.0%	13.7%	2.2%	8.9%	1.7%	18.2%	2.4%
Newcastle-under-Lyme	41UE	1.1%	0.6%	1.0%	0.5%	12.5%	2.0%	13.9%	1.9%	10.3%	1.8%	20.4%	2.2%
South Staffordshire	41UF	x	x	1.5%	0.7%	12.8%	2.1%	15.4%	2.1%	13.0%	2.1%	20.0%	2.4%
Stafford	41UG	0.8%	0.5%	2.2%	0.8%	12.3%	1.8%	15.2%	2.1%	8.3%	1.5%	16.4%	2.1%
Staffordshire Moorlands	41UH	x	x	1.7%	0.8%	16.2%	2.6%	14.0%	2.6%	14.0%	2.6%	14.0%	2.6%
Tamworth	41UJ	x	x	1.3%	0.8%	15.5%	2.6%	16.5%	2.6%	11.5%	2.3%	19.1%	2.7%
Warwickshire	44	0.7%	0.2%	1.1%	0.3%	12.3%	0.9%	15.1%	1.0%	7.5%	0.7%	15.1%	1.0%
North Warwickshire	44UB	x	x	x	x	16.2%	2.9%	18.5%	2.9%	9.3%	2.3%	17.3%	2.8%
Nuneaton and Bedworth	44UC	1.1%	0.6%	x	x	13.3%	1.9%	15.6%	2.1%	8.6%	1.5%	18.7%	2.3%
Rugby	44UD	1.7%	0.8%	1.8%	0.9%	11.2%	2.0%	14.6%	2.3%	7.3%	1.6%	13.0%	2.2%
Stratford-on-Avon	44UE	0.5%	0.4%	0.4%	0.3%	9.9%	1.8%	12.4%	2.2%	8.3%	1.2%	12.4%	2.2%
Warwick	44UF	x	x	1.3%	0.7%	12.1%	1.9%	15.2%	2.2%	6.8%	1.5%	14.0%	2.2%
West Midlands (Met County)	2E	1.7%	0.1%	1.9%	0.2%	12.7%	0.4%	14.3%	0.4%	10.6%	0.3%	21.5%	0.5%
Birmingham	00CN	2.0%	0.2%	2.4%	0.3%	11.9%	0.3%	14.5%	0.6%	10.8%	0.5%	21.6%	0.7%
Coventry	00CC	1.0%	0.3%	1.2%	0.4%	12.8%	1.1%	15.5%	1.3%	10.6%	1.1%	19.4%	1.4%
Dudley	00CB	1.1%	0.4%	1.0%	0.3%	14.7%	1.4%	14.4%	1.2%	9.3%	0.8%	14.3%	1.4%
Sandwell	00CS	2.1%	0.5%	1.4%	0.4%	13.3%	1.1%	14.4%	1.2%	12.9%	1.1%	24.6%	1.4%
Solihull	00CT	0.6%	0.3%	1.7%	0.6%	12.5%	1.4%	14.4%	1.5%	8.8%	1.2%	15.6%	1.6%
Walsall	00CU	1.6%	0.4%	2.2%	0.5%	11.3%	1.1%	13.0%	1.2%	9.3%	1.0%	21.9%	1.4%
Wolverhampton	00CW	2.0%	0.5%	1.7%	0.5%	14.3%	1.4%	13.3%	1.3%	11.3%	1.2%	23.8%	1.6%
Worcestershire	47	0.5%	0.2%	0.3%	0.3%	14.2%	1.0%	14.3%	1.0%	9.4%	0.8%	16.9%	1.0%
Bromsgrove	47UB	x	x	1.0%	0.7%	15.9%	2.4%	12.8%	2.3%	8.7%	1.6%	16.5%	2.5%
Malvern Hills	47UC	x	x	1.6%	0.8%	14.6%	2.7%	15.7%	2.7%	7.9%	2.1%	14.5%	2.6%
Redditch	47UD	0.9%	0.7%	x	x	12.1%	2.3%	14.7%	2.5%	9.3%	2.0%	17.5%	2.7%
Worcester	47UE	0.9%	0.7%	1.3%	0.7%	14.2%	2.3%	14.4%	2.3%	9.3%	1.9%	17.3%	2.5%
Wychevon	47UF	x	x	1.3%	0.7%	13.2%	3.1%	14.4%	2.1%	11.4%	1.9%	15.7%	2.5%
Wyre Forest	47UG	0.7%	0.6%	1.1%	0.7%	15.0%	2.4%	14.5%	2.4%	11.2%	2.1%	19.6%	2.7%
EAST OF ENGLAND	G	0.8%	0.1%	1.2%	0.1%	13.1%	0.3%	14.1%	0.3%	8.7%	0.2%	16.6%	0.3%
Bedford UA	00KB	0.7%	0.4%	0.9%	0.4%	13.8%	1.7%	14.2%	1.7%	11.6%	1.6%	17.5%	1.8%
<i>Former district of:</i>													
Bedford	09UD	0.7%	0.4%										

Area	Code	Underweight				Overweight				Obese			
		Reception		Year 6		Reception		Year 6		Reception		Year 6	
		Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±
LONDON	H	1.3%	0.1%	1.6%	0.1%	12.4%	0.2%	14.7%	0.3%	11.2%	0.2%	21.3%	0.3%
Barking and Dagenham	00AB	1.0%	0.4%	1.2%	0.5%	14.7%	1.5%	16.1%	1.6%	12.1%	1.3%	24.2%	1.9%
Barnet	00AC	1.4%	0.4%	1.2%	0.4%	13.1%	1.2%	14.1%	1.3%	9.5%	1.0%	18.1%	1.4%
Bexley	00AD	0.8%	0.4%	1.0%	0.4%	12.3%	1.4%	16.6%	1.5%	10.2%	1.2%	21.4%	1.6%
Brent	00AE	1.9%	0.5%	2.2%	0.5%	12.8%	1.2%	14.3%	1.3%	11.3%	1.1%	22.9%	1.6%
Bromley	00AF	0.7%	0.3%	1.2%	0.4%	12.3%	1.2%	15.5%	1.3%	7.3%	0.9%	16.0%	1.3%
Camden	00AG	1.7%	0.7%	1.6%	0.7%	11.3%	1.6%	16.6%	2.1%	11.6%	1.6%	20.1%	2.2%
Croydon	00AH	0.7%	0.3%	1.1%	0.4%	12.9%	1.1%	14.6%	1.2%	11.1%	1.0%	21.3%	1.4%
Ealing	00AJ	1.4%	0.4%	2.0%	0.5%	12.5%	1.1%	14.4%	1.2%	12.1%	1.1%	21.9%	1.4%
Enfield	00AK	1.3%	0.4%	1.7%	0.4%	12.8%	1.1%	15.7%	1.2%	13.3%	1.1%	23.0%	1.4%
Greenwich	00AL	0.8%	0.3%	1.2%	0.4%	14.0%	1.3%	14.2%	1.4%	12.0%	1.2%	22.9%	1.6%
Hackney	00AM	1.3%	0.5%	1.4%	0.5%	13.6%	1.4%	15.6%	1.6%	13.3%	1.4%	24.0%	1.8%
Hammersmith and Fulham	00AN	1.6%	0.7%	2.1%	0.9%	11.1%	1.8%	14.2%	2.1%	12.0%	1.9%	22.4%	2.5%
Haringey	00AP	1.2%	0.4%	1.1%	0.4%	12.2%	1.2%	15.8%	1.4%	11.8%	1.2%	20.7%	1.6%
Harrow	00AQ	2.4%	0.7%	2.9%	0.7%	11.5%	1.4%	14.4%	1.5%	9.8%	1.3%	18.2%	1.6%
Havering	00AR	0.8%	0.3%	1.4%	0.5%	14.9%	1.4%	14.7%	1.4%	10.7%	1.2%	17.6%	1.5%
Hillingdon	00AS	1.9%	0.5%	2.0%	0.5%	9.9%	1.1%	12.9%	1.2%	9.2%	1.0%	19.7%	1.5%
Hounslow	00AT	2.0%	0.5%	1.5%	0.5%	13.1%	1.3%	15.4%	1.5%	12.1%	1.3%	23.5%	1.8%
Islington	00AU	0.8%	0.4%	1.0%	0.5%	11.9%	1.6%	15.7%	1.8%	12.6%	1.6%	21.4%	2.1%
Kensington and Chelsea	00AW	x	x	1.3%	0.8%	14.3%	2.4%	14.7%	2.4%	8.7%	1.9%	22.4%	2.8%
Kingston upon Thames	00AX	1.7%	0.6%	1.4%	0.6%	10.0%	1.5%	13.2%	1.8%	7.6%	1.3%	16.4%	2.0%
Lambeth	00AY	1.3%	0.5%	1.2%	0.5%	14.0%	1.4%	15.3%	1.5%	13.8%	1.4%	25.3%	1.8%
Lewisham	00AZ	0.7%	0.3%	1.0%	0.4%	13.2%	1.2%	15.2%	1.4%	12.0%	1.2%	22.1%	1.6%
Merton	00BA	2.1%	0.7%	1.8%	0.7%	10.9%	1.4%	15.7%	1.9%	8.7%	1.3%	18.6%	2.0%
Newham	00BB	2.2%	0.5%	2.1%	0.5%	12.0%	1.1%	14.6%	1.2%	14.2%	1.1%	24.6%	1.4%
Redbridge	00BC	1.7%	0.5%	2.4%	0.6%	12.0%	1.1%	13.7%	1.3%	10.8%	1.1%	20.7%	1.5%
Richmond upon Thames	00BD	0.7%	0.4%	1.3%	0.6%	11.2%	1.4%	12.2%	1.6%	5.9%	1.1%	11.7%	1.6%
Southwark	00BE	1.0%	0.4%	1.0%	0.4%	14.0%	1.4%	13.3%	1.4%	14.2%	1.4%	26.7%	1.8%
Sutton	00BF	1.0%	0.4%	1.2%	0.5%	12.2%	1.5%	14.1%	1.6%	8.4%	1.3%	18.0%	1.8%
Tower Hamlets	00BG	1.7%	0.5%	2.7%	0.6%	10.5%	1.2%	13.7%	1.4%	13.4%	1.3%	25.7%	1.7%
Waltham Forest	00BH	2.1%	0.6%	2.7%	0.7%	10.2%	1.2%	13.8%	1.5%	9.9%	1.2%	20.8%	1.7%
Wandsworth	00BJ	1.0%	0.4%	1.6%	0.6%	10.9%	1.3%	15.4%	1.6%	10.2%	1.3%	20.9%	1.8%
Westminster	00BK	1.1%	0.6%	1.5%	0.7%	11.6%	1.7%	15.6%	2.1%	14.7%	1.9%	23.6%	2.4%
SOUTH EAST	J	1.0%	0.1%	1.2%	0.1%	13.0%	0.2%	14.1%	0.2%	8.7%	0.2%	16.0%	0.3%
Braclennell Forest UA	00MA	0.8%	0.3%	0.7%	0.5%	14.0%	1.4%	14.6%	2.1%	8.2%	1.7%	14.5%	2.1%
Brighton and Hove UA	00ML	0.6%	0.3%	1.5%	0.5%	13.7%	1.4%	15.2%	1.6%	8.9%	1.2%	16.4%	1.6%
Isle of Wight UA	00MW	x	x	0.6%	0.5%	16.1%	2.2%	14.6%	2.1%	9.9%	1.8%	19.1%	2.3%
Medway UA	00LC	0.9%	0.4%	0.7%	0.3%	13.5%	1.3%	14.6%	1.3%	11.8%	1.2%	19.4%	1.5%
Milton Keynes UA	00MG	1.2%	0.4%	1.5%	0.5%	12.6%	1.2%	14.7%	1.5%	9.4%	1.1%	15.9%	1.5%
Portsmouth UA	00MR	0.6%	0.3%	0.5%	0.3%	15.4%	1.6%	15.3%	1.7%	12.5%	1.5%	21.4%	1.9%
Reading UA	00MC	0.9%	0.5%	1.8%	0.7%	12.1%	1.7%	14.6%	1.9%	9.9%	1.6%	19.9%	2.2%
Slough UA	00MD	4.1%	1.1%	2.8%	0.9%	11.6%	1.9%	14.1%	1.9%	13.1%	2.0%	19.4%	2.1%
Southampton UA	00MS	1.9%	0.6%	1.1%	0.5%	11.4%	1.3%	12.9%	1.5%	9.3%	1.2%	17.1%	1.7%
West Berkshire UA	00MB	0.7%	0.4%	0.9%	0.5%	12.8%	1.6%	14.0%	1.8%	8.9%	1.4%	16.5%	1.9%
Windsor and Maidenhead UA	00ME	1.5%	0.7%	1.2%	0.6%	9.6%	1.6%	13.5%	2.0%	6.5%	1.4%	13.5%	2.0%
Wokingham UA	00MF	1.1%	0.5%	1.6%	0.6%	10.9%	1.6%	13.5%	1.7%	6.2%	1.2%	13.1%	1.7%
Buckinghamshire	11	2.3%	0.4%	1.7%	0.4%	9.6%	0.8%	13.0%	1.0%	7.4%	0.7%	14.2%	1.0%
Aylesbury Vale	11UB	3.0%	0.8%	1.9%	0.6%	8.3%	1.3%	13.4%	1.6%	7.2%	1.2%	13.2%	1.6%
Chiltern	11UC	0.9%	0.6%	1.0%	0.6%	10.4%	1.3%	13.3%	2.2%	7.6%	1.8%	13.7%	2.2%
South Bucks	11UE	x	x	x	x	12.4%	2.7%	13.3%	2.8%	8.8%	2.3%	17.0%	3.1%
Wycombe	11UF	2.8%	0.8%	2.4%	0.7%	9.7%	1.4%	12.4%	1.6%	6.8%	1.2%	14.6%	1.7%
East Sussex	21	1.4%	0.4%	1.5%	0.4%	12.7%	1.0%	13.6%	1.0%	8.2%	0.8%	14.5%	1.0%
Eastbourne	21UC	x	x	1.7%	0.9%	14.3%	2.4%	13.5%	2.3%	10.6%	2.1%	15.5%	2.4%
Hastings	21UD	1.9%	1.0%	1.1%	0.7%	11.7%	2.3%	14.8%	2.4%	8.4%	2.0%	14.0%	2.4%
Lewes	21UF	1.7%	0.9%	1.8%	1.0%	13.5%	2.4%	12.3%	2.4%	8.2%	2.0%	14.4%	2.6%
Rother	21UG	3.2%	1.3%	0.9%	0.7%	10.4%	2.2%	14.0%	2.5%	8.5%	2.0%	15.4%	2.6%
Wealden	21UH	0.7%	0.5%	1.8%	0.7%	13.2%	1.9%	13.4%	1.8%	6.3%	1.4%	13.8%	1.8%
Hampshire	24	0.9%	0.2%	1.1%	0.2%	13.4%	0.6%	13.3%	0.6%	8.6%	0.5%	15.5%	0.6%
Basingstoke and Deane	24UB	0.8%	0.5%	1.2%	0.5%	12.2%	1.6%	14.2%	1.7%	10.0%	1.5%	17.1%	1.8%
East Hampshire	24UC	x	x	1.3%	0.7%	12.6%	2.1%	12.3%	1.9%	7.9%	1.7%	14.7%	2.1%
Eastleigh	24UD	2.1%	0.9%	1.3%	0.6%	12.0%	1.9%	12.5%	1.8%	9.2%	1.7%	13.9%	1.9%
Fareham	24UE	x	x	0.5%	0.4%	17.8%	2.2%	13.9%	2.0%	8.1%	1.6%	13.6%	2.0%
Gosport	24UF	x	x	0.8%	0.6%	15.8%	2.5%	16.7%	2.6%	11.0%	2.2%	18.8%	2.7%
Hart	24UG	1.0%	0.6%	0.9%	0.6%	12.8%	2.1%	11.9%	2.1%	5.9%	1.5%	12.4%	2.1%
Havant	24UH	x	x	1.0%	0.6%	14.6%	2.1%	13.8%	2.1%	11.2%	1.9%	16.2%	2.2%
New Forest	24UJ	1.8%	0.7%	1.5%	0.6%	11.6%	1.6%	12.4%	1.6%	7.0%	1.3%	16.1%	1.8%
Rushmoor	24UL	0.9%	0.6%	1.0%	0.7%	15.5%	2.3%	13.8%	2.3%	7.8%	1.7%	20.8%	2.7%
Test Valley	24UN	0.6%	0.4%	0.7%	0.5%	13.5%	2.0%	12.6%	1.9%	8.5%	1.6%	15.0%	2.1%
Winchester	24UP	1.1%	0.7%	1.0%	0.6%	10.8%	2.0%	14.2%	2.2%	8.5%	1.8%	12.9%	2.1%
Kent	29	0.5%	0.1%	1.0%	0.2%	14.0%	0.6%	14.9%	0.6%	9.0%	0.5%	17.5%	0.6%
Ashford	29UB	0.7%	0.5%	0.6%	0.4%	13.3%	2.0%	14.2%	2.0%	9.2%	1.7%	16.9%	2.1%
Canterbury	29UC	x	x	1.1%	0.6%	14.4%	2.1%	13.3%	1.9%	7.6%	1.6%	19.3%	2.2%
Dartford	29UD	x	x	0.9%	0.6%	13.7%	2.2%	17.5%	2.5%	9.5%	1.6%	20.7%	2.8%
Dover	29UE	x	x	1.8%	0.7%	15.1%	2.4%	14.2%	2.1%	8.7%	1.9%	18.9%	2.8%
Gravesham	29UF	0.7%	0.5%	1.2%	0.7%	15.0%	2.2%	17.0%	2.4%	10.6%	1.9%	21.4%	2.8%
Maidstone	29UG	x	x	0.8%	0.5%	16.7%	2.0%	16.6%	1.9%	10.3%	1.6%	15.7%	1.9%
Sevenoaks	29UH	x	x	1.1%	0.7%	11.4%	1.9%	15.6%	2.3%	8.4%	1.7%	13.9%	2.2%
Shepway	29UL	x	x	1.5%	0.7%	12.5%	2.2%	14.3%	2.1%	8.4%	1.9%	18.0%	2.3%
Swale	29UM	0.7%	0.4%	1.6%	0.6%	14.6%	1.9%	13.8%	1.8%	8.9%	1.5%	16.5%	1.9%
Thanet	29UN	x	x	1.0%	0.5%	13.3%	2.1%	15.2%	1.9%	7.9%	1.6%	18.8%	2.1%
Tonbridge and Malling	29UP	0.9%	0.5%	0.8%	0.5%	12.1%	1.8%	15.7%	2.0%	8.4%	1.5%	17.0%	2.0%
Tunbridge Wells	29UQ	x	x	x	x	14.7%	2.2%	13.5%	2.1%	10.3%	1.8%	18.0%	2.4%
Oxfordshire	38	0.5%	0.2%	1.2%	0.3%	14.5%	0.9%	14.3%	0.9%	8.6%	0.7%	15.8%	1.0%
Cherwell	38UB	1.0%	0.5%	1.6%	0.7%	13.2%	1.7%	13.5%	1.8%	7.9%	1.4%	16.4%	2.0%
Oxford	38UC	0.7%	0.5%	1.5%	0.8%	13.4%	2.0%	14.1%	2.2%	9.4%	1.7%	19.0%	2.5%
South Oxfordshire	38UD	x	x	1.0%	0.6%	13.0%	1.8%	14.2%	1.9%	7.3%	1.4%	14.0%	1.9%
Vale of White Horse	38UE	x	x	0.7%	0.5%	13.5%	1.9%	13.9%	2.2%	7.3%	1.5%	15.0%	

Area	Code	Underweight				Overweight				Obese			
		Reception		Year 6		Reception		Year 6		Reception		Year 6	
		Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±	Prevalence	95% confidence interval ±
SOUTH WEST	K	0.6%	0.1%	1.1%	0.1%	14.0%	0.3%	14.2%	0.3%	8.9%	0.3%	16.2%	0.3%
Bath and North East Somerset UA	00HA	0.4%	0.3%	0.9%	0.4%	16.5%	1.9%	14.2%	1.7%	7.9%	1.3%	13.4%	1.7%
Bournemouth UA	00HN	0.9%	0.5%	1.1%	0.6%	12.5%	1.8%	14.6%	1.9%	7.8%	1.4%	15.2%	1.9%
Bristol, City of UA	00HB	0.5%	0.2%	0.9%	0.3%	14.4%	1.1%	15.2%	1.2%	10.4%	1.0%	17.9%	1.3%
Cornwall UA	00HE	0.4%	0.2%	1.1%	0.3%	14.4%	1.1%	14.3%	1.0%	9.9%	0.9%	17.8%	1.1%
<i>Former districts of:</i>													
Caradon	15UB	x	x	1.0%	0.8%	15.9%	3.3%	15.0%	2.9%	8.8%	2.6%	16.3%	3.0%
Carrick	15UC	x	x	0.9%	0.6%	13.8%	2.3%	15.6%	2.4%	9.4%	2.0%	17.9%	2.5%
Kerrier	15UD	x	x	0.8%	0.6%	14.6%	2.4%	14.3%	2.3%	11.2%	2.2%	22.4%	2.8%
North Cornwall	15UE	x	x	x	x	14.2%	2.7%	15.7%	2.7%	11.0%	2.4%	15.6%	2.7%
Penwith and Isles of Scilly	15UF	x	x	1.2%	0.9%	13.3%	2.9%	13.3%	2.7%	10.4%	2.6%	17.6%	3.0%
Restormel	15UG	1.1%	0.7%	2.1%	1.0%	14.6%	2.5%	11.5%	2.1%	8.3%	1.9%	16.3%	2.5%
North Somerset UA	00HC	x	x	0.7%	0.4%	14.1%	1.5%	15.5%	1.6%	7.0%	1.1%	16.0%	1.6%
Plymouth UA	00HG	x	x	0.9%	0.4%	14.7%	1.4%	14.8%	1.4%	10.1%	1.2%	18.3%	1.6%
Poole UA	00HP	x	x	1.0%	0.6%	12.4%	1.9%	11.9%	1.8%	8.8%	1.6%	15.5%	2.1%
South Gloucestershire UA	00HD	0.8%	0.3%	0.8%	0.3%	13.2%	1.3%	14.5%	1.3%	9.1%	1.1%	16.5%	1.4%
Swindon UA	00HX	x	x	1.0%	0.4%	13.6%	1.5%	14.4%	1.5%	9.5%	1.2%	16.5%	1.6%
Torbay UA	00HH	0.9%	0.6%	1.3%	0.6%	14.2%	2.0%	12.9%	1.8%	9.9%	1.7%	16.0%	2.0%
Wiltshire	00HY	0.8%	0.3%	1.2%	0.3%	12.5%	1.0%	13.7%	1.0%	7.8%	0.8%	14.7%	1.1%
<i>Former districts of:</i>													
Kennet	46UB	x	x	0.8%	0.6%	13.4%	2.8%	15.3%	2.5%	5.8%	1.9%	15.3%	2.5%
North Wiltshire	46UC	x	x	1.6%	0.7%	12.4%	1.8%	13.8%	1.8%	8.8%	1.5%	15.2%	1.9%
Salisbury	46UD	0.6%	0.5%	1.0%	0.6%	11.4%	1.9%	13.4%	2.1%	6.7%	1.5%	14.5%	2.2%
West Wiltshire	46UF	1.5%	0.7%	1.1%	0.6%	13.1%	1.8%	12.8%	1.9%	8.8%	1.6%	13.7%	1.9%
Devon	18	0.5%	0.2%	1.0%	0.2%	15.4%	0.9%	14.3%	0.8%	9.8%	0.7%	16.1%	0.9%
East Devon	18UB	1.1%	0.6%	1.1%	0.6%	13.1%	2.0%	15.0%	2.0%	6.8%	1.5%	14.3%	2.0%
Exeter	18UC	x	x	0.6%	0.5%	16.2%	2.5%	14.2%	2.2%	14.2%	2.3%	20.2%	2.6%
Mid Devon	18UD	x	x	x	x	17.4%	2.8%	14.0%	2.6%	9.7%	2.2%	13.8%	2.6%
North Devon	18UE	x	x	1.2%	0.7%	14.8%	2.3%	14.0%	2.3%	9.1%	1.9%	16.0%	2.4%
South Hams	18UG	1.1%	0.8%	1.3%	0.8%	14.0%	2.7%	15.8%	2.6%	10.8%	2.4%	13.5%	2.4%
Teignbridge	18UH	x	x	0.8%	0.5%	15.2%	2.2%	13.1%	2.0%	9.6%	1.8%	17.0%	2.2%
Torridge	18UK	x	x	1.4%	1.0%	13.9%	3.2%	13.4%	2.8%	9.3%	2.7%	17.8%	3.2%
West Devon	18UL	x	x	x	x	18.1%	3.8%	15.2%	3.3%	8.5%	2.8%	16.4%	3.4%
Dorset	19	0.4%	0.2%	0.9%	0.3%	13.6%	1.2%	14.0%	1.1%	8.3%	0.9%	14.9%	1.1%
Christchurch	19UC	x	x	2.0%	1.4%	11.1%	3.2%	14.6%	3.5%	10.5%	3.1%	15.1%	3.5%
East Dorset	19UD	x	x	x	x	13.8%	2.7%	13.7%	2.4%	7.9%	2.1%	13.3%	2.4%
North Dorset	19UE	x	x	1.3%	0.9%	10.8%	2.6%	15.3%	3.0%	6.9%	2.1%	14.4%	2.9%
Purbeck	19UG	x	x	x	x	11.6%	3.4%	15.7%	3.5%	9.2%	3.1%	16.7%	3.6%
West Dorset	19UH	x	x	0.8%	0.6%	13.8%	2.5%	13.8%	2.3%	6.3%	1.7%	15.0%	2.3%
Weymouth and Portland	19UJ	x	x	0.9%	0.7%	18.5%	3.1%	12.0%	2.5%	10.8%	2.4%	16.0%	2.8%
Gloucestershire	23	1.5%	0.3%	1.4%	0.3%	12.8%	0.9%	14.3%	1.0%	7.8%	0.7%	15.9%	1.0%
Cheltenham	23UB	1.2%	0.7%	0.7%	0.6%	14.2%	2.3%	13.0%	2.3%	7.3%	1.7%	13.6%	2.3%
Cotswold	23UC	4.3%	1.5%	3.6%	1.5%	10.3%	2.3%	13.9%	2.7%	5.4%	1.7%	14.6%	2.8%
Forest of Dean	23UD	x	x	1.0%	0.7%	15.8%	2.9%	16.0%	2.7%	9.2%	2.3%	17.6%	2.8%
Gloucester	23UE	2.0%	0.8%	1.8%	0.8%	11.5%	1.9%	14.2%	2.0%	8.5%	1.7%	18.1%	2.2%
Stroud	23UF	0.8%	0.5%	0.7%	0.5%	13.4%	2.0%	13.6%	2.1%	8.0%	1.6%	14.0%	2.1%
Tewkesbury	23UG	x	x	x	x	12.1%	2.5%	15.8%	2.9%	7.9%	2.1%	17.4%	3.0%
Somerset	40	0.7%	0.2%	1.4%	0.3%	14.9%	1.0%	14.1%	1.0%	8.7%	0.8%	16.7%	1.0%
Mendip	40UB	x	x	1.4%	0.7%	15.0%	2.2%	14.4%	2.2%	9.3%	1.8%	16.6%	2.3%
Sedgemoor	40UC	0.5%	0.4%	1.7%	0.8%	15.0%	2.1%	16.0%	2.2%	9.8%	1.8%	16.9%	2.2%
South Somerset	40UD	1.3%	0.6%	1.4%	0.6%	14.4%	1.8%	11.9%	1.7%	8.5%	1.4%	17.1%	1.9%
Taunton Deane	40UE	x	x	1.3%	0.7%	15.6%	2.2%	14.3%	2.2%	7.2%	1.6%	17.3%	2.3%
West Somerset	40UF	x	x	x	x	14.2%	4.6%	16.3%	4.4%	8.0%	3.5%	12.6%	4.0%

Notes:
1. Data for City of London have been combined with Hackney and data for Isles of Scilly have been combined with Penwith to avoid disclosure of small numbers (1-5 individuals) in the overweight and obese estimates.
x - Underweight prevalence estimates based on small numbers (1-5 individuals) have been suppressed and are denoted by 'x'. Corresponding healthy weight prevalence estimates have also been suppressed to maintain suppression.

Source: The Health and Social Care Information Centre, Lifestyle Statistics / Department of Health Cross-Government Obesity Unit NCMP Dataset
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Annex 2: Data Quality report

Table C shows a number of PCT data quality measures for the 2008/09 NCMP. As discussed at the beginning of Section 3, there have been considerable improvements in the overall NCMP data quality since 2006/07.

Table C: PCT data quality report for NCMP 2008/09

Key:

	Green	Amber	Red
Measure 1 - Overall participation rate	≥85%	≥80% and <85%	<80%
Measure 2 - % of records with heights rounded to the nearest whole number	<25%	≥25% and ≤50%	>50%
Measure 3 - % of records with weights rounded to the nearest whole number	<25%	≥25% and ≤50%	>50%
Measure 4 - % of records with complete home postcodes	>95%	≥75% and ≤95%	<75%
Measure 5 - % of records with complete ethnicity codes	>90%	≥50% and ≤90%	<50%

PCT name	Overall participation rate	Percentage of records with heights rounded to the nearest whole number	Percentage of records with weights rounded to the nearest whole number	Percentage of records with missing home postcodes	Percentage of records with missing ethnicity codes
PCT National average	90%	21%	15%	2%	23%
TAN North East Lincolnshire Care Trust Plus	98%	18%	7%	1%	0%
5C3 City & Hackney Teaching PCT	98%	22%	11%	1%	1%
5FL Bath & North East Somerset PCT	98%	20%	10%	0%	12%
5ND County Durham PCT	97%	15%	10%	1%	65%
5KF Gateshead PCT	97%	16%	10%	1%	15%
5M3 Walsall Teaching PCT	97%	17%	10%	0%	1%
5HQ Bolton PCT	96%	11%	9%	1%	0%
5KG South Tyneside PCT	96%	14%	11%	1%	44%
5GC Luton PCT	96%	20%	11%	0%	19%
5M1 South Birmingham PCT	96%	23%	11%	22%	1%
5PE Dudley PCT	96%	22%	10%	0%	1%
5E1 Stockton-On-Tees Teaching PCT	96%	25%	11%	0%	53%
5PF Sandwell PCT	96%	17%	9%	1%	1%
5NJ Sefton PCT	96%	16%	11%	0%	2%
5D8 North Tyneside PCT	96%	16%	20%	0%	1%
5D7 Newcastle PCT	96%	71%	10%	0%	100%
5HP Blackpool PCT	96%	19%	10%	99%	1%
5NH East Lancashire Teaching PCT	96%	20%	10%	0%	2%
5LD Lambeth PCT	96%	19%	10%	0%	20%
5D9 Hartlepool PCT	95%	25%	12%	0%	0%
5NR Trafford PCT	95%	27%	35%	0%	7%
5HX Ealing PCT	95%	23%	16%	0%	41%
5PR Great Yarmouth & Waveney PCT	95%	15%	9%	0%	11%
5K7 Camden PCT	95%	18%	12%	1%	1%
5LH Tameside & Glossop PCT	95%	15%	9%	0%	84%
5JX Bury PCT	94%	19%	21%	1%	2%
5KL Sunderland Teaching PCT	94%	17%	18%	1%	29%
5J2 Warrington PCT	94%	21%	19%	0%	31%
5HY Hounslow PCT	94%	16%	9%	1%	8%
5J9 Darlington PCT	94%	23%	9%	1%	16%
5FE Portsmouth City Teaching PCT	94%	13%	19%	0%	55%
5A9 Barnet PCT	94%	21%	11%	1%	3%
TAL Torbay Care Trust	94%	19%	19%	0%	11%
5F5 Salford PCT	94%	20%	10%	0%	2%
5NL Liverpool PCT	94%	35%	71%	1%	14%
5N2 Kirklees PCT	93%	20%	15%	0%	35%
5P6 West Sussex PCT	93%	15%	16%	0%	100%
5N1 Leeds PCT	93%	22%	9%	0%	3%
5PP Cambridgeshire PCT	93%	14%	10%	0%	3%
5PK South Staffordshire PCT	93%	24%	12%	1%	5%
5M6 Richmond & Twickenham PCT	93%	17%	10%	100%	2%
5QJ Bristol PCT	93%	33%	15%	0%	19%
5LF Lewisham PCT	93%	17%	11%	1%	6%
5NM Halton & St Helens PCT	93%	17%	11%	0%	8%
5A8 Greenwich Teaching PCT	93%	18%	12%	0%	8%
5C9 Haringey Teaching PCT	93%	13%	10%	1%	10%
5CS Newham PCT	93%	22%	10%	0%	1%
5MK Telford & Wrekin PCT	93%	10%	9%	0%	17%
5H8 Rotherham PCT	92%	19%	11%	0%	56%
5NV North Yorkshire & York PCT	92%	36%	21%	2%	7%
5MV Wolverhampton City PCT	92%	29%	24%	0%	5%
5PJ Stoke On Trent PCT	92%	22%	9%	0%	11%
5M2 Shropshire County PCT	92%	46%	12%	0%	33%
5QL Somerset PCT	92%	31%	11%	1%	2%
5PN Peterborough PCT	92%	17%	14%	0%	33%
5C1 Enfield PCT	92%	32%	11%	0%	2%
5MX Heart of Birmingham Teaching PCT	92%	28%	13%	2%	6%
5HG Ashton, Leigh & Wigan PCT	92%	19%	10%	0%	1%
5N6 Derbyshire County PCT	92%	18%	10%	1%	3%
5M8 North Somerset PCT	92%	15%	11%	0%	2%
5NG Central Lancashire PCT	92%	16%	12%	1%	68%
5LG Wandsworth PCT	91%	28%	7%	0%	1%
5NA Redbridge PCT	91%	23%	7%	1%	3%
5PT Suffolk PCT	91%	21%	10%	0%	9%
5N3 Wakefield District PCT	91%	20%	10%	0%	60%
5N9 Lincolnshire Teaching PCT	91%	49%	48%	0%	100%
5K5 Brent Teaching PCT	91%	27%	10%	0%	5%
5AT Hillingdon PCT	91%	20%	10%	0%	4%
TAC Northumberland Care Trust	91%	16%	10%	0%	1%
5LA Kensington & Chelsea PCT	91%	9%	9%	0%	4%
5LQ Brighton & Hove City PCT	91%	22%	14%	0%	7%
5A5 Kingston PCT	91%	14%	10%	3%	0%
5NW East Riding of Yorkshire PCT	91%	31%	12%	0%	100%
5A7 Bromley PCT	91%	15%	10%	0%	8%

	PCT name	Overall participation rate	Percentage of records with heights rounded to the nearest whole number	Percentage of records with weights rounded to the nearest whole number	Percentage of records with missing home postcodes	Percentage of records with missing ethnicity codes
5QG	Berkshire East PCT	91%	34%	27%	2%	18%
5P2	Bedfordshire PCT	91%	16%	10%	1%	14%
5N4	Sheffield PCT	91%	20%	9%	1%	21%
5F1	Plymouth Teaching PCT	91%	14%	10%	1%	1%
5QK	Wiltshire PCT	90%	17%	15%	1%	2%
5NP	Central & Eastern Cheshire PCT	90%	20%	7%	0%	79%
5NK	Wirral PCT	90%	12%	11%	2%	100%
5A4	Havering PCT	90%	28%	10%	0%	3%
5JE	Barnsley PCT	90%	15%	10%	0%	1%
5EM	Nottingham City PCT	90%	21%	10%	0%	17%
5J4	Knowsley PCT	90%	14%	11%	2%	100%
5NF	North Lancashire Teaching PCT	90%	17%	17%	0%	3%
5QE	Oxfordshire PCT	90%	12%	10%	0%	2%
5QN	Bournemouth & Poole Teaching PCT	90%	22%	11%	1%	4%
5PD	Northamptonshire Teaching PCT	90%	22%	26%	0%	88%
5C4	Tower Hamlets PCT	90%	19%	12%	7%	0%
5CC	Blackburn With Darwen PCT	90%	24%	8%	1%	1%
5PW	North East Essex PCT	90%	18%	26%	1%	10%
5PV	West Essex PCT	90%	17%	13%	1%	22%
5P8	Hastings & Rother PCT	90%	25%	34%	1%	24%
5QF	Berkshire West PCT	90%	29%	11%	0%	52%
5MD	Coventry Teaching PCT	90%	11%	10%	0%	4%
5NQ	Heywood, Middleton & Rochdale PCT	90%	27%	13%	0%	4%
5A3	South Gloucestershire PCT	90%	30%	19%	0%	15%
5PH	North Staffordshire PCT	90%	24%	15%	0%	12%
5P9	West Kent PCT	90%	18%	15%	0%	87%
5L1	Southampton City PCT	90%	20%	30%	0%	30%
5K3	Swindon PCT	89%	19%	18%	0%	5%
5H1	Hammersmith & Fulham PCT	89%	27%	21%	0%	17%
5QC	Hampshire PCT	89%	16%	22%	1%	53%
5L3	Medway PCT	89%	16%	18%	0%	10%
5K9	Croydon PCT	89%	15%	11%	0%	4%
5QD	Buckinghamshire PCT	89%	27%	42%	1%	11%
TAK	Bexley Care Trust	89%	18%	11%	0%	4%
5N7	Derby City PCT	89%	16%	10%	1%	2%
5EF	North Lincolnshire PCT	89%	25%	53%	1%	62%
5NT	Manchester PCT	89%	24%	10%	1%	27%
5P5	Surrey PCT	88%	23%	10%	18%	29%
5LC	Westminster PCT	88%	23%	14%	23%	4%
5PL	Worcestershire PCT	88%	16%	10%	0%	3%
5CQ	Milton Keynes PCT	88%	16%	11%	0%	4%
5NY	Bradford & Airedale Teaching PCT	88%	31%	24%	0%	18%
5P7	East Sussex Downs & Weald PCT	88%	19%	22%	0%	9%
5PY	South West Essex PCT	88%	19%	10%	12%	2%
5NN	Western Cheshire PCT	88%	22%	33%	0%	58%
5J5	Oldham PCT	88%	28%	12%	1%	3%
5P3	East & North Hertfordshire PCT	88%	27%	16%	0%	2%
5PC	Leicester City PCT	88%	16%	9%	1%	7%
5KM	Middlesbrough PCT	88%	17%	10%	0%	52%
5M7	Sutton & Merton PCT	88%	18%	13%	0%	20%
5K6	Harrow PCT	88%	28%	11%	1%	1%
5J6	Calderdale PCT	88%	28%	40%	0%	22%
5QQ	Devon PCT	87%	27%	17%	0%	4%
5F7	Stockport PCT	87%	22%	77%	1%	26%
5K8	Islington PCT	87%	20%	12%	1%	2%
5C2	Barking & Dagenham PCT	87%	83%	11%	0%	0%
5PM	Warwickshire PCT	87%	17%	10%	0%	20%
5N8	Nottinghamshire County Teaching PCT	87%	20%	11%	0%	3%
5PG	Birmingham East & North PCT	87%	19%	10%	1%	23%
5PQ	Norfolk PCT	87%	14%	10%	0%	27%
5QM	Dorset PCT	87%	16%	11%	0%	4%
5ET	Bassetlaw PCT	86%	15%	11%	0%	0%
5NX	Hull Teaching PCT	86%	32%	11%	0%	100%
5P4	West Hertfordshire PCT	86%	17%	19%	0%	2%
5NE	Cumbria Teaching PCT	86%	20%	17%	0%	43%
5CN	Herefordshire PCT	85%	13%	7%	0%	37%
5QA	Eastern & Coastal Kent PCT	85%	16%	11%	1%	16%
5N5	Doncaster PCT	84%	18%	11%	0%	97%
5QH	Gloucestershire PCT	83%	22%	34%	0%	79%
5QT	Isle of Wight NHS PCT	83%	17%	9%	0%	3%
5LE	Southwark PCT	83%	34%	11%	1%	54%
5PA	Leicestershire County & Rutland PCT	82%	27%	13%	1%	3%
TAM	Solihull Care Trust	81%	15%	9%	1%	1%
5QR	Redcar & Cleveland PCT	81%	32%	17%	0%	46%
5QP	Cornwall & Isles of Scilly PCT	80%	18%	17%	1%	3%
5PX	Mid Essex PCT	80%	25%	48%	1%	11%
5P1	South East Essex PCT	78%	9%	8%	0%	5%
5NC	Waltham Forest PCT	77%	21%	7%	0%	1%

The rows in Table C are sorted by the main data quality indicator: measure 1, the overall participation rate (the percentage of eligible Reception and Year 6 children for which valid measurements were received).

Four other data quality measures are also presented:

- Measures 2 and 3: percentage of records with rounded heights / weights. Heights and weights in the NCMP should be rounded to 1 decimal place, and so it would be expected that approximately 10% of measurements would be rounded to the nearest whole number. Percentages that are considerably different to this may have been inappropriately rounded. Analysis by the National Obesity Observatory has shown that systematic rounding to the nearest whole number can have a small overall biasing effect on height and weight measurements.
- Measures 4 and 5: percentages of records with complete home postcodes and ethnicity codes. The 2007/08 NCMP was the first year for which collection of these data fields was mandatory.

Annex 3 – Confidence intervals

A confidence interval gives an indication of the likely error around an estimate that has been calculated from measurements based on a sample of the population. It indicates the range within which the true value for the population as a whole can be expected to lie, taking natural random variation into account.

Throughout this report, 95% confidence intervals are used. These are known as such because if it were possible to repeat the same programme under the same conditions a number of times, we would expect 95% of the confidence intervals calculated in this way to contain the true population value for that estimate.

Larger sample sizes lead to narrower confidence intervals, since there is less natural random variation in the results when more individuals are measured. The NCMP has relatively narrow confidence limits because of the large size of the sample.

Note that:

- Confidence limits have not been adjusted using the finite population correction factor; and
- Raw confidence limits do not reflect error due to issues such as data quality and low response rates and, therefore, may give a misleading impression of the degree of precision.

Where applicable in this report, confidence limits are included in graphs. These confidence limits give an indication of whether any observed differences in prevalence (e.g. between school years) are likely to be real, or whether they are likely to be due to chance and the small numbers involved. **Where 95% confidence limits for two subgroups do not overlap, the difference can be said to be statistically significant.**

Year 6 obesity prevalence figures have the upper confidence limits expanded wherever possible in this report to represent the uncertainties in the estimates due to response bias. Analysis has shown that in Year 6, the children who opt out are more likely to be obese than those who are measured (see Annex 6). Given that the final Year 6 participation rates for the 2006/07, 2007/08, and 2008/09 NCMP were different (78%, 87%, and 89% respectively), this is an important consideration when assessing whether there has been a genuine change in obesity prevalence between the years.

Annex 4 - Calculation of prevalence

Prevalence = number of overweight or obese ÷ number of valid records uploaded

The data collection tool calculates the number of overweight/obese children using the following steps for each record:

1. calculate the BMI score: $BMI = \frac{10,000}{h(cm)^2} \times w(kg)$
2. calculate the BMI z-score:
 - a. look up child age (rounded to the nearest whole month) and sex on the UK National BMI centiles classification;
 - b. retrieve the corresponding L, M, and S values for use in the following formula (where y is the BMI score):

$$z = \frac{\left(\frac{y}{M}\right)^L - 1}{LS}$$

3. calculate the BMI p-score by converting the above z-score using the standardised normal distribution
4. children with a BMI p-score of ≤ 0.02 are flagged as 'underweight', those with a p-score ≥ 0.85 and < 0.95 are flagged as 'overweight' and those with a p-score ≥ 0.95 are flagged as 'obese'.

Prevalence rates are then calculated by dividing the numbers of children flagged by the number of eligible records uploaded for each school year.

Annex 5 – Calculation of participation rates

Calculating participation rates:

The participation rate is the proportion of eligible children who were measured by the PCT. The participation rate is calculated by dividing **the number of pupils measured** by **the number of pupils who were eligible for measurement**.

From 2007/08 PCTs were given access to a secure NCMP website where they were able to view, following their data upload, their participation rate and the basis upon which it had been calculated. PCTs were able to review their data, make corrections, and re-upload data to the NCMP database, as many times as necessary.

The **number of pupils measured** is the total number of records uploaded by a PCT to the NCMP database *excluding*:

- i. Invalid records (further information on the validation process can be found in Annex 7);
- ii. Records from independent and special schools.

Note: after a PCT had uploaded data they were provided with information on the secure NCMP website detailing the records that would be removed due to being invalid. PCTs were given the opportunity to correct these records and thereby increase their participation rate.

The **number of pupils eligible for measurement** for each school year is the number of pupils in state-maintained schools, with primary school aged children, excluding pupils with special educational needs.

- i. Estimates of the total number of pupils that were eligible for measurement, based on DCSF data, were initially supplied to PCTs. PCTs were then able to update these figures if they deemed them inaccurate.
- ii. These 'eligible' figures were automatically validated, on upload, through comparison to other PCT supplied data: (i) the school-level headcounts and (ii) the number of pupils with special educational needs.
- iii. Based on this comparison, the PCT supplied 'eligible' figure was either accepted or rejected by the database¹⁴.
- iv. PCTs had the opportunity to review and correct their data, if necessary.

¹⁴ The report compared **(A)** to **(B) – (C)** for each year, where:

- (A)** is the number of eligible pupils
- (B)** is the state-maintained schools headcount sum
- (C)** is the number of pupils with special educational needs

Since the number of eligible pupils should be the number of pupils in state-maintained schools, excluding pupils with special educational needs, it would be expected that **(A) = (B) – (C)**.

The database carried out the following calculation:

- Where **(A)/ ((B) – (C))** is in the range 0.95 to 1.05, **(A)** was **accepted**.
- Where **(A)/ ((B) – (C))** is outside the range 0.95 to 1.05, **(A)** was **rejected** and **(B) – (C)** was used instead.

Annex 6 - Effect of participation rate on prevalence

Since the participation rates for the NCMP were not 100%, the datasets used to estimate prevalence are based on samples. The prevalence rates for the sample are assumed to apply to the entire population.

To avoid biased results, a sample must be representative of the entire population from which it was drawn. In the case of the NCMP this means that every child must have an equal chance of being included in the dataset.

If the children who do not get included in the dataset share certain characteristics, such as being more likely to be overweight, then the sample would be biased. Such selective non-participation of overweight or obese children could potentially bias the results.

We do not have a good measure of the degree of selective opt out, but participation may provide a reasonable proxy of this factor. The higher the participation rate, the less chance there is for selective opt out, though this measure is far from perfect.

Analysis undertaken in 2007/08 investigated whether there is a relationship between participation rate and obesity prevalence by plotting each PCT's percentage point change in participation rate against their recorded change in prevalence.

It was deduced that there was no substantial association between participation rate and obesity prevalence for Reception children. However, it was suggested that there is a significant link between participation rates and obesity prevalence for Year 6 children. This suggests that a slightly disproportionate number of "obese" children in Year 6 could have missed measurement and, therefore, prevalence in Year 6 may be a slight underestimate.

The analysis showed that a 10 percentage point increase in Year 6 participation rate will, on average, lead to an increase in the Year 6 obesity prevalence estimate of approximately 0.6 percentage points. Around this estimate, there is a confidence interval of +/- 0.3 percentage points. The findings from similar analysis undertaken in 2008/09 was consistent with the 2007/08 findings.

Given that the Year 6 participation rate was 77.9% in 2006/07, it is likely that the true obesity prevalence in this year was underestimated by $((100-77.9)/10)*0.6 = 1.3$ percentage points +/- 0.3.

Given that the Year 6 participation rate was 86.6% in 2007/08, it is likely that the true obesity prevalence in this year was underestimated by $((100-86.6)/10)*0.6 = 0.8$ percentage points +/- 0.3.

Given that the Year 6 participation rate was 89.1% in 2008/09, it is likely that the true obesity prevalence in this year was underestimated by $((100-89.1)/10)*0.6 = 0.7$ percentage points +/- 0.3.

The headline Year 6 obesity prevalence estimates presented throughout this report have not been adjusted to take into account this element of underestimation, but the

upper confidence limits for Year 6 in figure 5 (year-on-year comparisons) have been adjusted.

There may be other confounding factors which also have an impact on the prevalence figures, and these are not investigated in this report.

In conclusion, participation rate is shown to have a slight but significant positive association with the estimated prevalence of obese Year 6 children in the NCMP data. For Reception there is no significant association between participation rate and prevalence.

Annex 7 – Data cleaning

The data that PCTs uploaded to the NCMP database underwent a series of data quality checks before being included in the national dataset. A guidance document was provided to PCTs and gives full details of the data quality checks that NCMP 2008/09 data underwent. It is available on the following link:

www.ic.nhs.uk/ncmp/validation

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