



Obesity in Warwickshire

An overview

January 2020





Key Messages

- In 2018/19 between 8.5% (South Warwickshire CCG) and 10.8% (Warwickshire North CCG) of adults in Warwickshire were obese.
- In addition, survey data showed that in 2017/18 between 52.8% and 70.6% of adults in Warwickshire were classified as overweight or obese. The highest levels were in the north of the county.
- The National Child Measurement Programme found that in 2018/19, 8.8% of children in Reception (aged 4-5 years) and 18.9% of children in Year 6 (aged 10-11 years) were obese.
- The percentage of children classified as severely obese in both Reception and Year 6, although small, has increased steadily between 2007/8 and 2018/19.
- The prevalence of obesity increases as children move through primary school and the percentage of obese children in year 6 outnumbers the percentage who are overweight.
- Levels of obesity are consistently higher in the north of the county in children in both Reception and Year 6, and above the England average in both North Warwickshire Borough and Nuneaton and Bedworth Borough for children in Reception and in Nuneaton & Bedworth Borough for children in Year 6.
- Ward level data for the 3-year period 2015/16-2017/18 shows that the percentage of children in Reception who are obese was significantly worse than the England average in Atherstone Central, Exhall, Camp Hill and New Bilton wards. For the same period, the only ward to be significantly worse than the England average for Year 6 pupils was Bulkington ward.
- The prevalence of diseases related to obesity, such as diabetes and hypertension, are generally increasing in Warwickshire but more so in the north of the county where the prevalence of obesity is higher.
- Warwickshire residents have a lower rate of hospital admissions with a primary diagnosis of obesity than those in the West Midlands region and England. However, the rate of admissions has gradually increased during the five years 2013/14 to 2017/18.
- Conversely, in 2017/18, Warwickshire residents had a higher rate of admissions with a primary diagnosis or secondary diagnosis of obesity than those in the West Midlands region and in England. In addition, the rate of admissions has increased during the five years 2013/14 to 2017/18.
- The rate of admissions for bariatric surgery has increased across Warwickshire since 2013/14 although there has been a reduction in 2017/18. Since 2015/16, the rate of finished consultant episodes per 100,000 population in Warwickshire North CCG has been markedly higher than the rate for the population in the other clinical commissioning groups in Warwickshire and in England.
- The percentage of physically inactive adults in Warwickshire has increased since 2015/16. In 2017/18, the highest percentage of physically inactive adults was in Nuneaton & Bedworth Borough.
- The percentage of adults (16+) walking or cycling for travel at least three times a week in Warwickshire is significantly lower than the England average.
- A local needs assessment survey suggests that levels of exercise and the consumption of healthy food decreases as children move from primary school into secondary school.
- In 2017, the rate of fast food outlets per 100,000 population was higher in the north of Warwickshire than the south of the county and the highest in North Warwickshire Borough.



Obesity in Warwickshire

Introduction

“Obesity is a complex problem with a large number of different but often interlinked causes. No single measure is likely to be effective on its own in tackling obesity. To have a significant impact on obesity levels, it is clear that everybody needs to get involved. Local authorities are particularly well placed as the functions they are responsible for serve all generations in society and can directly influence people’s health”ⁱ. Local Government Association, December 2017

Globally obesity rates have tripled since 1975, and the UK ranks among the worst in Europeⁱⁱ. This overview presents information on the scale of obesity in Warwickshire, the impact obesity has on health and health services and lifestyle factors locally that may have an impact on levels of obesity.

Definitions

Body mass index (BMI) is a measure used to determine if a person’s weight is healthy. BMI is calculated by dividing weight in kilograms by their height in metres squared (kg/m²). Defining children as overweight or obese is a complex process, given that children of different ages and sexes grow and develop at different rates so a different method is used for children than for adults.

- In adults, obesity is defined as a BMI greater than or equal to 30. An adult who is overweight has a BMI between 25 and 29.9.
- In children, for population monitoring purposes, BMI is classified according to the following table using the British 1990 growth reference (UK90ⁱⁱⁱ):

| BMI Classification | Centile of UK90 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 |

Source: Public Health England (February 2019)^{iv}

Prevalence of Obesity in Warwickshire

Obesity in Adults

There are two sources of information on the prevalence of overweight and obesity in adults (aged 18 and over) in Warwickshire. One is data collected based on general practice registers (Quality Outcome Framework – QOF), the other based on the Sport England Active Lives survey. These give an indicator of levels of obesity but are likely to be an underestimate as they rely on presentation at a GP practice or in the case of the survey on self-reported height and weight.

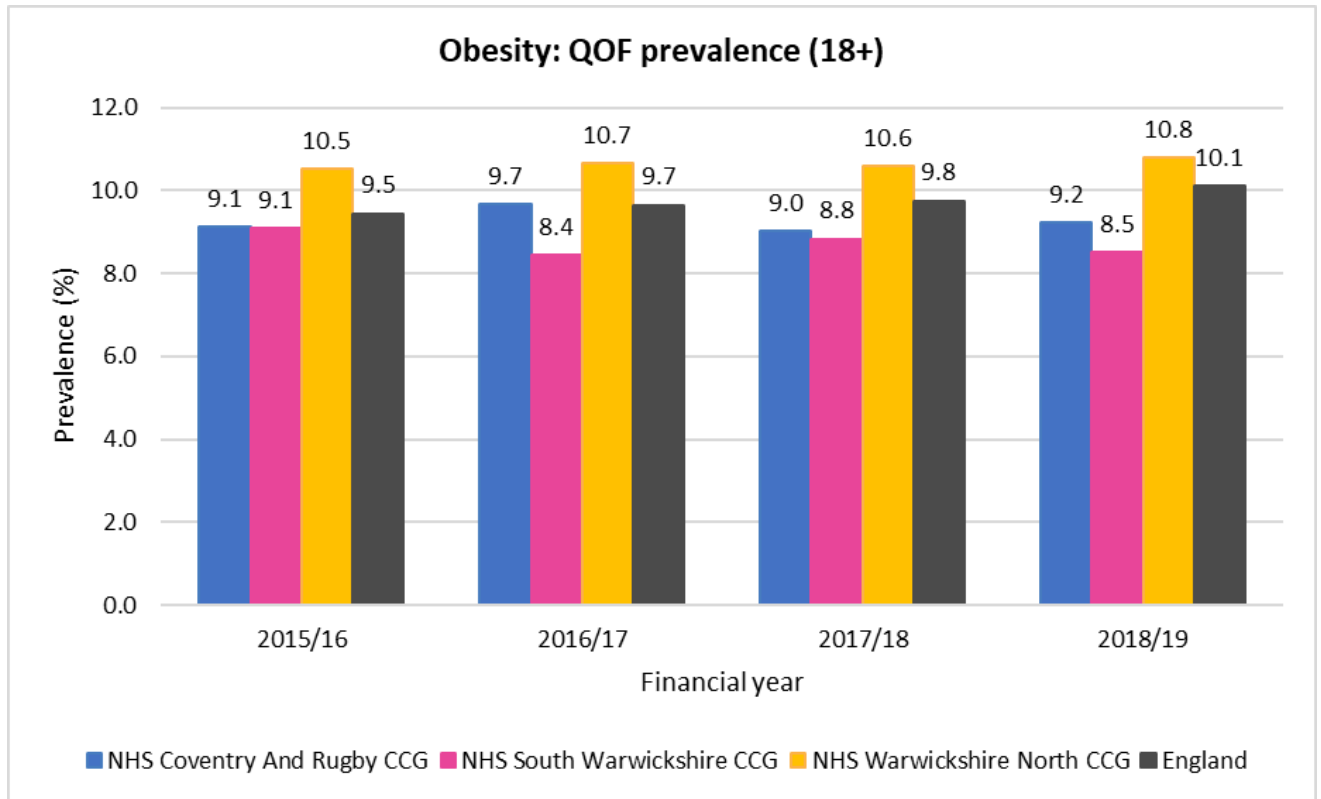
Obesity - QOF Prevalence (18+)

Figure 1 shows the percentage of patients aged 18 and over with a BMI greater than or equal to 30 in the previous 12 months, as recorded on practice disease registers, for the three clinical commissioning groups (CCGs) in Warwickshire and in England. In all four financial years shown, the prevalence of obesity recorded on practice registers is highest in Warwickshire North CCG. In 2018/19, 10.8% of patients registered with general practices in Warwickshire North CCG were classified as obese; this



was significantly higher than the prevalence in England and has been for the past four years. Conversely, in 2018/19, the prevalence of obesity in patients registered with general practices in Coventry and Rugby CCG was significantly lower than the prevalence in England (9.2% and 8.5% respectively).

Figure 1



Source: Public Health England, fingertips.phe.org.uk, accessed January 2020

Sport England Active Lives Survey

Figure 2 shows the percentage of adults aged 18 and over classified as overweight or obese in districts and boroughs in Warwickshire for the three years 2015/16 to 2017/18 as collected in the Sport England Active Lives Survey¹. This indicates that the prevalence of adults who are overweight or obese is greatest in the north of Warwickshire (North Warwickshire Borough and Nuneaton & Bedworth Borough). In 2017/18, the percentage of adults classified as overweight or obese was significantly higher than the percentage in England and the West Midlands (North Warwickshire Borough (70.6%), Nuneaton and Bedworth Borough (71.9%), West Midlands (65.7%), England (62.0%)). In addition, the general trend has been an increase in prevalence of overweight and obesity in these boroughs and in Rugby Borough since 2015/16.

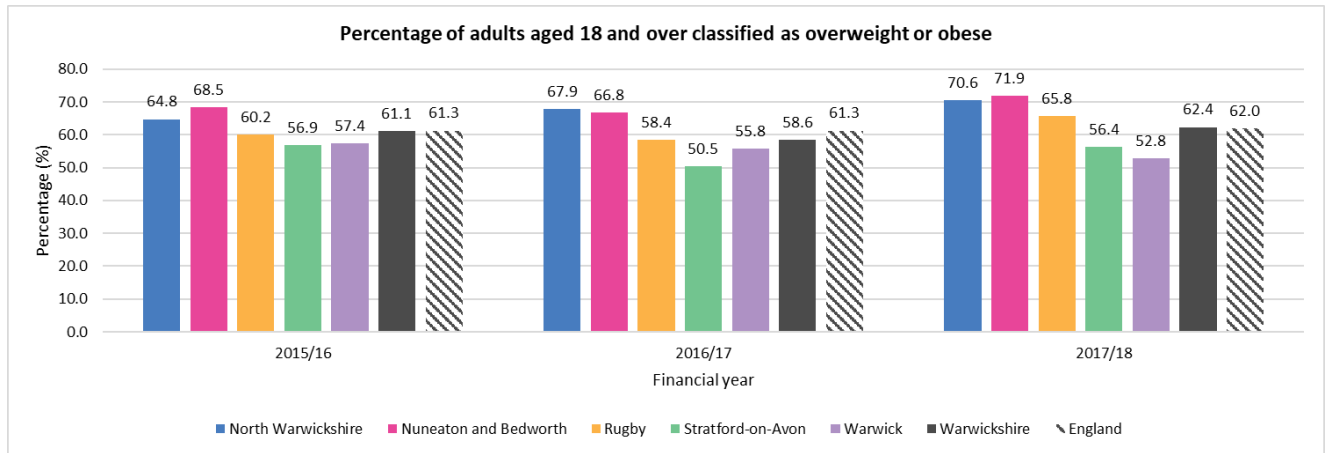
In the south of Warwickshire, the picture is different. The prevalence of adults who are overweight or obese has been lower than in Warwickshire and England during the 3 years reported. In 2017/18, the percentage of adults classified as overweight or obese was significantly lower than the

¹ Questions on self-reported height and weight are included in the Active Lives survey to provide data for monitoring excess weight in adults at local authority level for the Public Health Outcomes Framework (PHOF). As adults tend to underestimate their weight and overestimate their height when providing self-reported measurements these measurements are adjusted at individual level using formulas. In addition, the prevalences are weighted to be representative of the whole population at each level of geography and age-standardised to improve comparability of excess weight prevalence between Local Authorities.



percentage in England and the West Midlands (Stratford-on-Avon District (56.4%), Warwick District (52.8%)). In addition, the prevalence of adults classed as overweight and obese has decreased in Warwick District between 2015/16 and 2017/18 from 57.4% to 52.8%; the prevalence in Stratford-on-Avon District has remained similar despite a dip in 2016/17.

Figure 2



Source: Public Health England, fingertips.phe.org.uk, accessed January 2020

Obesity in Children

Nationally, the number of children with an unhealthy and potentially dangerous weight is a public health concern^v. Childhood obesity and excess weight are significant health issues. Obesity in children is associated with both poor psychological and emotional health, and many children experience bullying linked to their weight. Obese children are more likely to become obese adults and have a higher risk of morbidity, disability and premature mortality in adulthood. A literature review found that about a third (26 to 41%) of obese preschool children were obese as adults, and about half (42 to 63%) of obese school-age children were obese as adults^{vi}.

National Child Measurement Programme

The National Child Measurement Programme (NCMP) 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^{vii}. The measurement process is overseen by trained healthcare professionals in schools and the measurements are used to calculate a BMI centile.

Table 1 shows the percentage of children at primary school in Reception and Year 6 who were classified as overweight, obese and severely obese from 2007/8 to 2018/19 in Warwickshire, the West Midlands and in England. In Warwickshire, the prevalence of children in both Reception and Year 6 who were overweight, and obese fluctuated over this 12-year period but in 2018/19 levels were similar to those in 2007/8 (Figure 3 & 4). Those who were severely obese, although a small percentage, has gradually increased over the same time period.

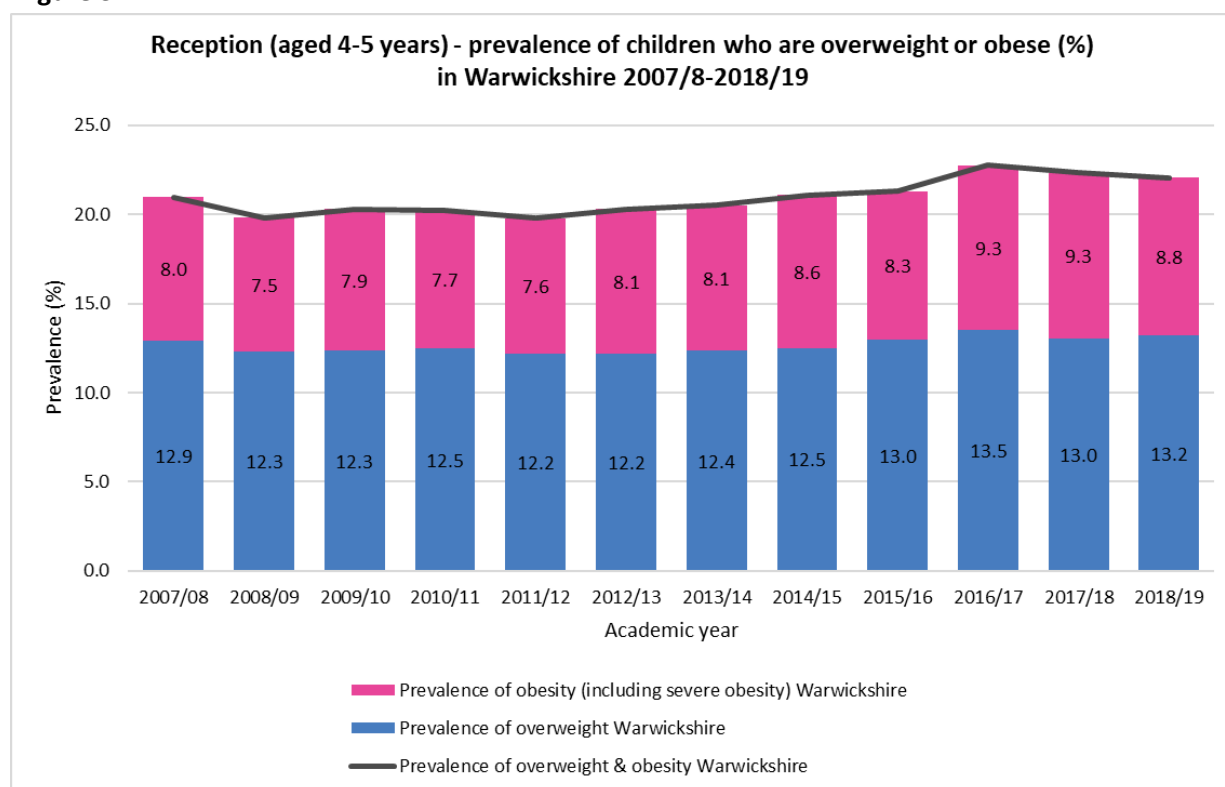


Table 1 - Percentage of children in Reception and Year 6 who were classified as overweight, obese and severely obese in Warwickshire, the West Midlands and in England

| | | 2007/ 08 | 2008/ 09 | 2009/ 10 | 2010/ 11 | 2011/ 12 | 2012/ 13 | 2013/ 14 | 2014/ 15 | 2015/ 16 | 2016/ 17 | 2017/ 18 | 2018/ 19 |
|--|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Reception | | | | | | | | | | | | | |
| Prevalence of overweight | Warwickshire | 12.9 | 12.3 | 12.3 | 12.5 | 12.2 | 12.2 | 12.4 | 12.5 | 13.0 | 13.5 | 13.0 | 13.2 |
| | West Midlands | 13.0 | 13.2 | 13.1 | 13.5 | 13.0 | 12.7 | 13.0 | 12.9 | 12.9 | 13.4 | 13.0 | 13.2 |
| | England | 13.0 | 13.2 | 13.3 | 13.2 | 13.1 | 13.0 | 13.1 | 12.8 | 12.8 | 13.0 | 12.8 | 12.9 |
| Prevalence of obesity (including severe obesity) | Warwickshire | 8.0 | 7.5 | 7.9 | 7.7 | 7.6 | 8.1 | 8.1 | 8.6 | 8.3 | 9.3 | 9.3 | 8.8 |
| | West Midlands | 10.0 | 10.1 | 10.5 | 10.1 | 10.5 | 10.0 | 10.5 | 10.2 | 10.4 | 10.7 | 10.4 | 10.6 |
| | England | 9.6 | 9.6 | 9.8 | 9.4 | 9.5 | 9.3 | 9.5 | 9.1 | 9.3 | 9.6 | 9.5 | 9.7 |
| Prevalence of severe obesity | Warwickshire | | 1.6 | 1.9 | 1.6 | 1.6 | 1.6 | 1.8 | 1.6 | 2.0 | 2.1 | 1.8 | 2.1 |
| | West Midlands | 2.5 | 2.5 | 2.7 | 2.6 | 2.7 | 2.5 | 2.6 | 2.6 | 2.7 | 2.9 | 2.9 | 2.9 |
| | England | 2.3 | 2.2 | 2.3 | 2.3 | 2.3 | 2.1 | 2.3 | 2.1 | 2.3 | 2.3 | 2.4 | 2.4 |
| Year 6 | | | | | | | | | | | | | |
| Prevalence of overweight | Warwickshire | 13.7 | 15.0 | 14.5 | 14.1 | 14.4 | 14.7 | 14.9 | 13.9 | 15.2 | 14.5 | 14.4 | 13.5 |
| | West Midlands | 14.5 | 14.5 | 14.8 | 14.6 | 15.0 | 14.9 | 14.8 | 14.6 | 14.5 | 14.8 | 14.6 | 14.5 |
| | England | 14.3 | 14.3 | 14.6 | 14.4 | 14.7 | 14.4 | 14.4 | 14.2 | 14.3 | 14.3 | 14.2 | 14.1 |
| Prevalence of obesity (including severe obesity) | Warwickshire | 18.2 | 15.6 | 16.9 | 16.2 | 17.5 | 16.5 | 15.7 | 16.8 | 17.4 | 17.0 | 17.3 | 18.9 |
| | West Midlands | 19.6 | 19.8 | 20.5 | 20.6 | 21.2 | 20.6 | 21.1 | 21.2 | 22.1 | 22.4 | 22.5 | 22.9 |
| | England | 18.3 | 18.3 | 18.7 | 19.0 | 19.2 | 18.9 | 19.1 | 19.1 | 19.8 | 20.0 | 20.1 | 20.2 |
| Prevalence of severe obesity | Warwickshire | | 2.7 | 2.8 | 2.8 | 2.9 | 2.6 | 2.7 | 3.0 | 3.3 | 3.1 | 3.2 | 3.6 |
| | West Midlands | 3.6 | 3.9 | 4.2 | 4.2 | 4.4 | 4.3 | 4.5 | 4.5 | 4.8 | 4.9 | 5.1 | 5.3 |
| | England | 3.4 | 3.4 | 3.5 | 3.6 | 3.7 | 3.6 | 3.7 | 3.7 | 4.0 | 4.1 | 4.2 | 4.4 |

Source: NCMP Dataset, NHS Digital Copyright © 2019

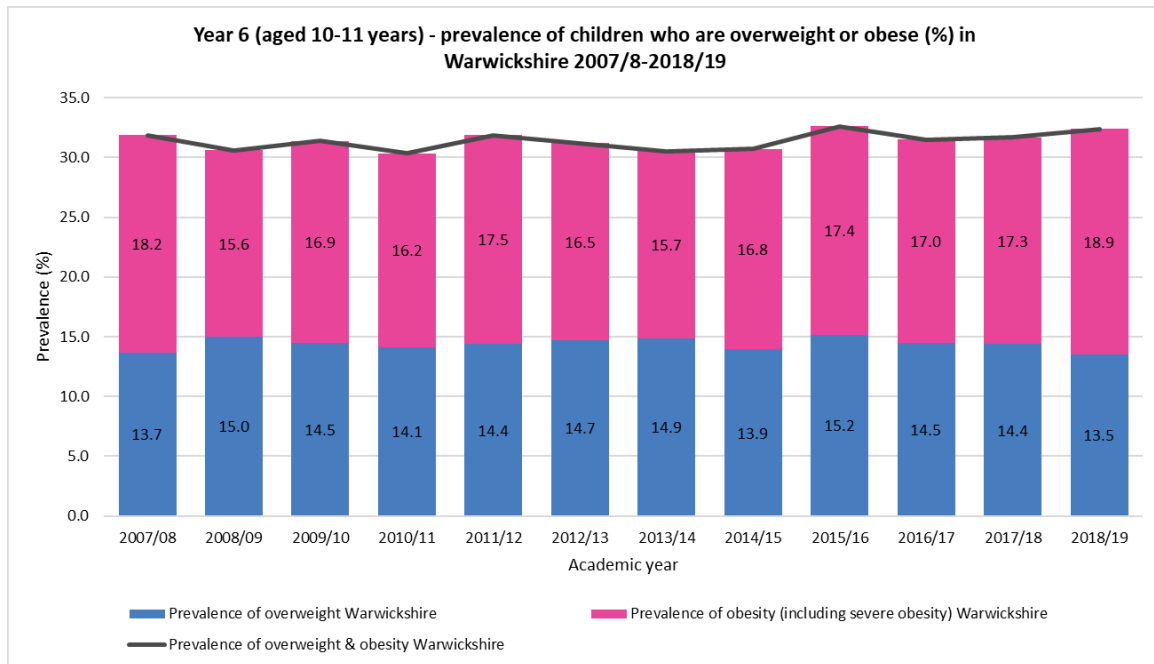
Figure 3



Source: NCMP Dataset, NHS Digital Copyright © 2019



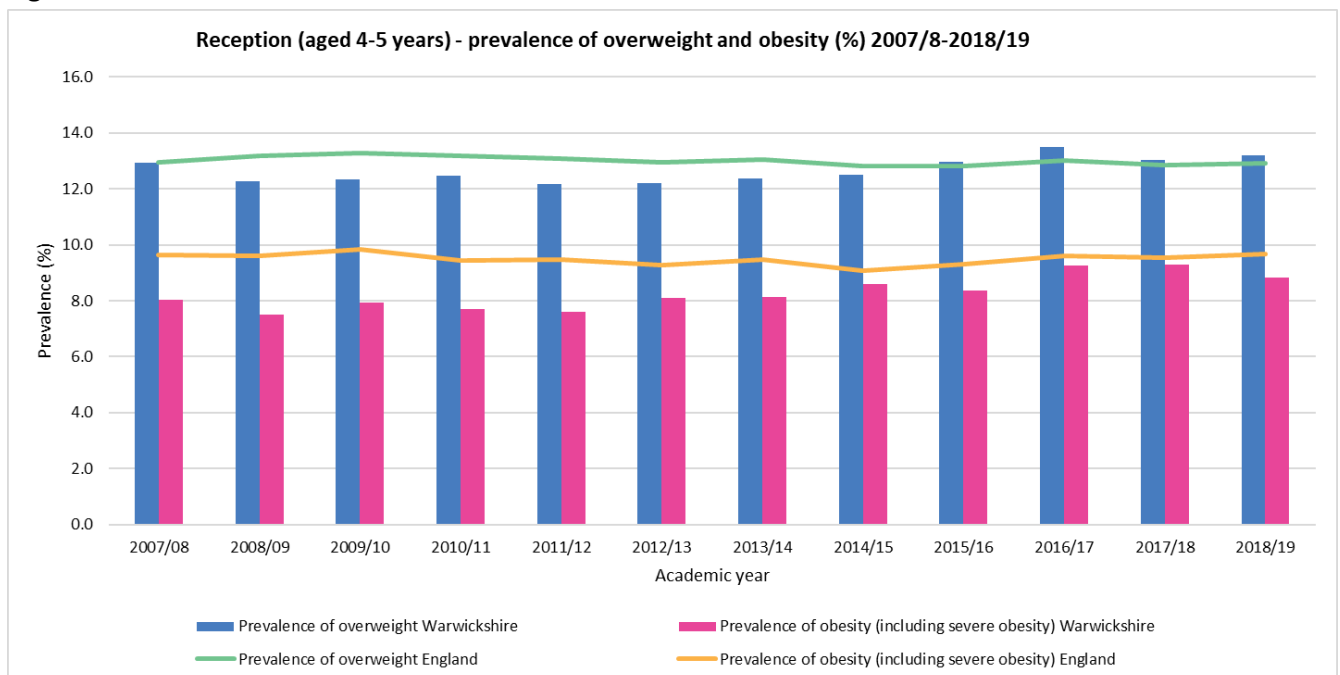
Figure 4



Source: NCMP Dataset, NHS Digital Copyright © 2019

The NCMP data indicates that in Warwickshire in 2018/19, 13.2% of children in Reception were overweight and 8.8% were obese. By Year 6, the prevalence of being overweight increased to 13.5% and being obese to 18.9%. Recognising that it is different cohorts that are being compared, there is still a ten percentage point increase in children who are either overweight or obese between Reception and Year 6.

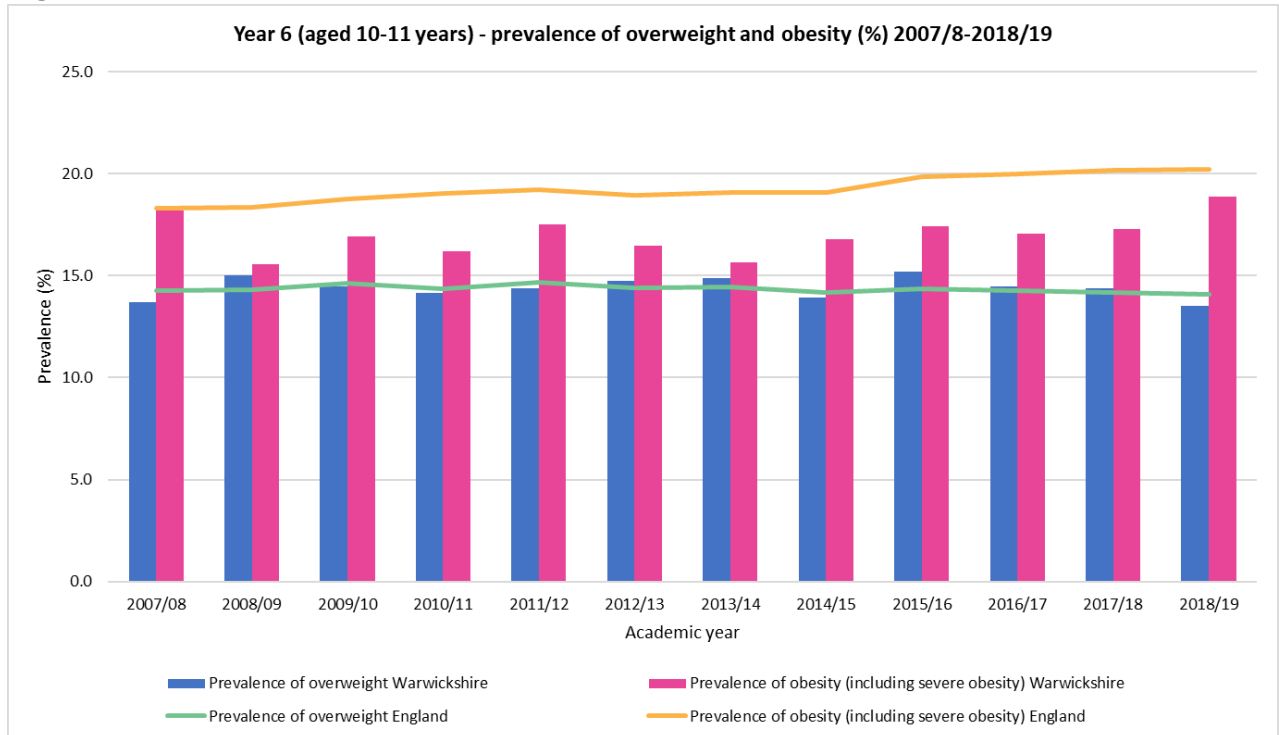
Figure 5



Source: NCMP Dataset, NHS Digital Copyright © 2019



Figure 6



Source: NCMP Dataset, NHS Digital Copyright © 2019

Figures 5 and 6 show that in Reception, the percentage of children who are overweight has consistently been greater than the percentage of children who are obese, whereas in Year 6 the percentage of children who are obese has consistently been greater than the percentage of children who are overweight. The same pattern is shown in England. It is likely that many of the children who are classified as overweight in Reception are classified as obese by Year 6.

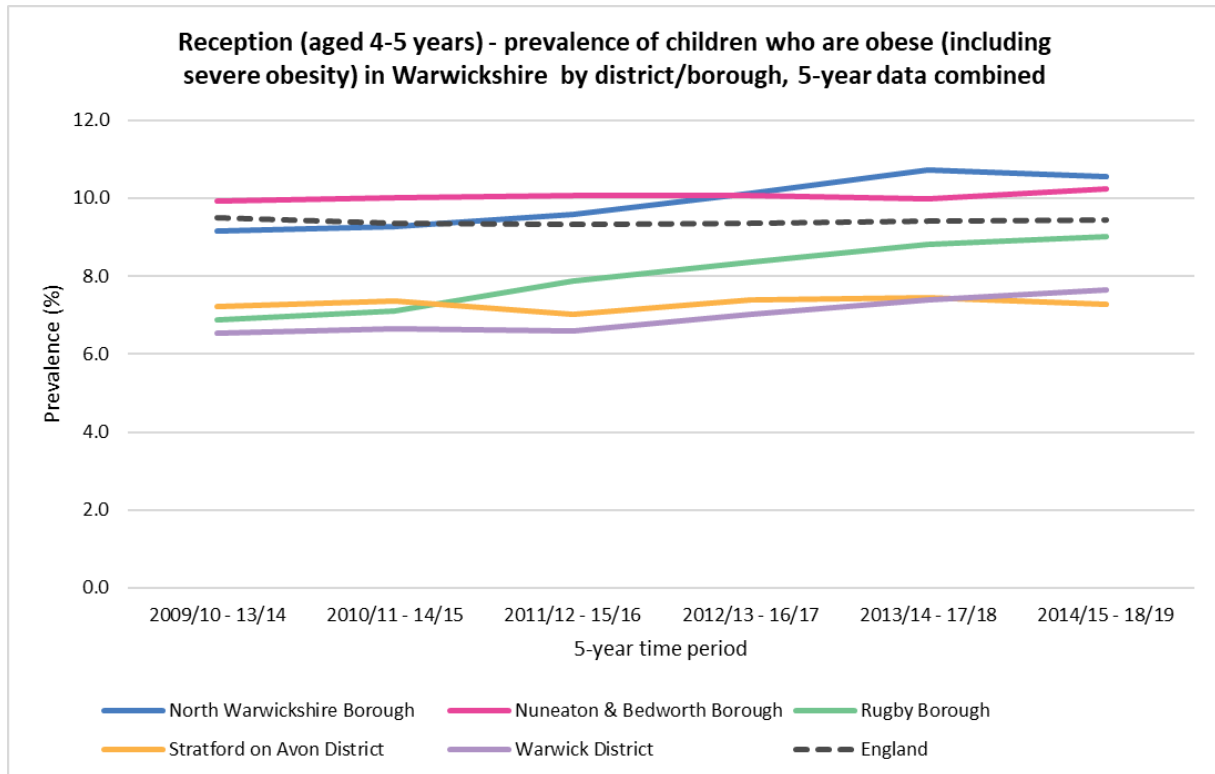
District & Borough Level Data

Levels of obesity are consistently higher in the north of the county in children in both Reception and Year 6 (Figures 7 and 8), and above the England average in both North Warwickshire Borough and Nuneaton and Bedworth Borough for children in Reception and in Nuneaton & Bedworth Borough for children in Year 6. The proportion of obese children in the 5-year period 2014/15-2018/19 varied from 7.3% in Stratford-on Avon District to 10.6% in North Warwickshire Borough in Reception and 13.9% in Warwick District to 21.5% in Nuneaton & Bedworth Borough in Year 6.

Looking further at Figure 7 and Figure 8 the percentage of children in Reception who are obese has increased most markedly in Rugby Borough (from 6.9% in 2009/10-2013/14 to 9.0% in 2014/15–2018/19) and North Warwickshire Borough (from 9.2% to 10.6%). The percentage of children in Year 6 who are obese has also increased the most in Rugby Borough (from 15.6% in 2009/10-13/14 to 17.9% in 2014/15 – 2018/19).

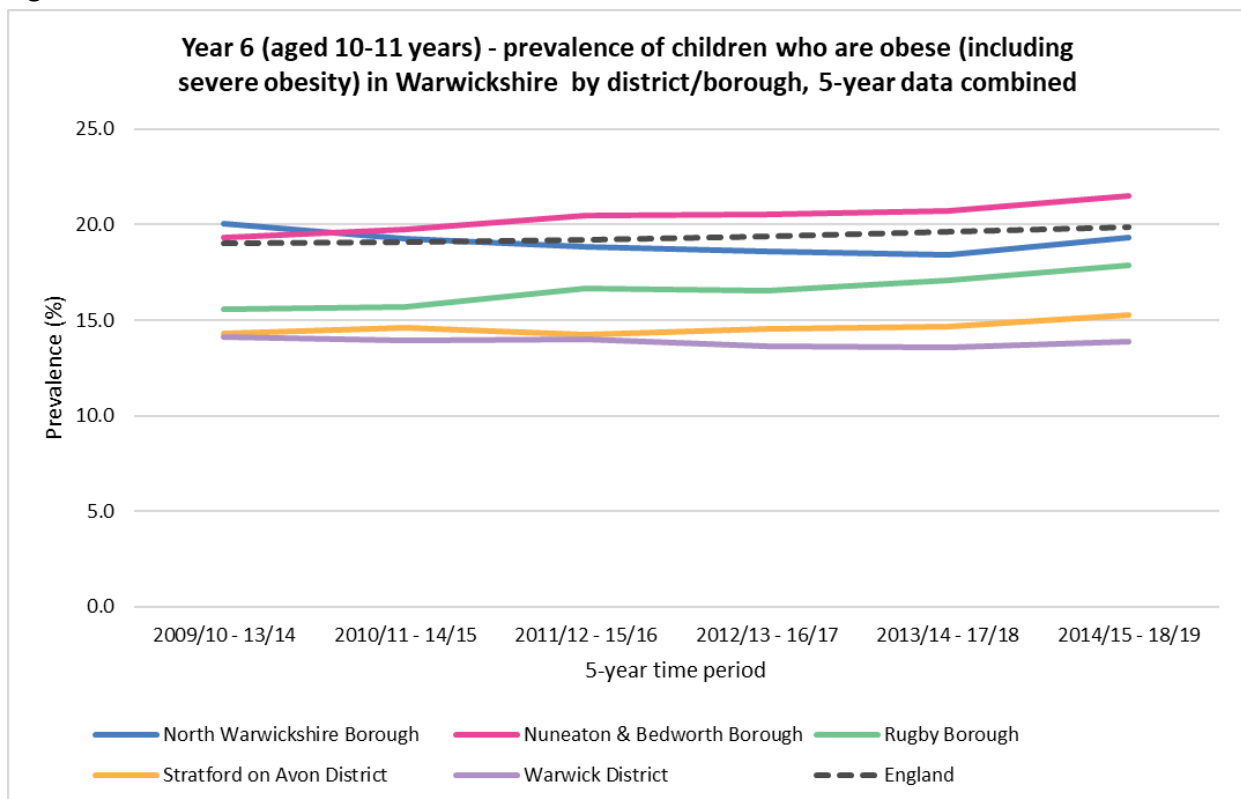


Figure 7



Source: Public Health England, Fingertips accessed January 2020

Figure 8



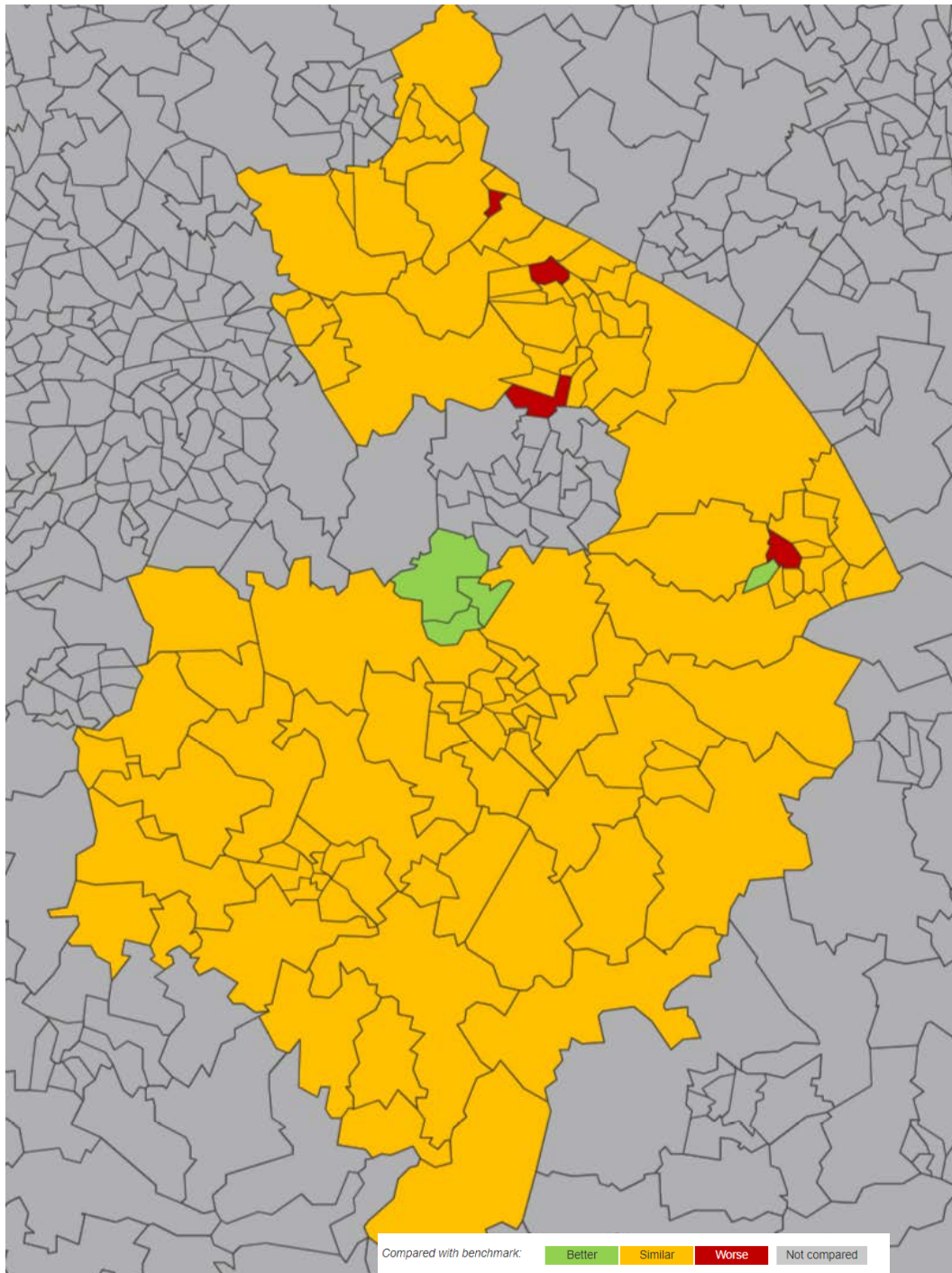
Source: Public Health England, Fingertips accessed January 2020



Ward Level Data

At a ward level data for the 3-year period 2015/16-2017/18 shows that the percentage of children in Reception who are obese was significantly worse than the England average in Atherstone Central (14.4%), Exhall (14.1%), Camp Hill (12.6%) and New Bilton (12.6%) (Figure 9). For the same period, the only ward to be significantly worse than the England average for Year 6 pupils was Bulkington (26.8%) (Figure 10).

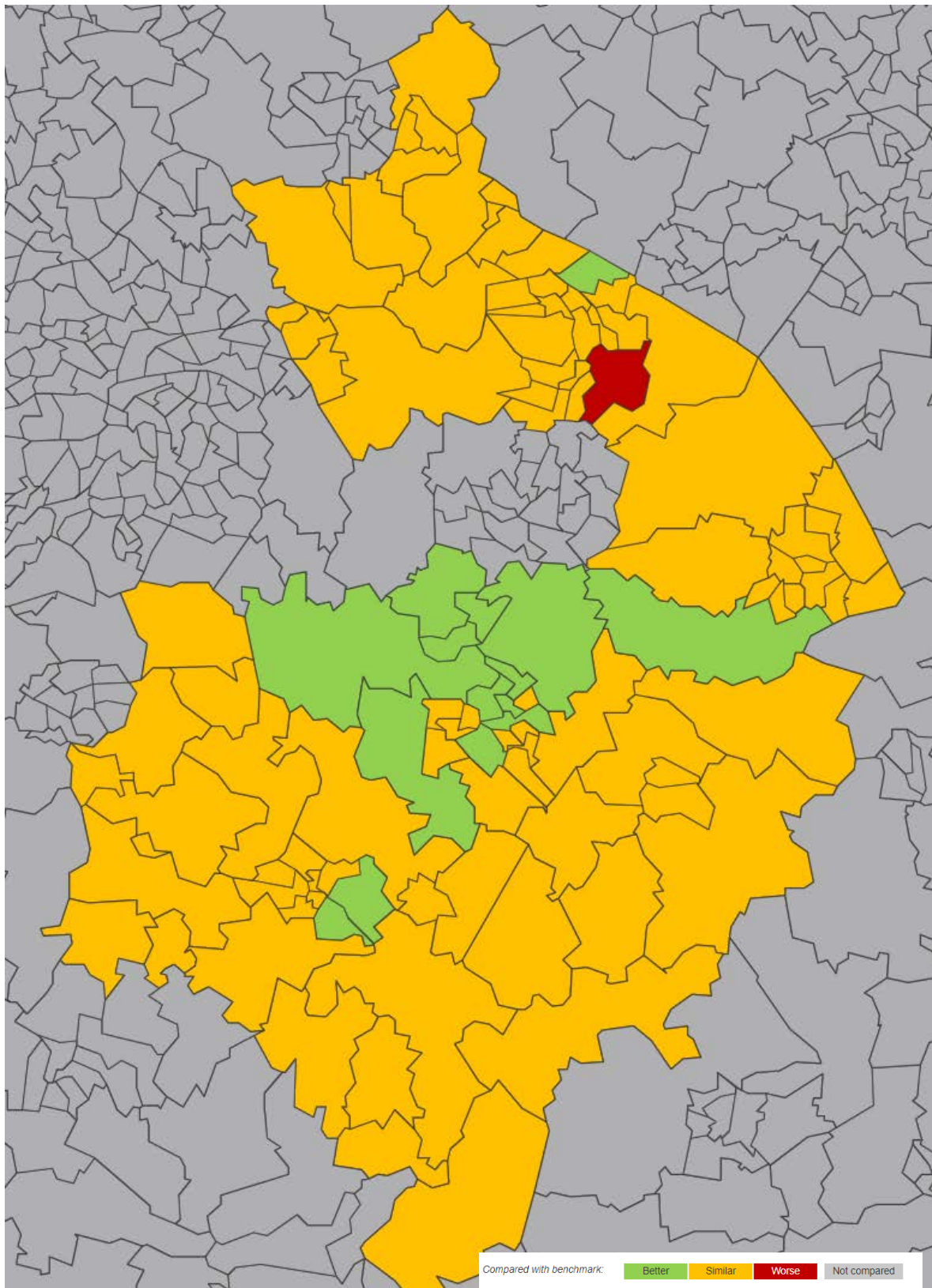
Figure 9 – Obese Children in Reception in Wards in Warwickshire, three-year average (2015/16-2017/18): levels compared to England average



Source: Public Health England, <https://fingertips.phe.org.uk/profile/national-child-measurement-programme/>



Figure 10 – Obese Children in Year 6 in Wards in Warwickshire, three-year average (2015/16-2017/18): levels compared to England average



Source: Public Health England, <https://fingertips.phe.org.uk/profile/national-child-measurement-programme/>



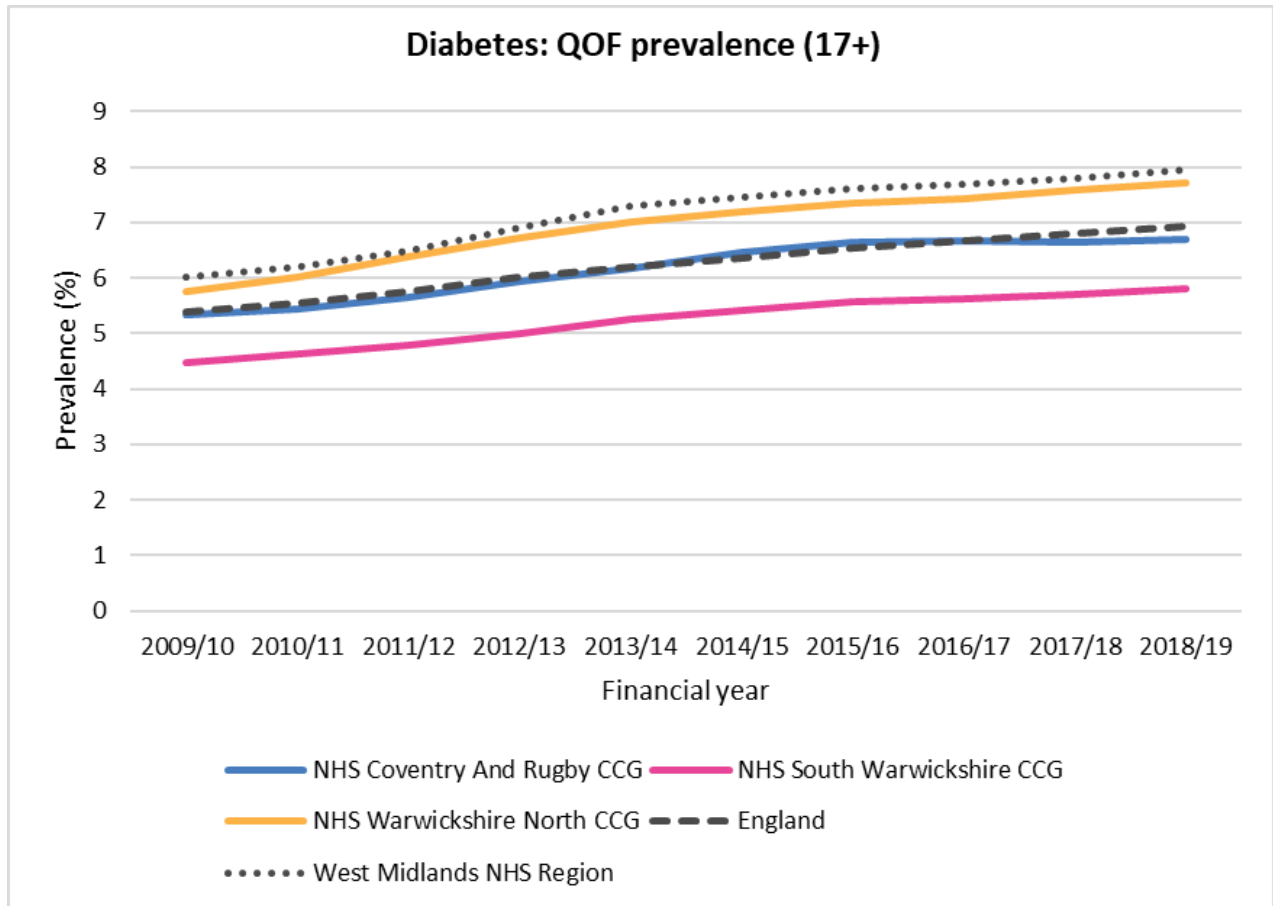
Impact of obesity on health and health services

Obesity is a major contributory factor for some of the most common causes of death and disability in developed economies, most notably greater rates of diabetes mellitus and accelerated onset of cardiovascular disease^{viii}. Obese people are also at increased risk of certain cancers, including being three times more likely to develop colon cancer^{ix}. In addition, people who are obese find it more difficult to be active, and have degenerative joint disease, lower employment and mood disorders.

Diabetes and Hypertension

Looking further at diabetes and hypertension as examples of health problems that obesity contributes to, Figure 11 and Figure 12 show that the prevalence of these diseases are generally increasing in Warwickshire but more so in the north of the county where the prevalence of obesity is higher. The percentage of patients aged 17 years and over with diabetes mellitus, as recorded on practice disease registers has been significantly higher for Warwickshire North than the England average since 2012/13 and has gradually increased since 2009/10. The same is true for the percentage of patients with established hypertension, as recorded on practice disease registers.

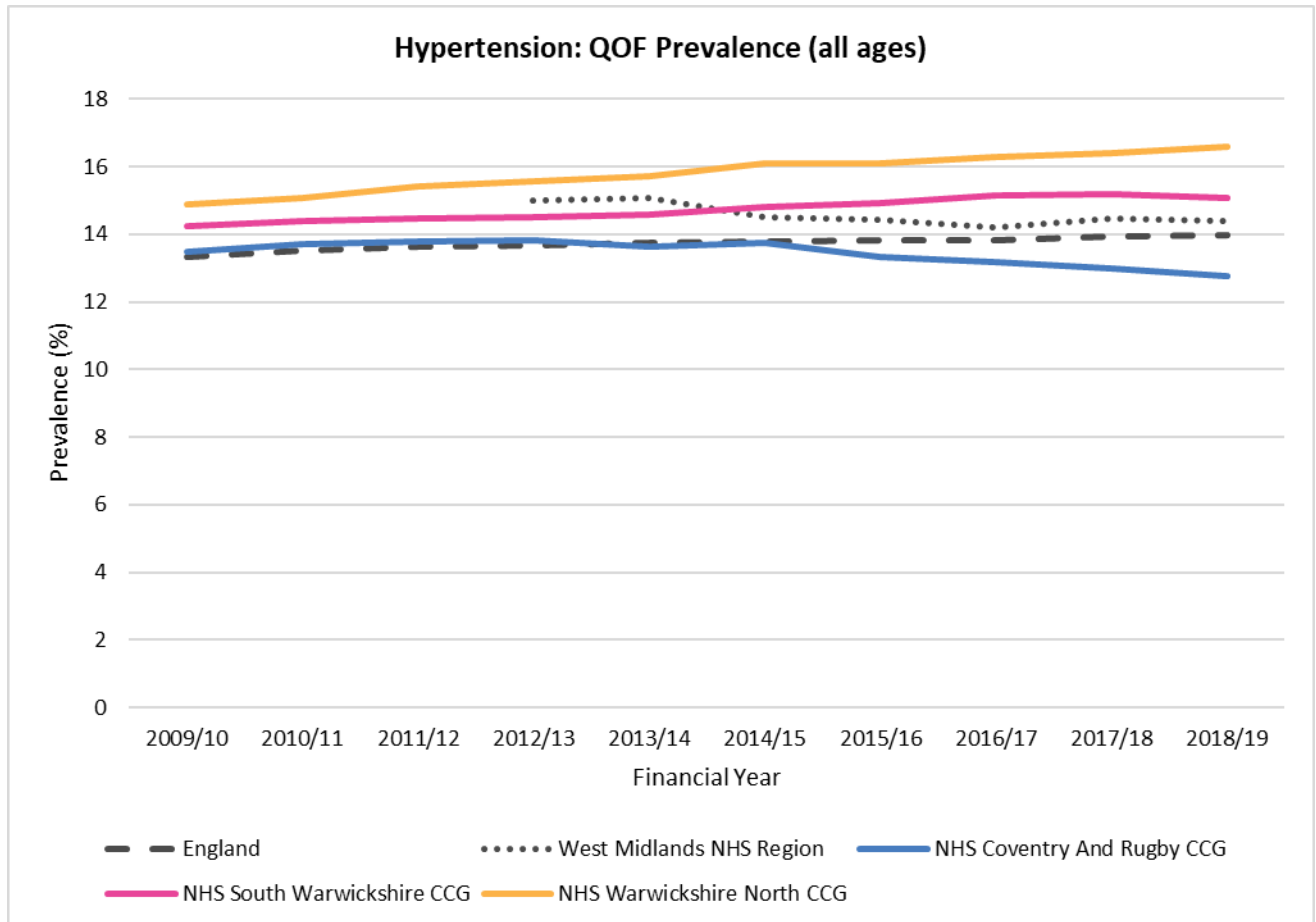
Figure 11



Source: Public Health England, <https://fingertips.phe.org.uk/>, accessed January 2020



Figure 12



Source: Public Health England, <https://fingertips.phe.org.uk/>, accessed January 2020

Hospital Admissions

In line with the impact of obesity on a person’s health there is an inevitable impact on health services. NHS Digital publishes annual data on hospital admissions with a primary and secondary diagnosis of obesity that are informed by the Hospital Episode Statistics (HES) dataset.

The primary diagnosis is the main reason why a patient was admitted to hospital. Warwickshire residents have a lower rate of admissions with a primary diagnosis of obesity than those in the West Midlands region and England, particularly for females (Table 2). However, the rate of admissions has gradually increased during the five years 2013/14 to 2017/18 (Figure 13). The rate of admissions with a primary diagnosis of obesity has been highest in residents registered with a GP practice in Warwickshire North CCG (21 per 100,000 population in 2017/18) and higher than the England rate since 2015/16.

As well as the primary diagnosis, there are up to 19 secondary diagnosis fields collected that show other diagnoses that are relevant to the episode of care. Data is therefore available for the number of episodes where the diagnosis of obesity was recorded in both the primary and any of the 19 secondary diagnosis fields in a patient’s record. In 2017/18, Warwickshire residents had a higher rate of admissions with a primary diagnosis or secondary diagnosis of obesity than those in the West Midlands region and in England for both males and females (Table 4). In addition, the rate of admissions has increased during the five years 2013/14 to 2017/18 (Figure 14), more than doubling for residents within both South Warwickshire and Warwickshire North CCG. The rate of admissions with a primary



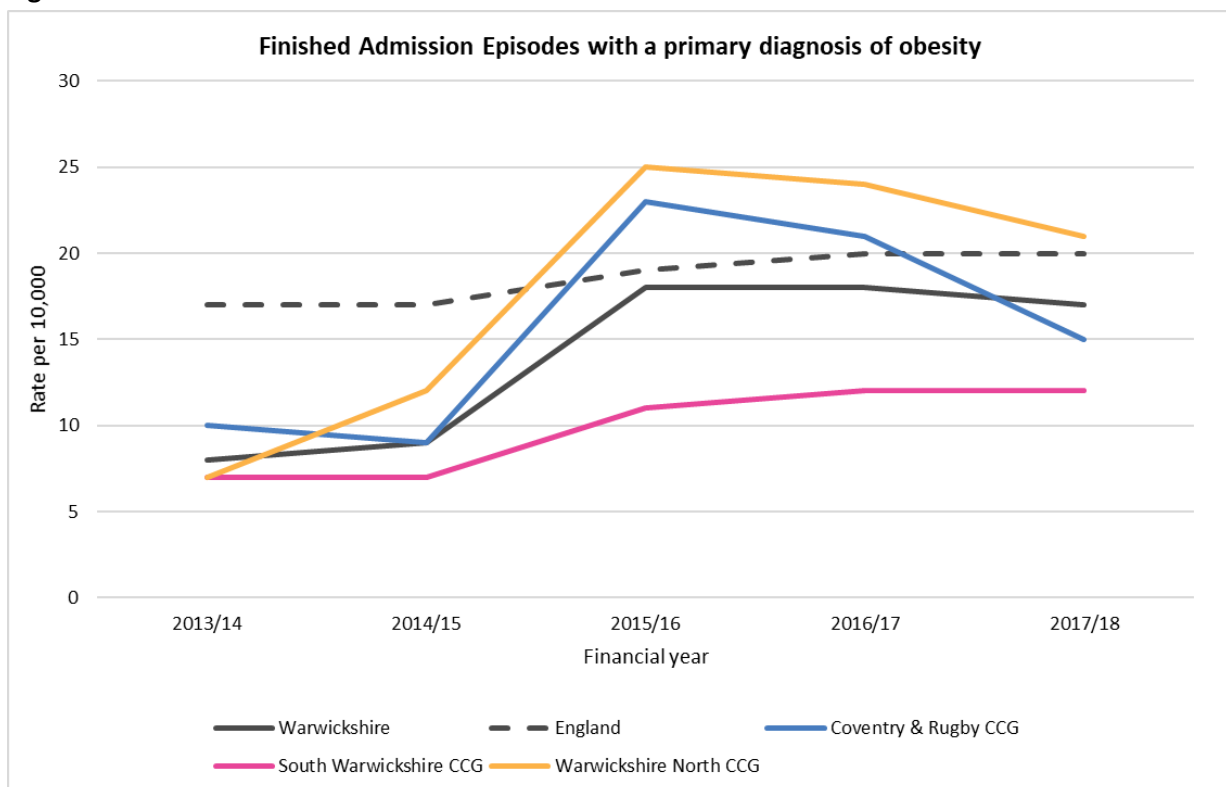
or secondary diagnosis of obesity is again highest in residents registered with a GP practice in Warwickshire North CCG (21 per 100,000 population in 2017/18).

Table 2 - Finished Admission Episodes² with a primary diagnosis of obesity, by region, local authority and CCG of residence, 2017/18

| Area of residence | Admissions | | | Admissions per 100,000 of population | | |
|------------------------|--------------------------|-------|--------|--------------------------------------|------|--------|
| | All persons ⁵ | Male | Female | All persons ⁵ | Male | Female |
| Warwickshire | 90 | 25 | 65 | 17 | 9 | 24 |
| Coventry & Rugby CCG | 65 | 10 | 55 | 15 | 4 | 27 |
| South Warwickshire CCG | 30 | 10 | 20 | 12 | 7 | 16 |
| Warwickshire North CCG | 40 | 10 | 25 | 21 | 13 | 28 |
| West Midlands | 1,420 | 330 | 1,090 | 25 | 12 | 39 |
| England | 10,660 | 2,772 | 7,885 | 20 | 10 | 29 |

Source: NHS Digital, Statistics on Obesity, Physical Activity and Diet, England.

Figure 13



Source: NHS Digital, Statistics on Obesity, Physical Activity and Diet, England.

² A finished admission episode (FAE) is the first period of inpatient care under one consultant within one healthcare provider. FAEs are counted against the year in which the admission episode finishes. Admissions do not represent the number of inpatients, as a person may have more than one admission within the year.

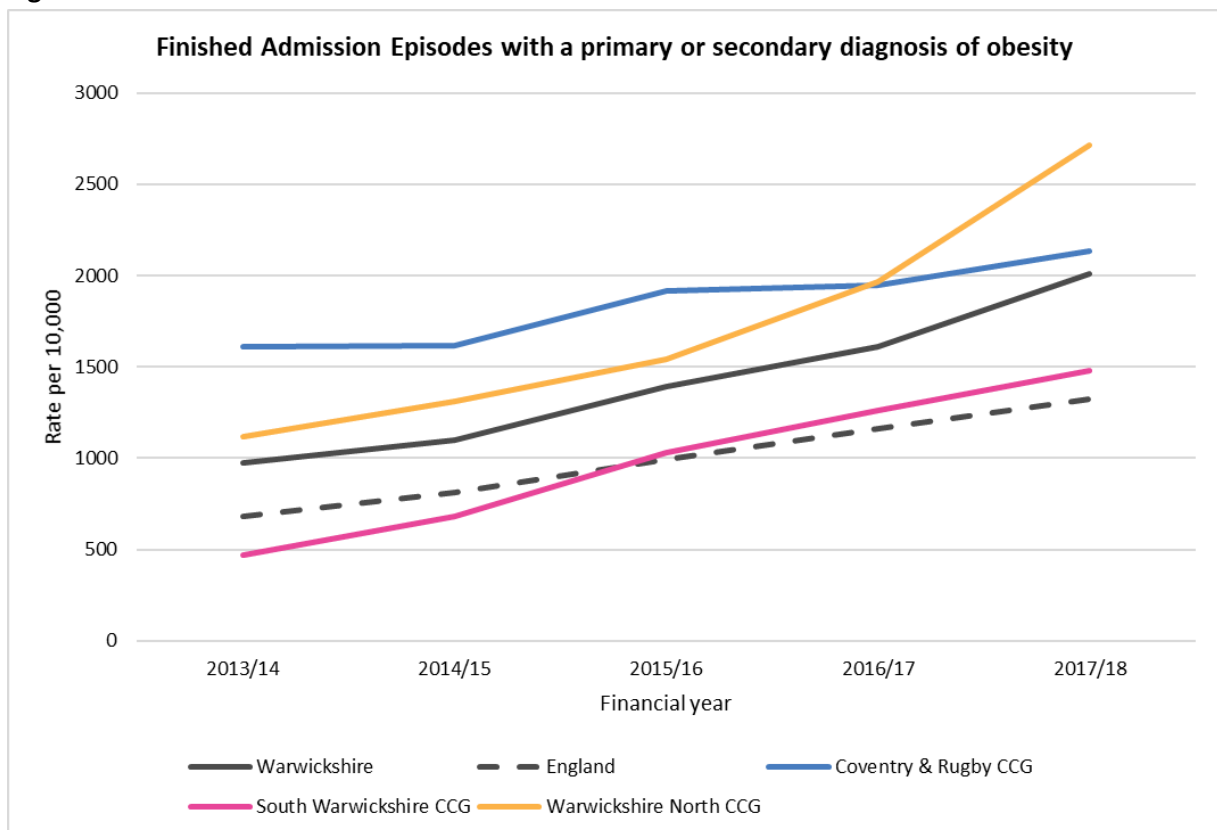


Table 3 - Finished Admission Episodes with a primary or secondary diagnosis of obesity, by region, local authority, and CCG, of residence, 2017/18

| Area of residence | Admissions | | | Admissions per 100,000 of population | | |
|------------------------|--------------------------|---------|---------|--------------------------------------|-------|--------|
| | All persons ⁵ | Male | Female | All persons ⁵ | Male | Female |
| Warwickshire | 11,295 | 4,005 | 7,290 | 2,009 | 1,442 | 2,584 |
| Coventry & Rugby CCG | 8,670 | 2,985 | 5,685 | 2,135 | 1,608 | 2,676 |
| South Warwickshire CCG | 3,915 | 1,230 | 2,685 | 1,482 | 924 | 2,064 |
| Warwickshire North CCG | 5,225 | 1,985 | 3,245 | 2,716 | 2,093 | 3,327 |
| West Midlands | 102,675 | 32,085 | 70,590 | 1,817 | 1,202 | 2,440 |
| England | 710,562 | 243,565 | 466,978 | 1,323 | 963 | 1,685 |

Source: NHS Digital, Statistics on Obesity, Physical Activity and Diet, England.

Figure 14



Source: NHS Digital, Statistics on Obesity, Physical Activity and Diet, England.

Nationally the main reasons for admission (primary diagnosis) for Finished Admission Episodes with a primary or secondary diagnosis of obesity are related to musculoskeletal conditions, maternity care, liver disease and heart disease (Table 4).



Table 4- Table 2.3: Main reason for admission (primary diagnosis)¹ for Finished Admission Episodes² with a primary or secondary diagnosis³ of obesity⁴ - England 2017/18

| Primary diagnosis code | Primary diagnosis description | Admission count |
|------------------------|--|-----------------|
| M17 | Gonarthrosis [arthrosis of knee] | 26,054 |
| O36 | Maternal care for other known or suspected fetal problems | 22,750 |
| K80 | Cholelithiasis | 14,974 |
| M16 | Coxarthrosis [arthrosis of hip] | 14,731 |
| I25 | Chronic ischaemic heart disease | 14,727 |
| O70 | Perineal laceration during delivery | 14,084 |
| O68 | Labour and delivery complicated by fetal stress [distress] | 13,312 |
| E66 | Obesity ⁵ | 10,660 |
| O34 | Maternal care for known or suspected abnormality of pelvic organs | 10,421 |
| M23 | Internal derangement of knee | 10,075 |
| R07 | Pain in throat and chest | 9,735 |
| R10 | Abdominal and pelvic pain | 9,507 |
| O26 | Maternal care for other conditions predominantly related to pregnancy | 9,420 |
| C50 | Malignant neoplasm of breast | 9,240 |
| J18 | Pneumonia, organism unspecified | 8,483 |
| A41 | Other sepsis | 7,825 |
| M75 | Shoulder lesions | 7,327 |
| H25 | Senile cataract | 6,354 |
| I50 | Heart failure | 6,193 |
| L03 | Cellulitis | 6,042 |
| J44 | Other chronic obstructive pulmonary disease | 5,987 |
| I48 | Atrial fibrillation and flutter | 5,912 |
| Z34 | Supervision of normal pregnancy | 5,844 |
| I21 | Acute myocardial infarction | 5,769 |
| T84 | Complications of internal orthopaedic prosthetic devices, implants and grafts | 5,705 |
| H26 | Other cataract | 5,557 |
| N39 | Other disorders of urinary system | 5,438 |
| O99 | Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium | 5,272 |
| O63 | Long labour | 5,166 |
| K42 | Umbilical hernia | 5,137 |
| | Other conditions | 422,861 |
| | Total admissions | 710,562 |

Source: NHS Digital, *Statistics on Obesity, Physical Activity and Diet, England*.



Bariatric Surgery

The term 'bariatric surgery' is used to define a group of procedures that can be carried out to facilitate weight loss and includes stomach stapling, gastric bypasses and sleeve gastrectomy. Table 5 show the number and rate of finished consultant episodes³ (FCEs) for patients with a primary diagnosis of obesity undergoing bariatric surgery in Warwickshire, the West Midlands and England in 2017/18. Figure 15 shows that the rate of admissions for bariatric surgery has increased across Warwickshire and the West Midlands since 2013/14 although there has been a reduction in 2017/18. Since 2015/16, the rate of FCEs per 100,000 population in Warwickshire North CCG has been markedly higher than the rate for the population in the other CCGs, Warwickshire and England. In all areas the rate of FCEs was noticeably higher for females than males.

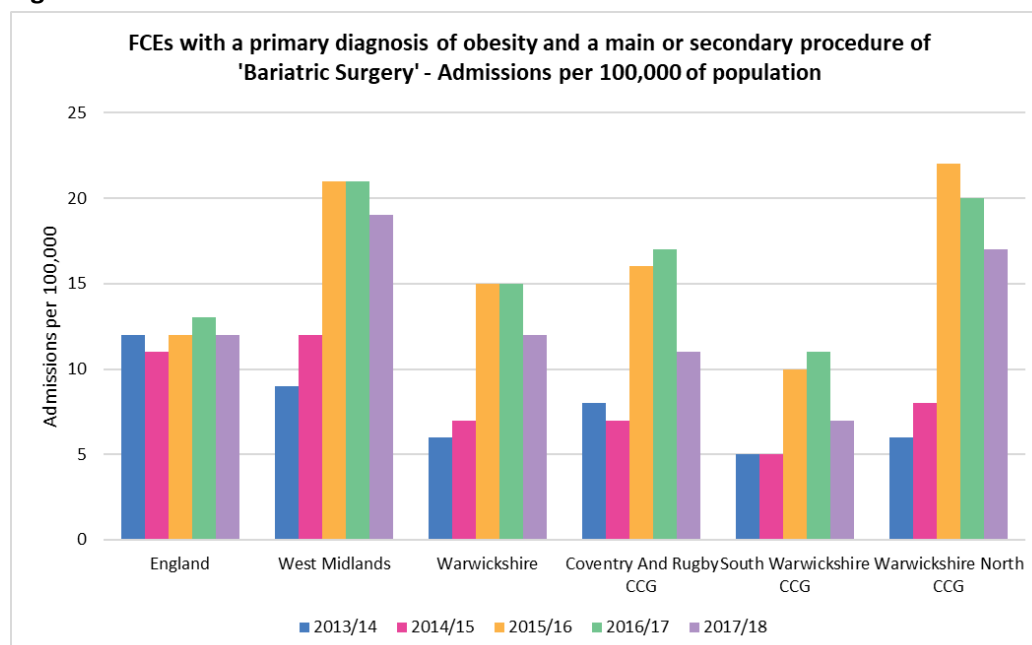
Table 5 - Finished Consultant Episodes with a primary diagnosis of obesity and a main or secondary procedure of 'Bariatric Surgery', by region, Local Authority and CCG of residence, 2017/18

| Area of residence | Admissions | | | Admissions per 100,000 of population | | |
|------------------------|-------------|-------|--------|--------------------------------------|------|--------|
| | All persons | Male | Female | All persons | Male | Female |
| Warwickshire | 65 | 15 | 50 | 12 | 5 | 18 |
| West Midlands | 1,055 | 200 | 855 | 19 | 7 | 31 |
| England | 6,627 | 1,400 | 5,224 | 12 | 5 | 19 |
| Coventry & Rugby CCG | 50 | * | 45 | 11 | * | 21 |
| South Warwickshire CCG | 20 | * | 15 | 7 | * | 11 |
| Warwickshire North CCG | 30 | * | 25 | 17 | 8 | 26 |

* = suppression applied to data where numbers are between 1 and 7.

Source: Hospital Episode Statistics (HES), NHS Digital. Copyright © 2019, Health and Social Care Information Centre.

Figure 15



Source: Hospital Episode Statistics (HES), NHS Digital. Copyright © 2019, Health and Social Care Information Centre.

³ A finished consultant episode (FCE) is a continuous period of admitted patient care under one consultant within one healthcare provider. Figures do not represent the number of different patients, as a person may have more than one episode of care within the same stay in hospital or in different stays in the same year.



Prescription Items for the treatment of obesity

Information obtained from the Prescribing Analysis and Cost Tool (PACT) system, which covers prescriptions prescribed by GPs, nurses, pharmacists and others in England and dispensed in the community in the UK includes data on the number of prescriptions for the drug Orlistat (Xenical®) which is the only drug currently available in the UK that is recommended specifically for the management of obesity⁴. Information for 2017/18, shows that there were 9 prescription items for the treatment of obesity (i.e prescriptions of Orlistat) per 1,000 population in residents covered by Warwickshire North CCG (Table 6). This was higher than the rate in England and other areas in Coventry and Warwickshire.

Table 6 - Number of prescription items for the treatment of obesity prescribed in primary care and dispensed in the community, by region, commissioning region and Clinical Commissioning Group, 2017/18

| Area | Prescription Items | Prescription items per 1,000 population |
|---|--------------------|---|
| England | 389,464 | 7 |
| NHS England Midlands and East (West Midlands) | 32,943 | 8 |
| Coventry and Rugby CCG | 3,569 | 8 |
| South Warwickshire CCG | 1,644 | 6 |
| Warwickshire North CCG | 1,653 | 9 |

Source: Prescribing Analyses and Cost (PACT) from the NHS Prescription Services a division of the NHS Business Services Authority (NHS BSA). Copyright © 2019, re-used with the permission of the NHS Prescription Services. Copyright © 2019, Health and Social Care Information Centre.

Lifestyle and Environmental Factors that Impact on Prevalence of Obesity

Poor diet and low levels of physical activity are the primary causal factors to excess weight.

Physical Activity

The Chief Medical Officer currently recommends that adults undertake a minimum of 150 minutes (2.5 hours) of moderate physical activity per week, or 75 minutes of vigorous physical activity per week or an equivalent combination of the two (MVPA), in bouts of 10 minutes or more. Regular physical activity is associated with a reduced risk of obesity.

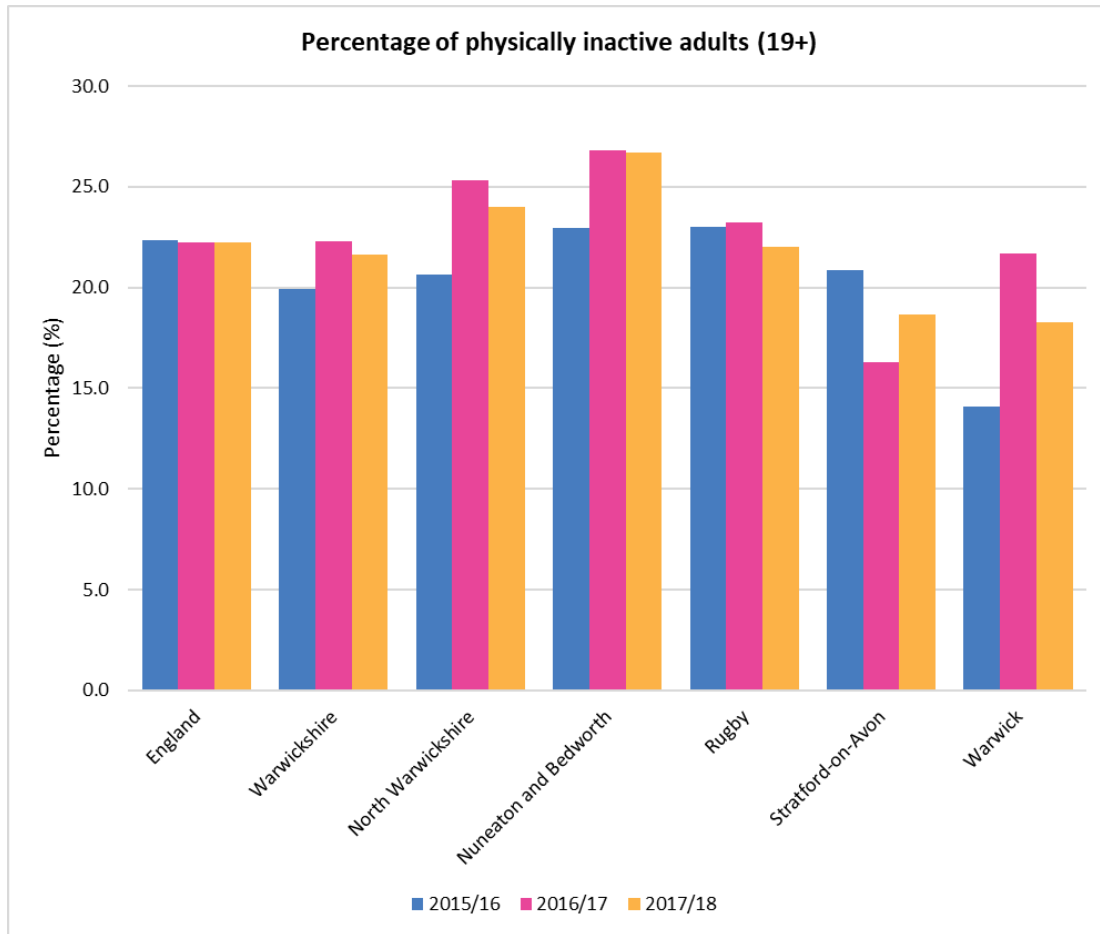
Physical Activity in Adults

Sport England conducts an online/postal survey (the Active Lives Adults Survey) of adults aged 19 years and over which includes a question on the amount of physical activity undertaken. Physical inactivity is defined as engaging in less than 30 minutes of moderate intensity equivalent (MIE) physical activity per week. Figure 16 shows that the percentage of physically inactive adults in Warwickshire has increased since 2015/16 (from 19.9% to 21.6% in 2017/18). Looking at a district and borough level, the percentage of physically inactive adults has increased during this time period in three of the districts and boroughs within Warwickshire: North Warwickshire Borough, Nuneaton & Bedworth Borough and Warwick District. The highest percentage of physically inactive adults is in Nuneaton & Bedworth Borough (26.7% in 2017/18).

⁴ Note that prescriptions written in hospitals /clinics that are dispensed in the community, prescriptions dispensed in hospitals, dental prescribing and private prescriptions are not included in PACT data.



Figure 16



Source: Public Health England (based on the Active Lives Adult Survey, Sport England), <https://fingertips.phe.org.uk/>, Accessed: January 2020.

The Active Lives Adult Survey also collects data on the percentage of adults walking or cycling for travel at least three times in a week:

- The number of respondents aged 16 and over, with valid responses to questions on walking, walking for travel in bouts of 10 minutes or more on at least twelve days in the previous 28 days expressed as a percentage of the total number of respondents aged 16 and over.
- The number of respondents aged 16 and over, with valid responses to cycling questions, cycling for travel on at least twelve days in the previous 28 days expressed as a percentage of the total number of respondents aged 16 and over.

Figures 17 and 18 show the percentage of adults (16+) walking or cycling for travel at least three times a week in Warwickshire and England between 2015/16 and 2017/18. The percentage of adults cycling has reduced in this period and is significantly lower than the England average. The highest percentage of adults cycling for travel is in Warwick District although this has decreased from 4.8% to 3.7% between 2015/16 and 2017/18. In 2017/18, the lowest percentage of adults cycling for travel was in North Warwickshire Borough, just 0.8% of adults. The percentage of adults walking for travel in Warwickshire has remained around 17-18% between 2015/16 and 2017/18 but is significantly lower than the England average. Again adults are more likely to walk for travel in Warwick District (22.3% in 2017/18) than in any other boroughs and districts in Warwickshire. The area with the lowest percentage of adults walking for travel is North Warwickshire but this has increased since 2015/16 (13.5% in 2017/18).



Figure 17

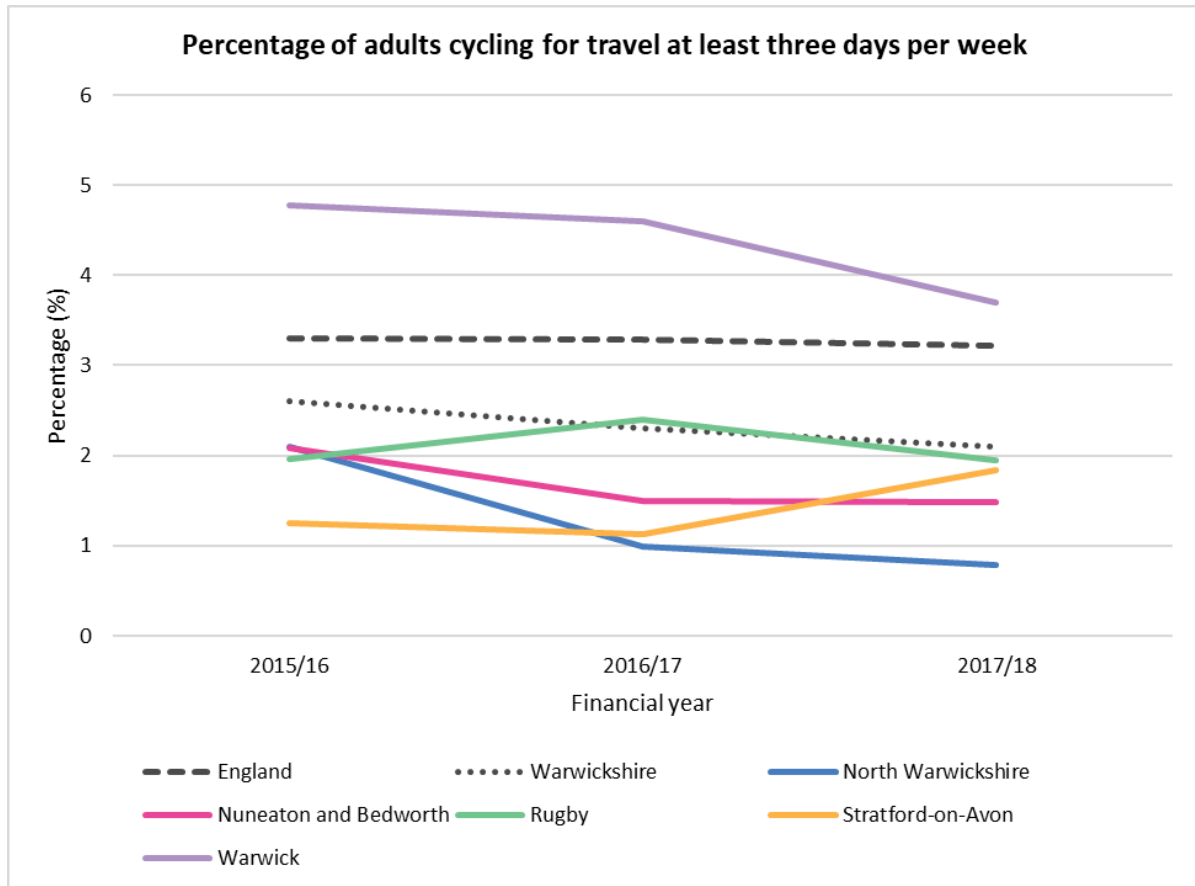
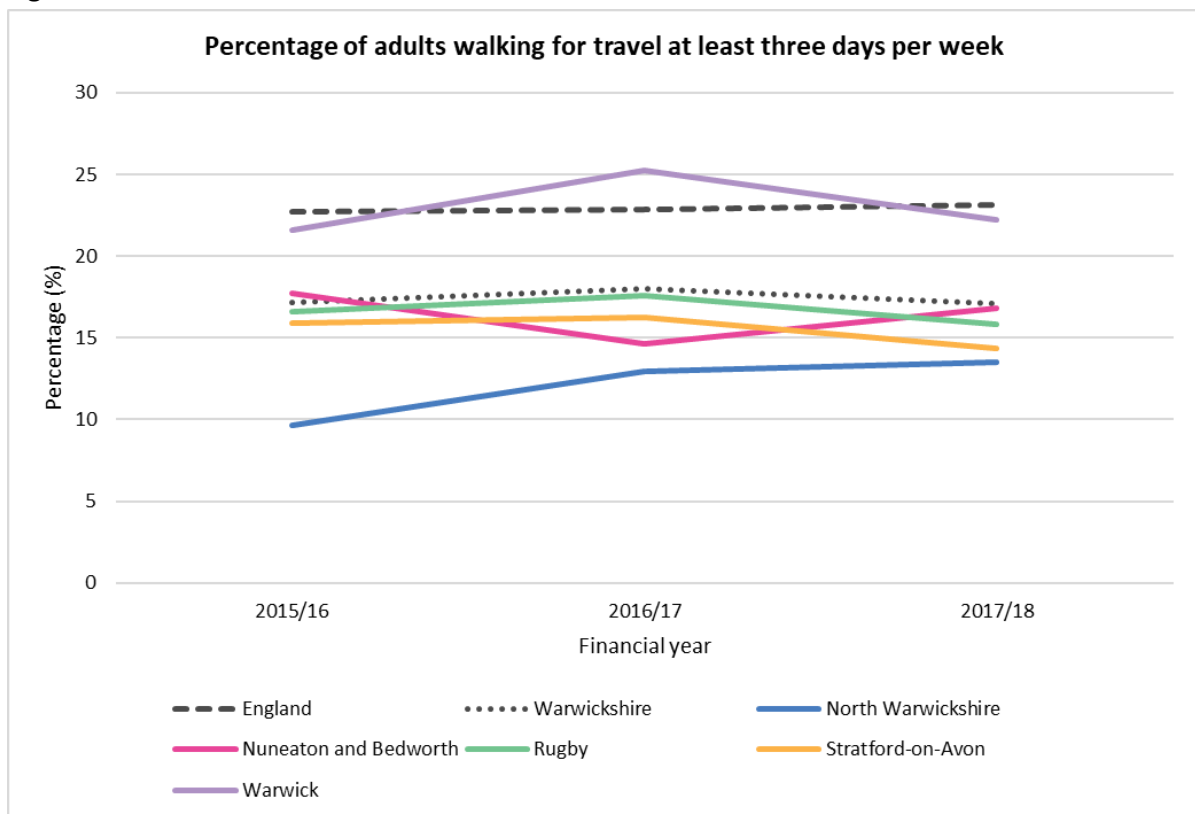


Figure 18



Source: Department for Transport (based on Active Lives Adult Survey, Sport England), <https://fingertips.phe.org.uk/>, Accessed: January 2020.



Physical Activity in Children

To maintain a basic level of health, children and young people aged 5 to 18 should aim for an average of at least 60 minutes of moderate intensity physical activity a day across the week ^x. This should range from moderate activity such as cycling and playground activities, to vigorous activity, such as running and tennis.

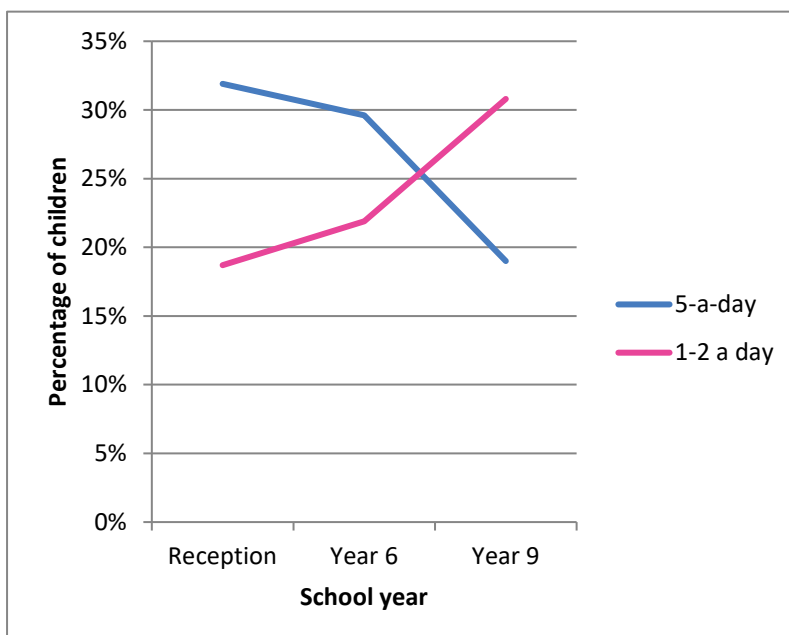
The Health Survey for England asks about children’s activity levels over the 7 days prior to completing the survey, apart from during school hours. Children or parents record details of their physical activity. In 2015, in England, only 28% of 5-7 year olds and 26% of 8-10 year olds met the recommendations. There is a decrease in activity level with age. Boys are more likely than girls to meet the recommended levels, as are children from the most affluent families when compared with the least affluent families.

The Health Survey for England isn’t reported at a Warwickshire level. Locally Compass undertake annual health and development questionnaires for Reception, Year 6 and Year 9 pupils as part of the School Health and Wellbeing Service. These include asking “How much moderate physical activity does your child do each day?” (Reception) or “How much moderate physical activity do you do each day?” (Year 6). In 2017/18, 90.7% of Reception children did at least an hour of moderate physical activity per day and 76.7% of Year 6 children did at least an hour of moderate physical activity per day. Questionnaires completed by year 9 students show that the numbers drop to 65.9% doing at least an hour of moderate physical activity by year 9.

Diet

Obesity develops gradually over time, as a result of poor diet and lifestyle choices. In the 2017/18 Compass Warwickshire School needs Assessment Survey, the number of pupils who said that they eat at least five portions of fruit and vegetables per day falls as they progress through school from 31.9% in reception to 29.6% in year 6 and 19.0% in year 9 (Figure 19). Similarly, the number of children eating breakfast every day falls from 90.9% in reception to 60.1% in year 9.

Figure 19 - Percentage of children consuming either 5 or 1-2 portions of fruit and vegetables per day by school year.



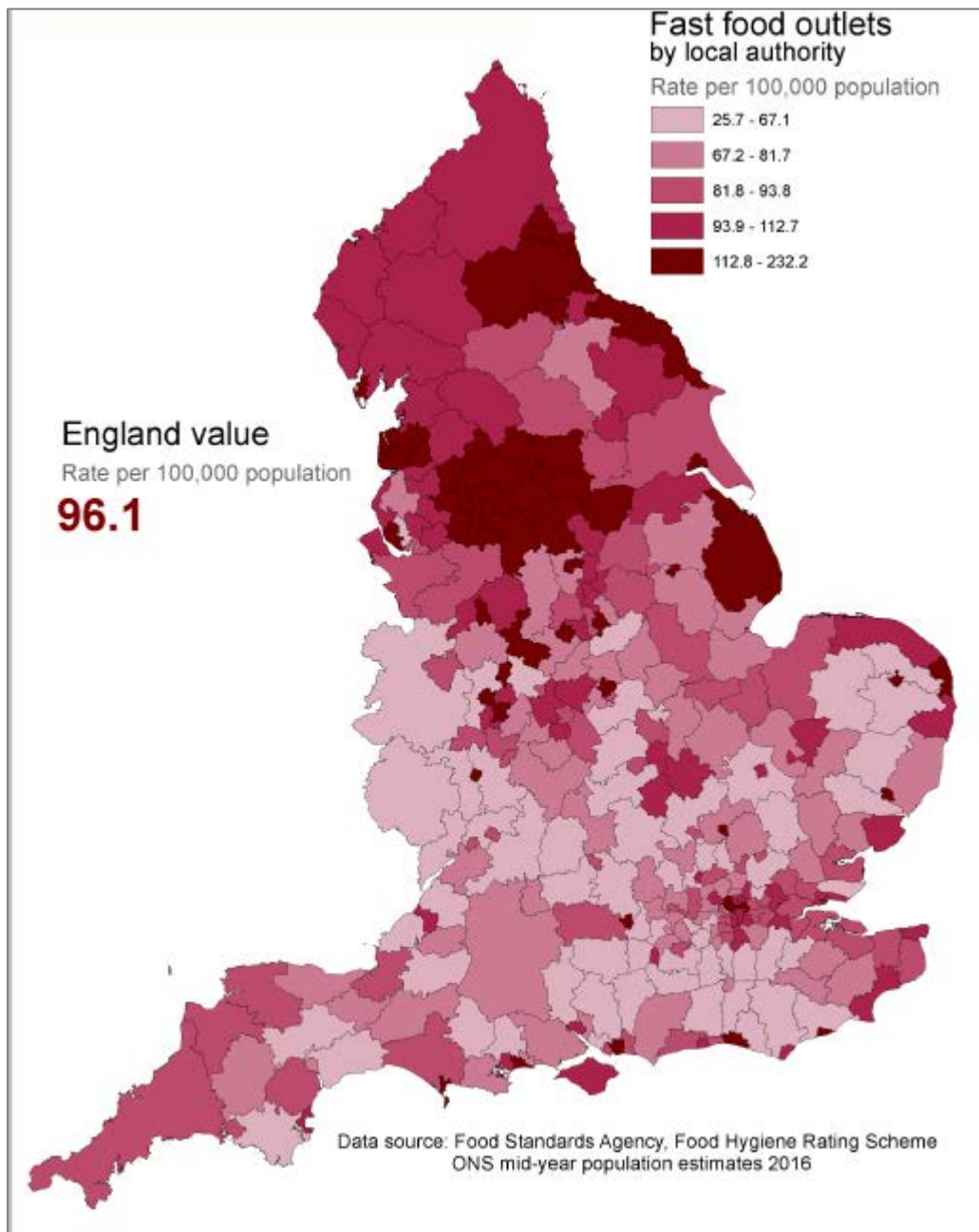
Source: Compass, Warwickshire School Needs Assessment Reports, January & April 2018



Fast Food Outlets

Experts say children exposed to fast food on the way home from school are more likely to eat unhealthily. In addition, research in Cambridge found that exposure to takeaway food outlets in home, work, and commuting environments combined was associated with marginally higher consumption of takeaway food, greater body mass index, and greater odds of obesity^{xi}. Public Health England has published the rate of fast food outlets per 100,000 population in England in December 2017 based on Food Standards Agency (FSA) Food Hygiene Rating Scheme (FHRS) data (Figure 20). Fast food refers to food that is energy dense and available quickly, therefore it covers a range of outlets that include, but are not limited to, burger bars, kebab and chicken shops, chip shops and pizza outlets.

Figure 20 Density of fast food outlets in England and Wales at 31/12/2017



Source: Public Health England (2018), <https://www.gov.uk/government/publications/fast-food-outlets-density-by-local-authority-in-england>, Accessed January 2020.



There is also strong evidence linking the density of fast food outlets to the level of area deprivation, and the data shows higher concentrations of fast food outlets in England's most deprived communities. The rate of fast food outlets per 100,000 population was higher in the north of Warwickshire than the south of the county and the highest in North Warwickshire Borough (North Warwickshire 66 outlets, 104.4 per 100,000; Nuneaton and Bedworth 108 outlets, 84.6 per 100,000, Rugby 89 outlets, 84.5 per 100,000; Stratford-on-Avon 84 outlets, 68.1 per 100,000; Warwick 100 outlets, 71.7 per 100,000).

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- ^{ix} NHS, Online version of the NHS Long Term Plan, <https://www.longtermplan.nhs.uk/online-version/chapter-2-more-nhs-action-on-prevention-and-health-inequalities/obesity/>
- ^x <https://www.nhs.uk/live-well/exercise/physical-activity-guidelines-children-and-young-people/>
- ^{xi} *Burgoine T et al*. BMJ 2014;348:g1464