Severe obesity: The data for severe obesity provides contextual information to the existing child obesity indicators. Providing severe obesity data as separate information allows stakeholders to see the whole picture on overweight (including obese) and obesity. Users can examine patterns in variation of severe obesity across England for the latest year’s data 2016/17. In addition trend data for England, for obesity prevalence and overweight (including obese) prevalence in boys and girls has been brought together in one place.

Main Findings

- The average percentage of severely obese Reception age children in England was 2.4%, and for Year 6 children it was 4.1%
- There is significant variation in upper tier local authorities for severe obesity across the country. For children in Reception the lowest severe obesity prevalence is 0.9% in Kingston upon Thames and the highest is 4.7% in Barking and Dagenham. In Year 6 children severe obesity prevalence was lowest in Wokingham from (1.5%) and the highest in Barking and Dagenham (7.8%)
- Although in relative terms the prevalence of severe obesity is low, in absolute terms this represents a large number of children across the country, (14,787 Reception children and 22,646 Year 6 children)
- The National Child Measurement Programme (NCMP) data shows that severe obesity prevalence in children has strong associations with ethnic group, deprivation and sex
- The trend data for boys and girls reveals that the percentage of overweight and/or obese boys is consistently greater than the percentage of girls

Severe obesity prevalence by ethnicity

At Reception age, 4.92% of children of Black African ethnicity are severely obese while in Year 6, 9.03% of children of Black Caribbean ethnicity are severely obese. These levels are significantly worse compared to the England averages of 2.35% in Reception and 4.07% in Year 6.
For Reception, children of White British, any other White, White and Asian, and Chinese ethnicities have significantly lower obesity prevalence than the England average. In Year 6, children from White British, White and Asian, and Chinese communities have severe obesity prevalence that is significantly lower than the England average.

Chinese children have the lowest severe obesity prevalence in both Reception (1.23%), and Year 6 (3.04%).

**Figure 1: Prevalence of severe obesity in Reception children, by ethnic group, England 2016/17**

**Figure 2: Prevalence of severe obesity in Year 6 children, by ethnic group, England 2016/17**
Of children in Reception, 2.61% of boys and 2.07% of girls are severely obese. This is significantly above the England average for all children (2.35%) for boys, and significantly below it for girls (Figure 3).

**Figure 3: Prevalence of severe obesity in Reception children, by sex, England -2016/17**

In Year 6 (Figure 4) children, 4.78% of boys and 3.33% of girls are severely obese. This is significantly higher than the England average for all children (4.07%) for boys, and significantly below for girls.

**Figure 4: Prevalence of severe obesity in Year 6 children, by sex, England -2016/17**
Severe Obesity prevalence by deprivation deciles (IMD2015)

There is a slope of deprivation for severe obesity in both Reception children and Year 6 children, as can be seen from the charts below. In the most deprived decile for Reception children 3.71% are severely obese, significantly worse than the England average of 2.35% and in the least deprived severe obesity prevalence is 0.96%, significantly better than the England average. In Year 6, severe obesity prevalence in the most deprived decile is 6.67% significantly worse than the England average of 4.07%, and 1.33% for the least deprived decile (significantly better than the national average).

Figure 5: Prevalence of severe obesity in Reception children, by deprivation deciles (IMD2015), England -2016/17

![Chart showing severe obesity prevalence in Reception children by deprivation deciles.]

Figure 6: Prevalence of severe obesity in Year 6 children, by deprivation deciles (IMD2015), England -2016/17

![Chart showing severe obesity prevalence in Year 6 children by deprivation deciles.]

1 The Index of Multiple Deprivation, commonly known as the IMD, is the official measure of relative deprivation for small areas in England. Deciles are calculated by ranking the 32,844 neighbourhoods in England from most deprived to least deprived and dividing them into 10 equal groups.

[Link to IMD 2015 Frequently Asked Questions]

Trend data for England for obesity prevalence in Reception age children, by sex

The prevalence of obesity in boys in Reception has decreased from 10.7% in 2006/07 to 10.0% in 2016/17; however over the last two years there have been small but significant increases from a low of 9.5% in 2014/15.

For girls in Reception the prevalence of obesity has followed a different trajectory; the 2016/17 value of 9.2% has returned to the high of 2009/10, the highest since the NCMP records began in 2006/07. As with boys, the trend over the last two years is upwards, from a low of 8.7% in 2014/15.

Overall, the trend in child obesity fell from a high of 9.9% in 2006/07 to a low of 9.1% in 2014/15, rising in the last two years to 9.6% (Figure 7).

Figure 7: Prevalence of obesity in Reception children by sex: England 2016/17
Trend data for England for overweight (including obese) prevalence in Reception age children, by sex

The prevalence of overweight (including obese) in boys in Reception has decreased from 24.3% in 2006/07 to 23.2% in 2016/17; however, as with obesity prevalence, the trend over the last two years has seen small increases from a low of 22.6% in 2014/15.

For girls in Reception the prevalence of overweight (including obese) has once again followed a different trajectory; the 2016/17 value of 22.1% is the highest since the NCMP records began in 2006/07. As with boys, the trend over the last two years is upwards from a low of 21.2% in 2014/15.

Overall the trend in child overweight (including obese) fell from a high of 22.9% in 2006/07 to a low of 21.9% in 2014/15, to a rise in the last two years to 22.6% (Figure 8).

**Figure 8: Prevalence of overweight (including obese) in Reception children, by sex: England 2016/17**

Trend data for England for obesity prevalence in Year 6 age children, by sex

The prevalence of obesity in boys in Year 6 has increased from 19.0% in 2006/07 to 21.8% in 2016/17.

For girls in Year 6 the prevalence of obesity has followed a similar trajectory; from a low of 15.8% in 2006/07 to 18.1% in 2016/17.

Overall, the trend in child obesity rose from a low of 17.5% in 2006/07 to a high of 20.0% in 2016/17 (Figure 9).

Figure 9: Prevalence of obesity in Year 6 children by sex: England 2016/17
Trend data for England for overweight (including obese) prevalence in Year 6 age children, by sex

The prevalence of overweight (including obese) in boys in Year 6 has increased from 33.2% in 2006/07 to 36.0% in 2016/17. This year and last year’s figures have produced a plateau in growth for overweight (including obese) amongst Year 6 boys.

For girls in Year 6 the prevalence of overweight (including obese) has followed a similar trajectory; from a low of 30.0% in 2006/07 to 32.4% in 2016/17. However the percentage of 32.4% is a return to the previous all-time high of 32.4% in 2011/12.

Overall, the trend in child overweight (including obese) rose from a low of 31.7% in 2006/07 to a high of 32.4% in 2016/17 (Figure 10).

**Figure 10: Prevalence of overweight (including obese) in Year 6 children by sex: England 2016/17**
Background

Severely obese children are at risk of developing a number of serious acute and chronic health problems\(^2\). These children therefore pose a significant concern in terms of their health and well-being, and may require the provision of specialist services.

The NCMP annually measures over one million children and provides robust data on rates of childhood obesity. The NCMP LA Profile holds data from 2006/07 and allows users to compare local authority data by region or between 'CIPFA nearest neighbours' (local authorities with similar characteristics). The data indicators in this tool enable monitoring of the national ambition to "significantly reduce childhood obesity" as set out in the government’s 2016 publication, "Child Obesity a Plan for Action".

NHS Digital published commentary on the 2016/17 NCMP data when it was first released in November (available here: [http://digital.nhs.uk/catalogue/PUB30113](http://digital.nhs.uk/catalogue/PUB30113)). It provides high-level analysis of the prevalence of ‘underweight’, ‘healthy weight’, ‘overweight’, ‘obese’ and ‘overweight and obese combined’ children, in Reception (aged 4–5 years) and Year 6 (aged 10–11 years), measured in state schools in England in the school year 2016-17.

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