National Child Measurement Programme

2022/23

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Contents

Introduction

The National Child Measurement Programme (NCMP) began in 2005/06. It aims to measure the height and weight of every child in reception year (YR) and year 6 (Y6) – as they start and finish primary school. The programme collects population-level data to find out about patterns in growth and obesity and inform the planning and delivery of local services for children. This report provides results from the 2022/23 Sefton programme by age, sex and compared to other areas and time-periods.

Things to note

This report looks at children measured as part of the Sefton programme. This includes children who attend school in Sefton but live outside the borough. The appendix includes figures for all children with a Sefton postcode (measured outside or within Sefton).

The report also looks at areas that are smaller than Local Authority such as ward, school, and deprivation groups. Data from more than one year has been added together to increase the strength of some estimates. Calculating confidence intervals also helps to find out whether differences from the Sefton average are real (i.e. Statistically significant) rather than due to chance.

The Covid-19 pandemic disrupted the programme during 2019/20 and 2020/21. In 2019/20 measuring children stopped part-way through the school year as schools closed. Estimates for Y6 are judged reliable as 93.6% of children took part. In YR, Sefton completed measurement for 31.9% of children. Estimates are fit to publish but when explaining their meaning the lower number of children needs to be considered.

In 2020/21, the Office for Health Improvement and Disparities (OHID) asked local authorities to collect data in a sample of their schools. Sefton measured 466 children across eight primary schools. This small sample is unlikely to reflect the characteristics of all Sefton children. Therefore, there are no reliable figures for Sefton for 2020/21, only national and regional estimates.

Participation

Over 95% of children in YR and Y6 took part in the programme in 2022/23 - above the 85% target. The precentage taking part in Sefton was above the England average for YR (93.8%) and Y6 (92.7%). Sefton's participation was the third highest across the Liverpool City Region. Knowsley (96.3%) and Wirral (96.7%) had higher participation in YR. Knowsley and St Helens (both 95.6%) had higher participation than Sefton in Y6.

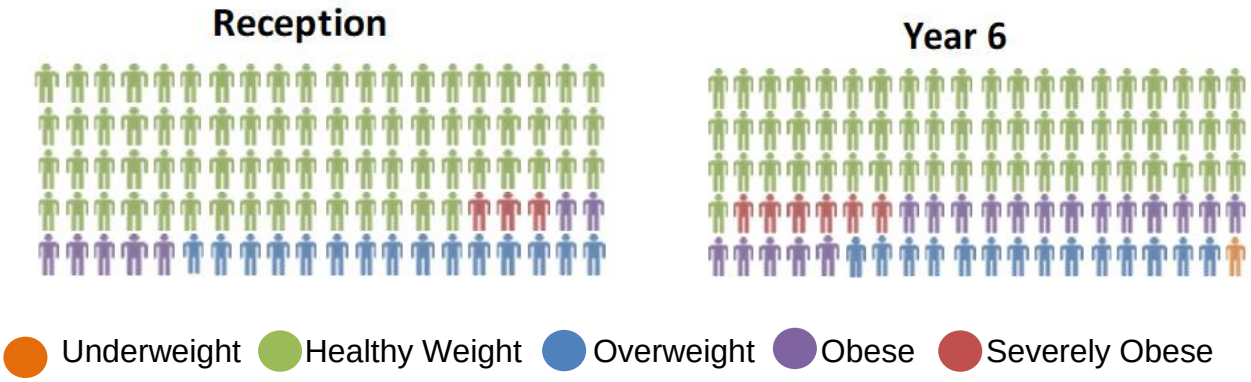
2022/23 Results

As part of the NCMP a child's Body Mass Index (BMI) is worked out and compared to a growth chart for their age and sex (the British 1990 growth chart, UK90). From this a BMI centile (how close the child's BMI is to the average BMI value) is worked out and put into the categories below:

- BMI centile equal to or less than 2 - Underweight
- BMI centile greater than 2 and less than 85 – Healthy Weight
- BMI centile equal to or greater than 85 and less than 95 – Overweight

- BMI centile equal to or greater than 95 – Living with obesity
- BMI centile equal to or greater than 99.6 - Living with severe obesity

In 2022/23, 1 in 10 YR children measured in Sefton were living with obesity, 1 in 4 were overweight or living with obesity and 1 in 33 children were living with severe obesity. In Y6, almost 1 in 4 children were living with obesity, over 1 in 3 were overweight or living with obesity and 1 in 17 were living with severe obesity. In Y6, 1 in 100 children were underweight. In YR less than 10 children were underweight.



Benchmarked Results

Sefton's percentage of overweight children and children living with obesity are compared with other areas to see whether there are any differences. Areas include England, the North West region, the other Liverpool City Region (LCR) authorities and similar local authorities (CIPFA nearest neighbours).

Sefton's YR overweight rates are significantly higher than the national and regional averages. However, Y6 overweight rates, YR obesity rates and Y6 obesity rates are not significantly different to the England and North West averages.

Sefton's YR and Y6 obesity rates are the second lowest of the Liverpool City Region (LCR), with Wirral the lowest. The YR obesity rate is significantly lower than the Knowsley rate and Sefton's Y6 obesity rate is significantly lower than Knowsley, Liverpool, and Halton. Overweight rates do not differ significantly between Sefton and the other LCR authorities.

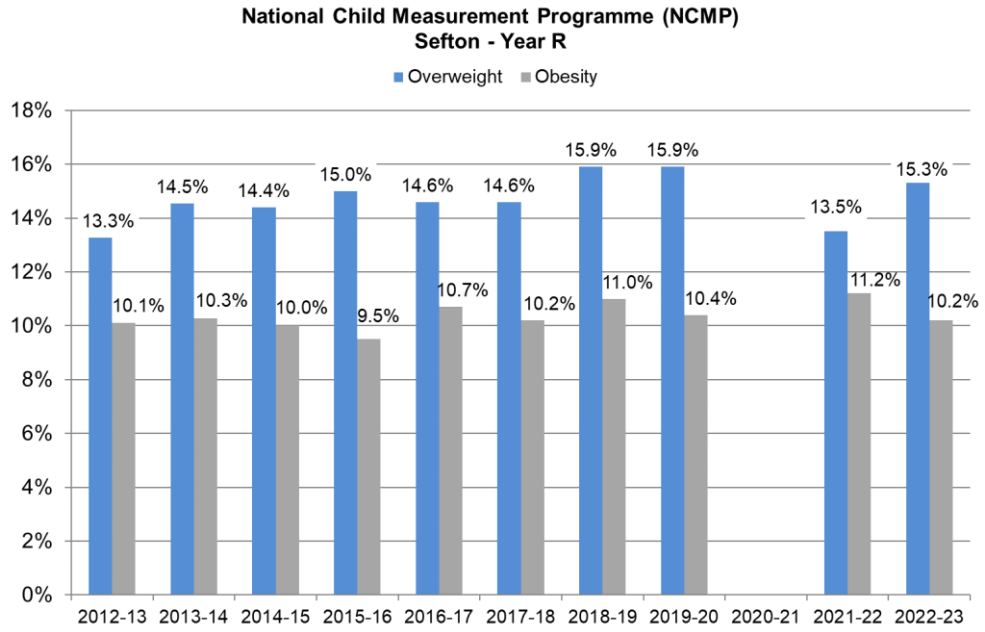
Sefton's YR rate of overweight children is significantly higher than Torbay's rate. Otherwise, Sefton's rates of overweight children and children living with obesity do not differ significantly to statistically similar areas.

National Child Measurement Programme 2022-23				
Area	**Year R Overweight**	**Year R Obese**	**Year 6 Overweight**	**Year 6 Obese**
Sefton	15.3%	10.2%	13.8%	23.8%
England	12.2%	9.2%	13.9%	22.7%
NW	13.1%	10.0%	14.5%	23.8%
Knowsley	15.8%	14.5%	16.6%	30.5%
Liverpool	13.7%	12.1%	14.7%	28.0%
Halton	14.6%	11.9%	14.7%	28.7%
St Helens	14.8%	11.6%	15.0%	25.7%
Wirral	14.2%	8.5%	14.4%	23.3%
Torbay	12.1%	9.5%	14.3%	21.4%
North Tyneside	13.9%	8.3%	13.9%	22.1%
Northumberland	14.1%	11.6%	14.5%	23.5%
Southend on Sea	14.0%	8.0%	13.7%	21.7%

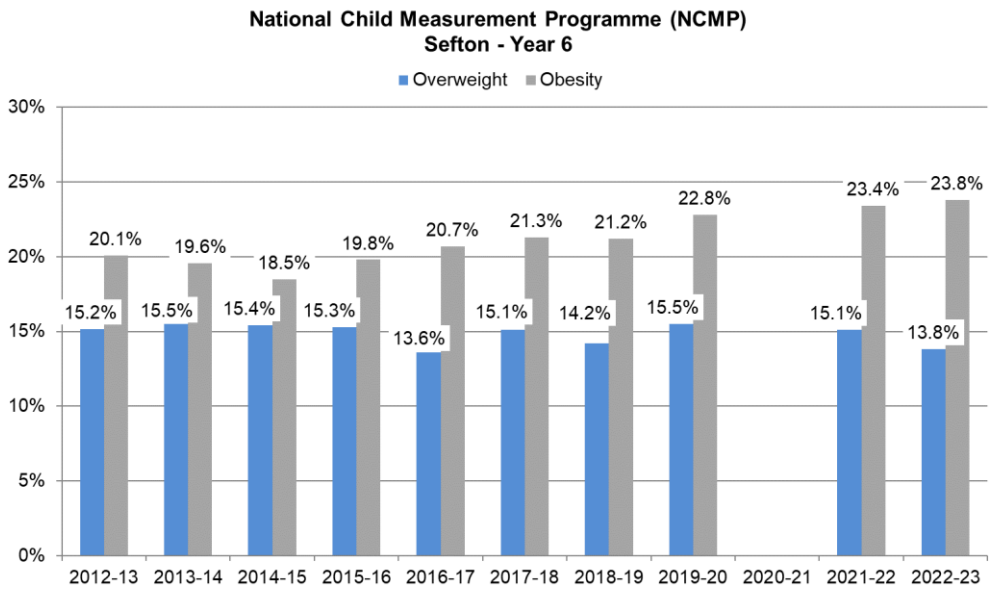
Green – significantly lower than Sefton (at 95% level)
Orange – not significantly different to Sefton (at 95% level)
Red – significantly higher than Sefton (at 95% level)

Trend

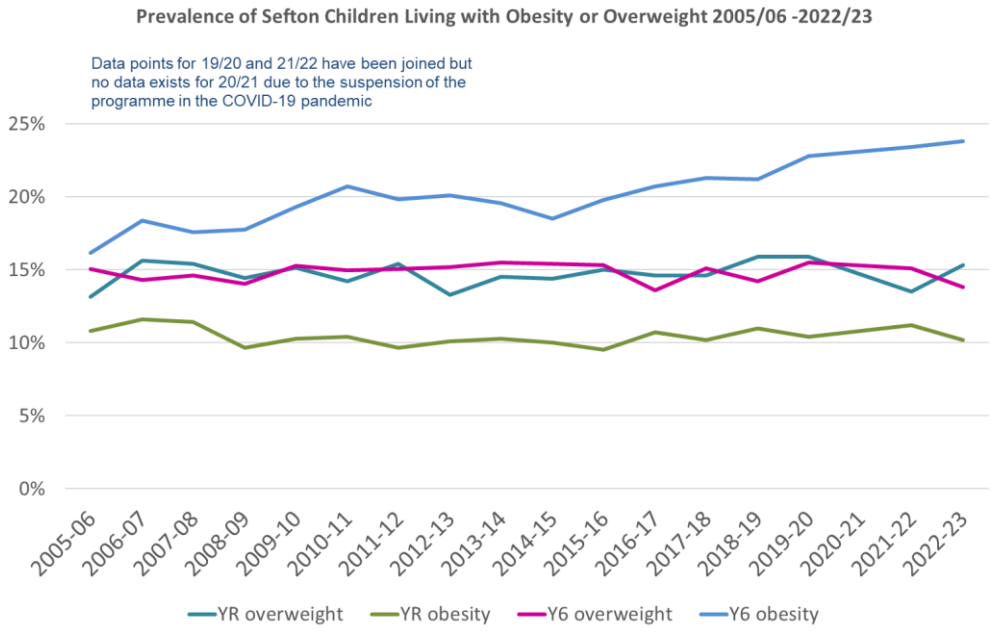
Sefton's percentage of overweight YR children (15.3%) increased compared to 2021/22 (13.5%) but remains lower than before the pandemic (15.9%). The percentage of YR children living with obesity reduced in 2022/23, from 11.2% to 10.2%.



In Y6, Sefton's rate of overweight children (13.8%) decreased compared with 2021/22 (15.1%). Sefton's percentage of Y6 children living with obesity in 2022/23 (23.8%) was similar to 2021/22 (23.4%).

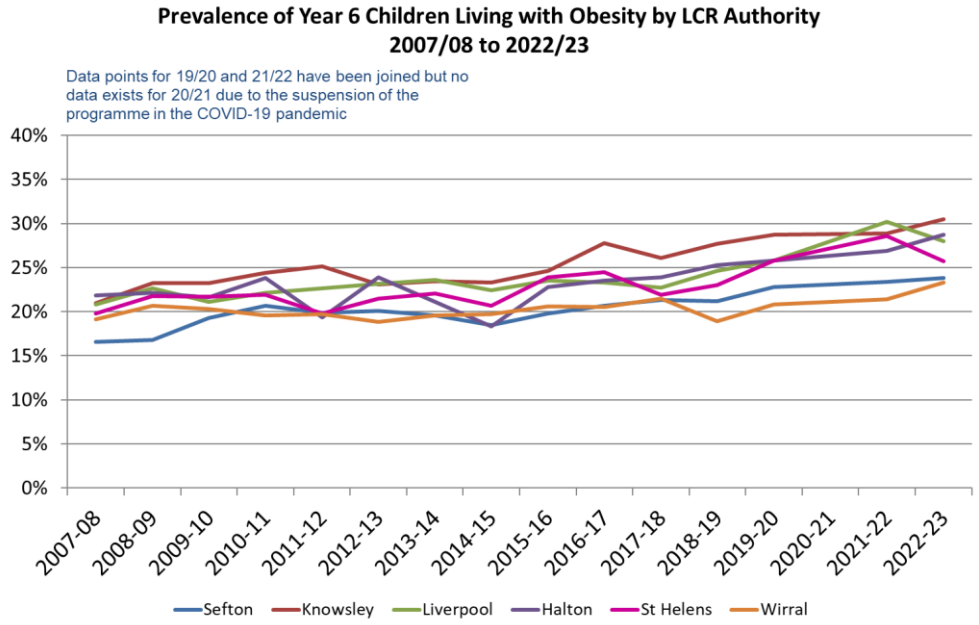


However, none of these differences are statistically significant. OHID suggests using at least five years of data to judge trends in childhood obesity. The percentage of Sefton overweight children has been stable with very few significant increases or decreases since the start of the programme. This is the same for YR children living with obesity. However, the rate of Sefton's Y6 children living with obesity has seen greater change. Since 2006/07, the rate has increased by five percentage points. Sefton's Y6 severe obesity percentage has also seen a statistically significant rise (from 3.2% to 6.0% between 2008/09 and 2022/23).



Up until the pandemic, England and the North West had seen obesity rates increase (in Y6 in particular). In 2020/21, the percentage of children living with obesity rose even more sharply for both year groups. Since then, however, national and regional estimates of children living with obesity have decreased. In 2022/23, despite a drop, levels in Y6 are still significantly higher than before the pandemic.

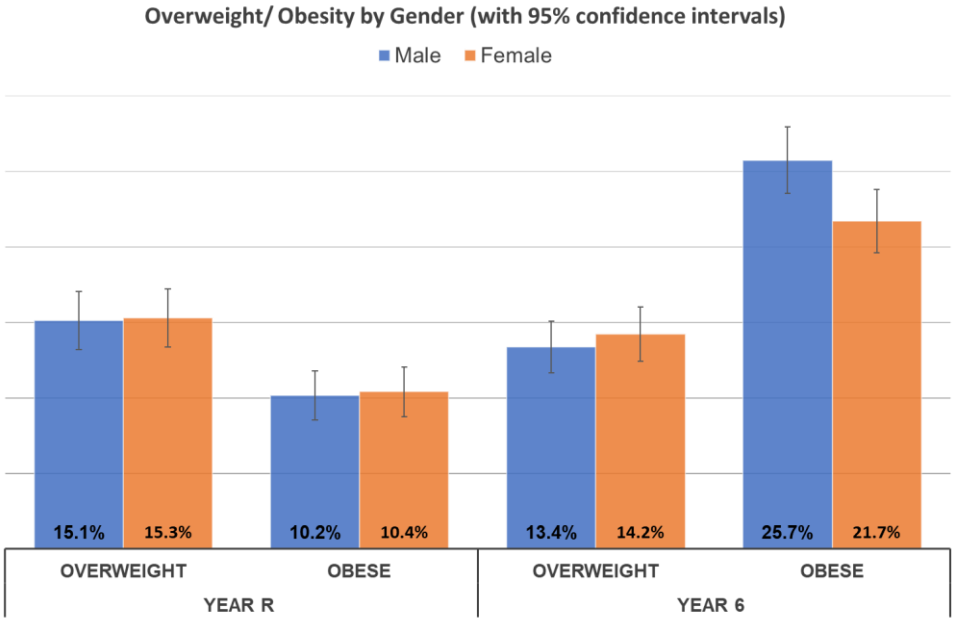
Apart from Knowsley, YR obesity decreased in 2022/23 across the LCR. In Y6, there is a more mixed picture. Whilst Y6 obesity rates decreased in 2022/23 for Liverpool and St Helen's, there were increases for Sefton, Knowsley, Halton, and Wirral. Looking over a longer time period, however, Y6 rates of children living with obesity have shown statistically significant increases for all LCR authorities since 2007/08.



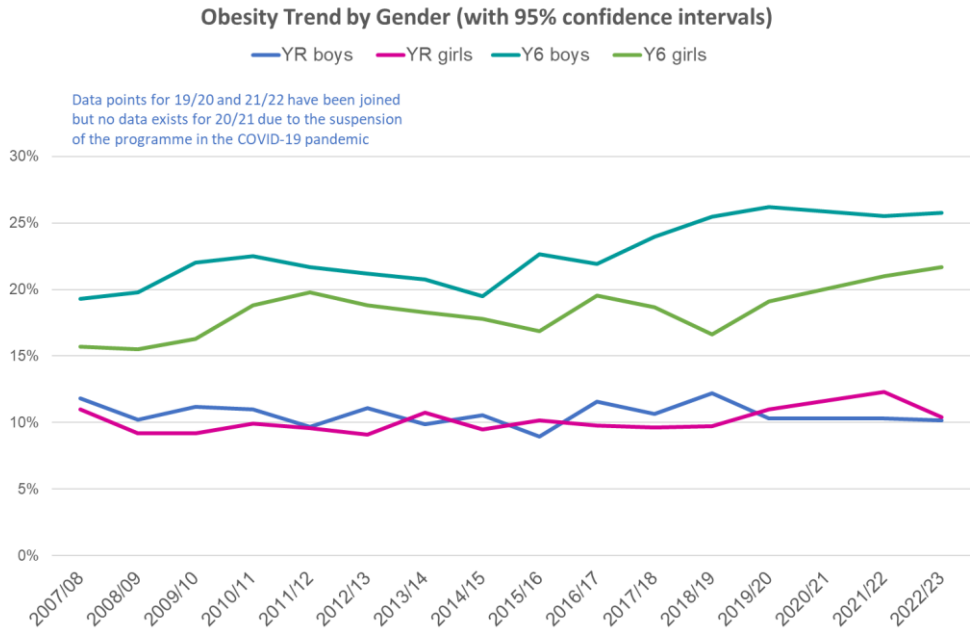
Sex

In 2022/23, the rates of overweight children and children living with obesity were similar amongst YR boys and girls. In YR, 15.3% of girls and 15.1% of boys were overweight. For living with obesity, it was 10.4% of YR girls and 10.2% of boys.

In Y6, the percentage of overweight girls (14.2%) was higher than the percentage of overweight boys (13.4%). Y6 boys had a higher rate of living with obesity (25.7%) compared to girls (21.7%). However, none of the differences between Y6 boys and girls were statistically significant.



Since 2007/08, the percentage of Y6 children living with obesity has increased by six percentage points for girls and by just under 6.5 percentage points for boys. These are both statistically significant increases. There were no statistically significant differences for YR obesity rates.



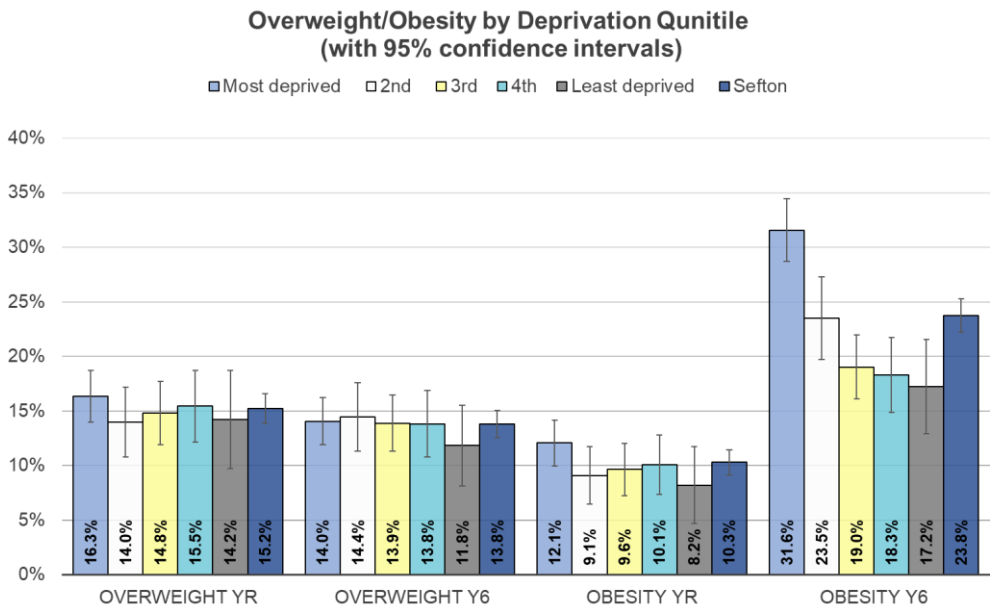
Ethnicity

Ninety-six percent of children had a valid ethnicity recorded for the 2022/23 programme. Of these children, 93% were White. There were no significant differences between the weight status of White children and children from Black and Minority Ethnic (BME) groups in Sefton. However, the rates for children from BME groups are based on very low numbers, making it harder to find any true differences. Looking at larger groups of children has found significant differences though. For England as a whole, living with obesity is highest for children of Black ethnicity and lowest for Chinese children in both YR and Y6.

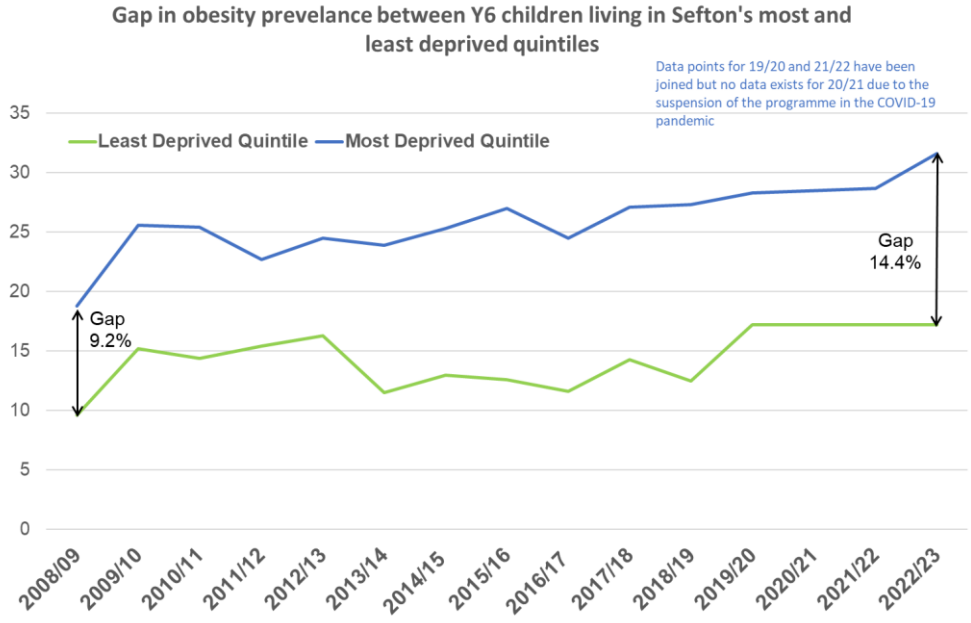
Deprivation

The Indices of Multiple Deprivation 2019 (IMD 2019) are a measure of deprivation for small areas. IMD 2019 is based on lower super output areas (LSOAs) –areas of about 1,500 people. IMD 2019 ranks LSOAs into national quintiles (20% bands) from most to least deprived. The NCMP uses children's postcode to work out their LSOA and deprivation band.

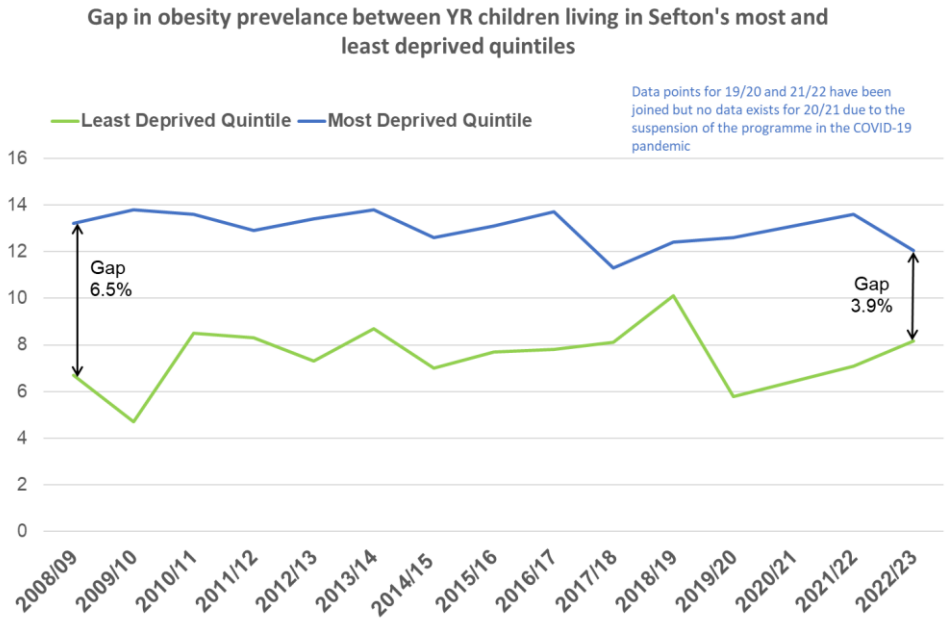
Overweight rates for the deprivation bands did not differ significantly from each other or from the Sefton average for either year group. However, Sefton's rates of obese children tended to increase with increasing deprivation. Y6 obesity rates in the most deprived band (31.6%) were more than 1.8 times that of children living in the least deprived band (17.2%).



The difference in obesity between the most and least deprived bands for Y6, increased from 11.5% in 2021/22 to 14.4% in 2022/23. This widening is due to increases in obesity in the most deprived band. Whilst obesity in the least deprived group increased before the pandemic, in 2022/23 it has stayed the same.



The gap in the percentage of children living with obesity between the most deprived and least deprived bands was smaller for YR (3.9%) - reducing from 6.5% in 2021/22. This narrowing is due to the obesity rate of YR children in the most deprived band reducing whilst the percentage in the least deprived band has increased.

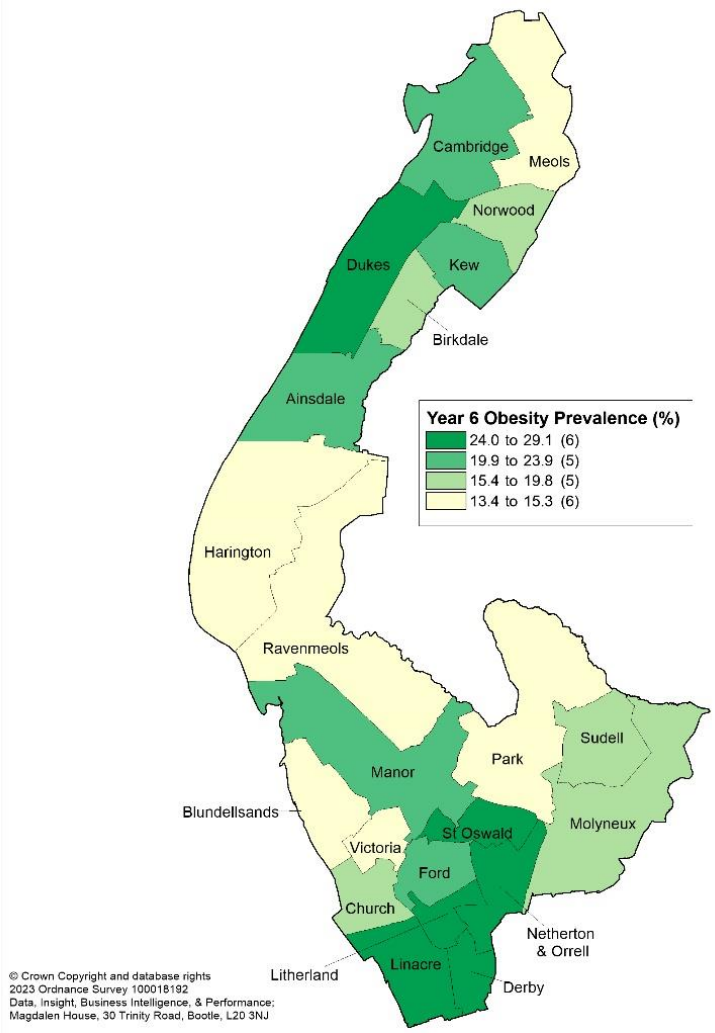


Ward

There can be a large amount of variation in ward estimates due to the smaller numbers involved. Adding more than one year of data together makes estimates stronger. For Y6 this is 4 years of data –2018/19, 2019/20, 2021/22 and 2022/23. For YR it is 2018/19, 2021/22 and 2022/23 and the partial data for 2019/20.

Analysis by Sefton's 22 electoral wards shows that obesity rates tend to be higher for the borough's more deprived wards. Derby had the highest rate of obesity in YR (22.1%), significantly higher than the Sefton average. The lowest rate was Blundellsands (10.9%), significantly lower than the Sefton average. For Y6, obesity was highest in Litherland (29.1%), Netherton and Orrell (25.8%), St Oswald (25.7%), Dukes (25.1%), Derby (24.5%), and Linacre (24.3%). Except for Duke's, all of these were significantly higher than the Sefton average. The percentage of Y6 children living with obesity was significantly lower than the Sefton average for Blundellsands (15.2%), Ravenmeols (15.2%), Meols (14.4%), Victoria (14.0%), Harington (13.4%) and Park (13.4%).

The lowest YR overweight rate was Harington (10.2%), which was significantly lower than the Sefton average. Although not significantly different to the Sefton average, Linacre had the highest YR overweight rate (19.7%). For Y6, Duke's had the highest overweight rate (16.6%) and Cambridge the lowest (10.2%). However, neither were significantly different to the Y6 Sefton overweight rate.



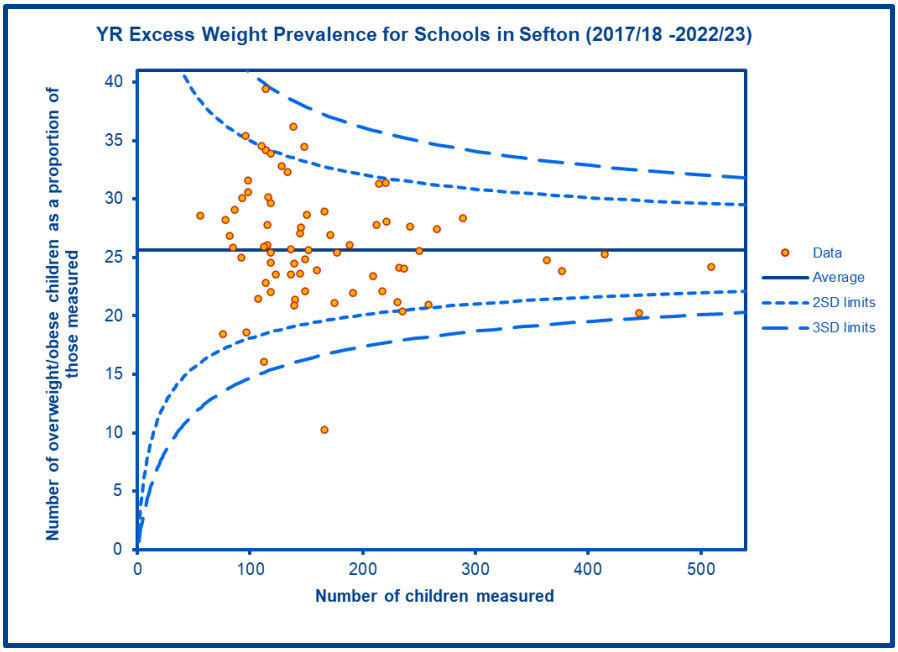
School

Due to small class sizes in some schools, several years of NCMP data have been added together to look for differences between schools. For Y6 this is 2017/18 to 2022/23. For YR this is data from 2017/18, 2018/19, 2021/22 and 2022/23 for all schools and data for 2019/20 for the eight schools where measuring took place.

The funnel charts below plot excess weight (overweight and obese) rates for Sefton schools. Funnel charts allow many points to be plotted at the same time and provide information about whether each point is significantly above or below an expected value. In this case the expected value is the average Sefton excess weight prevalence. Funnel charts can help pinpoint schools with rates that lie outside the normal spread of the dataset (2 or 3 standard deviations from the Sefton average). We can be 95% confident that schools with an excess weight two standard deviations away from the Sefton average are statistically significantly different to the Sefton average. For those with an excess weight three standard deviations away from the Sefton average, we can be 99% confident that they are statistically significantly different to the Sefton average. It is important to take care when giving meaning to school level figures. Differences in excess weight often link to pupil characteristics and are not a measure of school activity or environment.

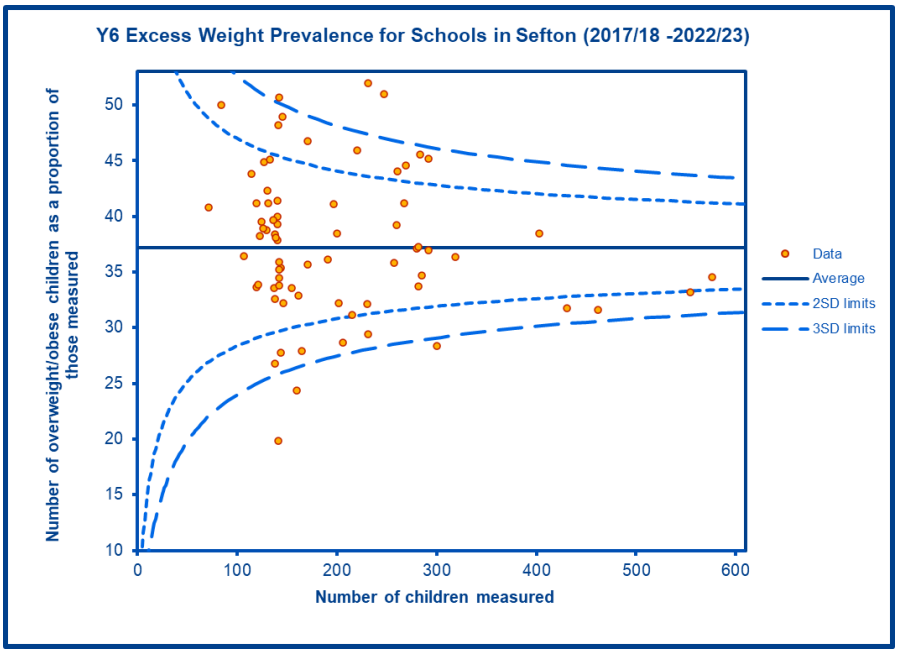
The YR excess weight prevalence was significantly higher than the Sefton average at the 95% level for Netherton Moss, St Oswald's, St George's and Melling.

The YR excess weight prevalence was significantly lower than the Sefton average at the 99% level for Valewood and at the 95% level for Forefield Infants and Our Lady of Compassion.



The Y6 excess weight prevalence was significantly higher than the Sefton average at the 99% level for All Saints, St Elizabeth's, and Holy Trinity and at the 95% level for Bedford Primary, Christ Church, Lander Road, Linaker, Our Lady Queen of Peace, Rimrose Hope, Springwell, St Monica's and St William of York.

The Y6 excess weight prevalence was significantly lower than the Sefton average at the 99% level for St Thomas, St Jerome's, and St Luke's Formby and at the 95% level for Churchtown, Forefield Junior, Freshfield, Great Crosby, Larkfield, St John Bosco, Woodlands, and St Luke's Halsall.



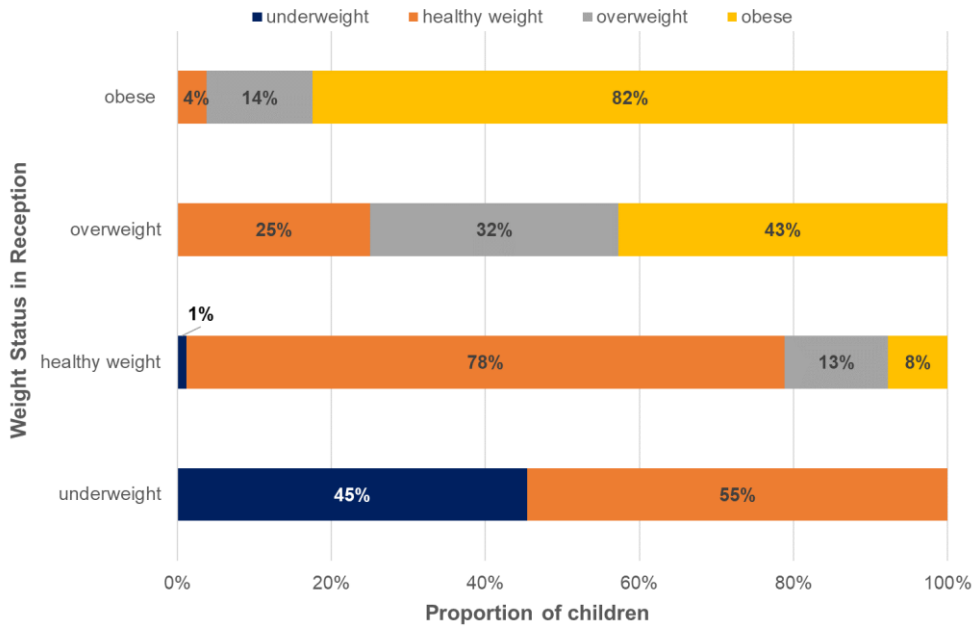
Changes in Pupil Weight Status between Reception and Year 6

Now that the NCMP has been running for over 7 years we can try and track children who have taken part in YR and Y6. This will help improve knowledge of how children's weight changes during primary school and target work to reduce childhood obesity.

The analysis matched YR data from the 2016/17 programme against Y6 data from the 2022/23 programme. There was a match between the two programmes and a valid weight status at both years for 2529 children. This is 87% of those measured in YR in the 2016/17 programme tracked to Y6.

Overall, 72.8% of the children had the same weight status at Y6 as at YR, 22.6% had moved to a higher weight status and 4.6% had changed to a lower weight status. More specifically:

- Of the children who were a healthy weight in YR, 78% remained a healthy weight, 13% were overweight, 8% were living with obesity and 1% were underweight at Y6.
- Of the children who were overweight in YR, 32% remained overweight, 43% were living with obesity and 25% were a healthy weight at Y6.
- Of the children living with obesity in YR, 82% continued to be living with obesity in Y6, 14% were overweight and 4% were a healthy weight at Y6.
- Of the children who were underweight in YR, 55% had moved to a healthy weight in Y6 and 45% remained underweight.



In previous years, a larger percentage of boys with a healthy weight in YR had moved to a higher weight status in Y6 compared to girls. However, there were no differences in weight status changes between girls and boys for this group of children.

Conclusion

In Sefton, in 2022/23 about 1 in 10 children starting primary school and almost 1 in 4 finishing primary school were living with obesity. Along with children who were also overweight, this rises to 1 in 4 children in YR and over 1 in 3 children in Y6.

Sefton's YR overweight rate is significantly higher than the national and regional averages and Torbay (one of Sefton's statistical neighbours). Sefton's obesity rates (both YR and Y6) are the second lowest of the Liverpool City Region (LCR). The YR obesity rate is significantly lower than the Knowsley rate and the Y6 obesity rate is significantly lower than Knowsley, Liverpool, and Halton.

Sefton's percentage of overweight children (for both years) and YR children living with obesity have been stable since the NCMP began. However, there have been statistically significant increases in Sefton's rate of Y6 children living with obesity and severe obesity. England and the other LCR authorities have seen the same rises.

In 2022/23, the rates of overweight and children living with obesity were similar amongst YR boys and girls. In Y6, the percentage of overweight girls was slightly higher than the percentage of overweight boys. For living with obesity, the opposite was true. However, none of these differences were statistically significant. Boys have seen a greater increase in Y6 obesity than girls, but the rises are statistically significant for both sexes.

Overweight rates did not differ for different deprivation groups but rates of children living with obesity generally increased with increasing deprivation. In 2022/23, the Y6 obesity rate in the most deprived banding was more than 1.8 times that of children living in the least deprived group – an increase in the gap in obesity compared with 2021/22. The gap in

obesity between the most deprived and least deprived bands is smaller for YR and has narrowed in 2022/23.

Looking at changes in children's weight status, 72.8% of the children had the same weight status in Y6 as in YR, 22.6% had changed to a higher weight status and 4.6% had changed to a lower weight status. Of the children who were a healthy weight in YR, 21% had moved to a higher weight status. Of the children who were overweight or living with obesity 48% had stayed in the same weight category and 29% had moved to a higher weight status. There were no differences in weight status changes between girls and boys in this year.

References

Sefton NCMP Enhanced Dataset (2022/23), supplied by Office for Health Improvement and Disparities

National Child Measurement Programme, England, 2022/23 school year - NDRS (digital.nhs.uk)

Changes in the weight status of children between the first and final years of primary school (phe.org.uk)

Appendix

NCMP 2022/23 results – Children whose home postcode falls within the Local Authority

National Child Measurement Programme 2022-23				
Area	Year R Overweight	Year R Obese	Year 6 Overweight	Year 6 Obese
Sefton	15.2%	10.3%	13.8%	23.9%
England	12.2%	9.2%	13.9%	22.7%
North West	13.1%	10.1%	14.5%	23.8%
Knowsley	15.4%	14.1%	16.3%	30.7%
Liverpool	15.2%	12.2%	14.8%	28.1%
Halton	14.2%	11.6%	14.3%	28.0%
St Helens	14.6%	11.4%	15.3%	25.8%
Wirral	14.2%	8.7%	14.4%	23.5%
Torbay	11.8%	9.2%	14.1%	21.1%
North Tyneside	13.8%	8.1%	13.7%	22.4%
Northumberland	14.1%	11.5%	14.7%	23.6%
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Green – significantly lower than Sefton (at 95% level)
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