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Excess Weight in Childhood:
National Child Measurement Programme, 2023/24

Dr Verity Pinkney | Public Health and Social Research Unit

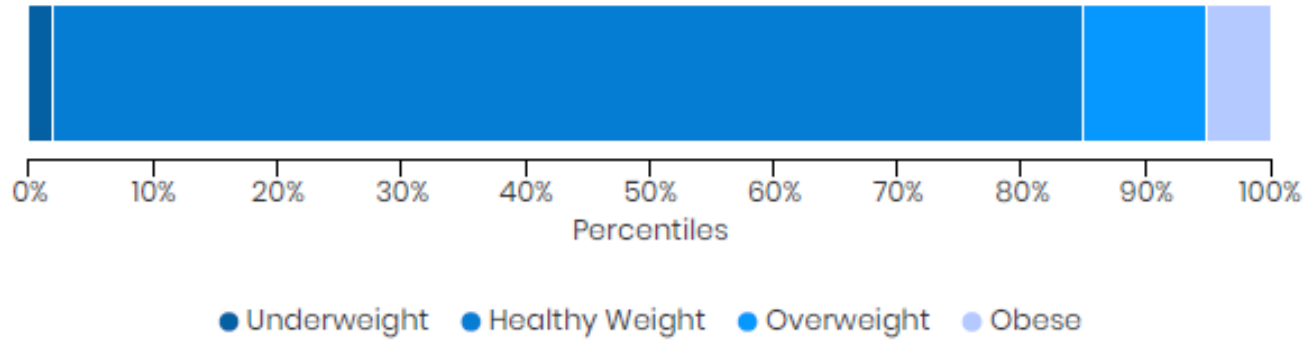
Why is it important to monitor child weight?

- Obesity in childhood can have a significant negative impact on the health and emotional wellbeing of children and young people
- Younger generations are becoming obese earlier and staying obese for longer
- Obese children are more likely to be bullied, report low self-esteem and poor body image
- Obese adults have a greater risk of premature mortality, and often suffer from long-term health conditions such as type 2 diabetes
- Whilst underweight is not always a cause for concern, a lack of weight in childhood can sometimes indicate an underlying medical condition, emotional or behavioural problem or wider issues at home
- Successful initiatives and interventions to target children at risk of being underweight or obese will only be achieved through active engagement of schools, communities, families and individuals

Childhood obesity: A plan for action (January 2017)
Childhood obesity: A plan for action - Chapter 2 (June 2018)
Tackling obesity: empowering adults and children to live healthier lives (July 2020)
Simmonds, M., Llewellyn, A., et al. (2016). Predicting adult obesity from childhood obesity: A systematic review and meta-analysis (2016)
Royal Society of Public Health. Tackling the UK's childhood obesity epidemic (November 2015)

The National Childhood Measurement Programme (NCMP)

- NCMP is an annual record of height and weight measurements of children in reception and year 6 (attending state-maintained schools)
- Key source of robust data for Public Health indicators
- Population[1] BMI classifications (considering weight, height, age and gender):
  - Underweight**:** Up to the 2nd BMI centile
  - Healthy weight: between the 2nd and 85th centile
  - Overweight: between the 85th and 95th centile
  - Obese: at or above the 95th BMI centile
  - Overweight or obese combined: children measured overweight or obese (often referred to as prevalence of 'excess weight')
  - Severely obese: at or above 99.6th BMI centile



[1] The population monitoring cut offs for overweight and obesity are lower than the clinical cut offs (91st and 98th centiles for overweight and obesity) used to assess individual children. This is to capture children in the population in the clinical overweight or obesity BMI categories and those who are high risk of moving into the clinical overweight or clinical obesity categories. This helps ensure that adequate services are planned and delivered for the whole population.

Headlines for 2023/24

- **Reception (4-to-5-year-olds):**
  - One in five reception children were overweight or obese (excess weight) in West Sussex, equating to around 1,725 children
  - Prevalence of excess weight was **lower** in West Sussex (20.3%) than England (22.1%)
  - Variation exists within the county - Adur had the highest prevalence of excess weight (24.0%), and Horsham had the lowest (17.6%)
  - Prevalence of excess weight among reception children has **not changed** over time in West Sussex

- **Year 6 (10-to-11-year-olds):**
  - 31.2% of Year 6 children were overweight or obese in West Sussex, equating to around 2,785 10–11-year-olds
  - Prevalence of excess weight was **lower** in West Sussex (31.2%) than England (35.8%)
  - Variation exists within the county - Arun had the highest prevalence of excess weight (37.3% - **higher** than the county average), and Horsham had the lowest (25.5% - **lower** than the county average)
  - Prevalence of excess weight among children in Year 6 has **increased** in the past 5 years in West Sussex

The data in this report:

- The data in this report comes from two different sources:
  1. Published National Child Measurement Programme data from NHS Digital and reproduced by OHID in the Obesity Profile
     - This data has been used to report current prevalence of excess weight, trends, and nearest neighbour and small area comparisons

  2. A local extract of National Child Measurement Programme data
     - This extract excludes children who may live in West Sussex but don't attend a school within the county
     - This data has been used to explore inequalities within West Sussex by deprivation, sex and ethnicity
     - Published data on inequalities (unaffected by the caveat above) is available in the Obesity Profile but reports on obesity only rather than excess weight

  – Analyses throughout this report are based on the postcode of the child rather than the location of the school they attend

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Reception (4 to 5 year olds)

National Child Measurement Programme, 2023/24

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Reception: How does West Sussex compare to England?

- In 2023/24, one in five reception children were overweight or obese (excess weight) in West Sussex, equating to around 1,725 children
- Prevalence of excess weight in West Sussex (20.3%) was significantly **lower** than England (22.1%)
- Within West Sussex, Adur had the highest prevalence of excess weight (24.0%), and Horsham had the lowest (17.6%)
- All local authorities within West Sussex had a **lower** or **similar** prevalence of excess weight when compared to England

Reception prevalence of overweight (including obesity) in West Sussex: 2023/24

Area	Number of children	Number of children measured	Prevalence			Versus England
			%	Lower CI	Upper CI	
Adur	145	605	24.0	20.4	27.1	Similar
Arun	320	1,380	23.2	21.1	25.6	Similar
Chichester	185	980	18.9	16.4	21.3	Better
Crawley	310	1,455	21.3	19.3	23.5	Similar
Horsham	250	1,420	17.6	15.8	19.8	Better
Mid Sussex	305	1,630	18.7	17.0	20.7	Better
Worthing	210	1,020	20.6	18.1	23.0	Similar
West Sussex	1,725	8,490	20.3	19.5	21.2	Better
South East	19,085	91,680	20.8	20.6	21.1	Better
England	123,709	560,720	22.1	22.0	22.2	Not compared

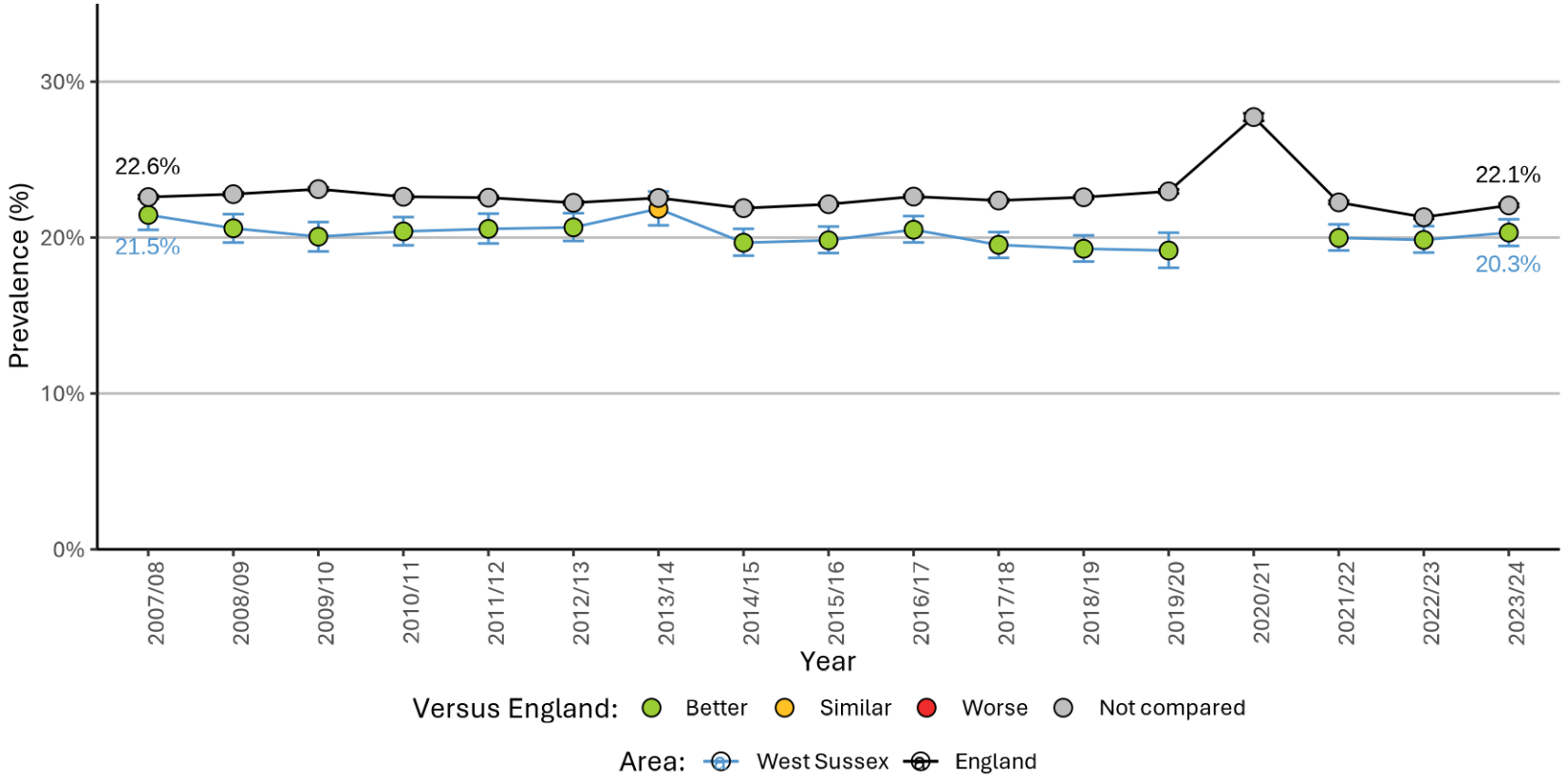
Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)

Reception: What about trends?

- Prevalence of excess weight among reception children has **not changed** over time in West Sussex
- Prevalence of excess weight continues to be significantly **lower** than England
- Across the district and boroughs within West Sussex, prevalence of excess weight has **not changed** significantly in any area during the past 5 years
- The **increase** in prevalence of excess weight nationally (2020/21) coincided with the COVID-19 pandemic[1, 2] – this estimate is based on weighted data.
- Reception children in West Sussex were not measured in 2020/21

Reception prevalence of overweight (including obesity) in West Sussex; 2007/08 to 2023/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)



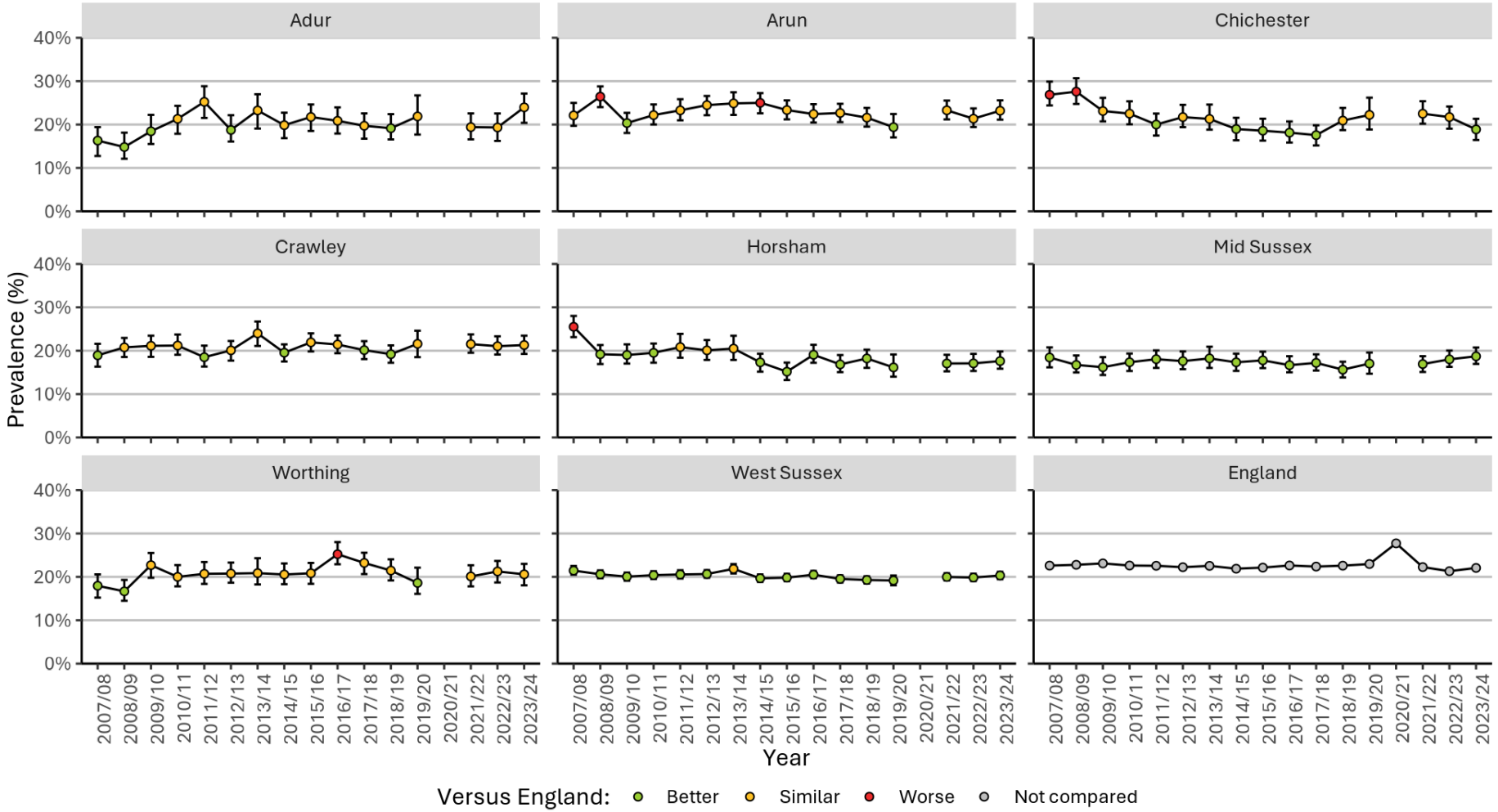
[1]Fewer children were measured in 2019/20 (around 75% of usual sample) and 2020/21 (25% of usual sample) due to school closures.

[2]National Child Measurement Programme (NCMP) data for the 2020 to 2021 academic year by local authority - GOV.UK

Reception: What about trends?

Reception prevalence of overweight (including obesity) in West Sussex lower-tier authorities; 2007/08 to 2023/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)

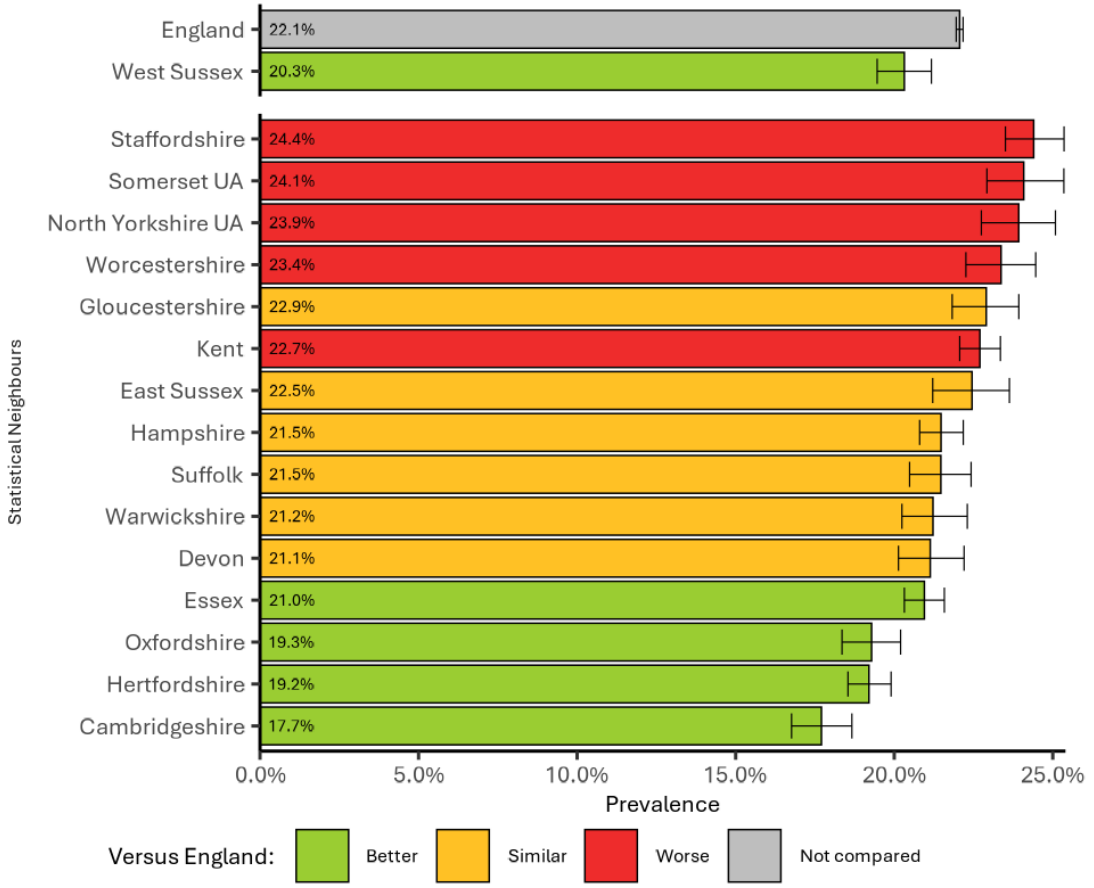


Reception: How does West Sussex compare to ‘similar’ areas?

- West Sussex generally performs well when compared to nearest neighbours
- In 2023/24, West Sussex had the third lowest prevalence of excess weight among 4–5-year-olds when compared to nearest neighbours
- Excess weight prevalence for nearest neighbours of West Sussex ranged from 17.7% (Cambridgeshire) to 24.4% (Staffordshire)

Reception prevalence of overweight (including obesity) among West Sussex nearest neighbours; 2023/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)



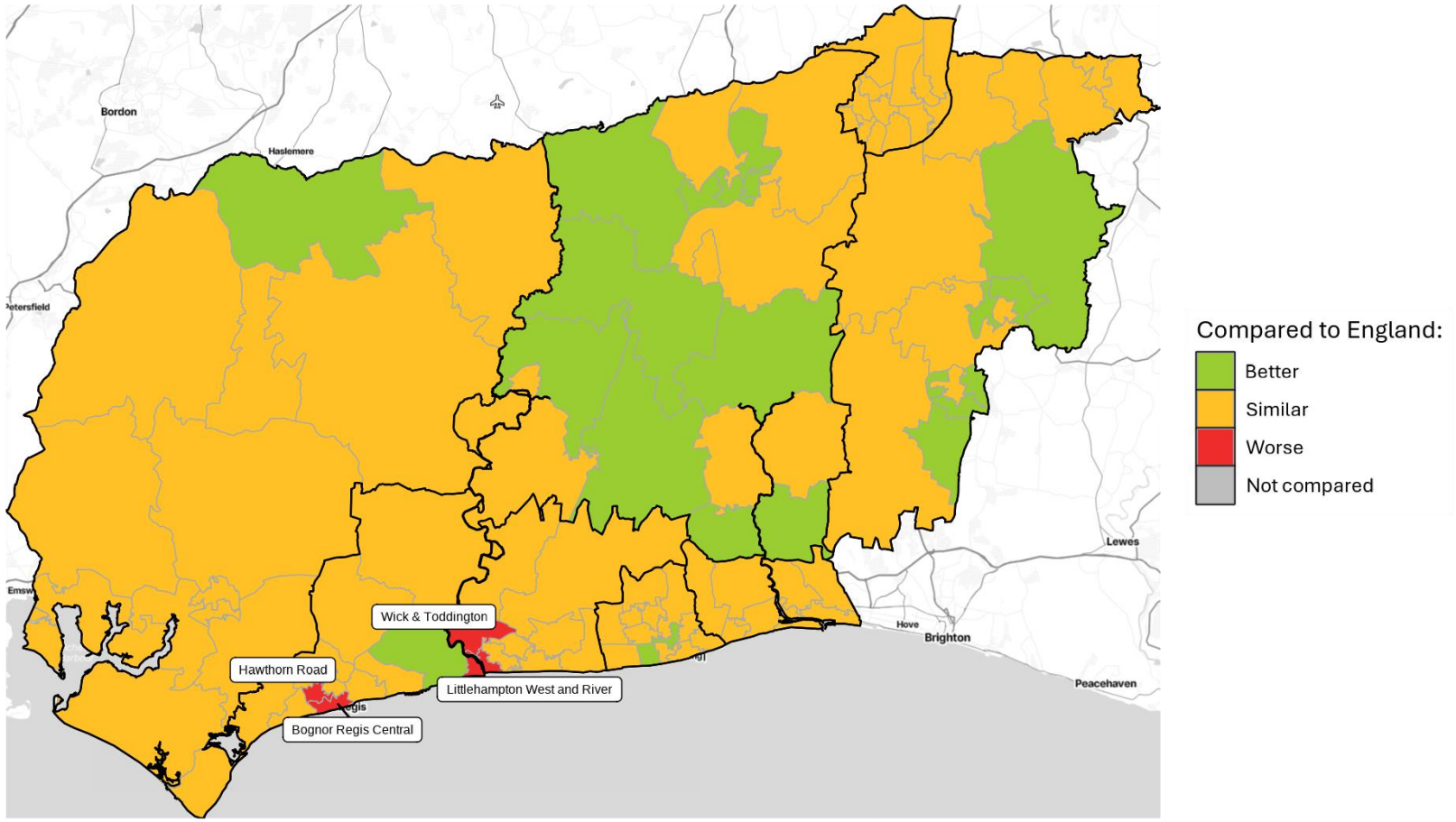
Note. If no data is given, prevalence has been suppressed due to small counts.
Area is determined based on the postcode of the child.

Reception: Variation exists within West Sussex:

- Prevalence of excess weight among children in reception varies within West Sussex
- In 2021/22 to 2023/24, four small areas (MSOAs) in West Sussex have a significantly **higher** prevalence of excess weight than England (21.9%)
- These areas all fall within Arun district and include:
  - Hawthorn Road (33.3%)
  - Littlehampton West and River (31.6%)
  - Bognor Regis Central (28.6%)
  - Wick and Toddington (26.2%)
- In contrast, the small area with the **lowest** prevalence was Burgess Hill South (10.0%)

Reception prevalence of overweight (including obesity), 3 years data combined; in West Sussex MSOAs; 2021/22 - 23/24

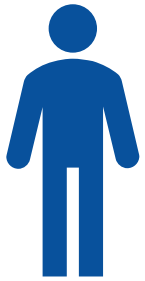
Source: NHS Digital, National Child Measurement Programme (reallocated to MSOAs by OHID, Fingertips)



Reception: Inequalities: Sex

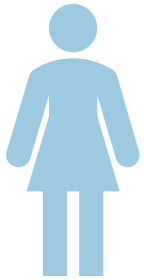
- Prevalence of excess weight among reception children did not differ by sex
- In 2018/19 to 2023/24*, in West Sussex:

20.0%
of boys



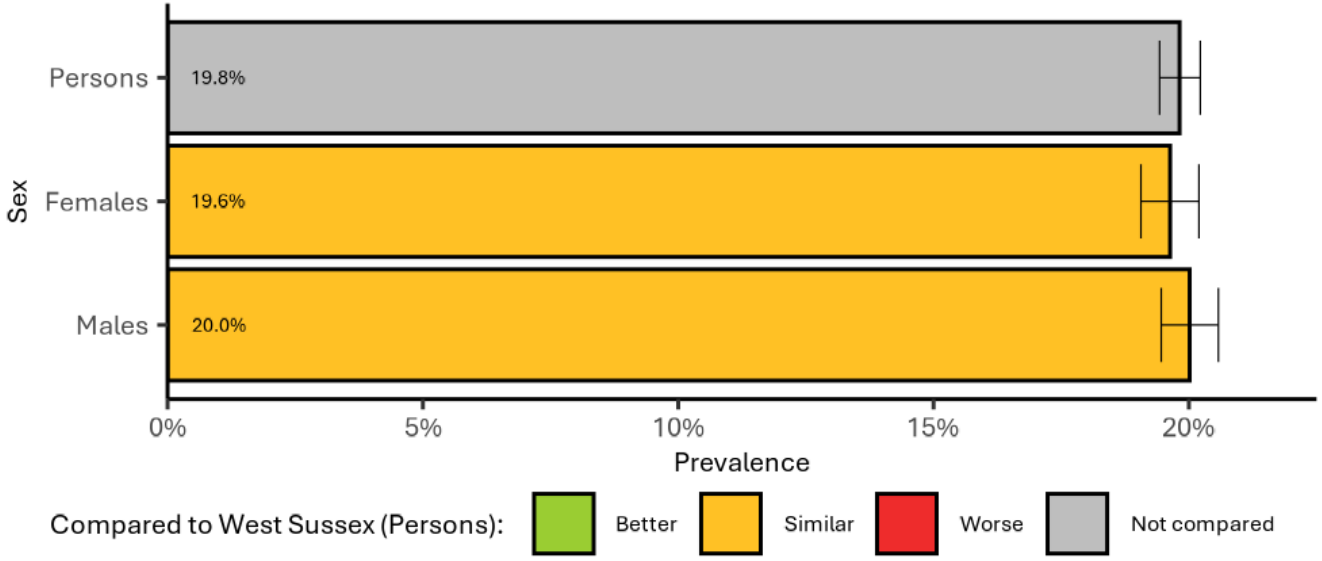
in reception were overweight or obese compared to

19.6%
of girls



Prevalence of overweight or very overweight among children in reception (4 to 5 yr olds) in West Sussex by sex; 2018/19 to 2023/24

Source: Local analysis of NCMP data



Note. If no data is given, prevalence has been suppressed due to small counts.
Children who attend schools outside of West Sussex but live within the county are excluded.
Due to the COVID-19 pandemic, data for 2020/21 is excluded from the 5-year window, with 2018/19 used in preference.

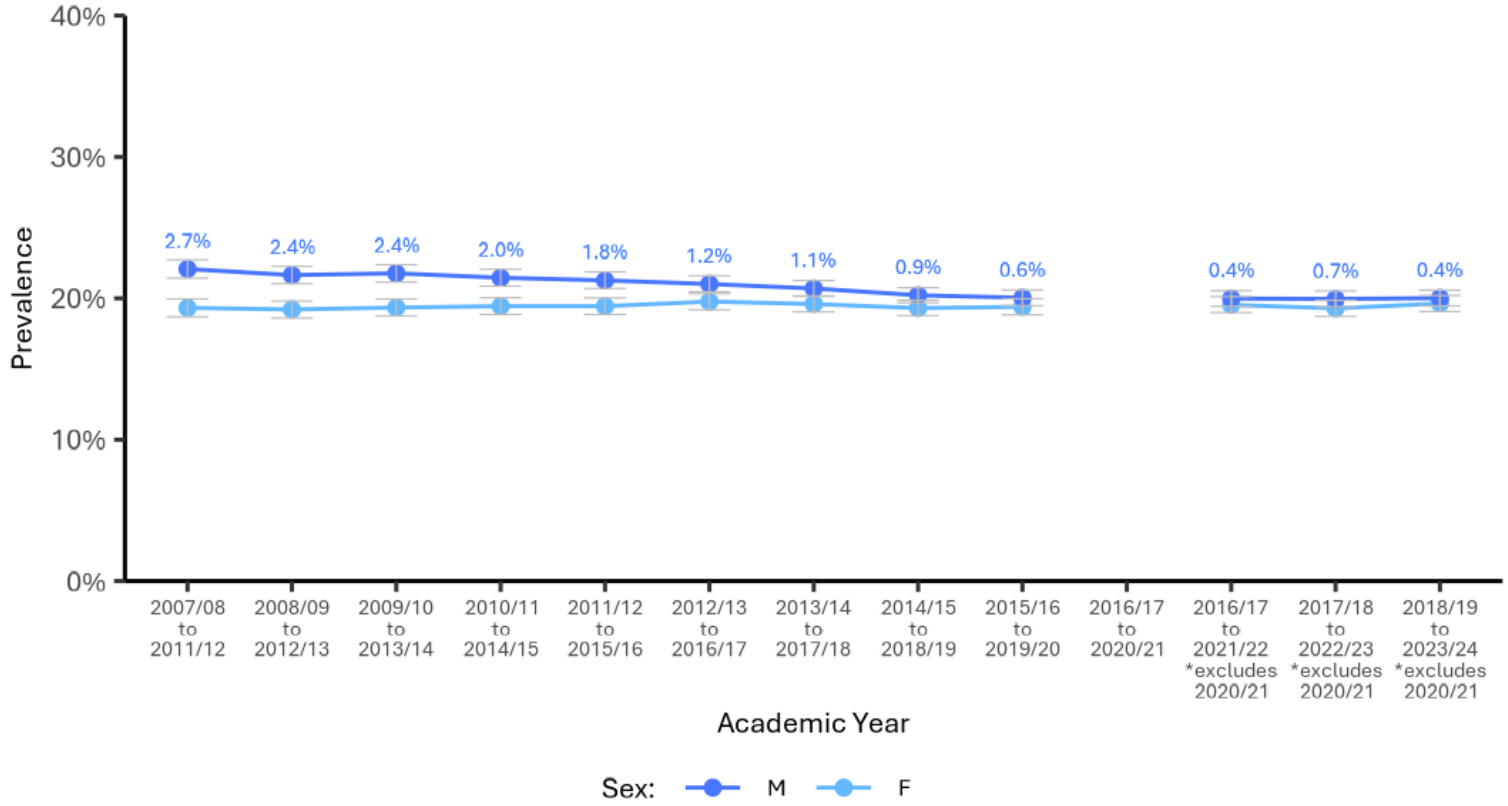
Reception: Inequalities: Sex

- National data[1, 2] has demonstrated a widening gap in prevalence of obesity among boys and girls in Year 6, but not Reception

- The figure (right) shows prevalence of excess weight for Reception children in West Sussex by sex
- Data has been aggregated over a rolling 5-year window
- The difference in prevalence of excess weight between 4-to-5-yr-old boys and girls does appear to have narrowed overtime

Prevalence of overweight or very overweight among children in reception (4 to 5 yr olds) by sex in West Sussex over time

Source: Local analysis of NCMP data



Note. Children who attend schools outside of West Sussex but live within the county are excluded.
Data for 2016/17 to 2020/21 is not available for Reception due to the mass closure of schools due to the COVID-19 pandemic.
Values denote difference in prevalence between sexes.

[1]NHS England, NCMP (2023/24)
[2]OHID, Obesity Profile (2023/24 data)

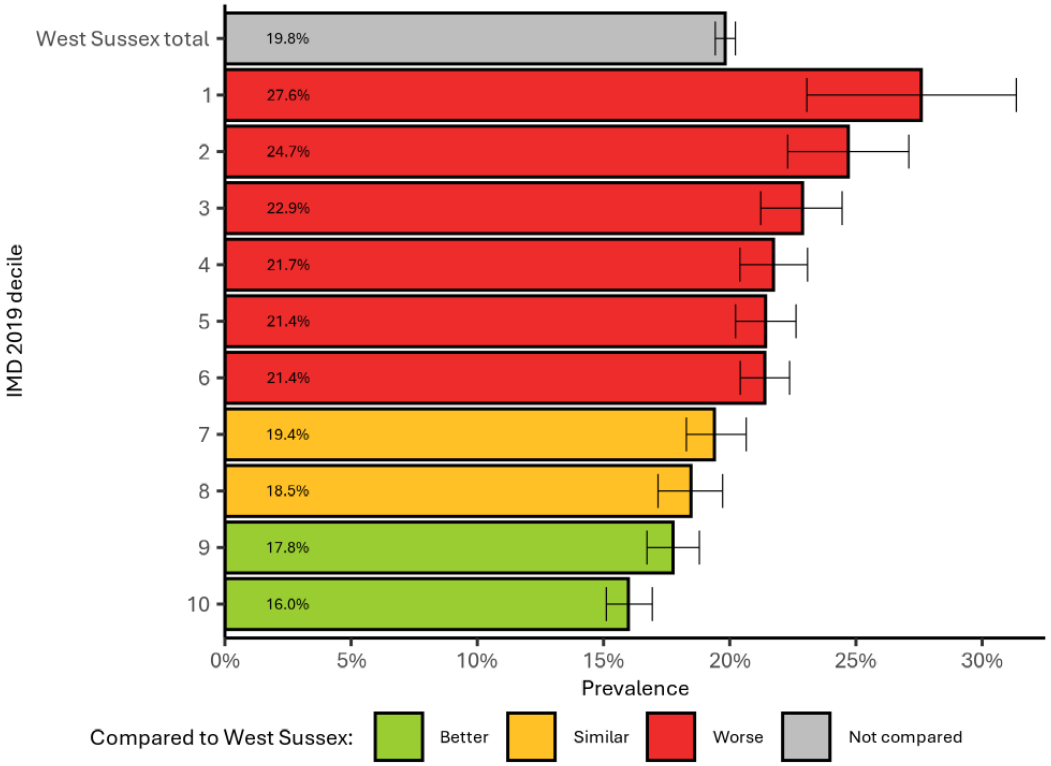
Reception: Inequalities: Deprivation

- Overall, West Sussex is one of the least deprived areas in the country[1], but some neighbourhoods in Arun and Crawley rank amongst the poorest 10% of all areas in England
- Child excess weight is strongly associated with deprivation
- Prevalence of excess weight is **greatest** among children from the most deprived areas
  - Prevalence of excess weight was **1.7 times higher** for reception children living in areas of West Sussex among the 10% most deprived areas in England, compared with areas among the 10% least deprived
  - Compared to the West Sussex average, prevalence of excess weight was **higher** for children living in more deprived deciles and **lower** for those in the least deprived deciles, with a clear social gradient

Note. Data pooled across 5-years due to small counts. The number of children in each decile varies, with fewer small areas of West Sussex among the least deprived deciles in England.
[1]English indices of deprivation (2019)

Prevalence of overweight or very overweight among children in reception (4 to 5 yr olds) in West Sussex by Index of Multiple Deprivation (2019) deciles; 2018/19 to 2023/24

Source: Local analysis of NCMP data



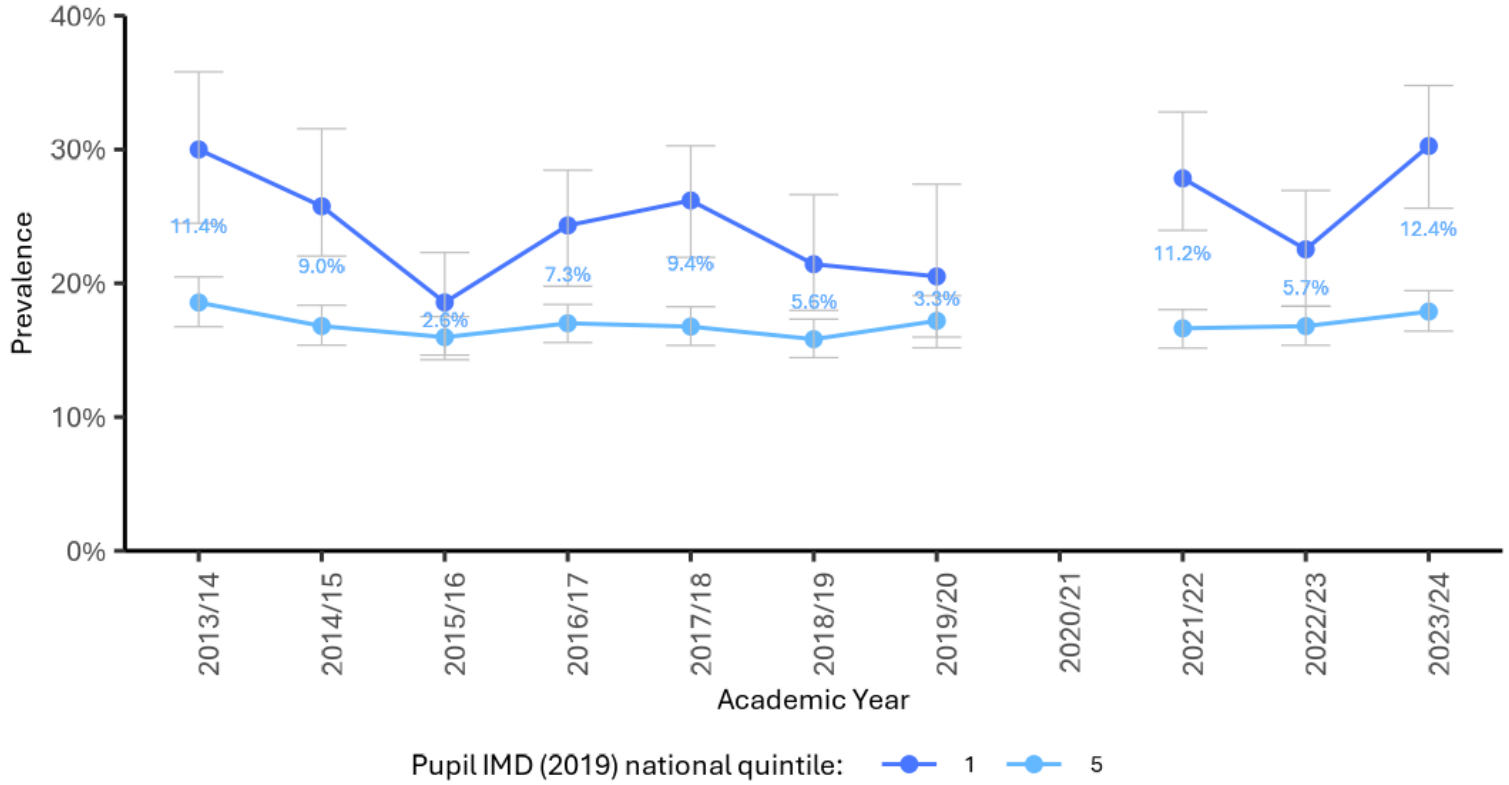
Note. If no data is given, prevalence has been suppressed due to small counts.
Decile is determined based on the postcode of the child.
Children who attend schools outside of West Sussex but live within the county are excluded.
Due to the COVID-19 pandemic, data for 2020/21 is excluded from the 5-year window, with 2018/19 used in preference.

Reception: Inequalities: Deprivation gap

- National data[1] has demonstrated a stable gap between obesity prevalence of children resident in the most and least deprived 10% of areas over time
- The only exception to this was during the COVID-19 pandemic, which saw a significantly larger gap*
- This figure (right) shows prevalence of excess weight (overweight and obesity) for reception children in areas of West Sussex among the 20% most and least deprived areas in England since 2013/14

Prevalence of overweight or very overweight among children in reception (4 to 5 yr olds) by most and least deprived IMD quintiles (based on postcode of pupil) in West Sussex over time

Source: Local analysis of NCMP data



Note. Quintile is determined based on the postcode of the child.
Children who attend schools outside of West Sussex but live within the county are excluded.
Values denote difference in prevalence between areas of West Sussex amongst the 20% most and 20% least deprived areas in England.
Data for 2020/21 is not available for Reception due to the mass closure of schools due to the COVID-19 pandemic.

[1]NHS England, NCMP (2023/24)

* 2020/21 for England is based on weighted data due to lower coverage as the COVID-19 pandemic closed schools. Local data for reception children in 2020/21 is not available.

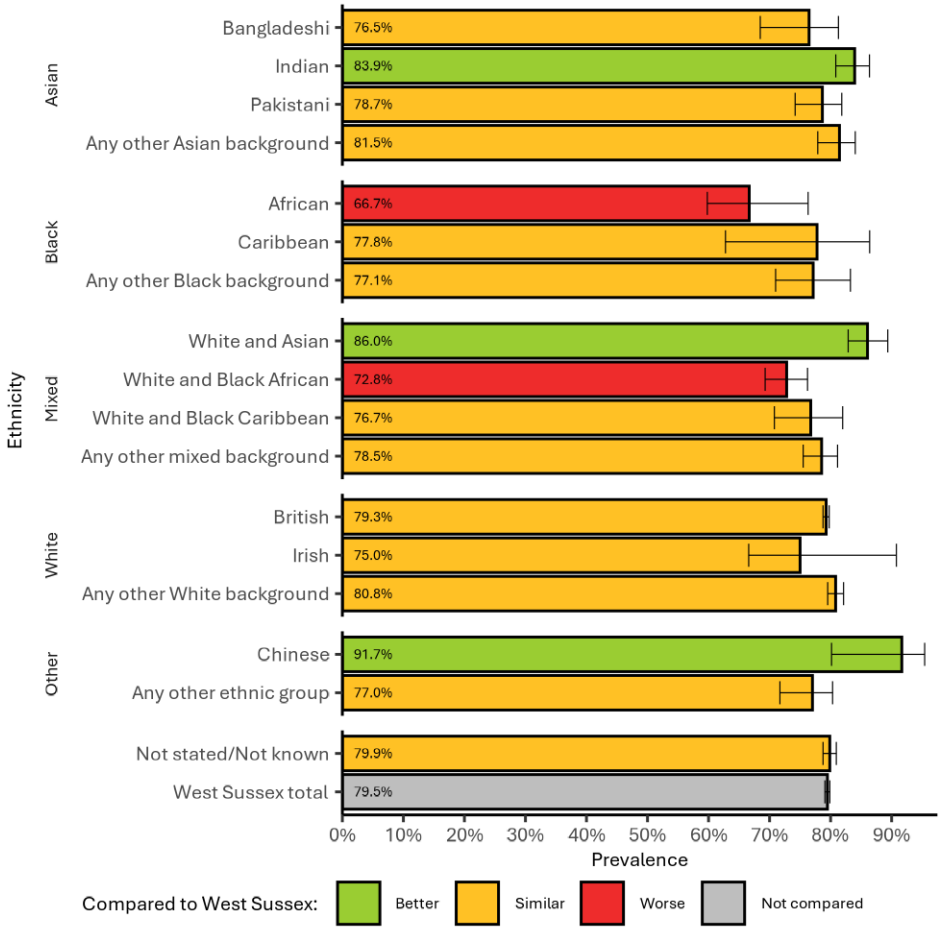
Reception: Inequalities: Ethnicity

Caveats: Five years of data was combined to improve reliability. Healthy weight prevalence is reported as counts are larger. Some records do not have ethnicity stated/recorded. Data completeness has generally improved over time (37% of records without ethnicity in 2018/19, falling to between 2-7% of records from 2021/22 onwards). **Counts are small for some ethnic groups.**

- Prevalence of healthy weight is reported as counts are larger.
- Most children who are not a healthy weight are likely to be overweight or obese. Prevalence of underweight is generally low, although there is likely to be variation across ethnicities.
- Across the 5-year period, prevalence of healthy weight was **lowest** for Black African children (66.7%), and **highest** for Chinese children (91.7%).
- Estimated prevalence of healthy weight was **significantly lower** than the 5-year average for West Sussex (79.5%) for:
  - Black African children (66.7%)
  - White and Black African children (72.8%).

Prevalence of healthy weight among children in reception (4 to 5 yr olds) in West Sussex by ethnicity; 2018/19 to 2023/24

Source: Local analysis of NCMP data



Note. If no data is given, prevalence has been suppressed due to small counts.
Children who attend schools outside of West Sussex but live within the county are excluded.
Due to the COVID-19 pandemic, data for 2020/21 is excluded from the 5-year window, with 2018/19 used in preference.

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Year 6 (10- to 11-year-olds)

National Child Measurement Programme, 2023/24

Dr Verity Pinkney | Public Health and Social Research Unit

Year 6: How does West Sussex compare to England?

- In 2023/24, 31.2% of Year 6 children were overweight or obese in West Sussex, equating to around 2,785 10–11-year-olds
- Prevalence of overweight and obesity was significantly **lower** than England (35.8%)
- There is significant variation within West Sussex. Arun had the highest prevalence of overweight and obesity in 2023/24 (37.3% - **higher** than the county average), and Horsham had the lowest (25.5% - **lower** than the county average)
- All local authorities within West Sussex have a **lower** or **similar** prevalence of excess weight when compared to England

Year 6 prevalence of overweight (including obesity) in West Sussex: 2023/24

Area	Number of children	Number of children measured	Prevalence			Versus England
			%	Lower CI	Upper CI	
Adur	220	715	30.8	27.8	34.6	Better
Arun	570	1,530	37.3	34.8	39.6	Similar
Chichester	305	1,045	29.2	26.4	31.8	Better
Crawley	505	1,470	34.4	32.0	36.9	Similar
Horsham	365	1,430	25.5	23.4	28.0	Better
Mid Sussex	430	1,635	26.3	24.1	28.4	Better
Worthing	390	1,110	35.1	32.5	38.1	Similar
West Sussex	2,785	8,940	31.2	30.2	32.1	Better
South East	31,490	96,440	32.7	32.4	32.9	Better
England	217,532	606,863	35.8	35.7	36.0	Not compared

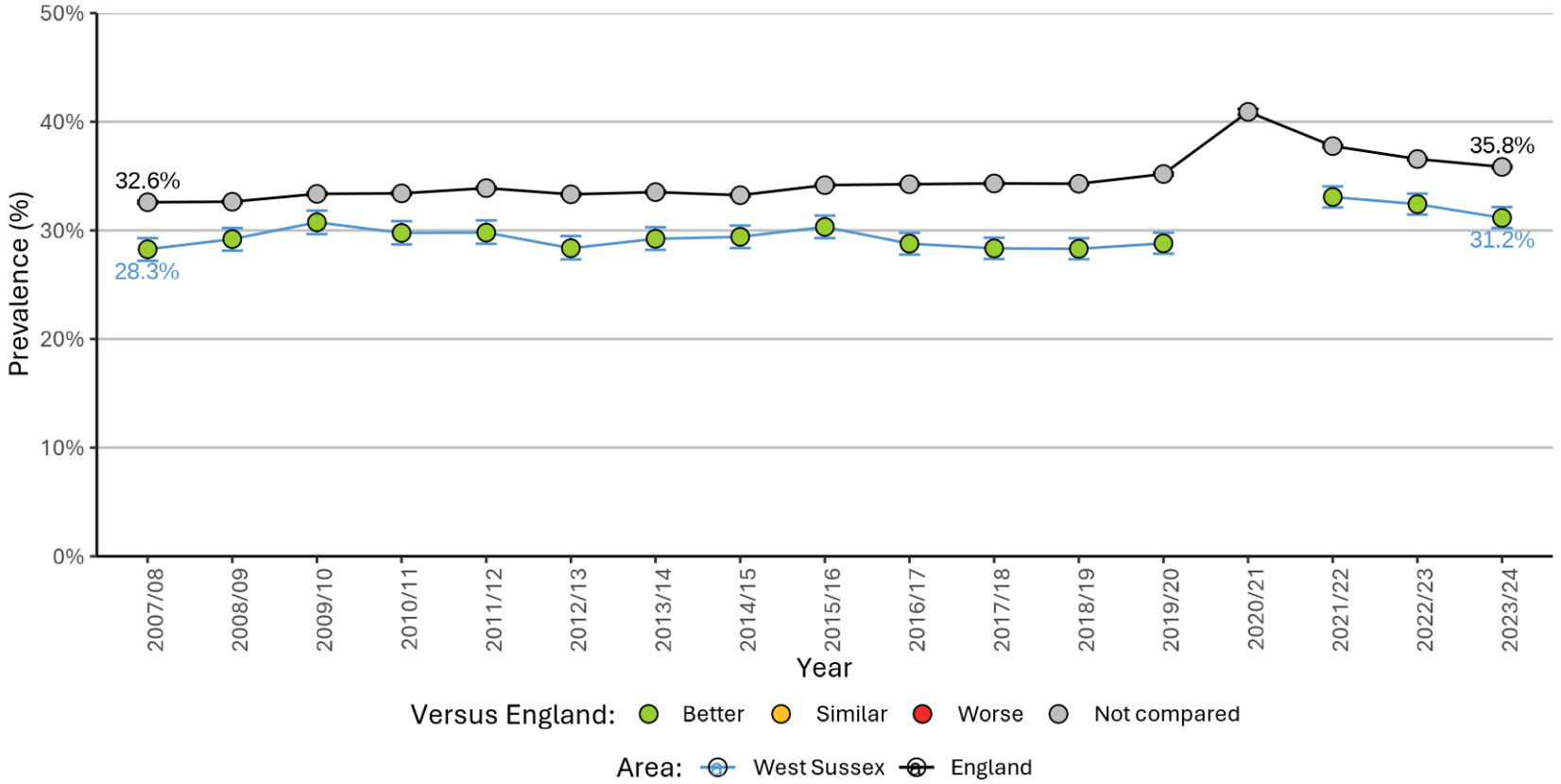
Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)

Year 6: What about trends?

- Prevalence of excess weight among children in Year 6 has **increased** in the past 5 years in West Sussex
- Prevalence of excess weight continues to be significantly **lower** than England
- Across the district and boroughs within West Sussex, prevalence of excess weight has **not changed** significantly in most areas during the past 5 years
- Arun is the exception, which has seen a significant **increase**
- The **increase** in prevalence of excess weight nationally (2020/21) coincided with the COVID-19 pandemic[1, 2] – this estimate is based on weighted data
- West Sussex achieved sufficient data for Year 6 pupils in 2020/21 (91% participation)
- 35.7% of Year 6 pupils were overweight or obese in 2020/21, a significantly **larger** proportion than the previous year (up from 28.8%)

Year 6 prevalence of overweight (including obesity) in West Sussex; 2007/08 to 2023/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)



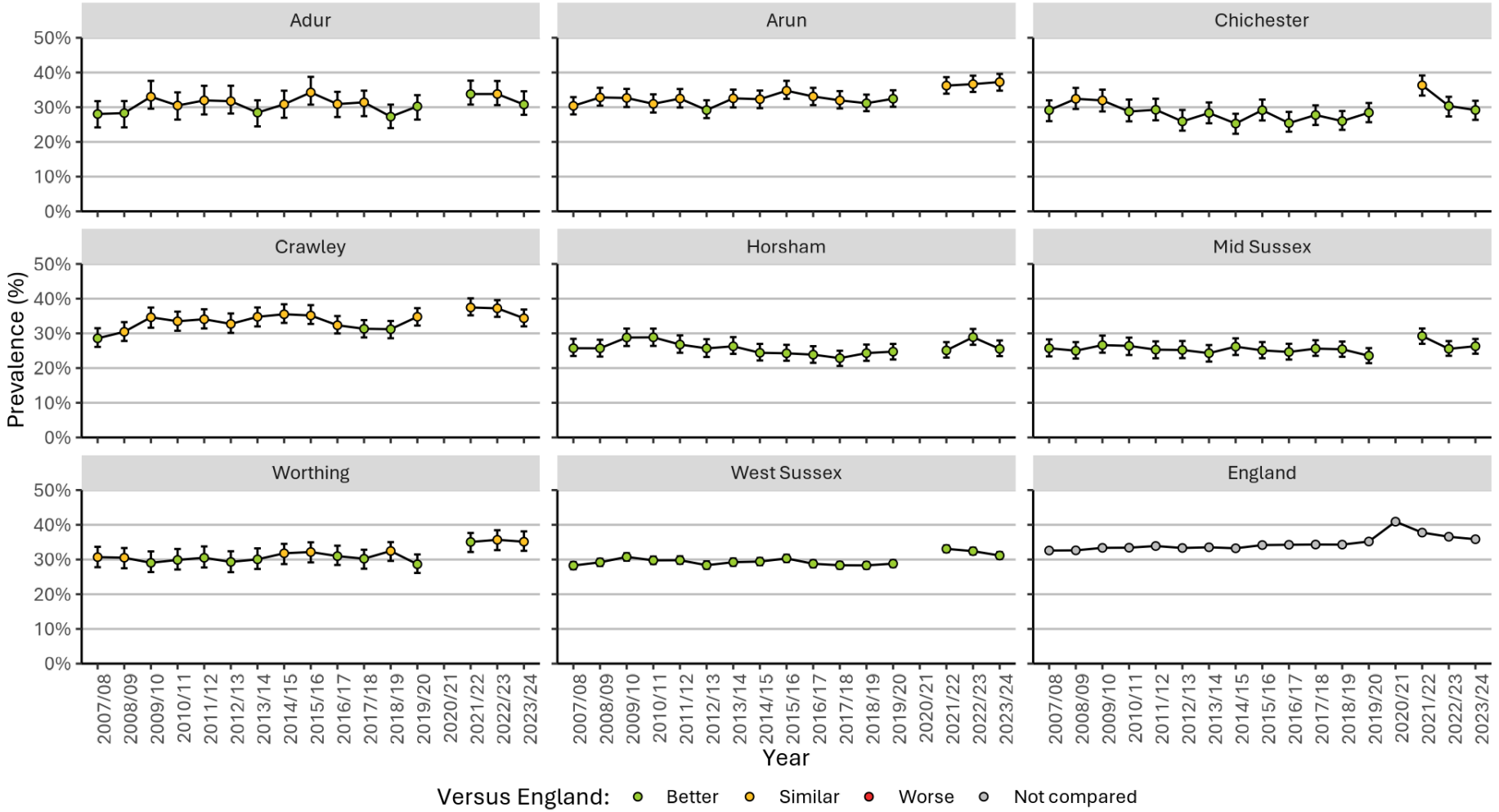
[1]Fewer children were measured in 2019/20 (around 75% of usual sample) and 2020/21 (25% of usual sample) due to school closures. Year 6 measurements were submitted for West Sussex in 2020/21, although are not presented in the figure.

[2]National Child Measurement Programme (NCMP) data for the 2020 to 2021 academic year by local authority - GOV.UK

Year 6: What about trends?

Year 6 prevalence of overweight (including obesity) in West Sussex lower-tier authorities; 2007/08 to 2023/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)

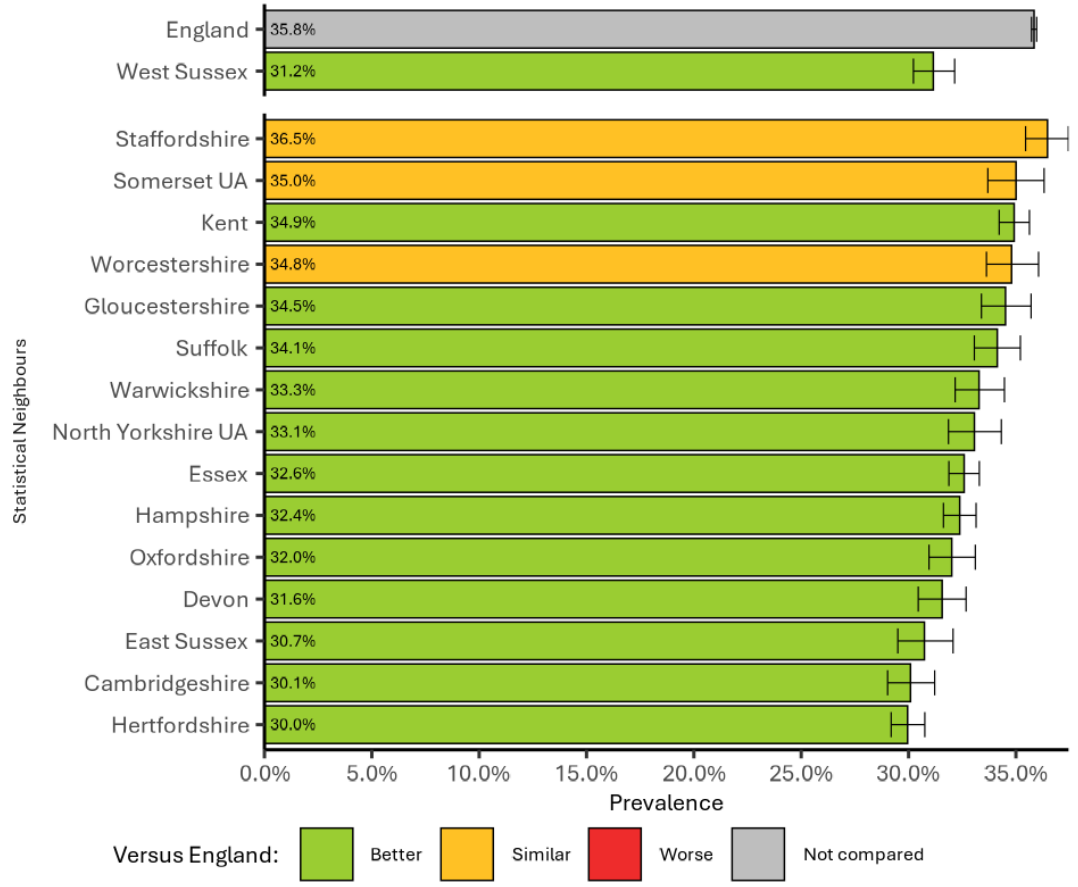


Year 6: How does West Sussex compare to ‘similar’ areas?

- West Sussex generally performs well when compared to nearest neighbours
- In 2023/24, West Sussex had the fourth lowest prevalence of excess weight among 10-11-year-olds when compared to nearest neighbours
- Excess weight prevalence for nearest neighbours of West Sussex ranged from 30.0% (Hertfordshire) to 36.5% (Staffordshire)
- Most nearest neighbours have a **lower** prevalence of excess weight among 10-11-year-olds than England

Year 6 prevalence of overweight (including obesity) among West Sussex nearest neighbours; 2023/24

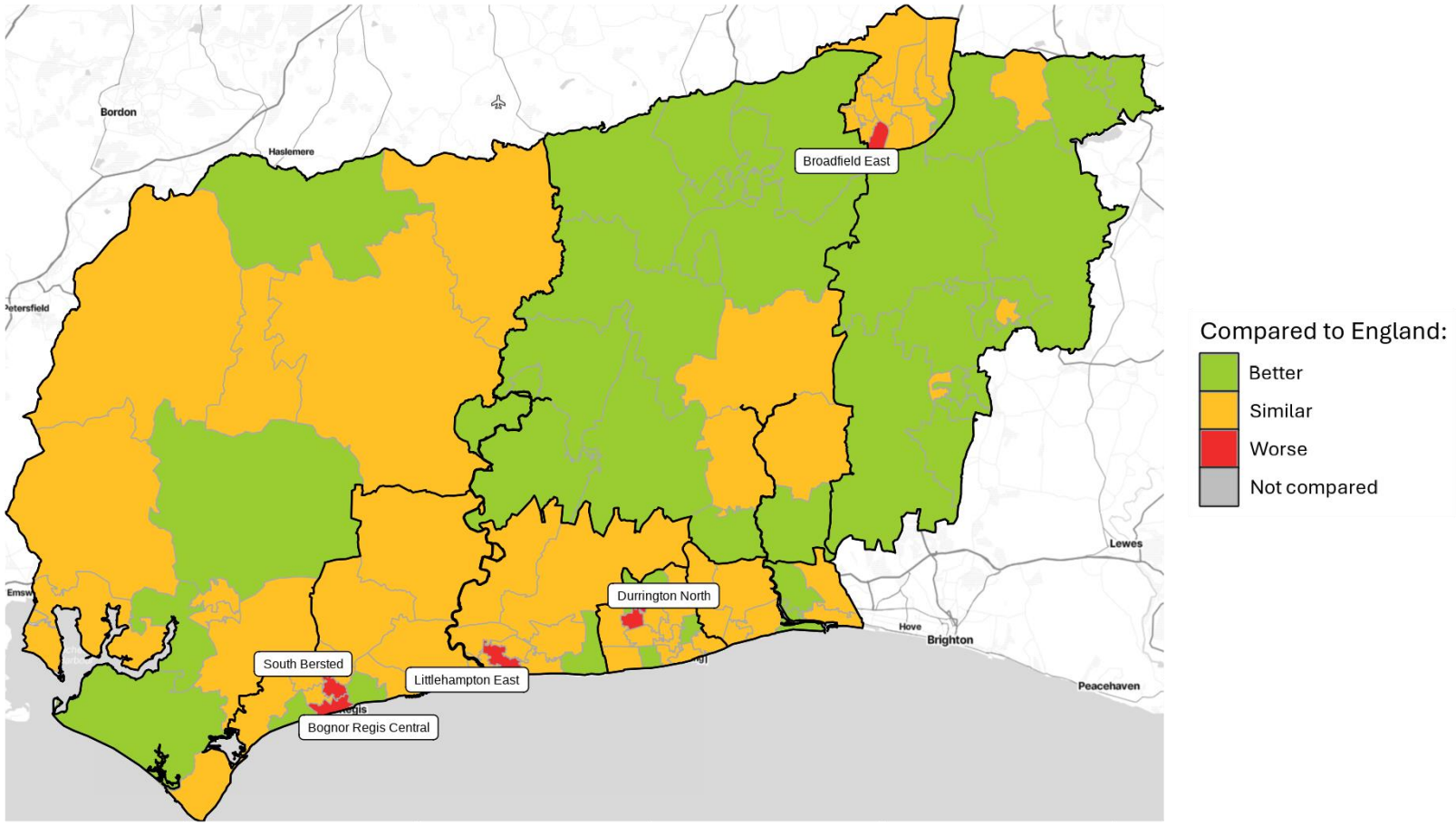
Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)



Note. If no data is given, prevalence has been suppressed due to small counts.
Area is determined based on the postcode of the child.

Year 6: Variation exists within West Sussex:

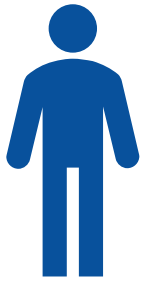
- Prevalence of excess weight among children in Year 6 varies within West Sussex
- In 2021/22 to 2023/24, five small areas in West Sussex have a significantly **higher** prevalence of excess weight than England (36.7%)
- These areas include:
  - Durrington North (47.3%)
  - South Bersted (46.9%)
  - Broadfield East (45.2%)
  - Littlehampton East (45.1%)
  - Bognor Regis Central (44.2%)
- In contrast, the small area with the **lowest** prevalence was Haywards Heath North East (19.0%)



Year 6: Inequalities: Sex

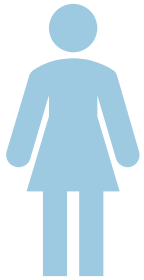
- Prevalence of excess weight among year 6 children tends to be higher among boys than girls
- In 2019/20 to 2023/24, in West Sussex:

34.9%
of boys



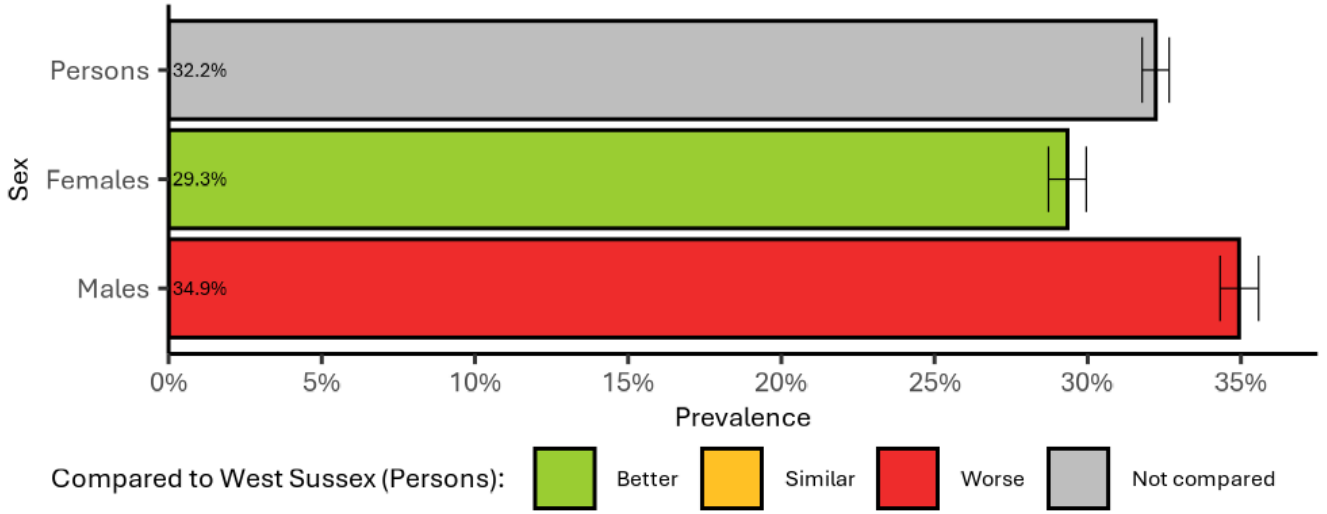
in year 6 were overweight or obese compared to

29.3%
of girls



Prevalence of overweight or very overweight among children in Year 6 (10 to 11 yr olds) in West Sussex by sex; 2019/20 to 2023/24

Source: Local analysis of NCMP data



Note. If no data is given, prevalence has been suppressed due to small counts.
Children who attend schools outside of West Sussex but live within the county are excluded.
During the COVID-19 pandemic (2020/21 academic year), mass school closures meant NCMP was incomplete in many local authorities in England. However in West Sussex, the number of year 6 children measured was 75% or more compared to the average number in the previous 3 years. West Sussex data for Year 6 is considered robust and reliable for 2020/21.

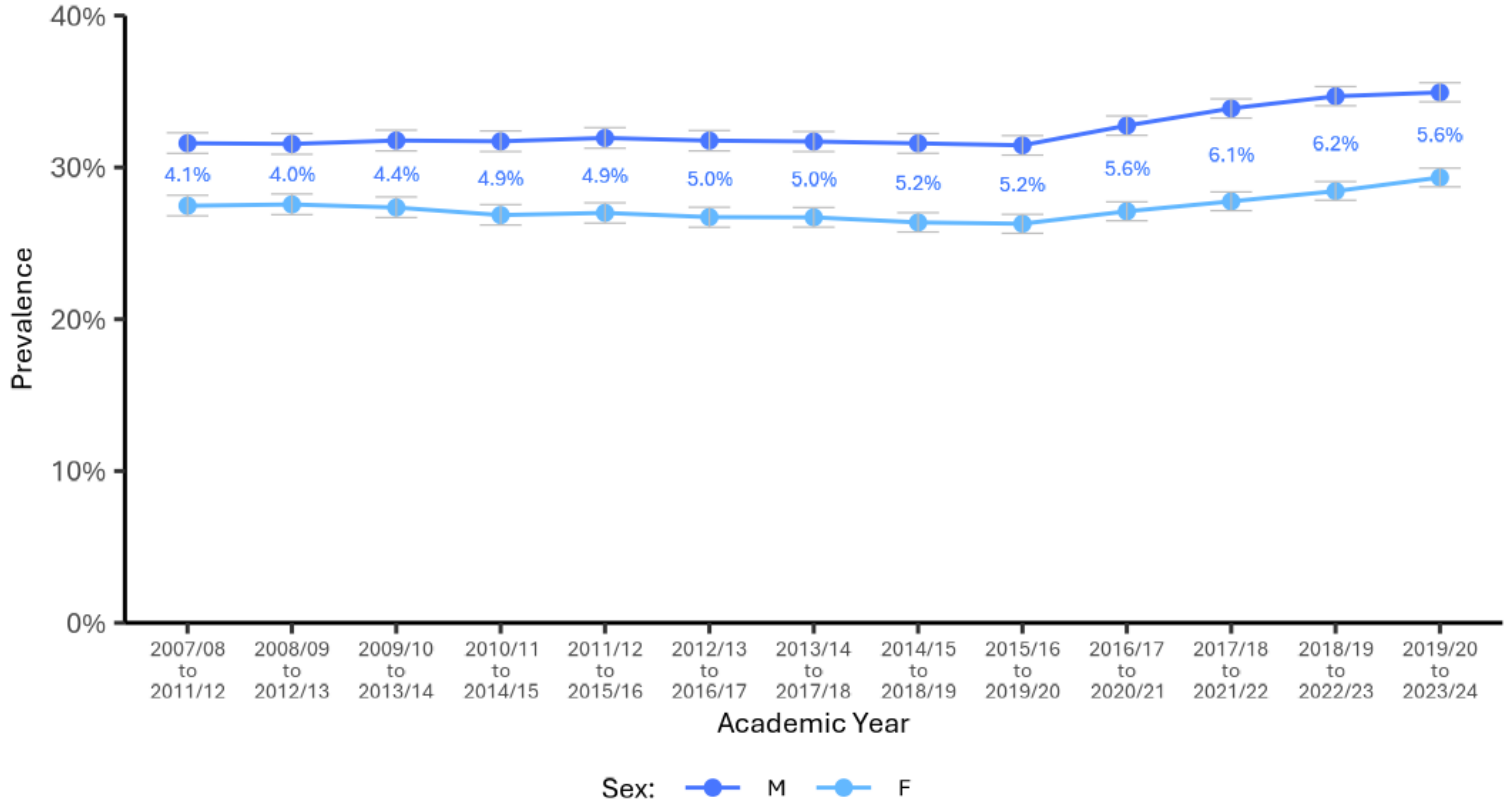
Year 6: Inequalities: Sex

- National data[1, 2] has demonstrated a widening gap in prevalence of obesity among boys and girls in year 6, but not reception

- The figure (right) shows prevalence of excess weight for year 6 children in West Sussex by sex
- Data has been aggregated over a rolling 5-year window
- The difference in prevalence of excess weight between 10-to-11-yr-old boys and girls does appear to have widened overtime

Prevalence of overweight or very overweight among children in Year 6 (10 to 11 yr olds) by sex in West Sussex over time

Source: Local analysis of NCMP data



Note. Children who attend schools outside of West Sussex but live within the county are excluded.
Data for 2016/17 to 2020/21 is not available for Reception due to the mass closure of schools due to the COVID-19 pandemic.
Values denote difference in prevalence between sexes.

[1]NHS England, NCMP (2023/24)
[2]OHID, Obesity Profile (2023/24 data)

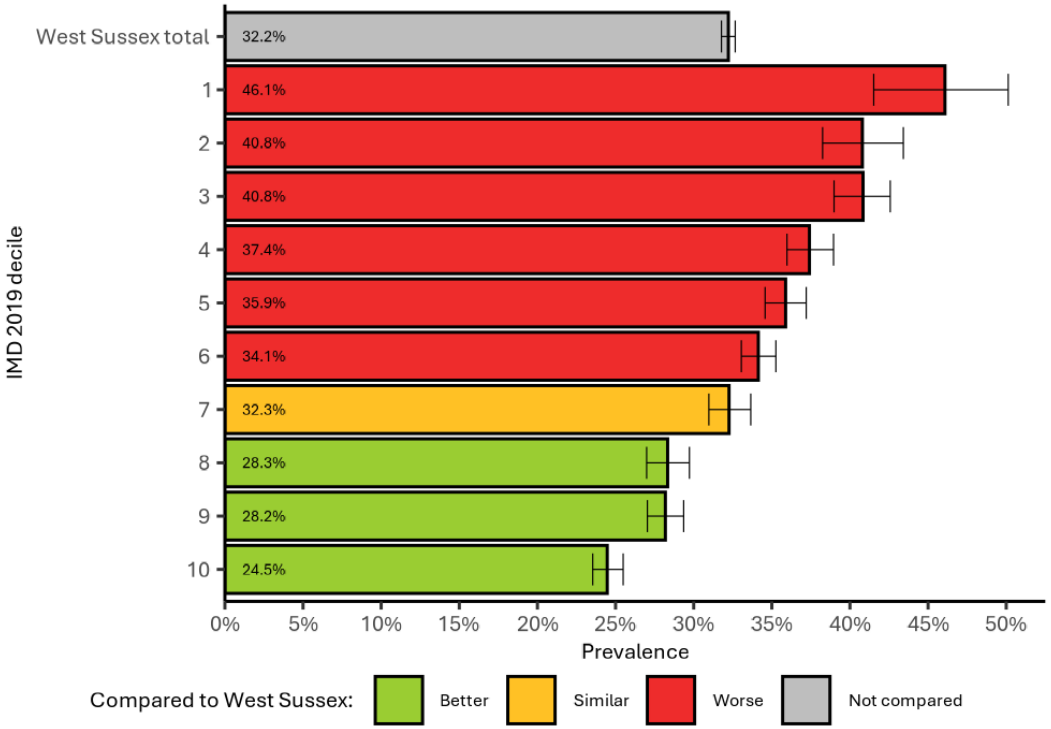
Year 6: Inequalities: Deprivation

- Overall, West Sussex is one of the least deprived areas in the country[1], but some neighbourhoods in Arun and Crawley rank amongst the poorest 10% of all areas in England
- Child excess weight is strongly associated with deprivation
- Prevalence of excess weight is **greatest** among children from the most deprived areas
  - Prevalence of excess weight was **1.9 times higher** for children in year 6 living in areas of West Sussex among the 10% most deprived areas in England, compared with areas among the 10% least deprived
  - Compared to the West Sussex average, prevalence of excess weight was **higher** for children living in more deprived deciles and **lower** for those in the least deprived deciles, with a clear social gradient

Note. Data pooled across 5-years due to small counts. The number of children in each decile varies, with fewer small areas of West Sussex among the least deprived deciles in England.
[1]English indices of deprivation (2019)

Prevalence of overweight or very overweight among children in Year 6 (10 to 11 yr olds) in West Sussex by Index of Multiple Deprivation (2019) deciles; 2019/20 to 2023/24

Source: Local analysis of NCMP data



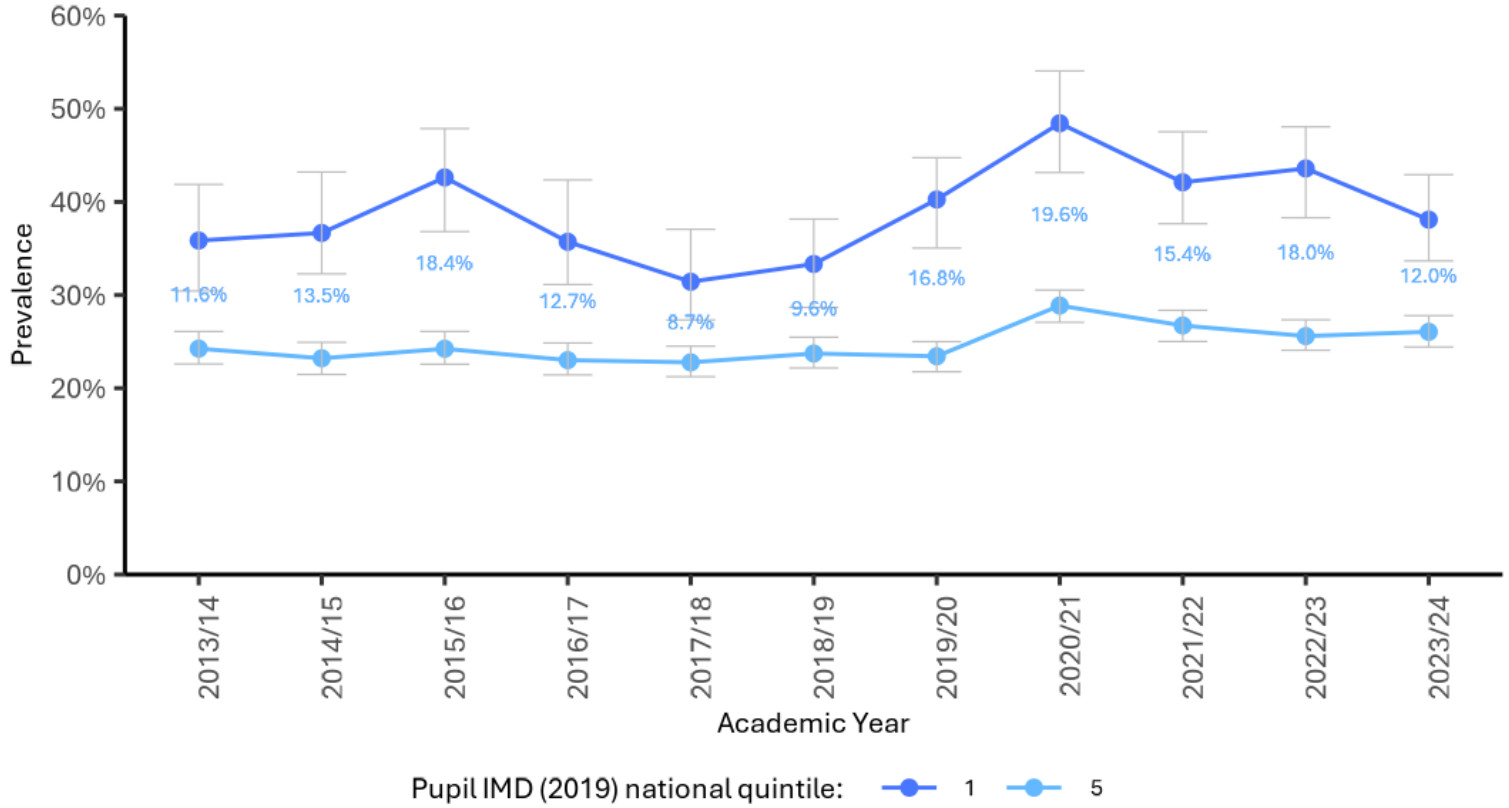
Note. If no data is given, prevalence has been suppressed due to small counts.
Decile is determined based on the postcode of the child.
Children who attend schools outside of West Sussex but live within the county are excluded.
During the COVID-19 pandemic (2020/21 academic year), mass school closures meant NCMP was incomplete in many local authorities in England. However in West Sussex, the number of year 6 children measured was 75% or more compared to the average number in the previous 3 years. West Sussex data for Year 6 is considered robust and reliable for 2020/21.

Year 6: Inequalities: Deprivation gap

- National data[1] has demonstrated a stable gap between obesity prevalence of children resident in the most and least deprived 10% of areas over time
- The only exception to this was during the COVID-19 pandemic, which saw a significantly larger gap
- The figure (right) shows prevalence of excess weight for year 6 children in areas of West Sussex among the 20% most and least deprived areas in England since 2013/14
- Similarly to national data, the gap was most notable during 2020/21

Prevalence of overweight or very overweight among children in Year 6 (10 to 11 yr olds) by most and least deprived IMD quintiles (based on postcode of pupil) in West Sussex over time

Source: Local analysis of NCMP data



Note. Quintile is determined based on the postcode of the child.
Children who attend schools outside of West Sussex but live within the county are excluded.
Values denote difference in prevalence between areas of West Sussex amongst the 20% most and 20% least deprived areas in England.

[1]NHS England, NCMP (2023/24)

* 2020/21 for England is based on weighted data due to lower coverage as the COVID-19 pandemic closed schools. Local data for year 6 children in 2020/21 was collected prior to school closures.

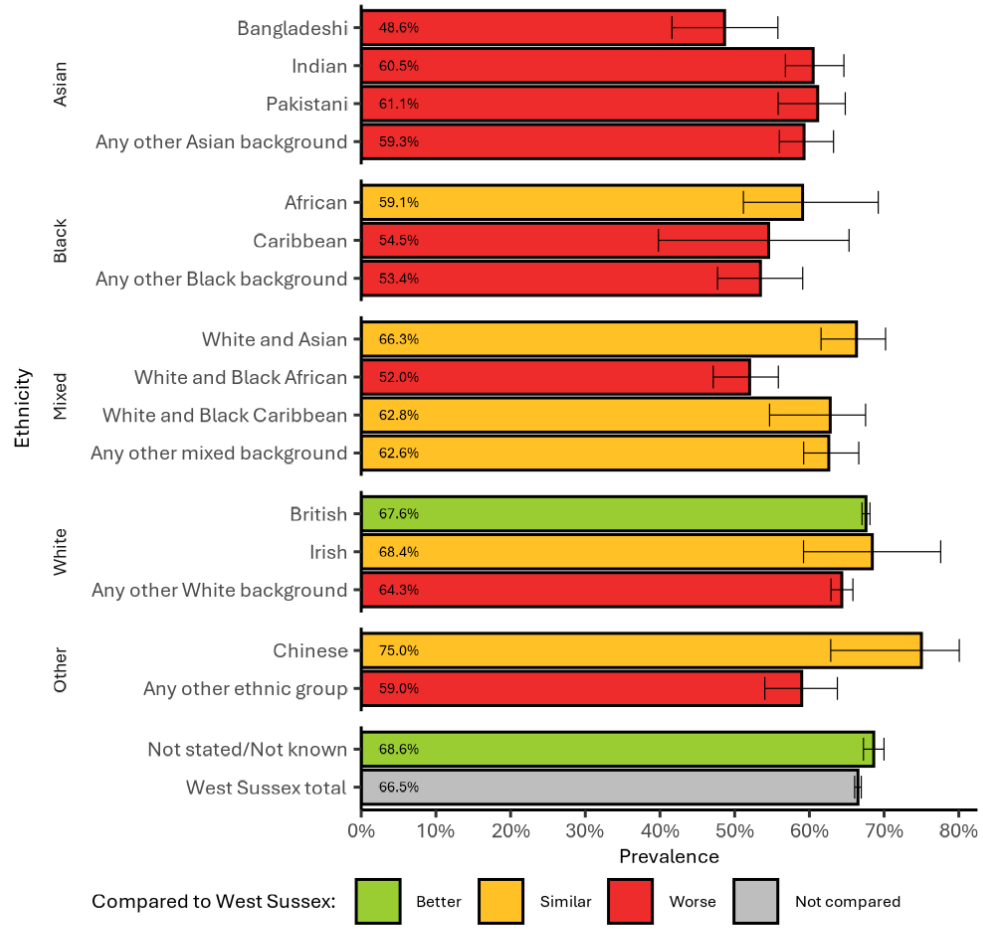
Year 6: Inequalities: Ethnicity

Caveats: Five years of data was combined to improve reliability. Healthy weight prevalence is reported as counts are larger. Some records do not have ethnicity stated/recorded. Data completeness has generally improved over time (20% of records without ethnicity in 2019/20, falling to between 6-9% of records from 2021/22 onwards). **Counts are small for some ethnic groups.**

- Prevalence of healthy weight is reported as counts are larger.
- Most children who are not a healthy weight are likely to be overweight or obese. Prevalence of underweight is generally low, although there is likely to be variation across ethnicities.
- Across the 5-year period, prevalence of healthy weight was **lowest** for Bangladeshi children (48.6%), and **highest** for Chinese children (75.0%).
- Estimated prevalence of healthy weight was **significantly lower** than the 5-year average for West Sussex (66.5%) for:
  - Children with an Asian ethnicity (includes Bangladeshi, Indian, and Pakistani children and children from any other Asian background)
  - Black Caribbean children and children from any other Black background
  - White and Black African children
  - Children from any other White background
  - Children from any other ethnic group

Prevalence of healthy weight among children in Year 6 (10 to 11 yr olds) in West Sussex by ethnicity; 2019/20 to 2023/24

Source: Local analysis of NCMP data



Note. If no data is given, prevalence has been suppressed due to small counts.
Children who attend schools outside of West Sussex but live within the county are excluded.
During the COVID-19 pandemic (2020/21 academic year), mass school closures meant NCMP was incomplete in many local authorities in England. However in West Sussex, the number of year 6 children measured was 75% or more compared to the average number in the previous 3 years. West Sussex data for Year 6 is considered robust and reliable for 2020/21.

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Trajectories between Reception and Year 6

National Child Measurement Programme, 2023/24

Dr Verity Pinkney | Public Health and Social Research Unit

Trajectories between Reception and Year 6

- OHID have published two new indicators in their Obesity Profile:
  - Percentage of reception children remaining overweight (including obesity) in Year 6
  - Percentage of children moving from healthy weight in reception to overweight (including obesity) in Year 6
- These indicators combines 3-years of data based on when children in Year 6 were measured and is currently only available for one time point (Year 6 children measured in 2021/22 to 2023/24)
- This analysis is expected to be updated by OHID every 3 years
- A supporting data file is available to show the number and proportion of records that have been linked for each local authority[1]

- Local authorities also have access to annual subsets of data for children attending schools in their area
- Linking local data can allow for further analyses to be explored beyond the published data by OHID
- There are likely to be differences in published estimates and from local analyses due to differences in linkage methodologies, time windows, and how populations are defined (residence or school based)
- Local data extracts do not include children who may live in West Sussex but attend out of county schools

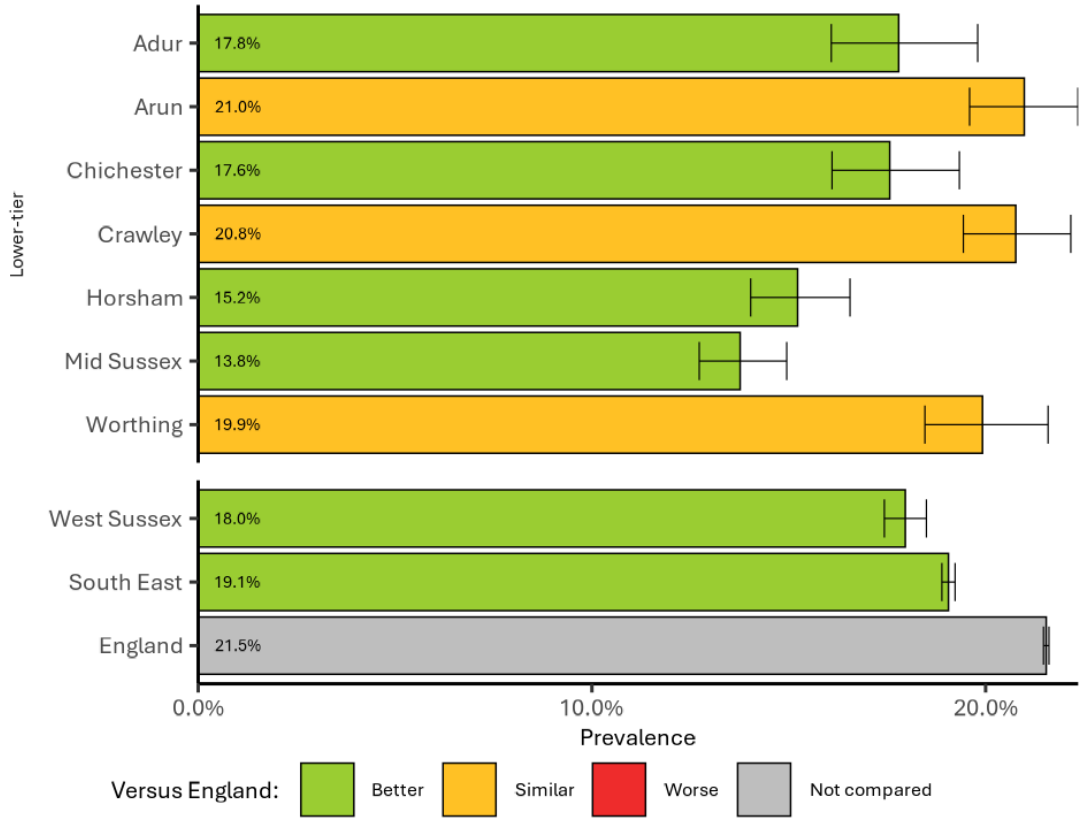
[1]Changes in the body mass index (BMI) category of children between the first and final years of primary school, 2023 to 2024 - GOV.UK

Published data: Trajectories

- For 2021/22 to 2023/24, the proportion of children moving from a healthy weight in reception to excess weight in Year 6 was 18.0% in West Sussex – a **lower** proportion than England (21.5%)
- Across the district and boroughs, Arun had the highest proportion of children moving from a healthy weight to excess weight, at 21.0%, and Mid Sussex had the lowest (13.8%)
- Arun, Crawley and Worthing did **not differ** from England
- All other lower-tier authorities in West Sussex had a **lower** proportion than England
- It is important to note that areas with lower proportions of children moving from healthy weight in reception to excess weight in year 6 still see a large increase in prevalence of overweight and obesity between reception and year 6

Percentage of children moving from healthy weight in reception to overweight (including obesity) in year 6 among West Sussex lower-tier authorities; 2021/22 - 23/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)



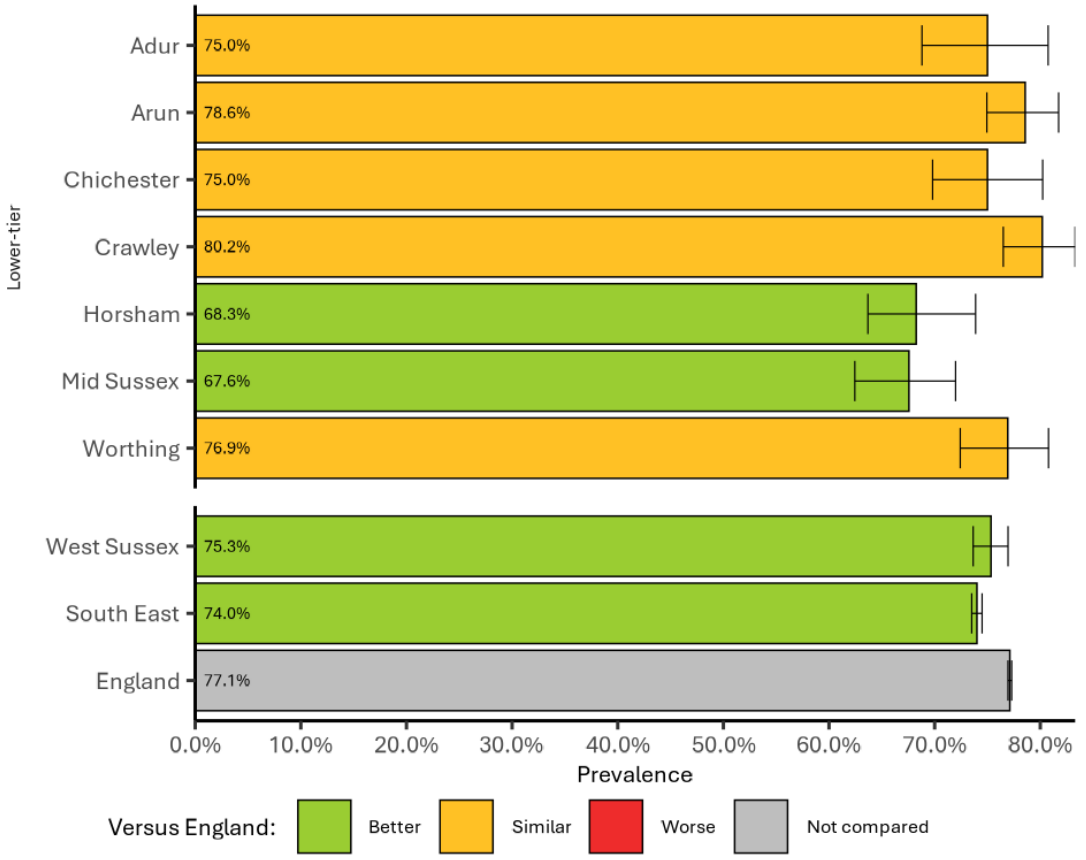
Note. Clinical BMI thresholds have been used to assign children to a BMI category as this analysis tracks individuals. Therefore, proportions falling into each BMI category will be different to published population level prevalence estimates. The time period covers the years that children were measured in Year 6. Local authority and region have been defined from the postcode of the child residence in the reception measurement record.

Published data: Trajectories

- For 2021/22 to 2023/24, three quarters (75.3%) of reception children remained overweight or obese in Year 6 – a **lower** proportion than England (77.1%)
- Across the district and boroughs, Crawley had the highest proportion of reception children remaining overweight or obese in Year 6, at 80.2%, and Mid Sussex had the lowest (67.6%)
- Aside from Mid Sussex and Horsham, all lower-tier authorities in West Sussex did **not differ** from England
- It is important to note that whilst some areas have a lower proportion of reception children remaining overweight or obese at Year 6, most children remain an unhealthy weight

Percentage of reception children remaining overweight (including obesity) in year 6 among West Sussex lower-tier authorities; 2021/22 - 23/24

Source: NHS Digital, National Child Measurement Programme (via OHID, Fingertips)



Note. Clinical BMI thresholds have been used to assign children to a BMI category as this analysis tracks individuals. Therefore, proportions falling into each BMI category will be different to published population level prevalence estimates. The time period covers the years that children were measured in Year 6. Local authority and region have been defined from the postcode of the child residence in the reception measurement record.

Local analyses: Trajectories

- Locally held NCMP data was used to explore BMI trajectories from reception to Year 6
- This analysis includes reception children measured during 2013/14 to 2017/18, and then subsequently measured in Year 6 during 2019/20 to 2023/24
- Child measurements were joined using two methods:
  1. Firstly, using NHS number,
  2. Any unmatched records were then joined using a unique pupil identifier built from first name, first part of surname, date of birth and sex
- This resulted in a sample of around 32,500 pupils with valid measurements at both reception and Year 6

- When split by year, the match rate has improved overtime, ranging from 60% for the 2013/14 reception cohort to 83% of the 2017/18 reception cohort
- The overall match rate for this 5-year window was 77.8%
- It is possible that the match rate will vary among groups within our sample (such as by ethnicity, or area) - this has yet to be explored

Local analyses: Trajectories

- Clinical BMI thresholds have been used to assign children to a BMI category, as this analysis tracks individual children

- For clinical assessment of BMI the British 1990 growth reference (UK90) is used to determine BMI category according to a child's age and sex. The following thresholds are used:
  - Underweight: less than 2nd centile
  - Healthy weight: greater than or equal to 2nd centile and less than the 91st centile
  - Overweight: greater than or equal to the 91st centile
  - Very overweight: greater than or equal to 98th centile

- **Proportions will differ from those derived using population thresholds (see slide 3)**

Local analyses: Change in BMI category

In the 5-year period:

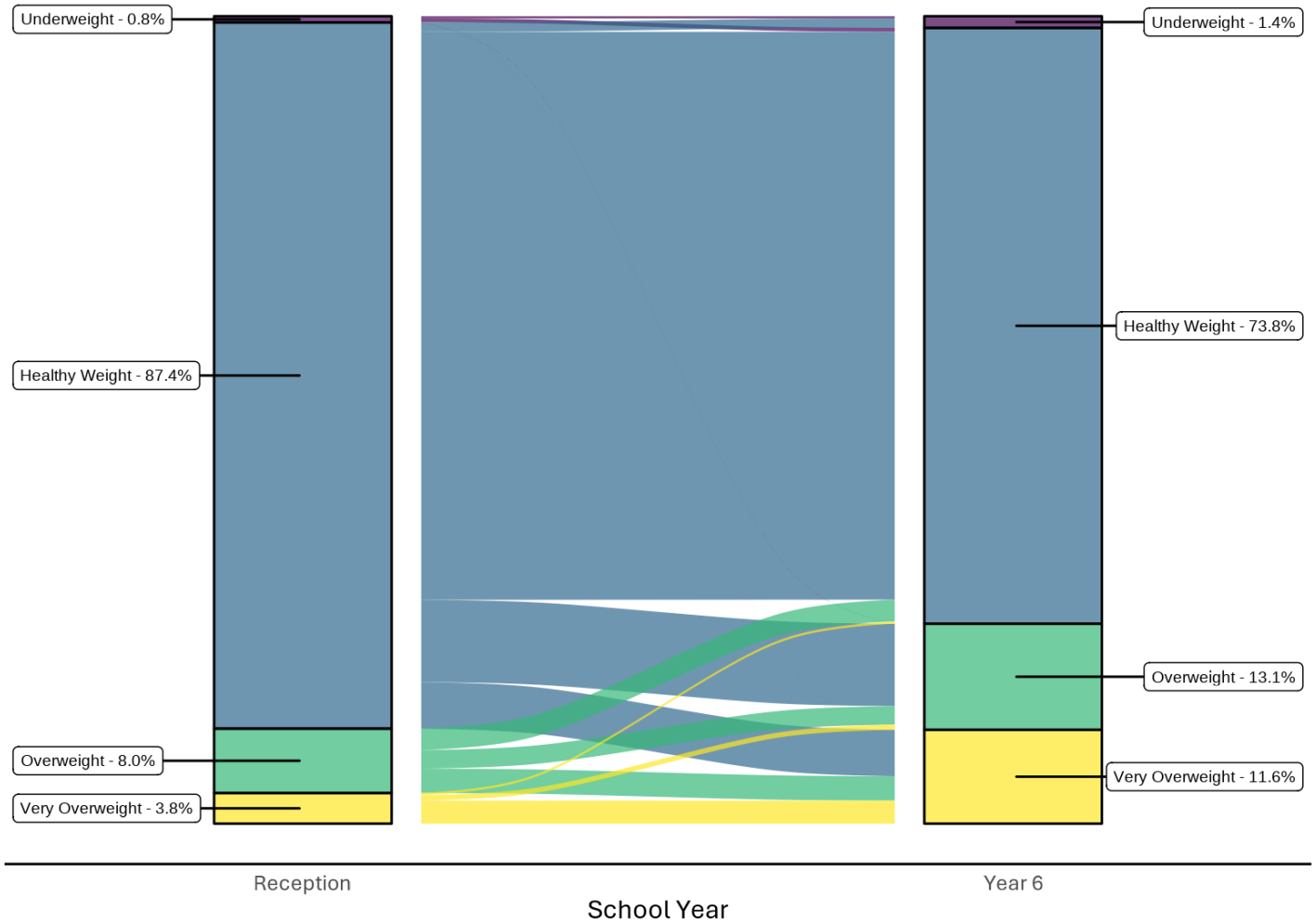
- For children in the 2013/14 to 2017/18 cohort, 87.4% were a healthy weight in reception
- When measured again in Year 6 (2019/20 to 2023/24), 73.8% of the cohort were a healthy weight

Trajectories:

- 18.2% of children who were a healthy weight in reception had become overweight or obese in Year 6
- 74.7% of reception children remained overweight or obese when measured again in Year 6
- These values are comparable to those reported in the public domain by OHID

Change in weight status from Reception (aged 4-5 years) to Year 6 (aged 10 to 11 years)

Pupils in reception in 2013/14 to 2017/18, measured in year 6 in 2019/20 to 2023/24



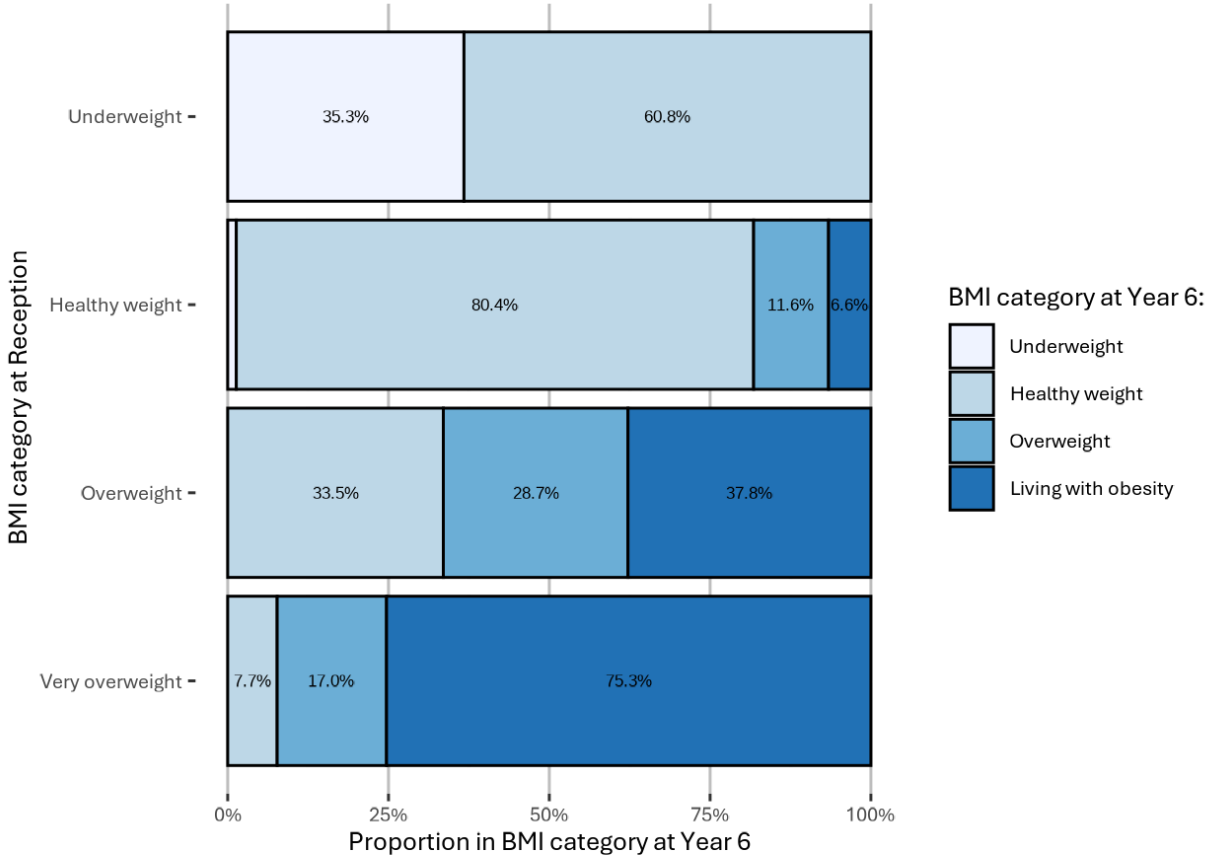
Source: Local access to record level National Child Measurement Programme data (2013/14 to 2023/24)

Local analyses: Change in BMI category

- In West Sussex:
  - 80.4% of reception children who were a healthy weight remained so in Year 6
  - Of children who were overweight or obese in reception, the **majority** (74.7%) remained overweight or obese in Year 6
    - This includes 37.7% of overweight reception children who **moved to living with obesity**
    - Most children who were obese in reception **remained obese** in Year 6 (75.4%)
  - **Only a quarter** (25.3%) of children who were overweight or obese in reception **moved to a healthy weight** in Year 6

Change in BMI category among West Sussex pupils from reception to Year 6

Includes children in reception in 2013/14 to 2017/18



Source: Local analysis of NCMP data.

Notes. Proportions based on counts less than 8 are suppressed. Labels for proportions less than 5% are not shown. Excludes children who may live within West Sussex but attend schools outside the county. Only includes children with valid measurements at both Reception and Year 6.

Local analyses: Change in BMI category (table)

Change in BMI category from Reception to Year 6; West Sussex; Reception cohort from 2013/14 to 2017/18

Change in BMI category		Number at Reception	Number at Year 6	Proportion	95% CIs	
Reception	Year 6				Lower	Upper
Underweight	Underweight	255	90	35.3%	29.9%	41.6%
	Healthy weight	255	155	60.8%	55.9%	67.8%
	Overweight	255	-	-	-	-
	Very overweight	255	-	-	-	-
Healthy weight	Underweight	28,415	380	1.3%	1.2%	1.5%
	Healthy weight	28,415	22,855	80.4%	80.0%	80.9%
	Overweight	28,415	3,310	11.6%	11.3%	12.0%
	Very overweight	28,415	1,870	6.6%	6.3%	6.9%
Overweight	Underweight	-	-	-	-	-
	Healthy weight	2,595	870	33.5%	31.8%	35.5%
	Overweight	2,595	745	28.7%	26.9%	30.4%
	Very overweight	2,595	980	37.8%	35.9%	39.6%
Very overweight	Underweight	-	-	-	-	-
	Healthy weight	1,235	95	7.7%	6.4%	9.4%
	Overweight	1,235	210	17.0%	14.9%	19.0%
	Very overweight	1,235	930	75.3%	72.9%	77.7%

Source: Local analysis of NCMP data

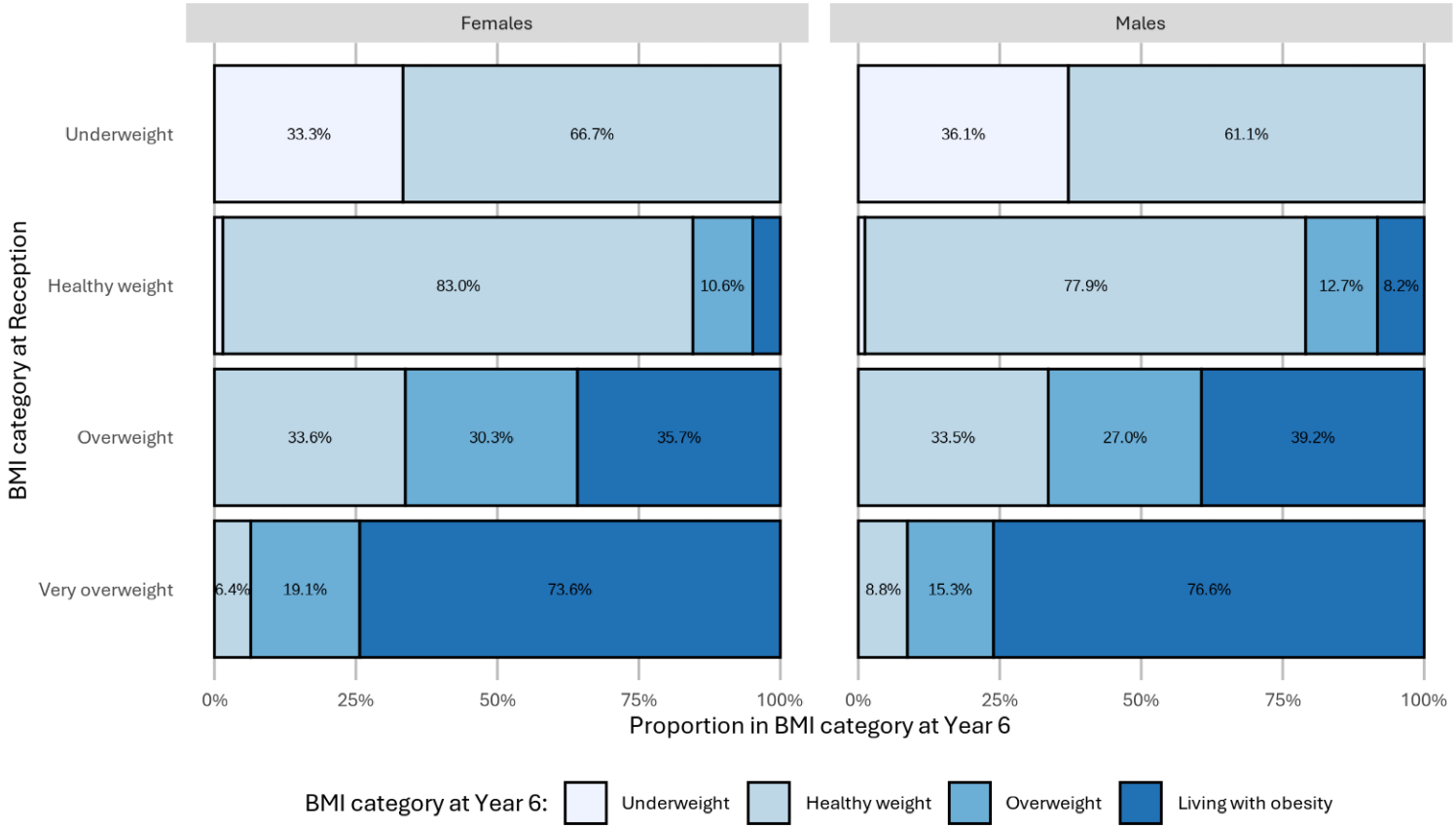
Notes: Values denoted with '-' are based on counts of 0 to 7. All counts rounded to nearest 5.

Local analyses: Trajectories by Sex

- When explored by sex:
  - A **higher** proportion of girls remained a healthy weight from reception to Year 6 than boys (83.0% compared to 77.9%)
  - **Boys** were **more likely** to move from a healthy weight to a higher BMI category than girls
    - 20.9% of boys moved from healthy weight in reception to overweight or obese in Year 6 compared to 15.5% of girls
  - There was **no difference** by sex among those remaining overweight or obese from reception to Year 6 (74.7% for both sexes)

Change in BMI category among West Sussex pupils from reception to Year 6 by sex

Includes children in reception in 2013/14 to 2017/18



Source: Local analysis of NCMP data.

Notes. Proportions based on counts less than 8 are suppressed. Labels for proportions less than 5% are not shown. Excludes children who may live within West Sussex but attend schools outside the county. Only includes children with valid measurements at both Reception and Year 6.

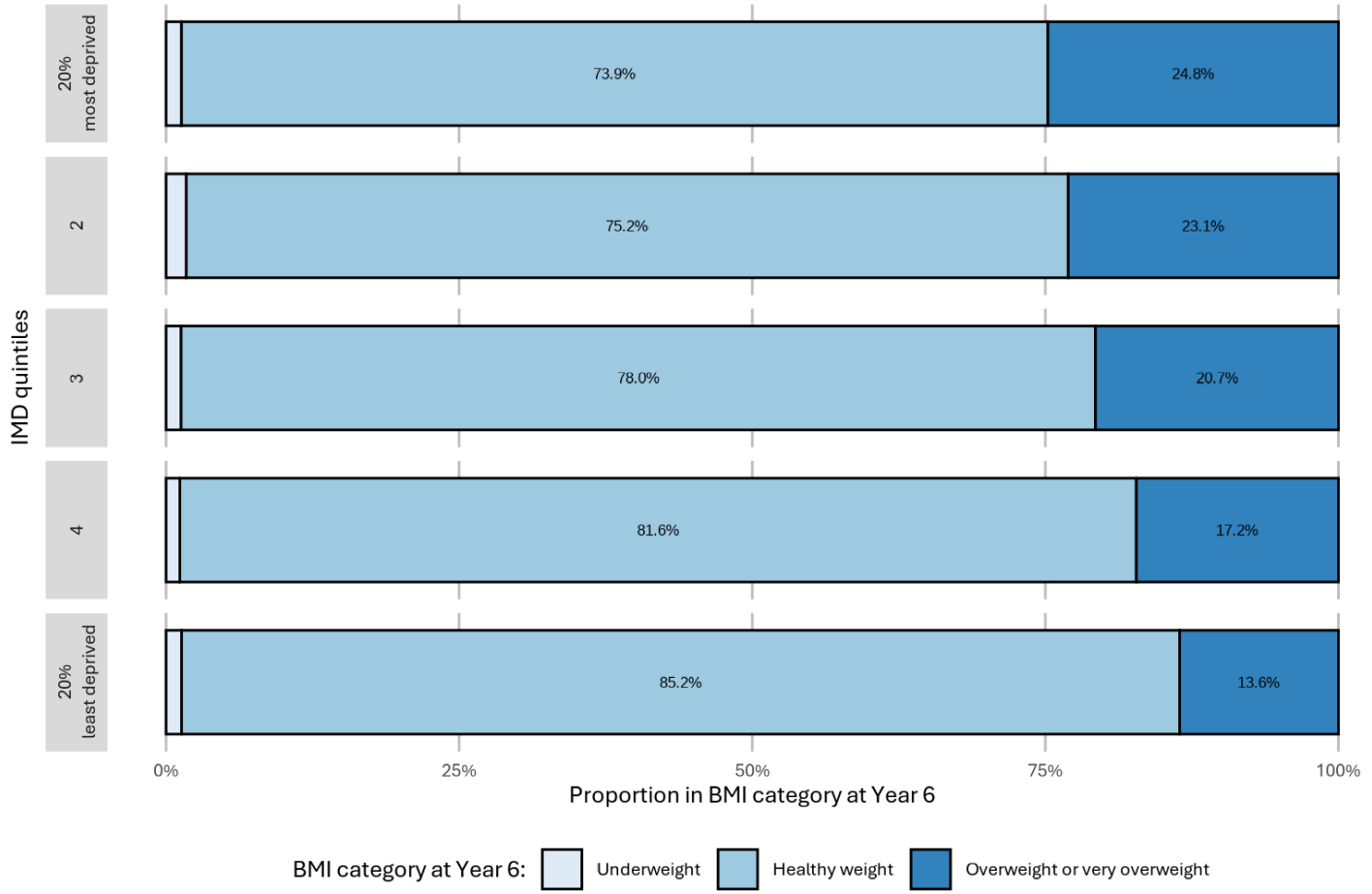
Local analyses: Trajectories by Deprivation

- This figure shows change in BMI category at Year 6 among pupils who were a healthy weight in Reception by national deprivation quintiles (2019 Index of Multiple Deprivation)

- **A social gradient is evident**, with a smaller proportion of pupils living in areas among the 20% most deprived remaining a healthy weight at Year 6
- A **quarter** of pupils living in areas among the **20% most deprived** in England **moved from a healthy weight** in reception **to overweight or obese** in Year 6
- In the least deprived quintile, this value was 13.6%

West Sussex pupils measured a healthy weight in reception by BMI Category at Year 6 by national Index of Multiple Deprivation (2019) quintile

Includes children in reception in 2013/14 to 2017/18



Source: Local analysis of NCMP data.

Notes. Proportions based on counts less than 8 are suppressed. Labels for proportions less than 5% are not shown. Excludes children who may live within West Sussex but attend schools outside the county. Only includes children with valid measurements at both Reception and Year 6.

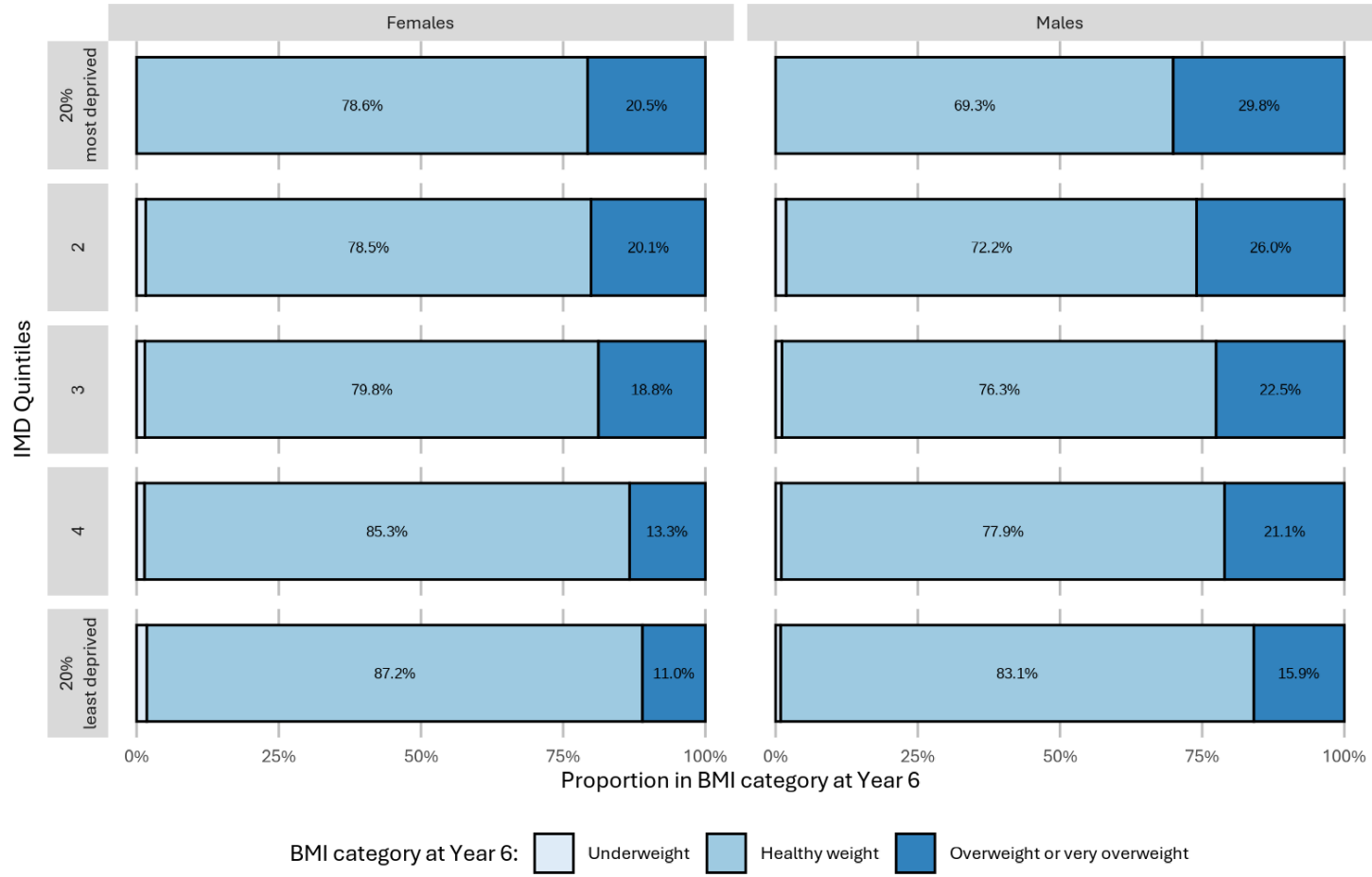
Local analyses: Trajectories by Deprivation and Sex

- This figure shows change in BMI category at Year 6 among pupils who were a healthy weight in Reception, by national deprivation quintile and sex
- In some cases, these proportions are based on smaller counts. This is particularly true of quintile 1 (20% most deprived)

- Across both sexes, a social gradient can be seen, with **lower proportions** of children who live in areas among the **most deprived** in England **remaining a healthy weight** at Year 6
- For both sexes, the proportion of pupils living in the most deprived areas who moved from a healthy weight to overweight or obese is **nearly twice that** of the least deprived quintile
- Proportions of pupils moving from a healthy weight to overweight or obese are **higher among boys than girls** across all quintiles

West Sussex pupils measured a healthy weight in reception by BMI category at Year 6; separated by national Index of Multiple Deprivation (2019) quintile and sex

Includes children in reception in 2013/14 to 2017/18



Source: Local analysis of NCMP data.

Notes. Proportions based on counts less than 8 are suppressed. Labels for proportions less than 5% are not shown. Excludes children who may live within West Sussex but attend schools outside the county. Only includes children with valid measurements at both Reception and Year 6.