



## Child obesity and excess weight at small area level: Data update to include latest year 2015 to 2016

New National Child Measurement Programme (NCMP) data for child obesity and excess weight prevalence for children in Reception (aged 4-5 years) and Year 6 (aged 10-11 years) at sub-local authority level has been produced.

The latest NCMP data has been added to our series of Excel spreadsheets for Middle Super Output Areas (MSOA), Electoral Wards, and Clinical Commissioning Groups (CCG) and includes local authority and England figures for comparison. Data is presented by area of child residence using rolling three-year combined NCMP data to show small area trends from 2008/09 to 2015/16.

The small area level data spreadsheets will assist planning and delivery of services for children and the targeting of resources at a local level to help reduce the prevalence of excess weight and obesity.

### Main findings

- There is variation in child obesity and excess weight prevalence at small area level throughout England
- Children living in the most deprived areas are at the highest risk of obesity

### Summary

This data publication is a series of Excel spreadsheets providing trend data on the prevalence of excess weight (overweight including obesity) (NCMP 2010/11 to 2015/16) and obesity (NCMP 2008/09 to 2015/16) based on area of child residence, for 2011 MSOAs, 2015 Electoral Wards, 2015 CCGs, 2013 local authorities and England.

To produce as robust an indicator as possible at small area level, the prevalence estimates use three years of NCMP data combined; the latest data is presented for 2013/14 to 2015/16 combined. The comparator data provided at local authority and England level also uses three years of NCMP data combined.

## Interpreting the data

Prevalence of child obesity and excess weight varies across England. Analysis of national<sup>1</sup> and local authority<sup>2</sup> data shows that children resident in the most deprived areas in England are at the highest risk of being overweight and obese.

In England 9.3% of children in Reception were obese in 2013/14 to 2015/16, varying from 4.6% to 13.8% at local authority level. Among children in Year 6 in England 19.3% were obese in 2013/14 to 2015/16 varying from 9.8% to 27.1% between local authorities. There is often considerable variation between neighbourhoods within each local authority.

This variation within local authorities can be examined using data for MSOAs and wards. The data published in these spreadsheets will help to identify pockets of high obesity and excess weight and enable changes in prevalence to be monitored over time. This may help to assist planning and delivery of services for children.

Figures 1 and 2 show examples of how the data can be examined to identify local patterns and trends in child obesity prevalence using the data at Electoral Ward level.

When interpreting small area level data it is important to consider the confidence intervals around the values as they show the level of uncertainty in the prevalence estimates.

In general, the greater the number of measurements used within any analysis, the more reliable the resulting statistics (for example the England and local authority figures). Analysis based on small samples (such as MSOA and Ward level) may be affected by small number variation, and therefore the prevalence figure may not provide a reliable estimate of the true value in the underlying population.

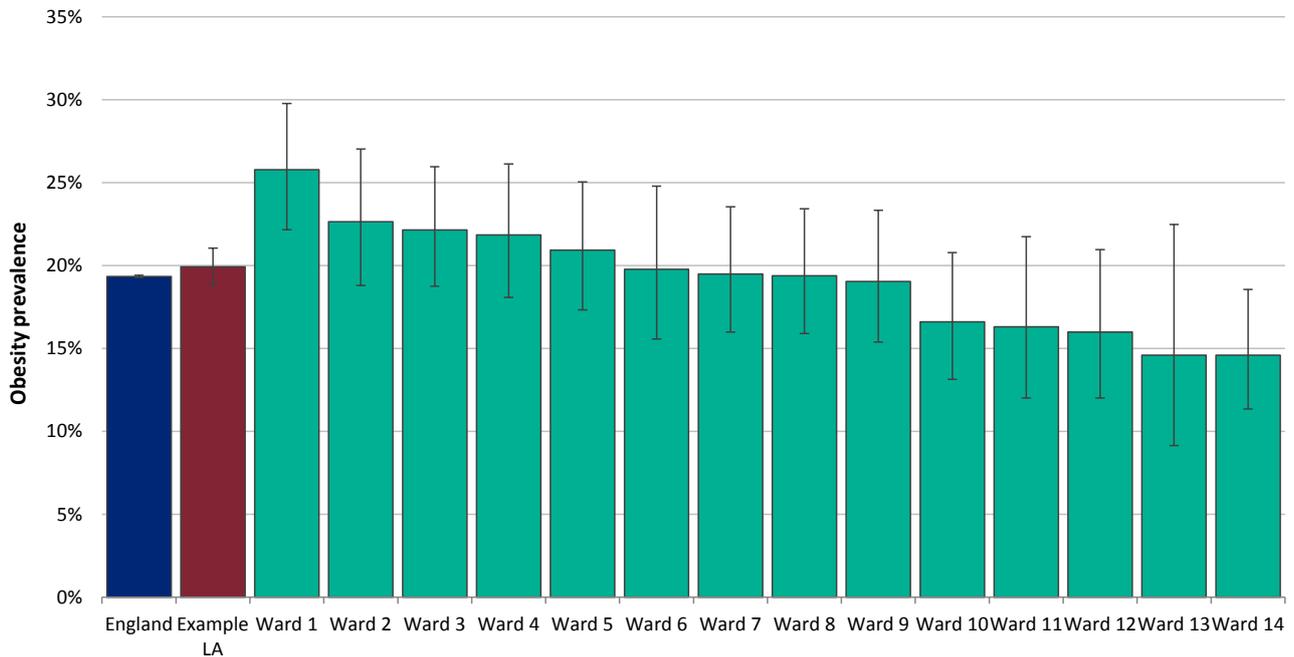
In Figure 1, Ward 1 has the highest prevalence value in Example local authority of 25.8% but the 95% confidence intervals range from 22.2% to 29.8% meaning we can be 95% certain that the true value is within this range. We can be confident that Year 6 obesity prevalence in Ward 1 is higher than the local authority and England values but can only say with some certainty it is higher than the prevalence in Wards 10, 11, 12, and 14 as in these cases the confidence intervals do not overlap. Where the confidence intervals do overlap, as between Ward 1 and Wards 2-9 and 13, we cannot be confident that the prevalence in Ward 1 is higher than the prevalence in any of these wards.

<sup>1</sup> Copley V. R. & Bray C. Changes in children's body mass index in England between 2006/7 and 2014/15: National Child Measurement Programme. London: Public Health England, October 2016  
[http://www.noo.org.uk/NCMP/National\\_report](http://www.noo.org.uk/NCMP/National_report) / [Link to document on K-Hub](#).

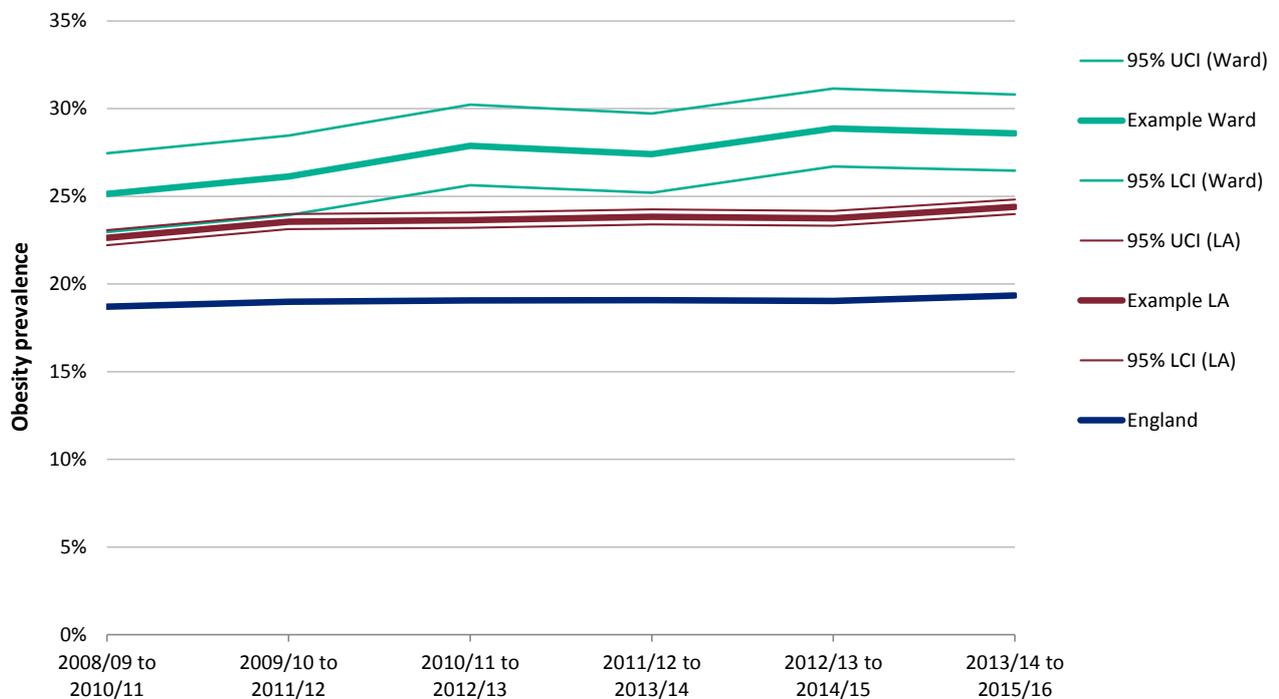
<sup>2</sup> Public Health England, NCMP Local Authority Profile <http://fingertips.phe.org.uk/profile/national-child-measurement-programme>

Figure 2 shows the trend in obesity prevalence among Year 6 children for an example ward compared to the local authority and England values. Obesity prevalence in this ward has been consistently higher than both the England and local authority values, prevalence appears to be showing a pattern of increase in this ward.

**Figure 1: An example of how to chart prevalence of obesity among Year 6 children (aged 10-11 years) by area of residence, NCMP 2013/14 to 2015/16 with 95% confidence intervals**



**Figure 2: An example of how to chart prevalence of obesity among Year 6 children (aged 10-11 years) by area of residence, NCMP 2008/09 to 2015/16 with 95% confidence intervals around Ward data**



UCI = upper confidence interval  
 LCI = lower confidence interval

## Background

- The NCMP annually measures the height and weight of over one million children in England and provides robust data on rates of child obesity and excess weight.
- Detailed metadata is available in each Excel spreadsheet available to download at <https://www.gov.uk/government/statistics/announcements/child-obesity-and-excess-weight-at-small-area-level-data-up-to-2015-to-2016>.
- Data for 2015 Electoral Wards and 2015 CCGs of child residence is estimated from suppressed 2011 MSOA data. This is to avoid the potential disclosure of small numbers which could result if data for non-coterminous geographies was released.
- In the 2006/07 NCMP, 57.7% of records had a valid child postcode of residence. In 2007/08 this figure had risen to 95.1%. In the NCMP since 2008/09 over 99% of child records have a valid postcode, providing a large enough coverage to produce reliable estimates at small area level.
- Children with a body mass index (BMI) greater than or equal to the 95th centile of the British 1990 growth reference (UK90) BMI distribution have been classified as obese.
- Children with a BMI greater than or equal to the 85th centile of the British 1990 growth reference (UK90) BMI distribution have been classified as overweight including obese (excess weight).
- These indicators can also be examined in the Public Health England (PHE) **Local Health** tool. The latest data may not be available in Local Health due to different publication dates.
- The statistics were produced using the national analysis dataset provided to Public Health England by NHS Digital.

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