National Child Measurement Programme: 2017/18 Annual Report

Monitoring the Weight Status of Dudley Borough Primary School Children

Reception and Year 6

Clare Davies
Intelligence Team
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Dudley
Metropolitan Borough Council

Contents

Glossary

BMI (Body Mass Index) - A measure that uses height and weight to indicate health.

BME (Black and Minority Ethnic) - Used to refer to members of non white communities in the UK.

Centile - Short for Percentile, the result of dividing the frequency distribution of a variable into 100 equal groups.

Decile - The result of dividing the frequency distribution of a variable into 10 equal groups.

IMD (Index of Multiple Deprivation) - The English indices of Multiple Deprivation 2015, are the official measure of relative deprivation for small areas in England.

NCMP (National Child Measurement Programme) - The National Child Measurement Programme measures the height and weight of children in Reception class (aged 4 to 5) and Year 6 (aged 10 to 11), to assess overweight and obesity levels in children within primary schools.

PHE (Public Health England) - Public Health England is an executive agency of the Department of Health and Social Care in the UK that began operating on 1 April 2013.

Statistically 'Better' - Can say with 95% confidence that the value is statistically better than the Dudley average value.

Statistically 'Worse' - Can say with 95% confidence that the value is statistically worse than the Dudley average value.

UK90 - UK 1990 growth reference, a representative sample of anthropometric data for children from England, Scotland and Wales.

Introduction

The National Child Measurement Programme (NCMP) is a mandatory public health function for all local authorities which began in 2006. It aims to collect the heights and weights of children in their first and last year of primary school (Reception and Year 6), to calculate their individual weight status and allow for analysis of trends in children's growth and health.

National analyses of NCMP data has shown that the prevalence of obese children approximately doubles during primary school[1]. This finding proved to be true for Dudley in the 2016/17 annual NCMP report, where the prevalence of obese children in Reception was 12% and in Year 6 increased to 23%.

The prevalence of overweight and obese children has been shown to have links with factors such as ethnicity and deprivation. This conjecture is supported by the 2016/17 annual Dudley report.

- For Reception children, 50% of those with excess weight (over weight or obese) live in an area categorised within the three most deprived deciles of the Index of Multiple Deprivation (IMD).
- Similarly, for Year 6 children, 48% of those with excess weight live in areas having an IMD decile of 1-3 (1 being most deprived).
- The ethnic groups with the highest proportions of excess weight in reception were ‘Any other ethnic group’ and Chinese, however combined these cohorts make up only 2% of the sample data.
- In Year 6, the Black ethnic group shows the highest proportion of excess weight overall, but again they make up only 2% of the 3,301 sample of children.

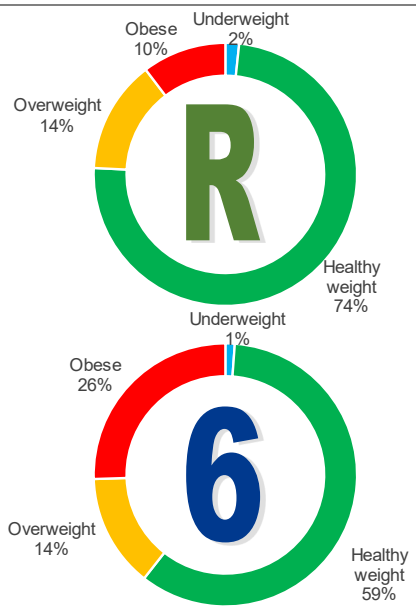
The number of children measured in Dudley schools in 2017/18 was 7,359, of which 3,868 were Reception children and 3,491 were in Year 6. This is a participation rate of 96.5%, which is higher than the West Midlands and England values of 96.3% and 94.7% respectively. The participation rate has also increased compared to 2016/17, when it fell to the lowest level since 2006/07 at 92%.

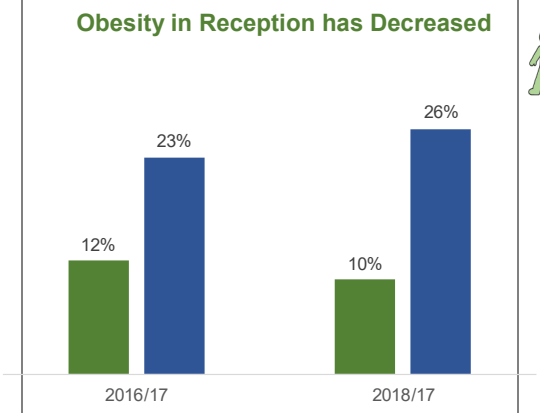
The terms used to describe BMI classification for population monitoring purposes are based on the British 1990 growth reference[2] as detailed in Table 1.

Table 1:

BMI Classification	Centile of UK90 BMI distribution
Underweight	Less than or equal to 2
Healthy weight	Greater than 2 and less than 85
Overweight	Greater than or equal to 85 and less than 95
Obese	Greater than or equal to 95 (includes severely obese)
Excess weight	Greater than or equal to 85 (overweight plus obese)
Severely Obese	Greater than or equal to 99.6

2017/18 NCMP on a Page





Reception

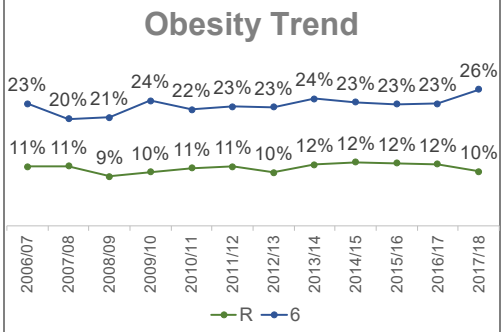
Under-weight	Healthy weight	Over-weight	Obese
2%	74%	14%	10%

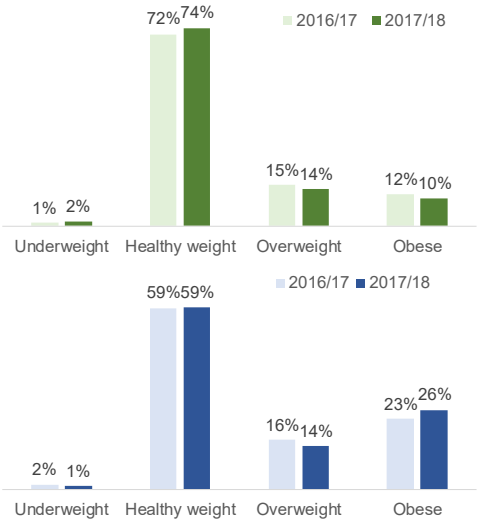
Dudley Compared to England Benchmark

Under-weight	Healthy weight	Over-weight	Obese
1%	58%	14%	26%

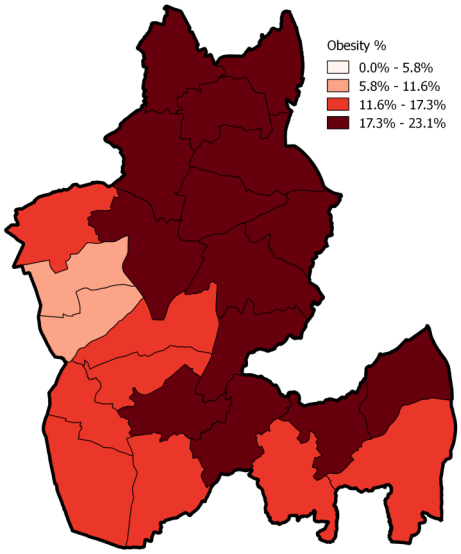
Year 6

Compared with benchmark: Better Similar Worse

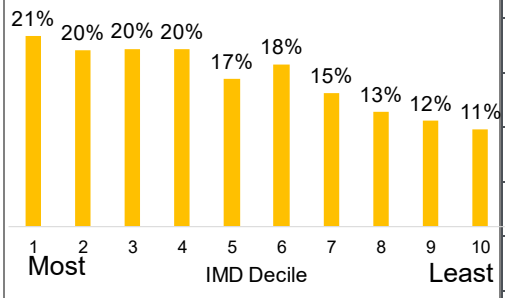




Obesity by Ward R+6



Obesity by Deprivation R+6

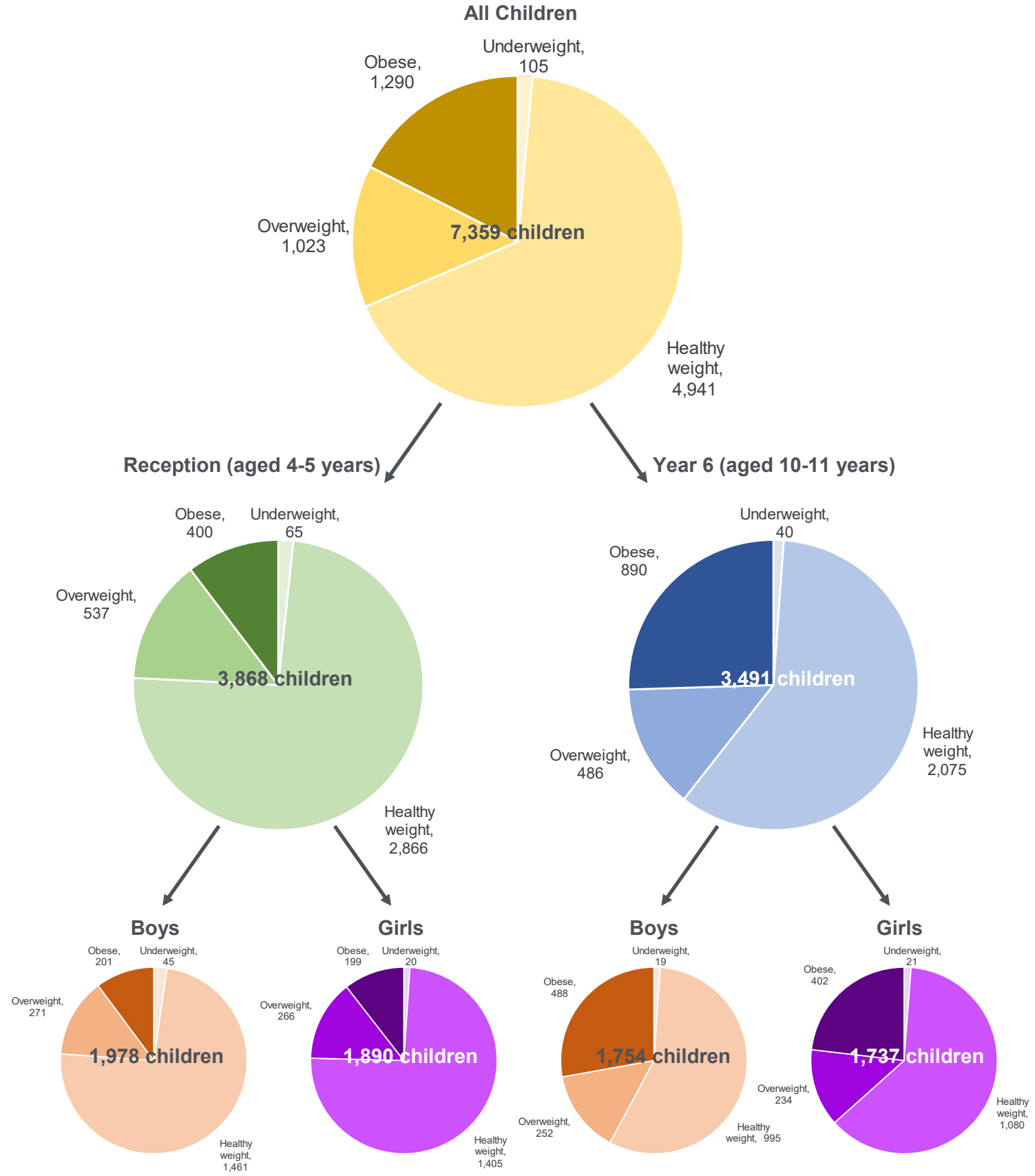


10 percentage points between Most and Least Deprived.

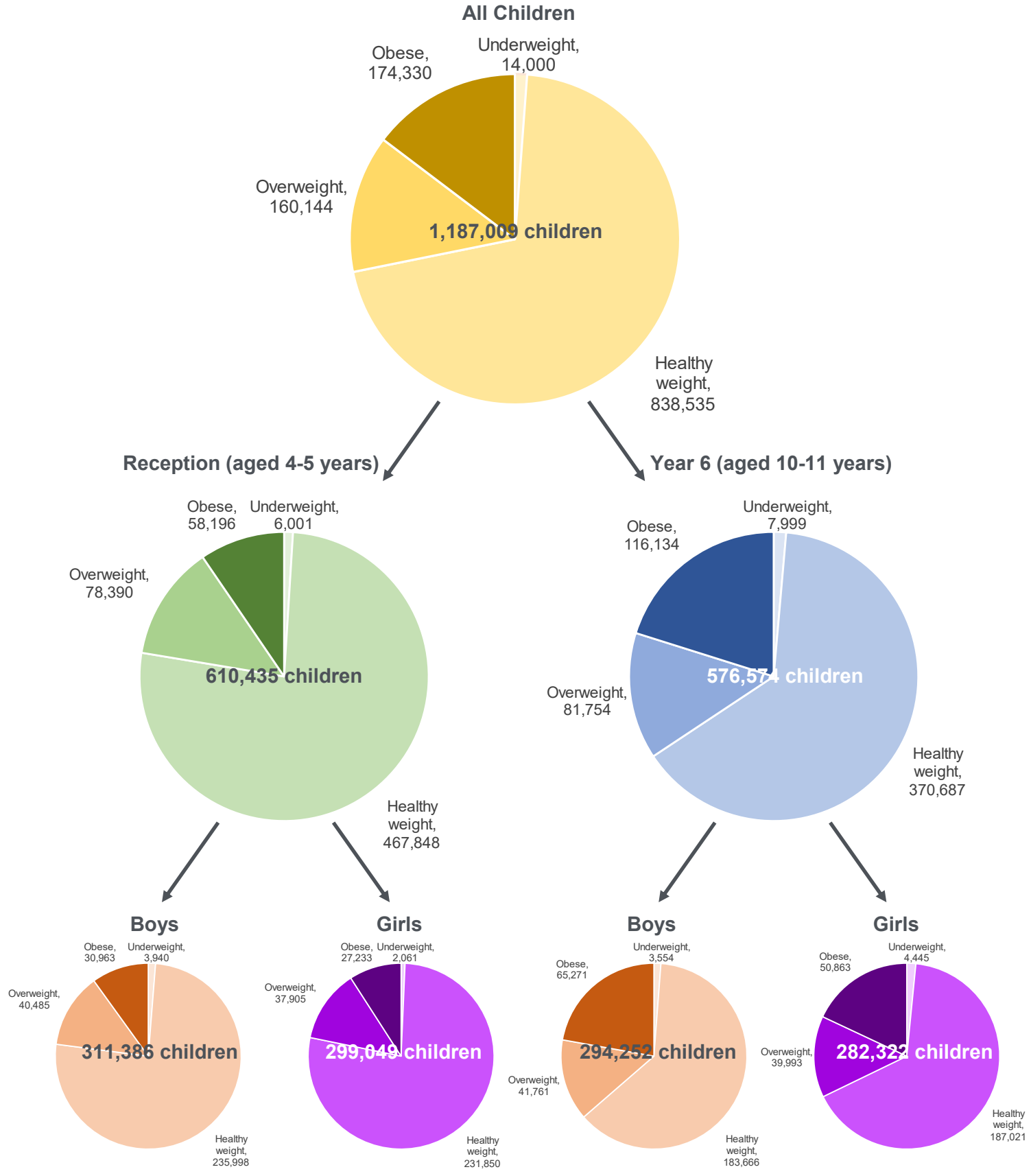
Obesity by Ethnicity

Rank	Reception	Year 6
1	Black **15.7%**	Other **32.5%**
2	Other **13.2%**	Black **31.0%**
3	Not Stated **12.9%**	Asian **29.0%**
4	Asian **11.4%**	Mixed **28.4%**
5	Chinese **11.1%**	White **24.5%**
6	White **10.0%**	Not Stated **22.1%**
7	Mixed **9.2%**	Chinese **11.1%**

BMI Classification by Age and Gender-Dudley



BMI Classification by Age and Gender-England



Excess Weight, Obesity and Severe Obesity

1 in 4 children have Excess Weight

Dudley 24.2%

West Midlands 23.4%

England 22.4%

1 in 10 children are Obese

Dudley 10.3%

West Midlands 10.4%

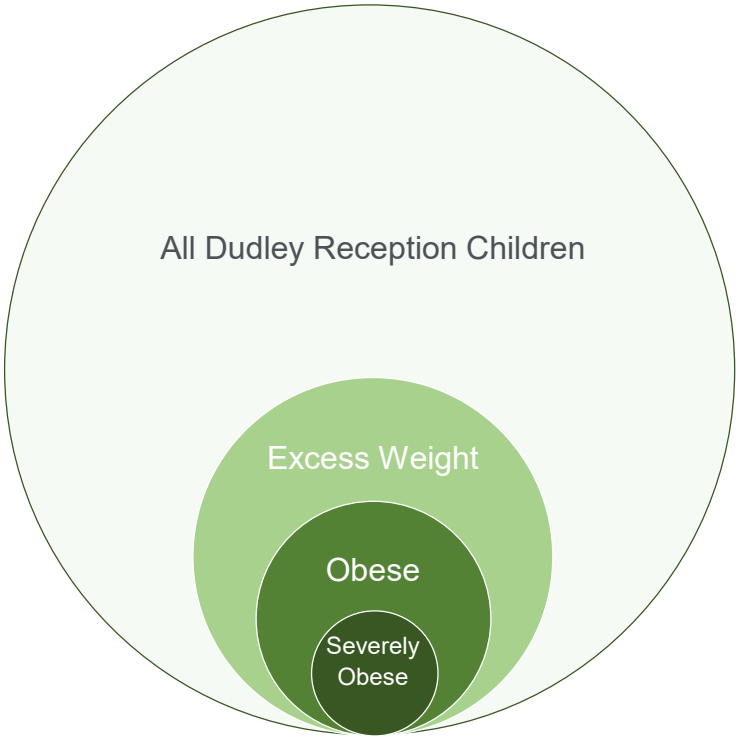
England 9.5%

Severely Obese

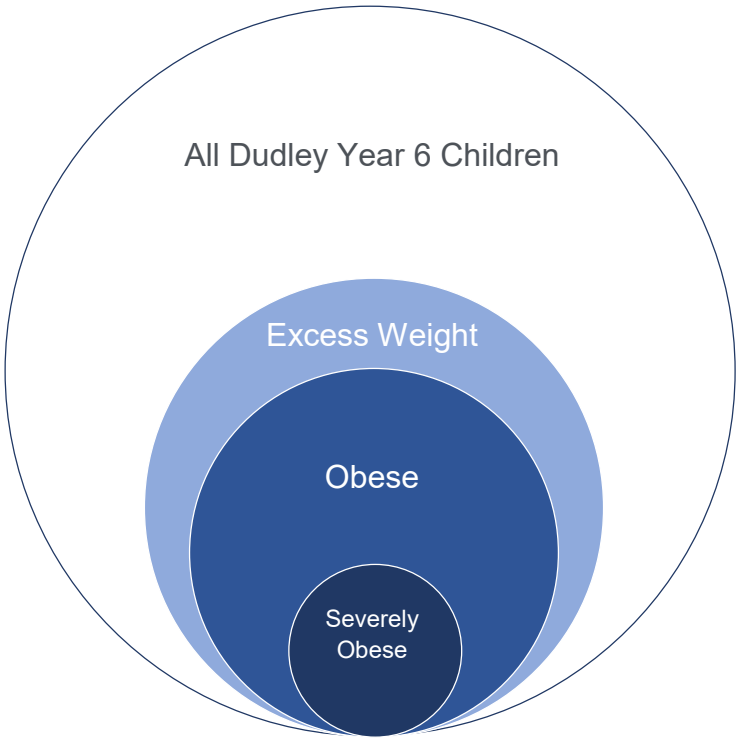
Dudley 3.0%

West Midlands 2.9%

England 2.4%



The proportion of Reception children with excess weight, obesity and severe obesity in Dudley is similar to the West Midlands.



2 in 5 children have Excess Weight

Dudley 39.4%

West Midlands 37.1%

England 34.3%

1 in 4 children are Obese

Dudley 25.5%

West Midlands 22.5%

England 20.1%

Severely Obese

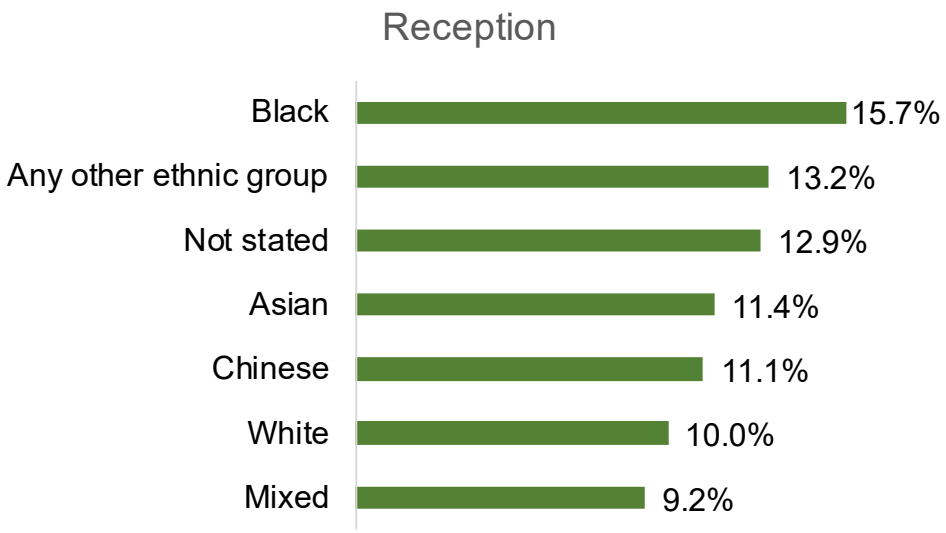
Dudley 5.6%

West Midlands 5.1%

England 4.2%

The proportion of Year 6 children with excess weight, obesity and severe obesity in Dudley is similar to the West Midlands, however Dudley's value is slightly greater in all three categories.

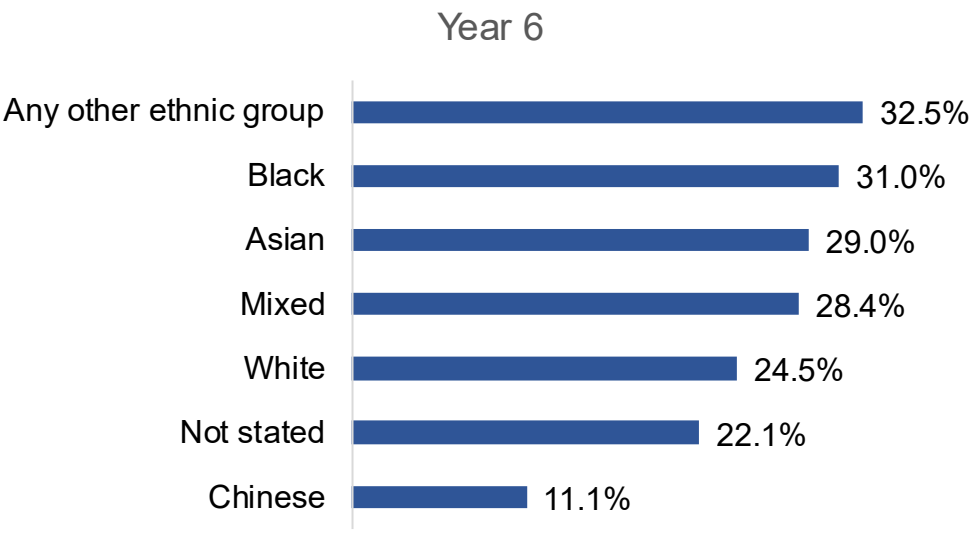
Obesity by Ethnicity



In Reception the ethnic group with the largest proportion of obese children is the 'Black' cohort.

The same is also true for the West Midlands.

The ethnic group with the smallest proportion of obese children is Mixed.



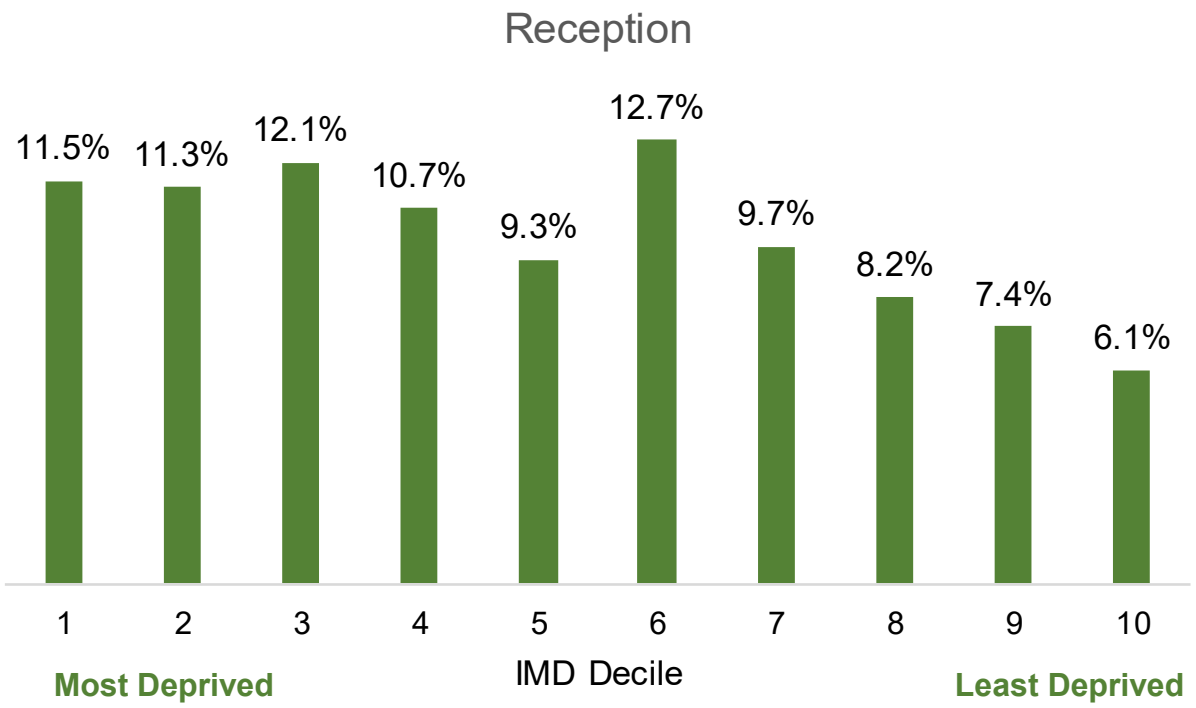
In Year 6 the Other ethnic group has the highest proportion of obese children.

Black has the second largest proportion of obese children.

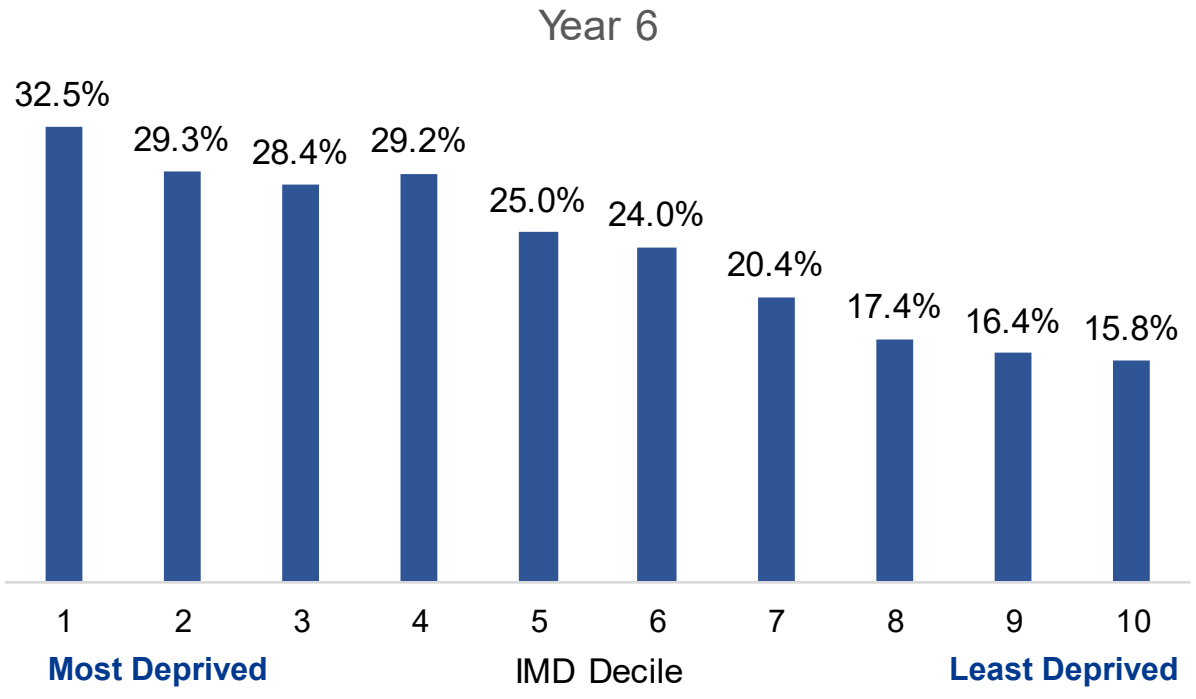
In the West Midlands the highest proportion lies in the Black cohort.

The smallest proportion in Dudley is the Chinese cohort.

Obesity by Deprivation



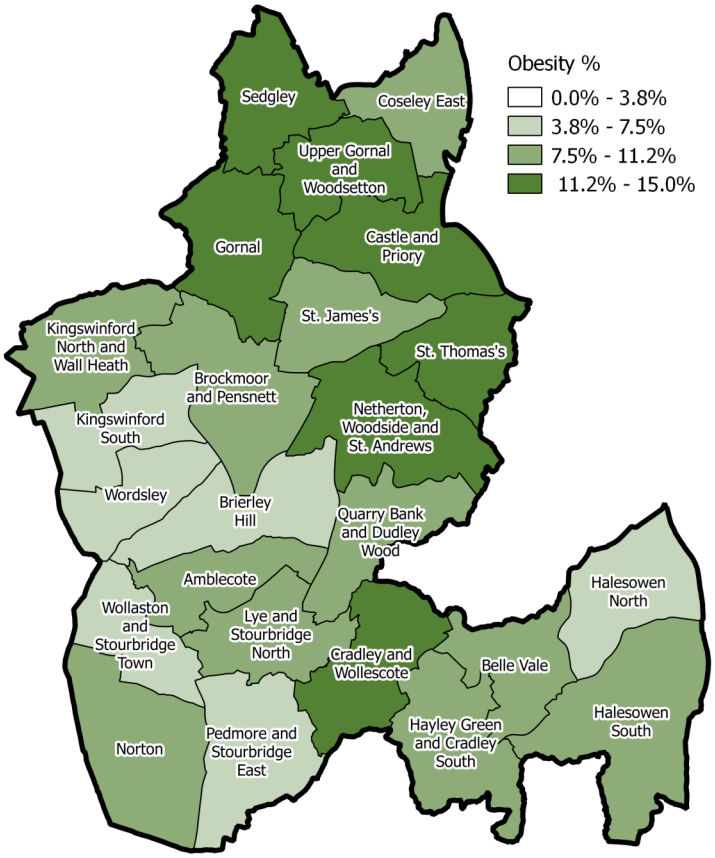
In Reception the decile with the highest proportion of obese children is centrally located at 6. However when comparing the 3 most and least deprived deciles, which are different by 4.4 percentage points, there is a skew towards obesity being more prevalent in the most deprived areas.



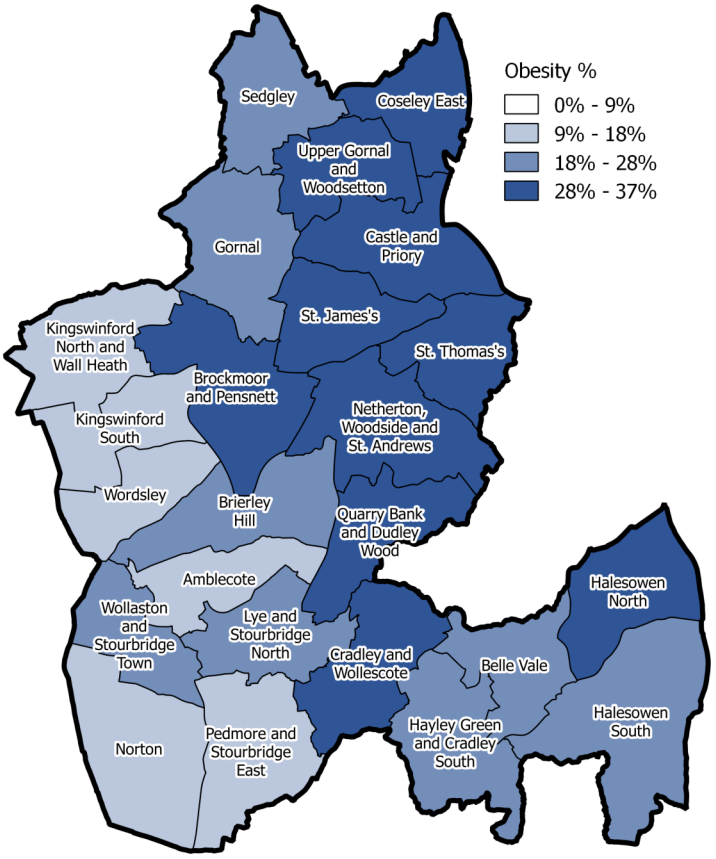
In Year 6 the decile with the highest proportion of obese children is the most deprived (1). The distribution is skewed towards more deprived deciles having higher proportions of obesity. Comparing the most and least deprived 3 deciles shows a 13.4 percentage point difference.

Obesity by Ward

Obese Reception children by Ward



Obese Year 6 children by Ward



Key points

- In the 2017/18 school year 400 children measured in Reception and 890 in Year 6 were classified as Obese. This translates to 1 in 10 children in Reception and 1 in 4 children in Year 6, these proportions are similar to the West Midlands as a whole.
- The proportion of severely obese Dudley school pupils was also similar to the West Midlands values; 3% of Reception children and 5.6% of Year 6 children fall into this BMI category.
- Comparing Reception and Year 6 prevalence of obesity directly at 10.3% and 25.5% respectively, it can be inferred that obesity more than doubles between the year groups in 2017/18.
- Black and Any Other ethnicity are the two groups with the highest proportion of obese children. This follows closely with the findings for the West Midlands where Black has the highest proportion for both year groups.
- The link between prevalence of obesity and deprivation is more prominent in Year 6 children, where a skew towards the more deprived deciles can be seen; the distribution is more even in Reception children.
- For the majority of wards in Dudley, the obesity prevalence in Reception children is between 8.3%-16.5%. In the older year group higher prevalence of obesity between 25%-50% is found around Dudley central, Brierley Hill, Lye, Cradley and Halesowen North.
- For both year groups the schools with highest prevalence of obesity seem to be spread across the borough.

Key points from the trends found in Appendix 1:

- Prevalence of obesity in Reception is statistically similar to England in 2017/18 however in Year 6 Dudley's obesity prevalence is worse than England and is the highest value since NCMP began.
- In 2017/18 the proportion of underweight reception children has become statistically worse than England and is also worse than the West Midlands.
- The proportion of healthy weight Reception and Year 6 children is worse than England and the West Midlands in 2017/18.
- Similarly the proportion of overweight Reception and Year 6 children is worse than England. In the older year group the proportion is the highest since the start of the programme at 39.8%.

References

1. Vicky Copley et al, (2017). *Changes in the weight status of children between the first and final years of primary school*. 1st ed. [ebook] London: Public Health England, p.9. Available at: http://dera.ioe.ac.uk/28704/1/weight_changes_in_primary_school_children_analysis.pdf

2. Cole, T., Freeman, J. and Preece, M. (1995). *Body mass index reference curves for the UK, 1990*. [ebook] pp.25-29. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1511150/pdf/archdisch00623-0033.pdf

3. All data sourced from https://fingertips.phe.org.uk/ under the terms and conditions of the Open Government Licence via the following software/packages:

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Sebastian Fox (2018). fingertipscharts: Produce Charts that you See on the Fingertips

Website. R package version 0.0.3. https://CRAN.R-project.org/package=fingertipscharts

Appendix 13

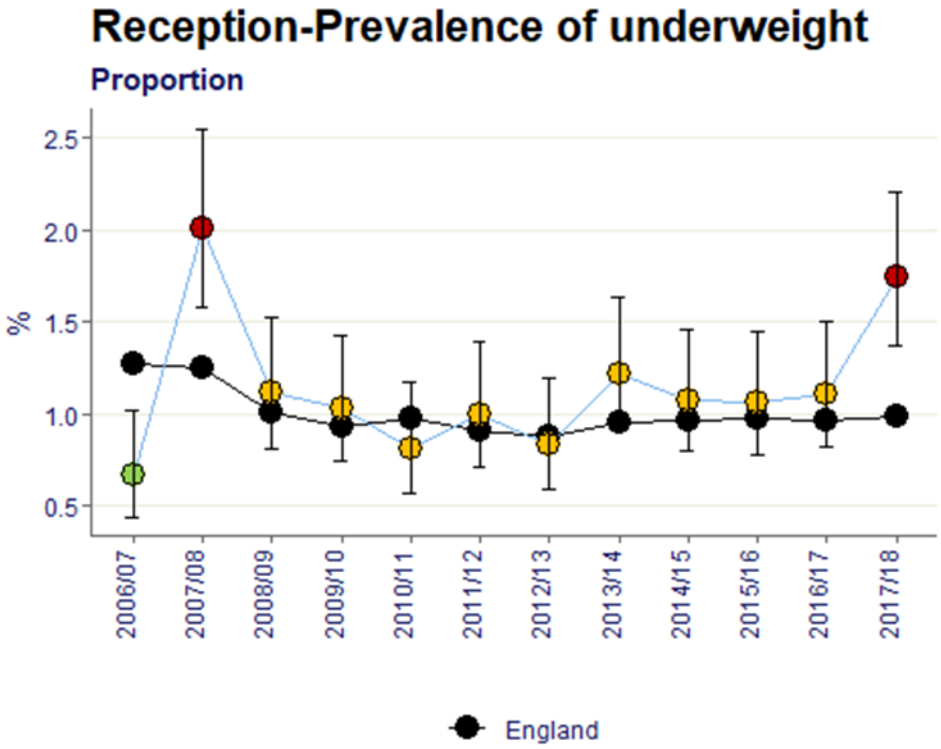
NCMP and Child Obesity Profile

NCMP Prevalence Data

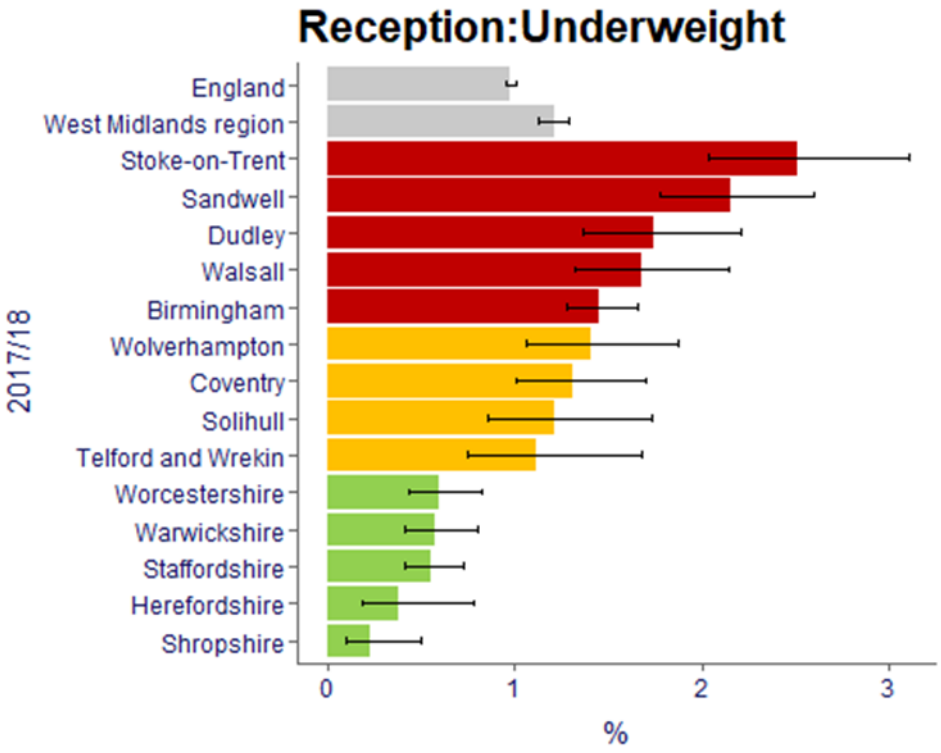
Compared with benchmark: Better Similar Worse Not compared

		Indicator	Page
Reception	Trends with England benchmark	Prevalence of underweight	14
		Prevalence of healthy weight	15
		Prevalence of overweight (including obese)	16
		Prevalence of obesity (including severe obese)	17
	Comparison with the West Midlands	Prevalence of underweight	14
		Prevalence of healthy weight	15
		Prevalence of overweight (including obese)	16
		Prevalence of obesity (including severe obese)	17
Year 6	Trends with England benchmark	Prevalence of underweight	18
		Prevalence of healthy weight	19
		Prevalence of overweight (including obese)	20
		Prevalence of obesity (including severe obese)	21
	Comparison with the West Midlands	Prevalence of underweight	18
		Prevalence of healthy weight	19
		Prevalence of overweight (including obese)	20
		Prevalence of obesity (including severe obese)	21

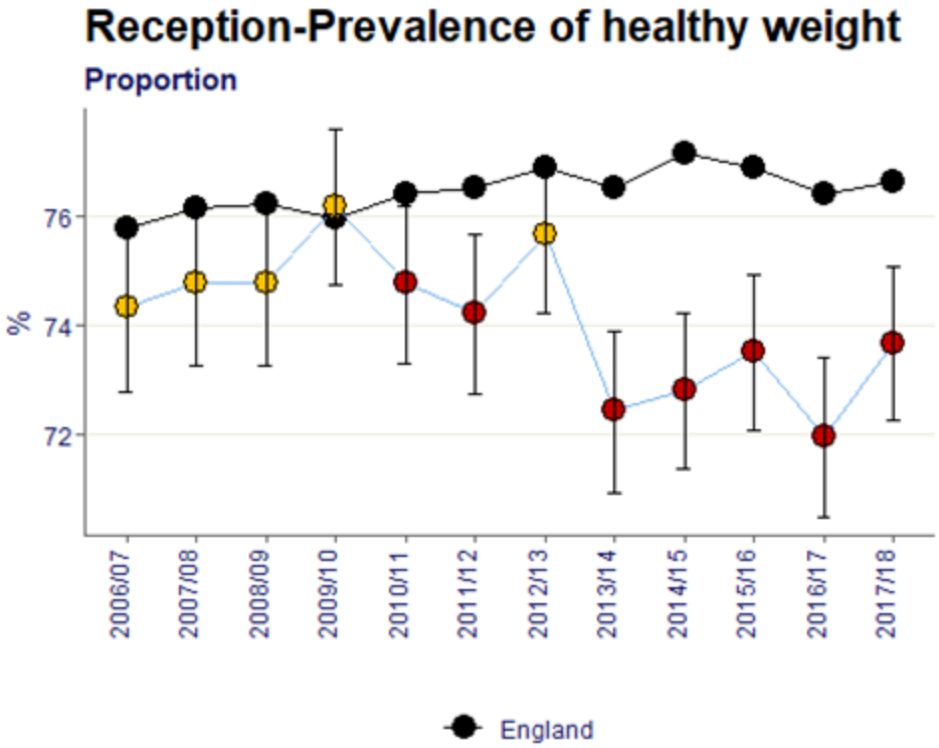
Please note proportions may differ very slightly from the main report above due to complete case data used in the PHOF data set, affecting denominators.



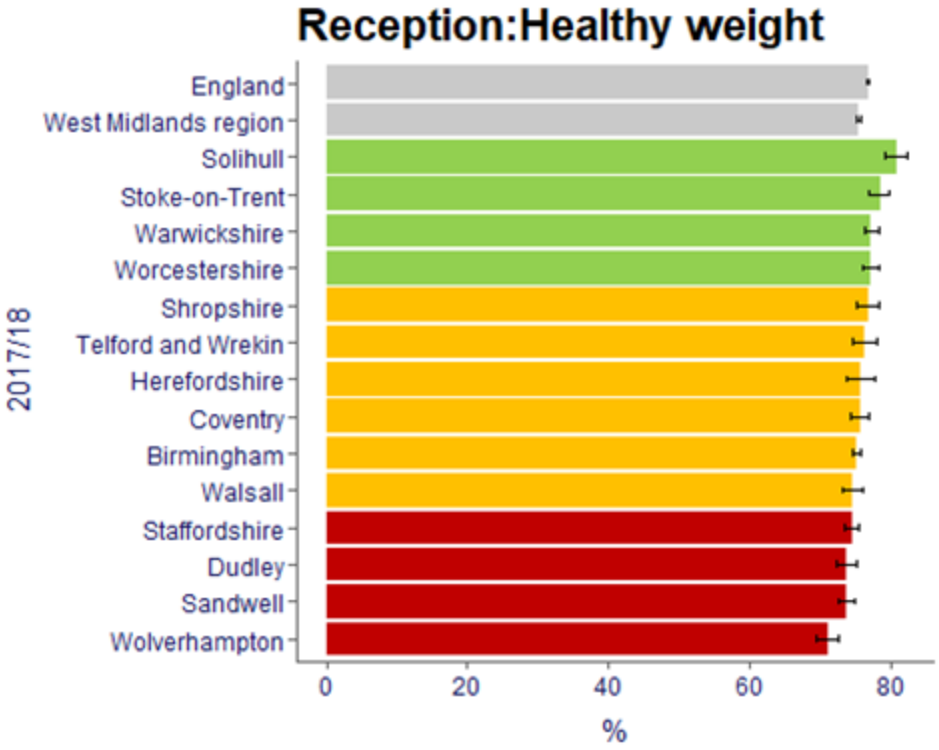
For nine consecutive years the prevalence of underweight Reception children has been similar to the England baseline. However in 2017/18 the proportion has become significantly worse, increasing by 0.6 percentage points to 1.74%.



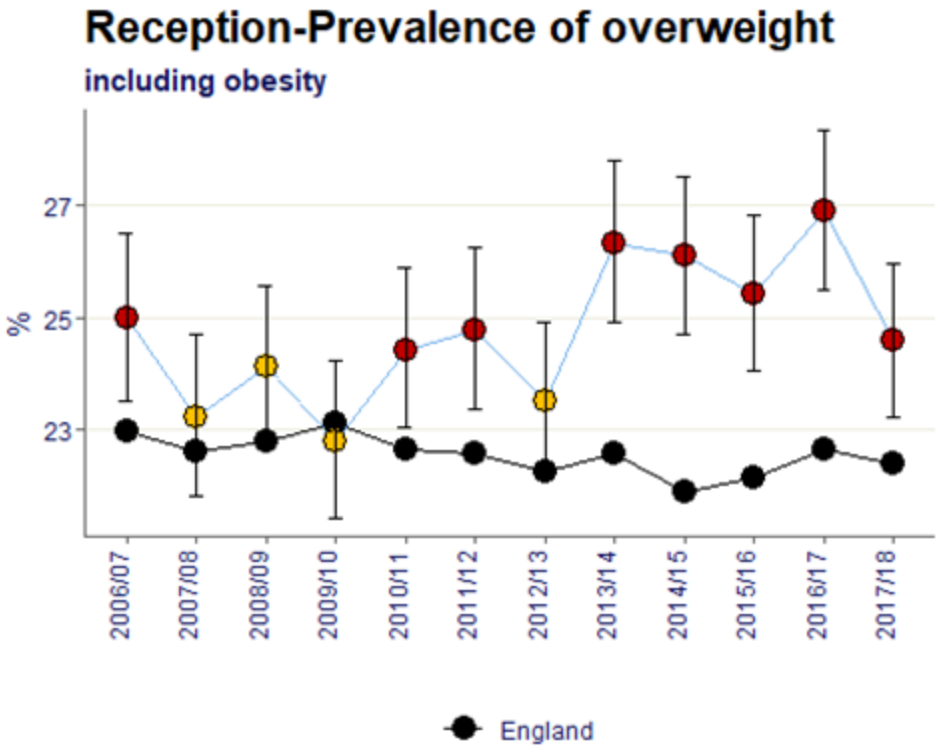
Significantly worse than the West Midlands.



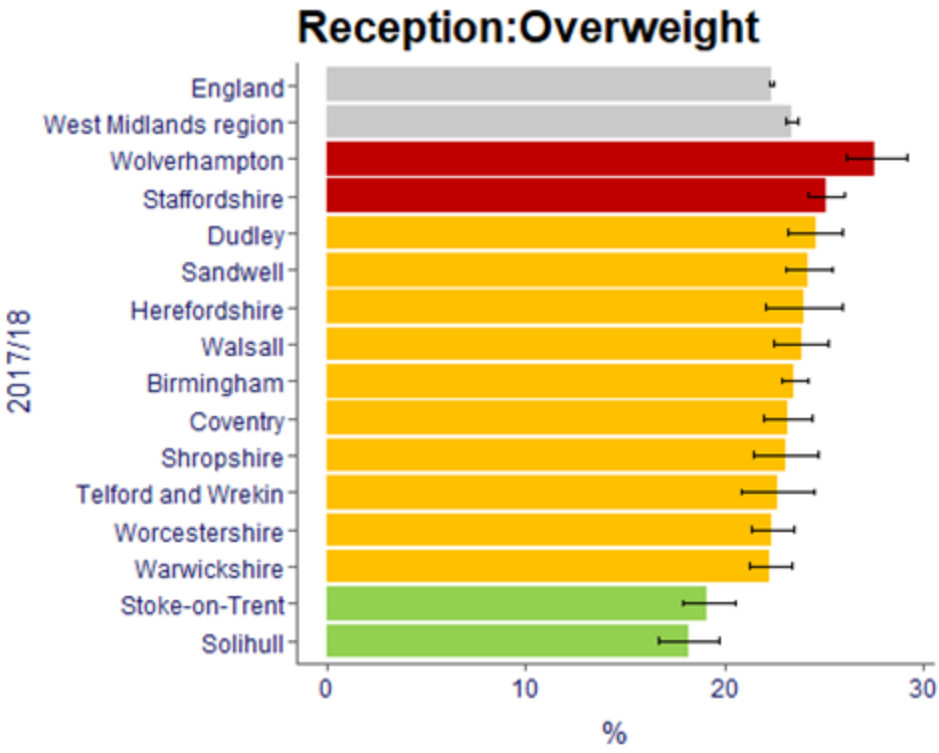
The prevalence of healthy weight Reception children remains significantly below the England value, as it has been for the last five years. The value has increased by 1.7 percentage points since 2016/17 and is now 73.7%



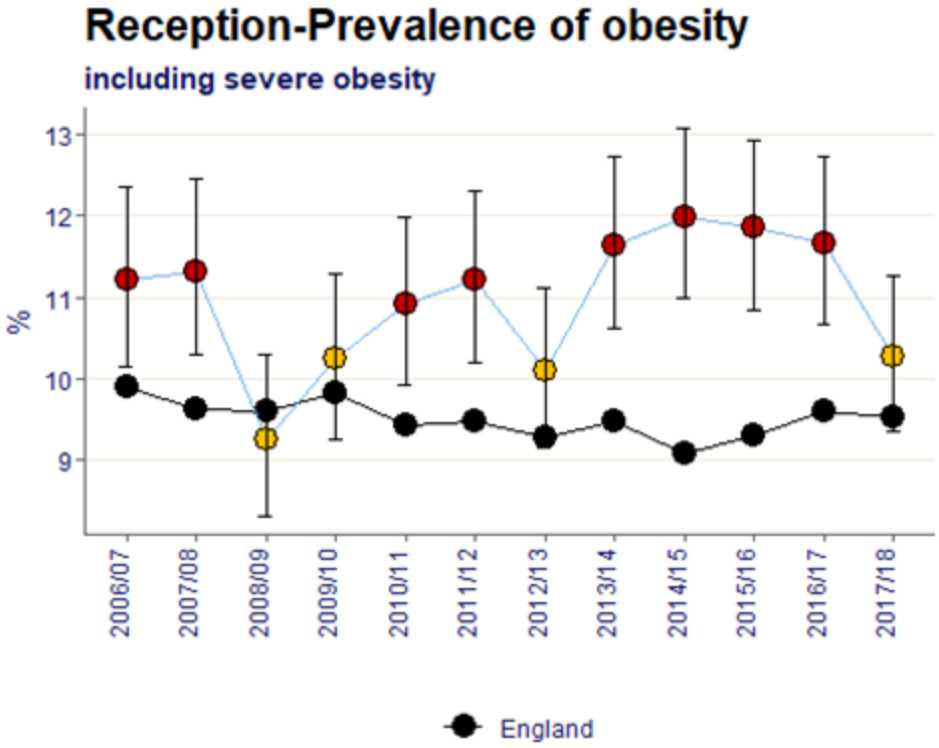
Significantly worse than the West Midlands.



The prevalence of overweight Reception children remains significantly worse than England, however it has decreased by 2.3 percentage points to 24.6% in 2017/18.

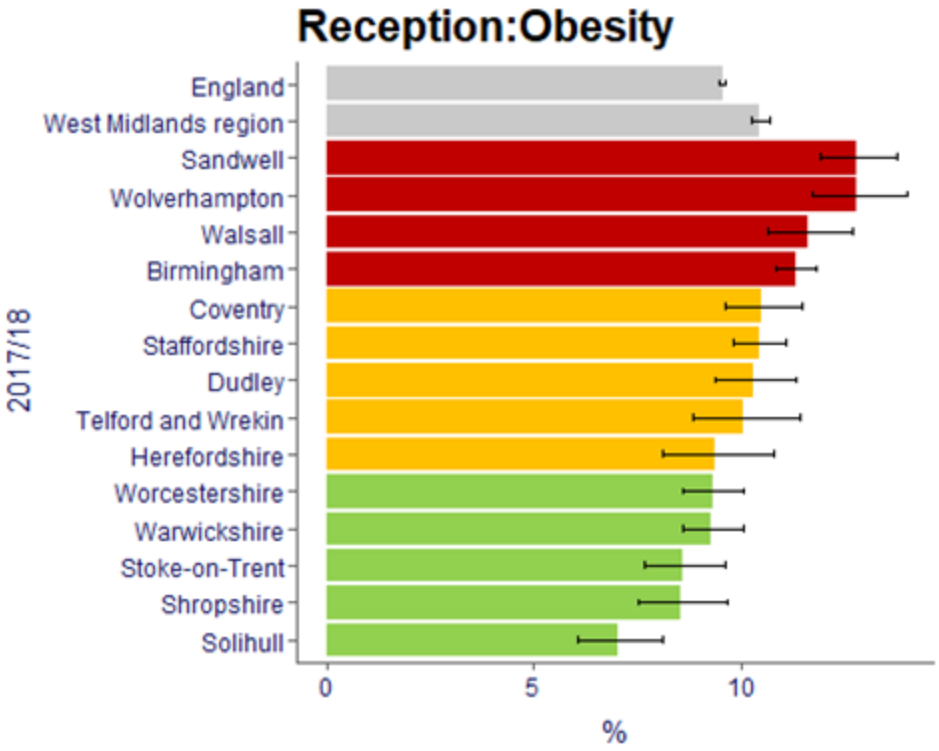


Similar to the West Midlands.

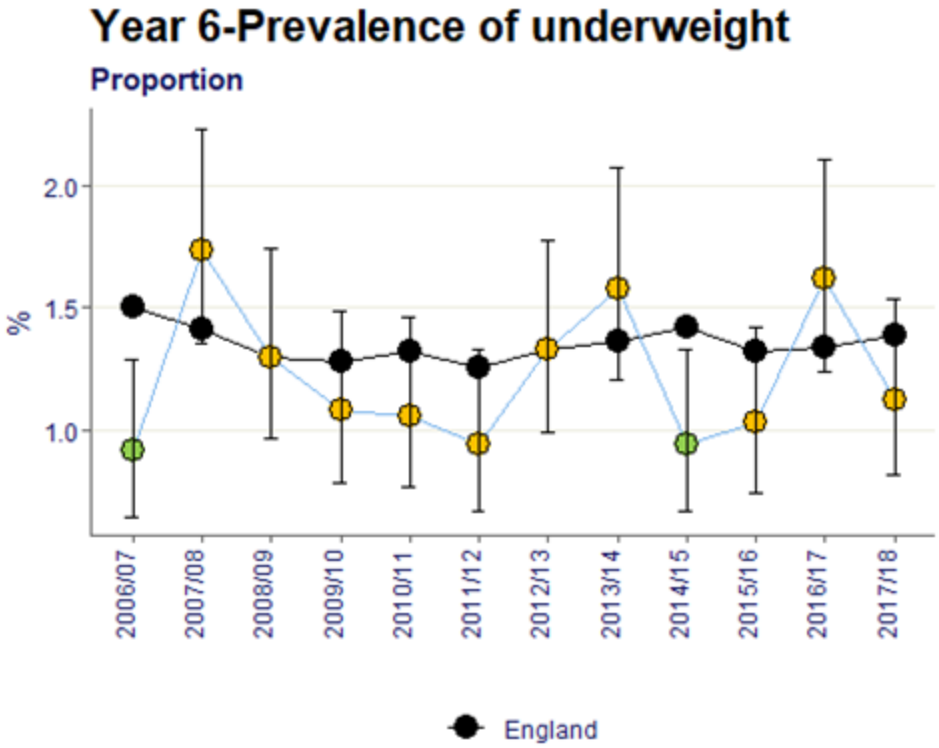


The prevalence of obese Reception children has become similar to the England value in 2017/18.

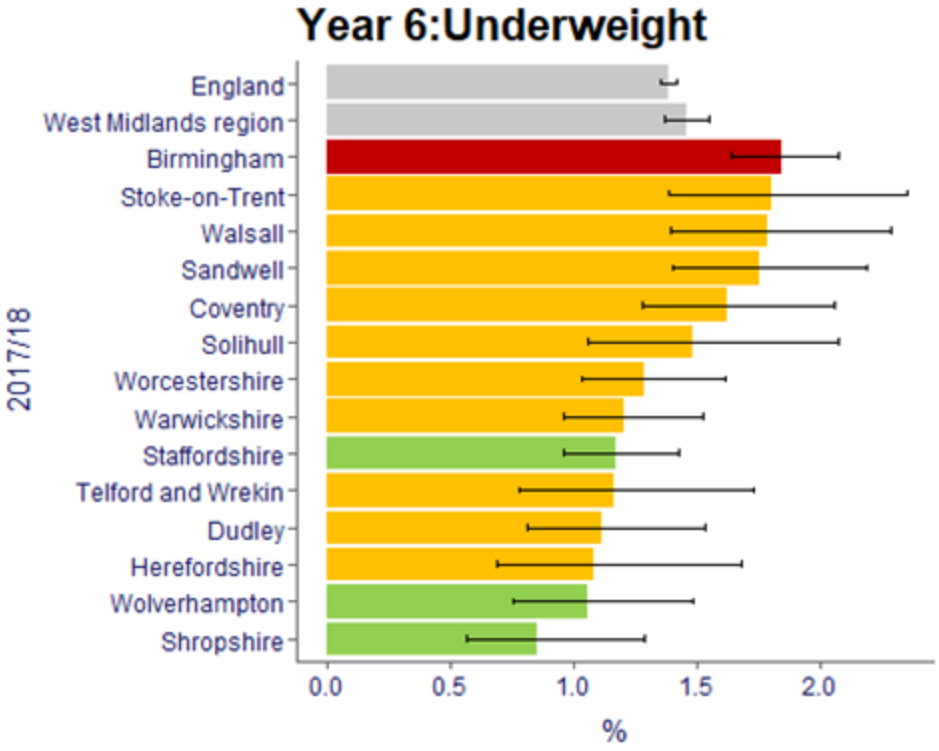
In Dudley 10.3% of Reception children have a BMI in the 95th centile or above. England's value is 9.5%.



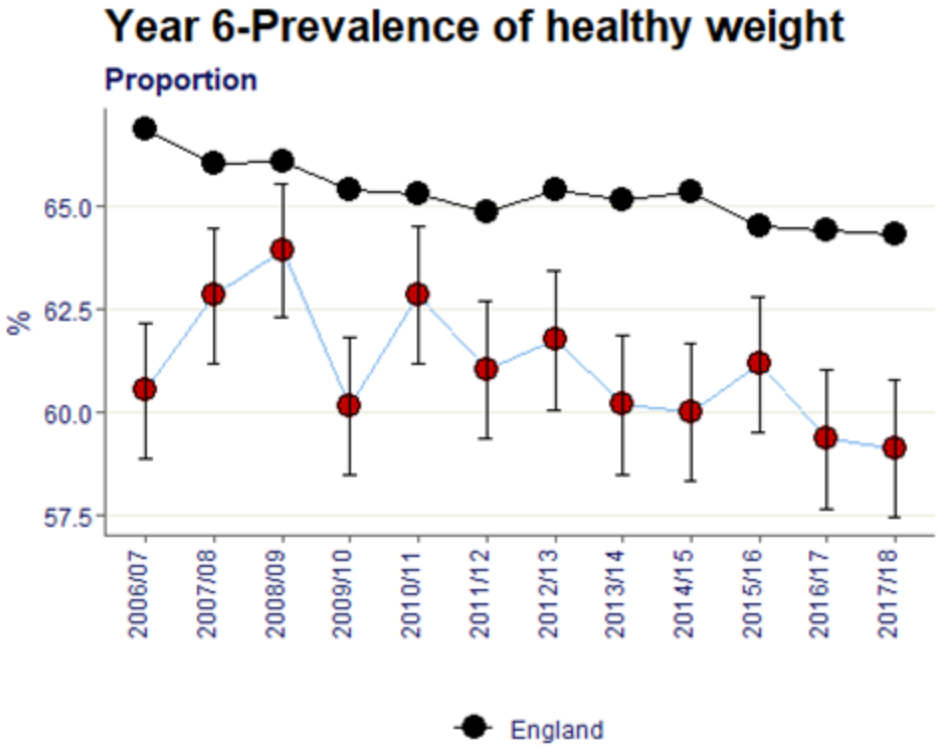
Similar to the West Midlands.



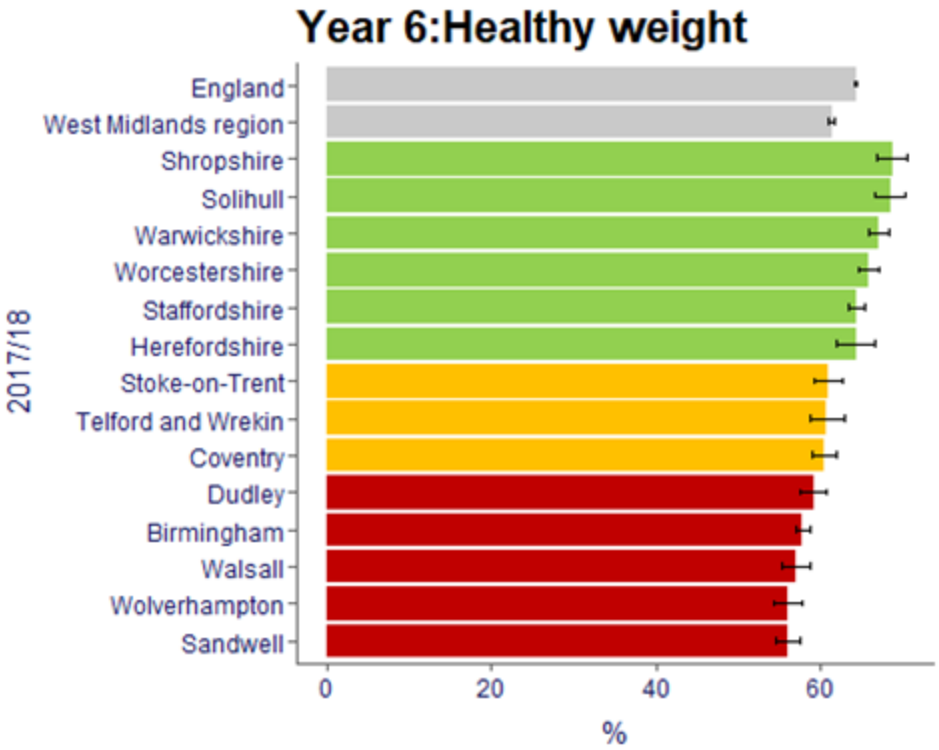
Prevalence of underweight Year 6 children remains similar to England and has decreased by 0.5 percentage points to 1.1%.



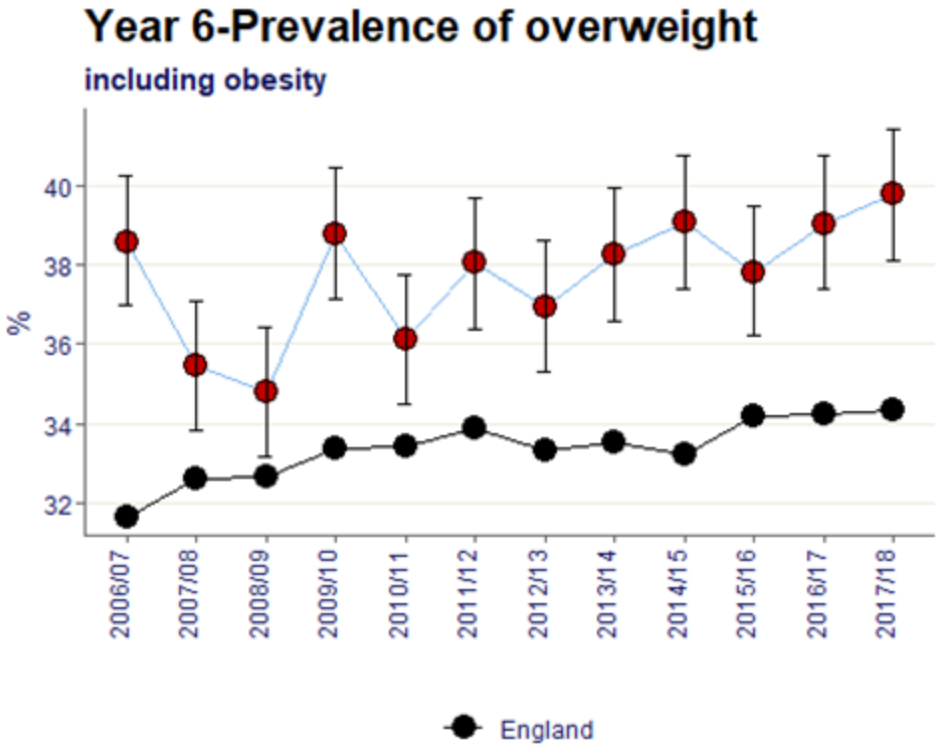
Similar to the West Midlands.



Prevalence of healthy weight Year 6 children has decreased in 2017/18 to 59% and remains significantly below the England value.

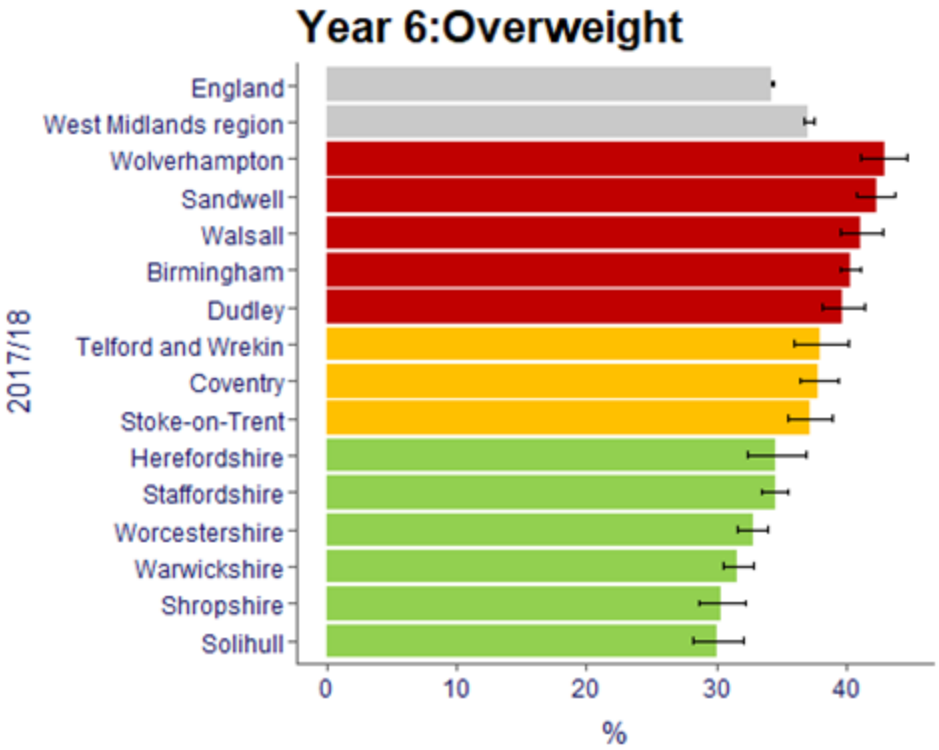


Significantly worse than the West Midlands.

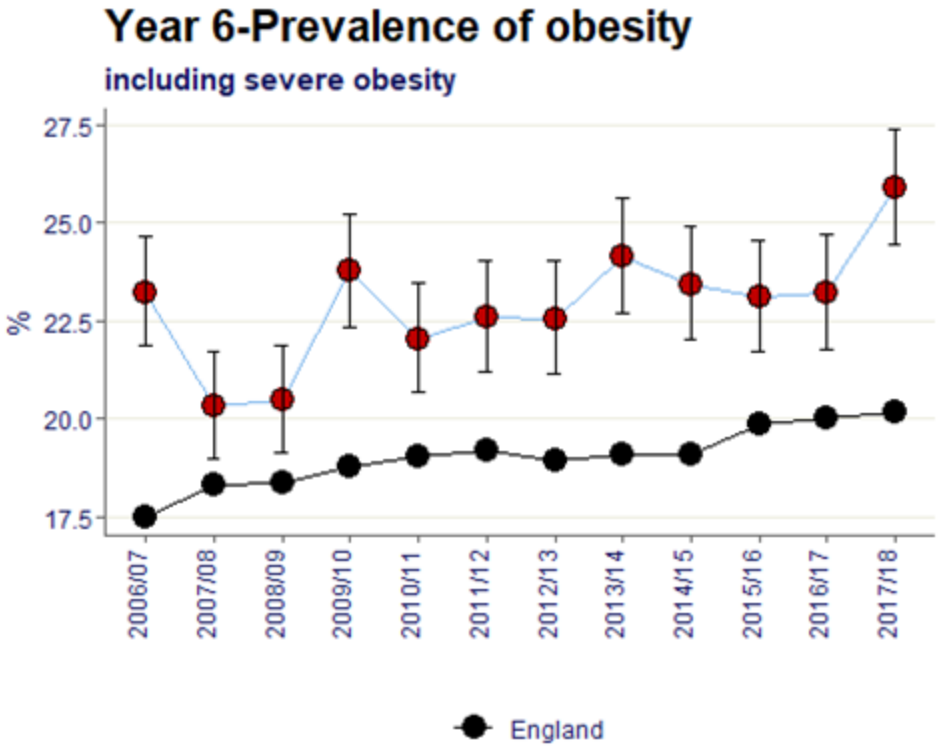


The prevalence of overweight Year 6 children is the highest since NCMP began at 39.8%.

It has always been significantly higher than the England value.



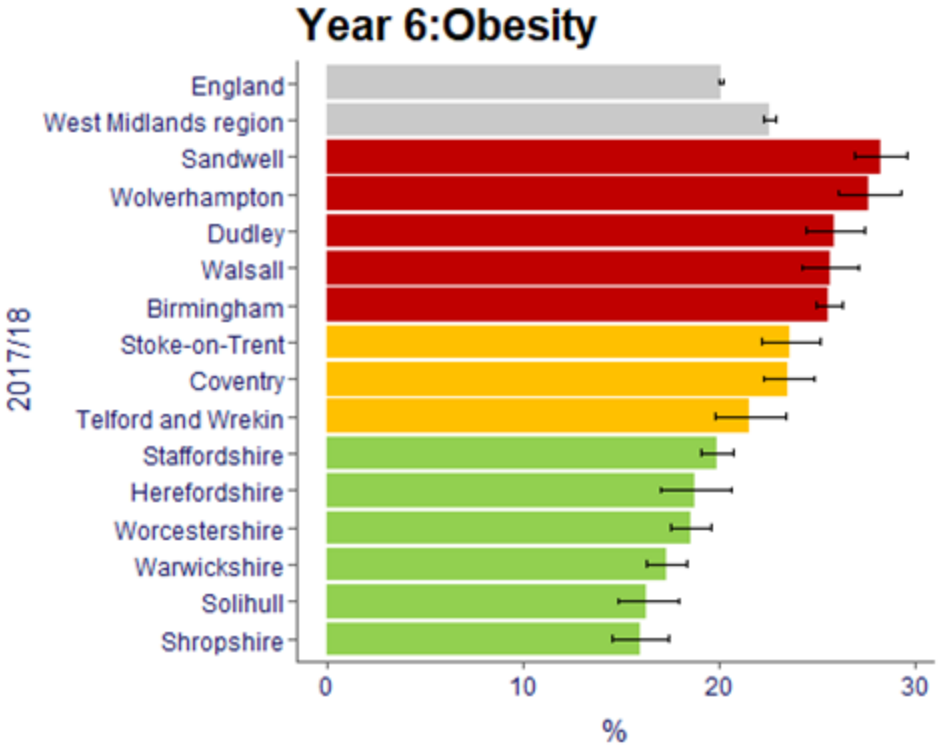
Significantly worse than the West Midlands.



The prevalence of obesity is the highest of any year at 25.9%, an increase of 2.7 percentage points on the previous year.

It remains significantly higher than the England throughout the 12 years of data.

Dudley's value is 5 percentage points above the England value of 20.1%.



Significantly worse than the West Midlands.