

Southampton Strategic Assessment National Child Measurement Programme

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Context - childhood obesity and NCMP

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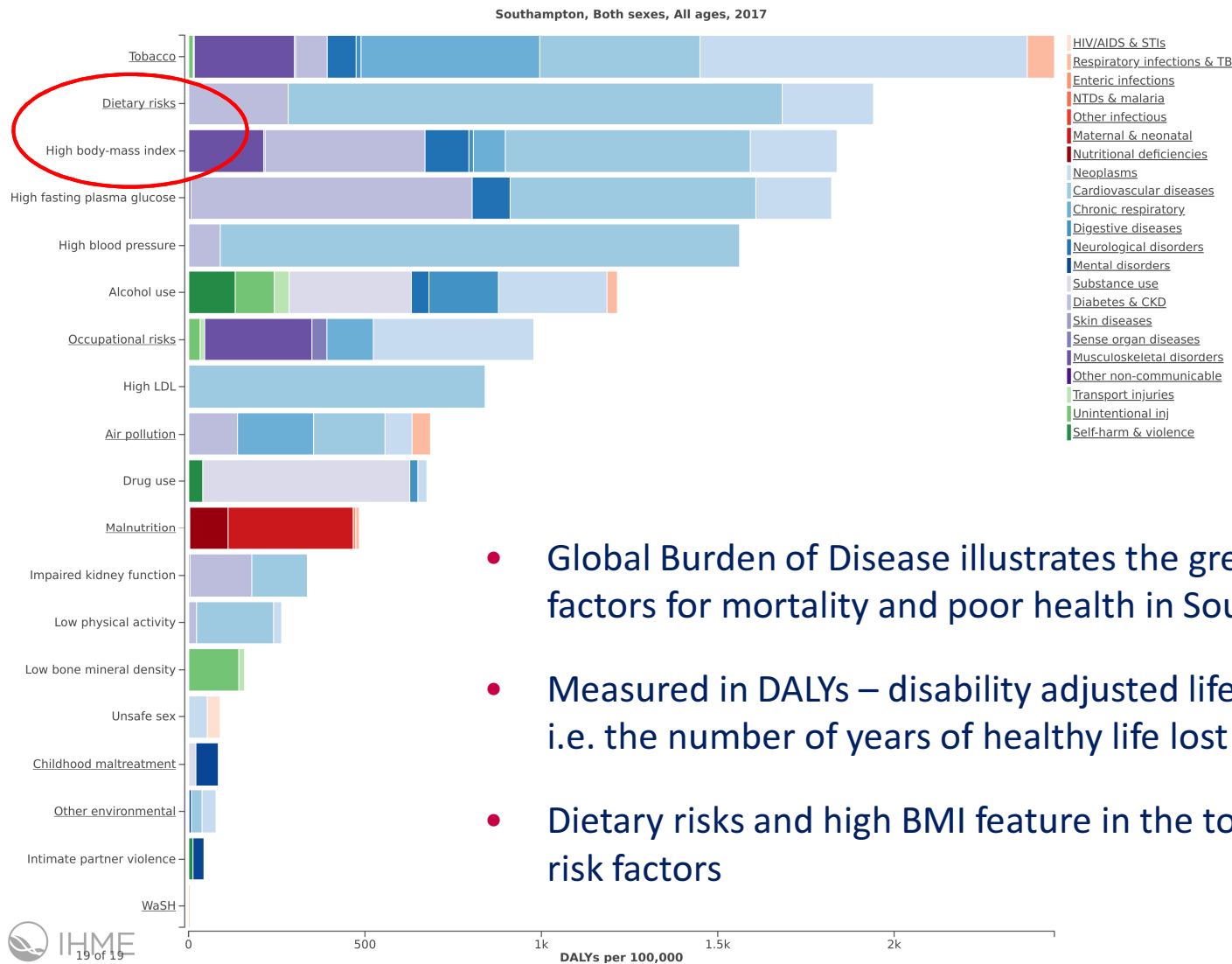
The World Health Organization defines childhood obesity as:

- “Abnormal or excessive fat accumulation that presents a risk to health”
- “One of the most serious public health challenges of the 21st century.”

Obesity as a risk factor for poor health and wellbeing....

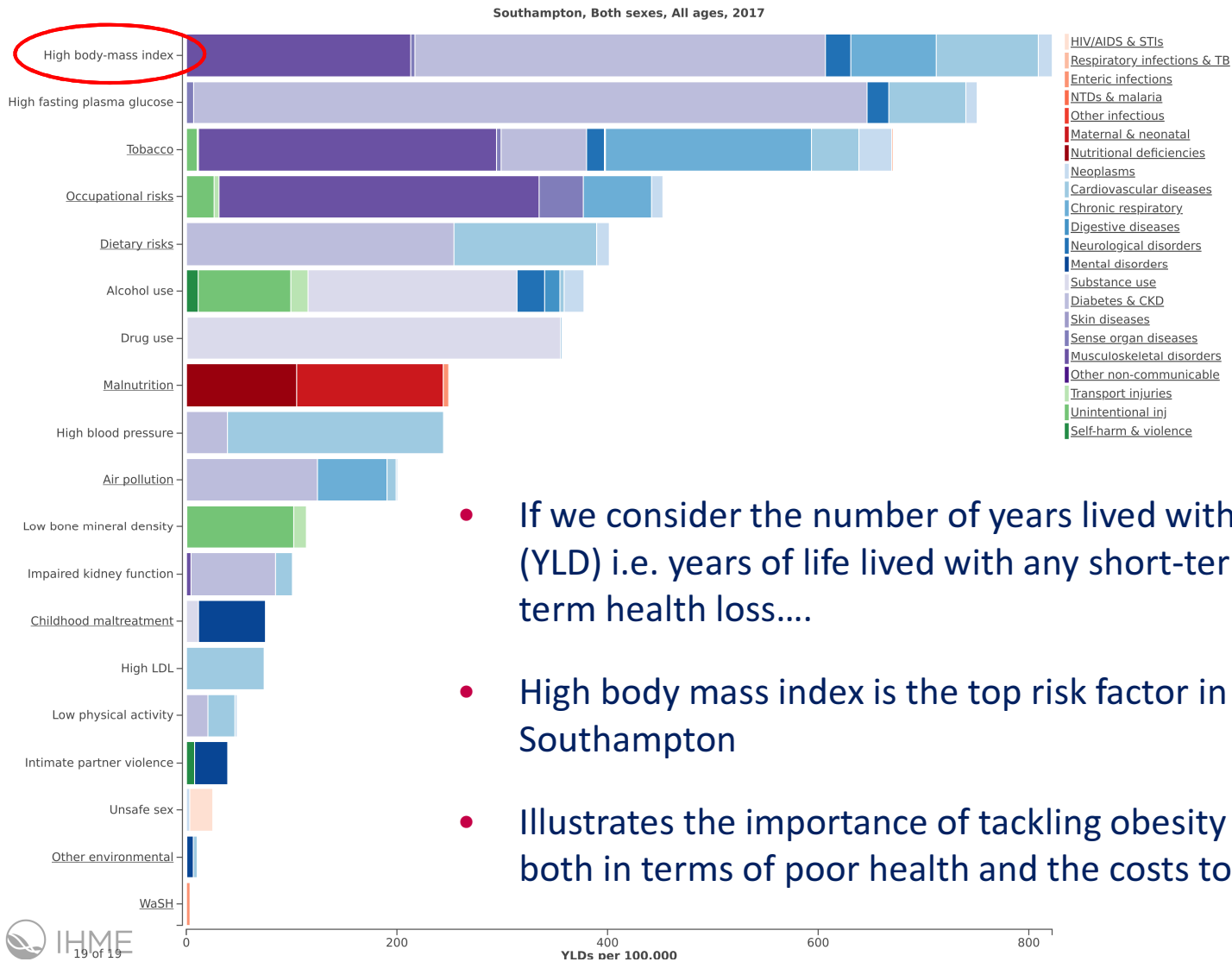
- In Children....
 - Range of adverse health outcomes such as asthma
 - Poor self esteem, mental health and stigmatisation
 - Risk factor for obesity in adulthood
- In adults....
 - A leading cause of a range of conditions such as asthma and other respiratory problems, eating disorders, mental health disorders and psychosocial risks, cardiovascular diseases, Type 2 diabetes, musculoskeletal problems, sleep apnoea etc.....

Context



- Global Burden of Disease illustrates the greatest risk factors for mortality and poor health in Southampton
- Measured in DALYs – disability adjusted life years lost i.e. the number of years of healthy life lost
- Dietary risks and high BMI feature in the top three risk factors

Context



- If we consider the number of years lived with disability (YLD) i.e. years of life lived with any short-term or long-term health loss....
- High body mass index is the top risk factor in Southampton
- Illustrates the importance of tackling obesity in the city, both in terms of poor health and the costs to society

How do we measure obesity?



- Body Mass Index (BMI) is the accepted way of measuring obesity
 - divides a persons weight in kilograms by their height in metres squared
- Adults are classified as overweight or obese if their BMI is above specified levels.....overweight > 25 ; obesity > 30
- However, such levels are not appropriate for children as their BMI changes considerably with age and gender
- Therefore, children's BMI is standardised for their age and sex by comparing against a recognised standard – known as the 1990 UK standard

How do we measure obesity?



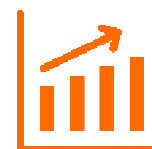
- Our primary source of information on childhood obesity comes from the National Child Measurement Programme (NCMP) introduced in 2005/06
- Children are measured when they start and leave primary school
 - Year R (4-5 year olds) and Year 6 (10-11 year olds)
- Height and weight is measured by Public Health school nurses and recorded along with various demographic information
- BMI adjusted for age and sex by calculating standard deviation scores (z-scores) using the 1990 UK reference and then converted to centiles (p-scores)
 - Underweight: 2nd centile or below
 - Healthy weight: 2nd to 85th centile
 - Overweight: 85th centile and above
 - Obese: 95th centile and above
- NHS number is recorded to allow individual records to be linked between time points
- Local coverage is consistently higher than the national average; over 95% in last 4 years, meaning this is a very reliable dataset



Childhood obesity data



Benchmarking



Trends



Deep dive – spatial variations





Obesity in all our children and young people

Using the NCMP data collected in our schools, the adult national Active People Survey and all age Health Survey for England; we can estimate in **Southampton** there are:

- Between **13,000** and **13,700 overweight/obese** children aged 2 to 17 years old
- With over half – between **6,700** and **7,900** are estimated **obese**



NCMP - Benchmarking



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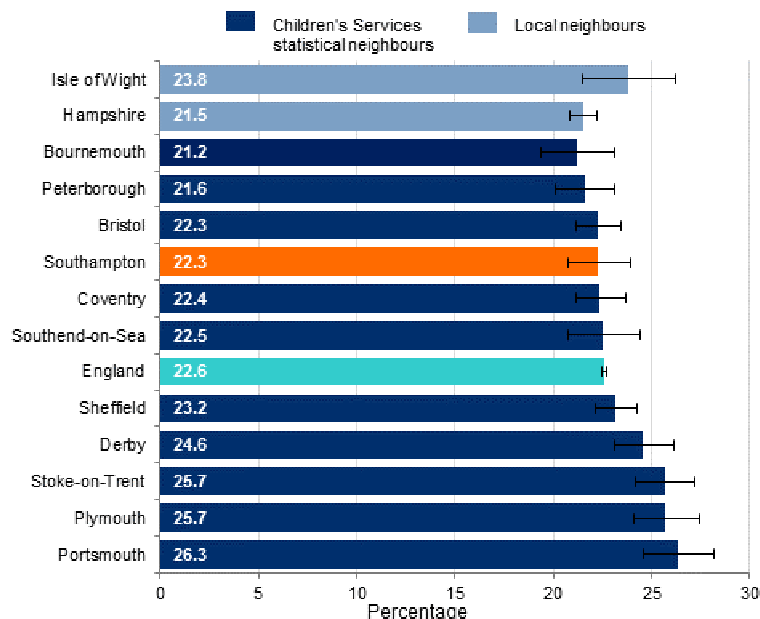


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Prevalence of overweight (including obese)

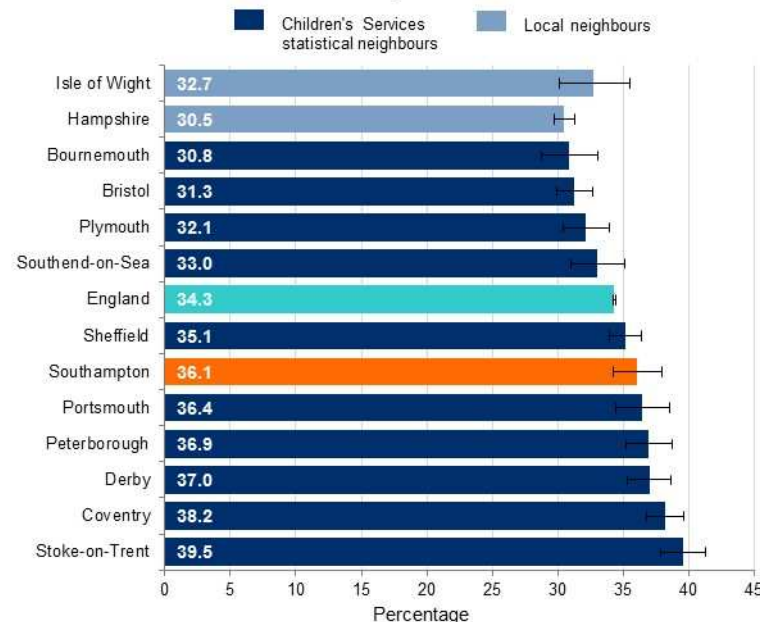


Percentage of Children Considered to be Overweight or Obese in Year R : Southampton and Children's Services statistical comparators: 2018/19



Source: NHS Digital - NCMP national data tables

Percentage of Children Considered to be Overweight or Obese in Year 6 : Southampton and Children's Services statistical comparators: 2018/19



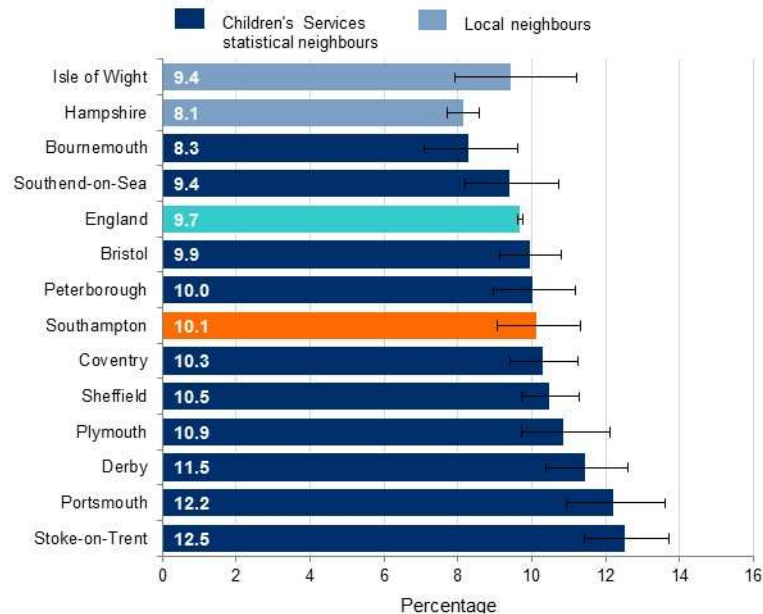
Source: NHS Digital - NCMP national data tables

- **2018/19: Year R – National average (22.6%); Southampton (22.3%);**
Range Bournemouth (21.2%) to Portsmouth (26.3%).
Southampton 4th lowest among comparators – **lower but not significantly** than England.
- **2018/19: Year 6 – National average (34.3%); Southampton (36.1%);**
Range Bournemouth (30.8%) to Stoke-on-Trent (39.5%).
Southampton mid rank among comparators and **higher, not significantly** than England.

Prevalence of obese

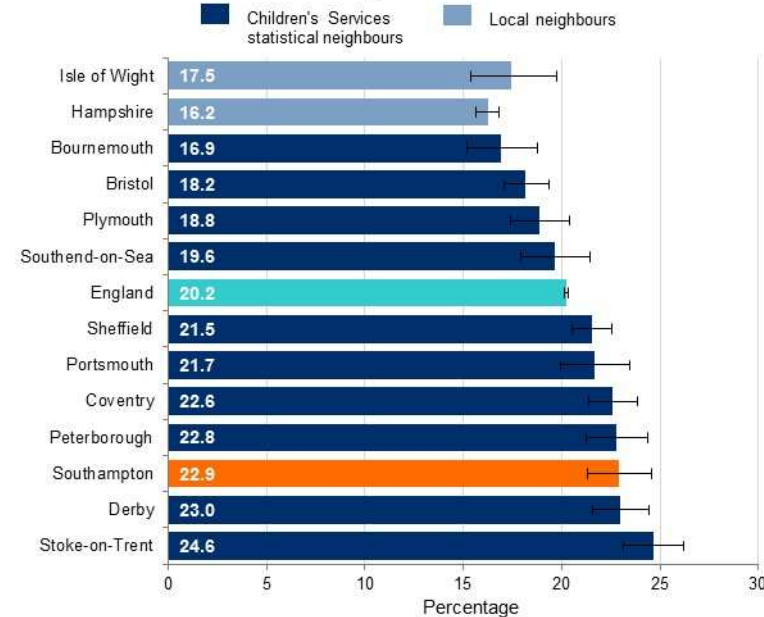


Percentage of Children Considered to be Obese in Year R :
Southampton and Children's Services statistical
comparators: 2018/19



Source: NHS Digital - NCMP national data tables

Percentage of Children Considered to be Obese in Year 6 :
Southampton and Children's Services statistical
comparators: 2018/19

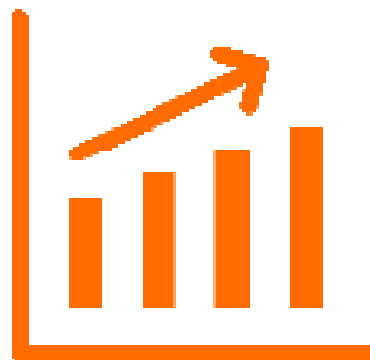


Source: NHS Digital - NCMP national data tables

- **2018/19: Year R – National average (9.7%); Southampton (10.1%); Range Bournemouth (8.3%) to Stoke-on-Trent (12.5%).** Southampton mid rank among comparators, **higher but not significantly than England**
- **2018/19: Year 6 – National average (20.2%); Southampton (22.9%); Range Bournemouth (16.9%) to Stoke-on-Trent (24.6%).** Southampton 3rd highest among comparators and **significantly higher than England**



NCMP - Trends



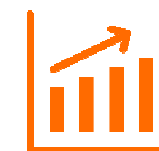
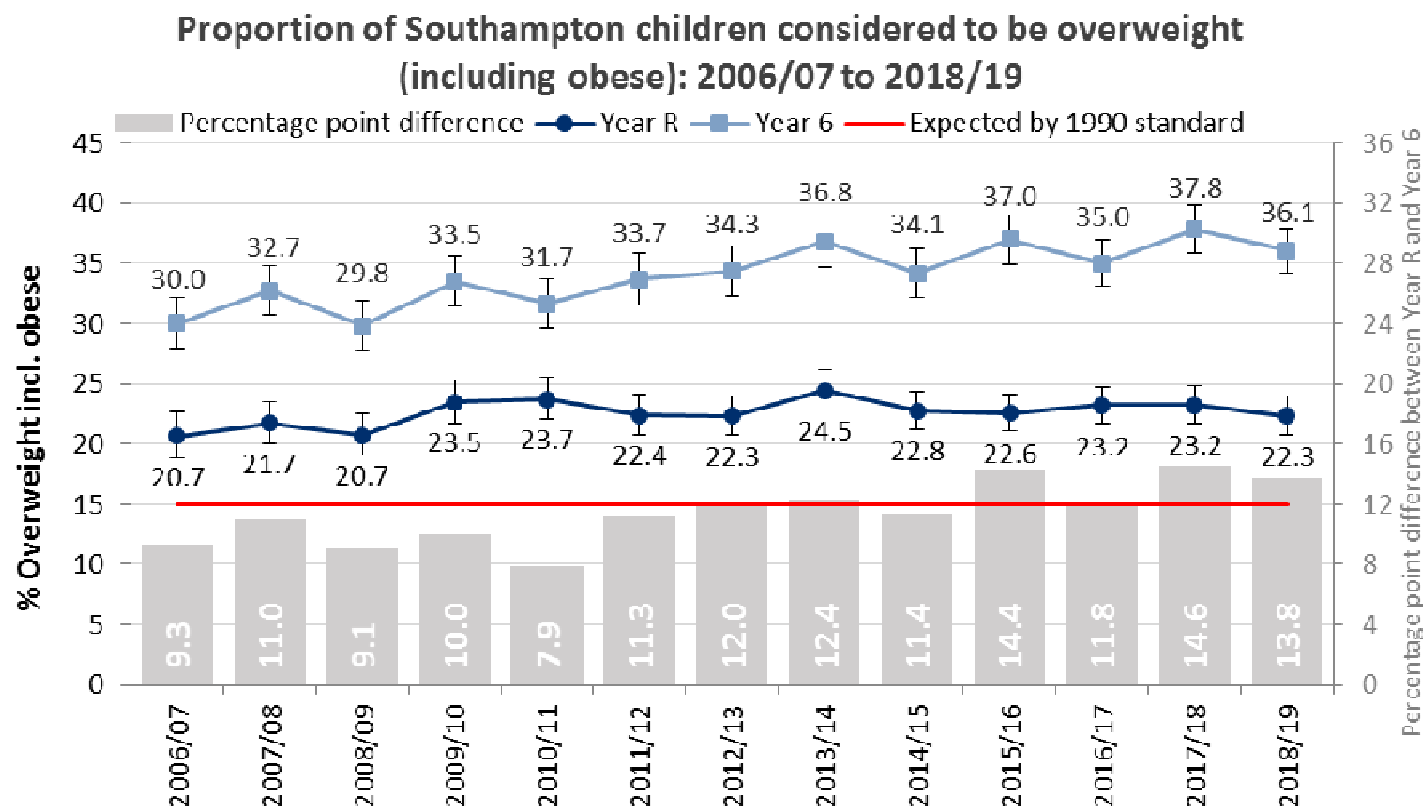
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Childhood obesity trends – Overweight incl. Obese



- Year R: stable over time
- Year 6: statistically significant increase since 2006/07

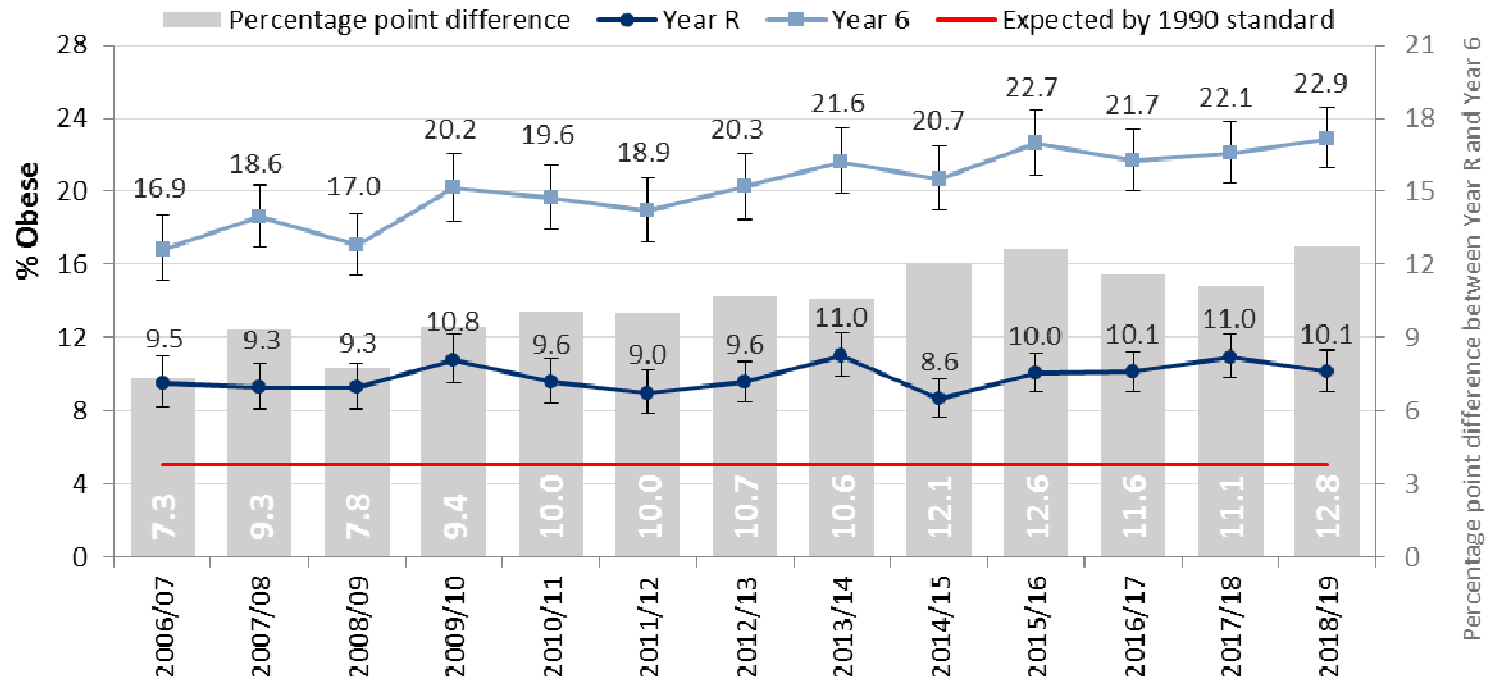
Source: NHS Digital - NCMP national data tables

Year 6 – Increase from 30.0% (2006/07) to 36.1% (2018/19); significantly higher

Childhood obesity trends – Obese



Proportion of Southampton children considered to be obese:
2006/07 to 2018/19



Source: NHS Digital - NCMP national data tables

- Year R: stable over time
- Year 6: statistically significant increase since 2006/07

Year 6 – Increase from **16.9%** (2006/07) to **22.9%** (2018/19); significantly higher



NCMP – Deep dive



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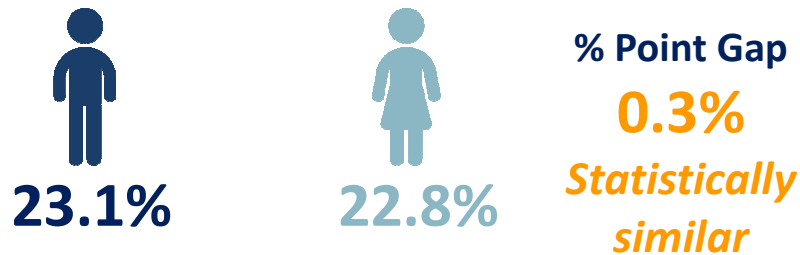
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Gender differences

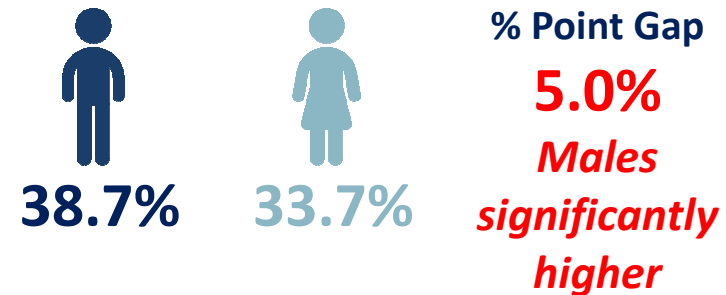


Southampton Children 2016/17 to 2018/19

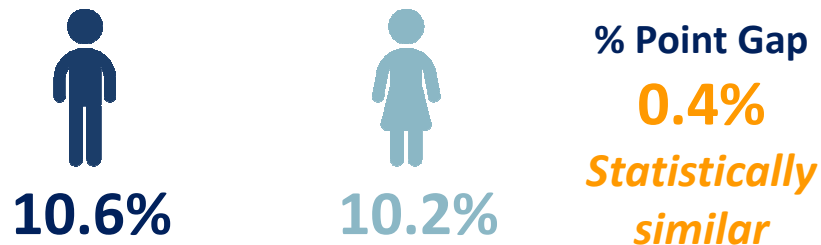
Year R – Overweight incl. obese



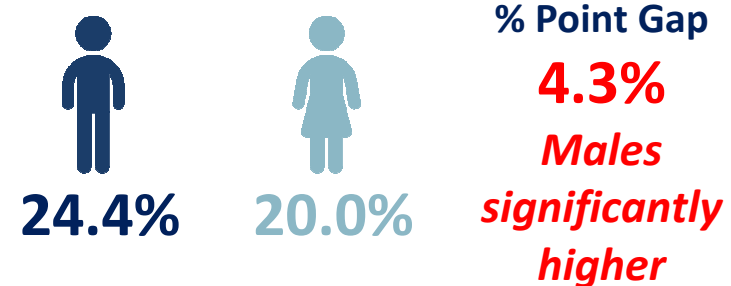
Year 6 – Overweight incl. obese



Year R – Obese



Year 6 – Obese

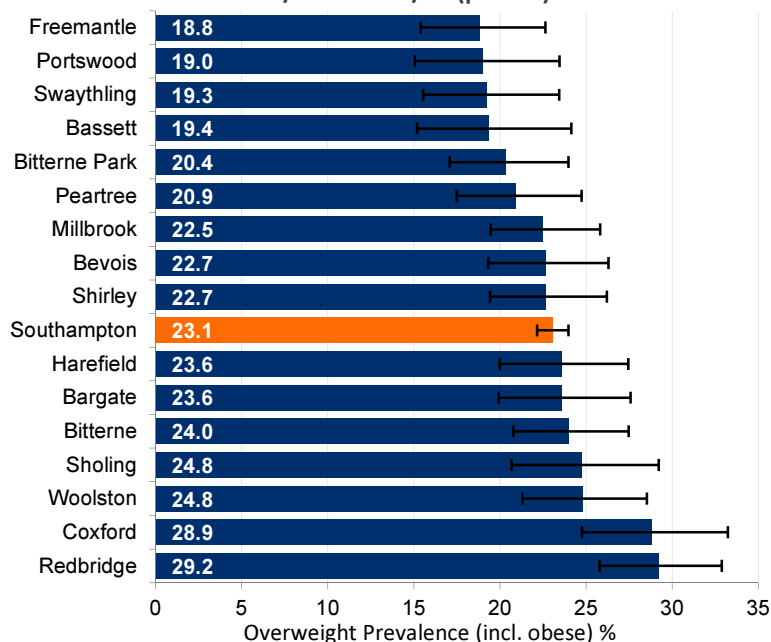


- There is a **significant difference** between prevalence by **gender for Year 6**
- Trends over time show **Year R prevalence** becoming **statistical similar**, however **Year 6 gap** has **increased** with **males significantly higher** than females

Overweight incl. Obese prevalence at Ward Level

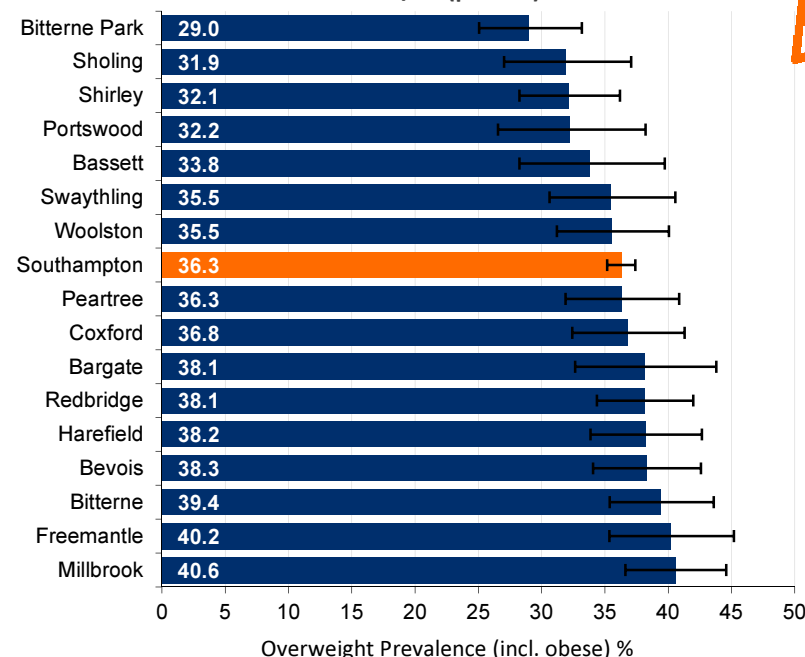


Percentage of children considered to be Overweight (Including Obese) in Year R by Southampton Wards: 2016/17 to 2018/19 (pooled)



Source: National Child Measurement Programme Pupil Enhanced Data Set, NHS Digital - Lifestyle Statistics

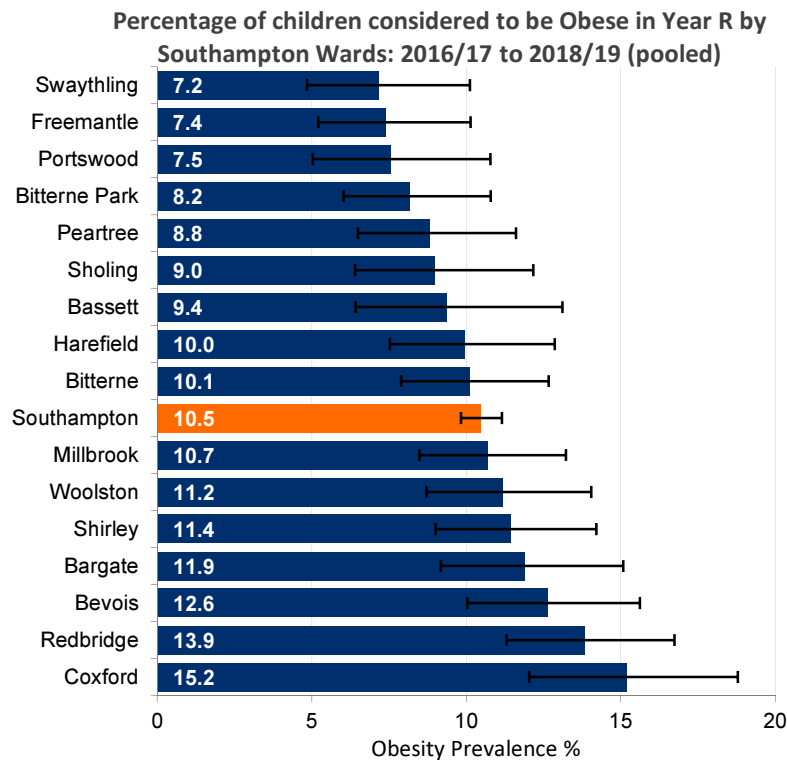
Percentage of children considered to be Overweight (Including Obese) in Year 6 by Southampton Wards: 2016/17 to 2018/19 (pooled)



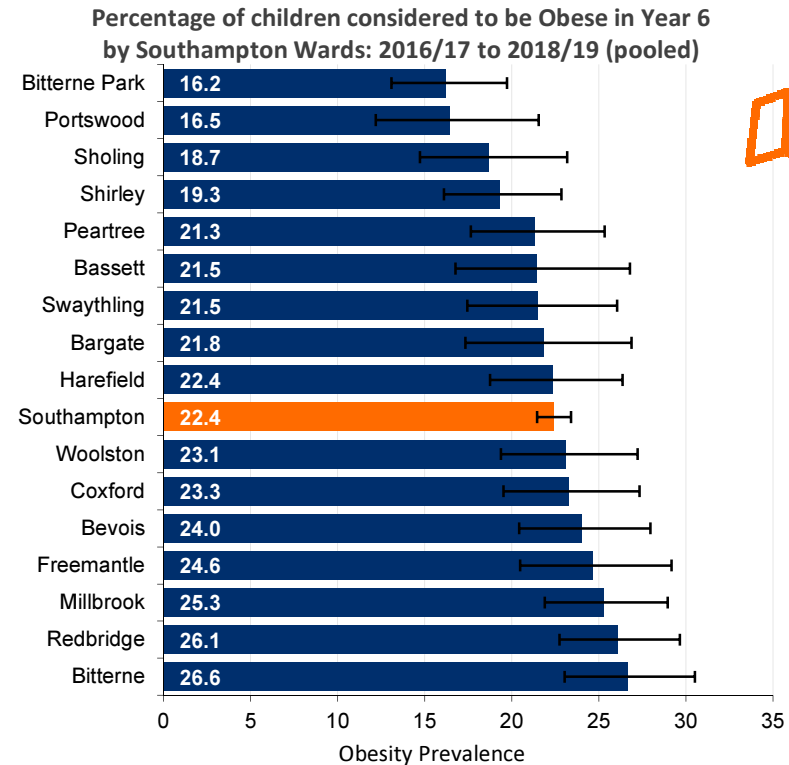
Source: National Child Measurement Programme Pupil Enhanced Data Set, NHS Digital - Lifestyle Statistics

- **2016/17 to 2018/19: Year R – City average (23.1%); Range Freemantle (18.8%) to Redbridge (29.2%).** Redbridge and Coxford significantly higher than city prevalence
- **2016/17 to 2018/19: Year 6 – City average (36.3%); Range Bitterne Park (29.0%) to Millbrook (40.6%).** Bitterne Park was significantly lower than city prevalence

Obese prevalence at Ward Level



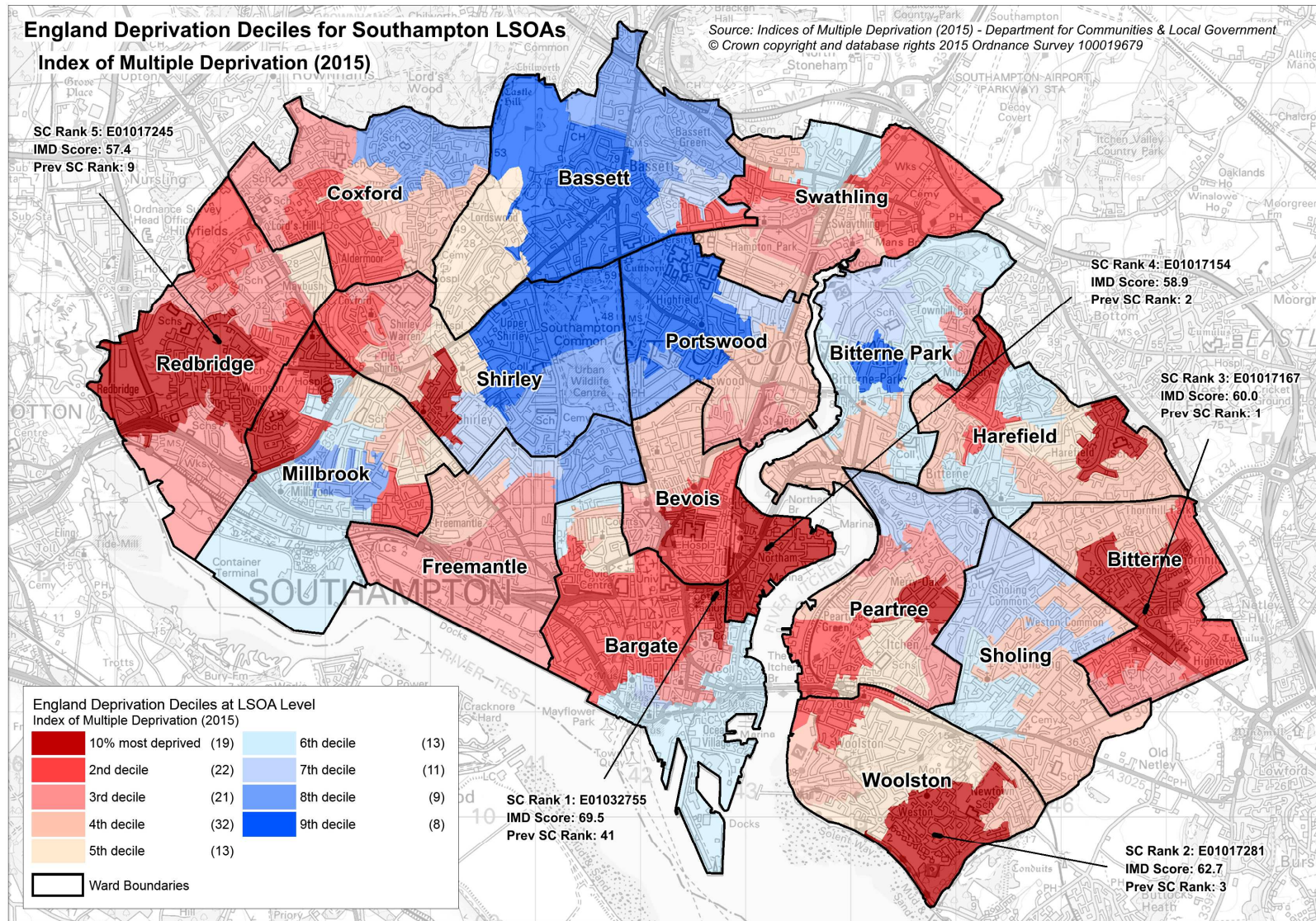
Source: National Child Measurement Programme Pupil Enhanced Data Set, NHS Digital - Lifestyle Statistics



Source: National Child Measurement Programme Pupil Enhanced Data Set, NHS Digital - Lifestyle Statistics

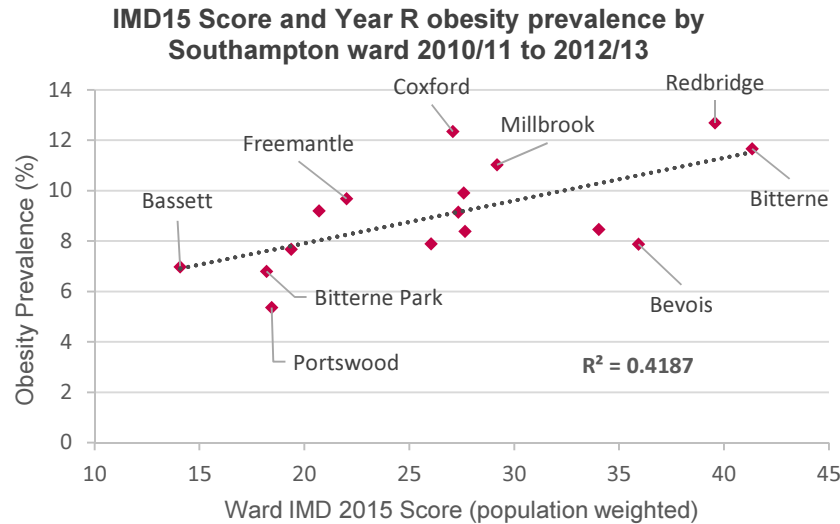
- **2016/17 to 2018/19: Year R – City average (10.5%); Range Swaythling (7.2%) to Coxford (15.2%).** Coxford and Redbridge again significantly higher than city prevalence
- **2016/17 to 2018/19: Year 6 – City average (22.4%); Range Bitterne Park (16.2%) to Bitterne (26.6%).** Bitterne Park was again significantly lower than city prevalence

IMD (2015) – Map of ENGLAND Deprivation Deciles

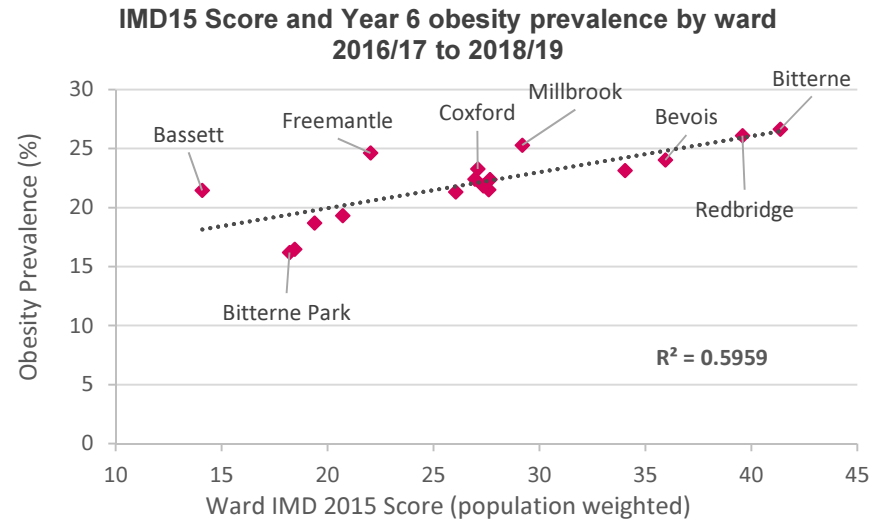


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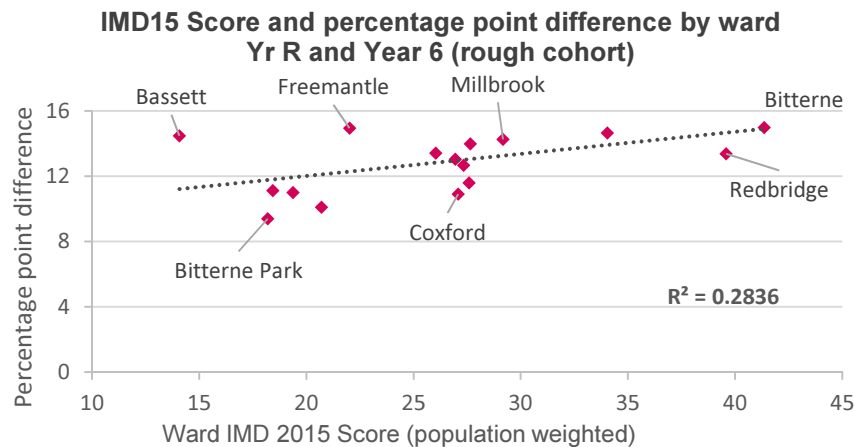
Year R and 6 Obesity by Ward IMD 2015 score



Source: National Child Measurement Programme Pupil Enhanced Data Set – NHS Digital



Source: National Child Measurement Programme Pupil Enhanced Data Set – NHS Digital



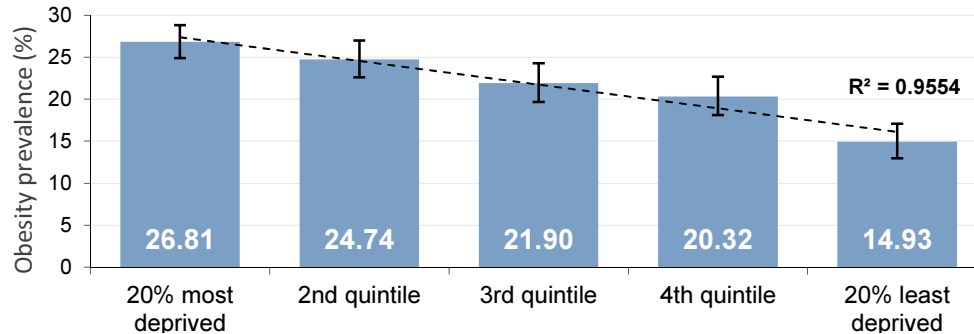
Source: National Child Measurement Programme Pupil Enhanced Data Set – NHS Digital

- **Obesity prevalence increases as deprivation increases**
- **Those children living in more deprived areas experience greater prevalence differences between Year R and Year 6**

Year 6 Obesity by IMD 2015 (Local Quintiles)



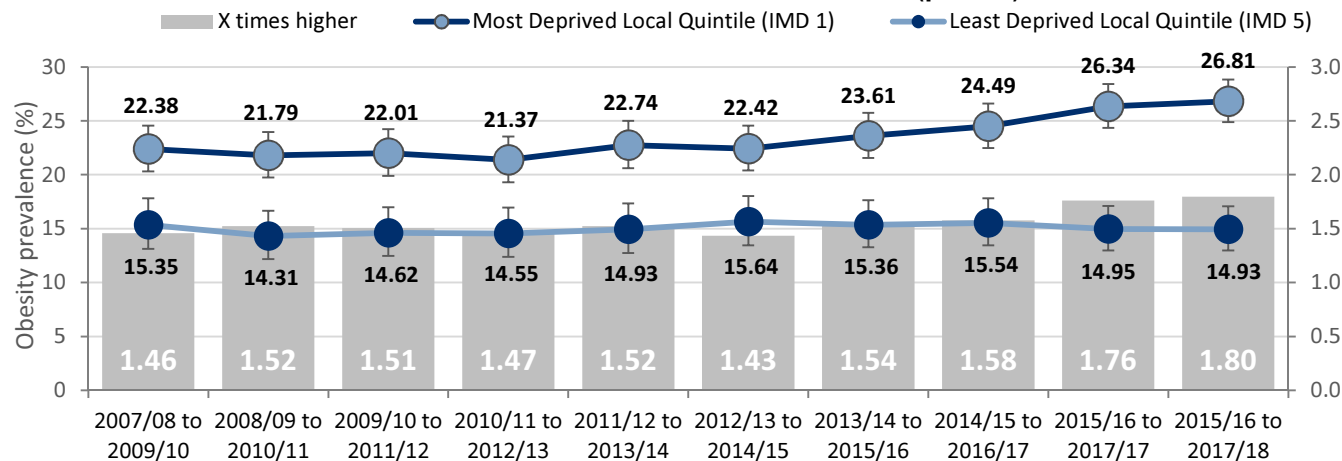
Percentage of children considered to be Obese in Year 6 by Local Deprivation Quintile (IMD 2015): 2016/17 to 2018/19 (pooled)



↑ 1.80 times higher most vs least deprived quintile

Source: National Child Measurement Programme Pupil Enhanced Data Set, NHS Digital - Lifestyle

Percentage of children considered to be Obese in Year 6
Inequalities Trend - Most Vs Least Deprived IMD Local Quintiles (IMD 2015):
2007/08-09/10 to 2016/17-18/19 (pooled)



↑ Gap is increasing

Higher burden is with the most deprived

Sources: SEPHO (2007/08 to 2012/13 data) and the National Child Measurement Programme Pupil Enhanced Data Set, NHS Digital - Lifestyle Statistics (data for 2013/14 onwards)



NCMP - Linked analysis

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Linked analysis – Southampton children







Children in Year R 2010/11 to 2012/13



- 5,954 linked records by NHS Number of the **SAME** children

Children in Year 6 2016/17 to 2018/19



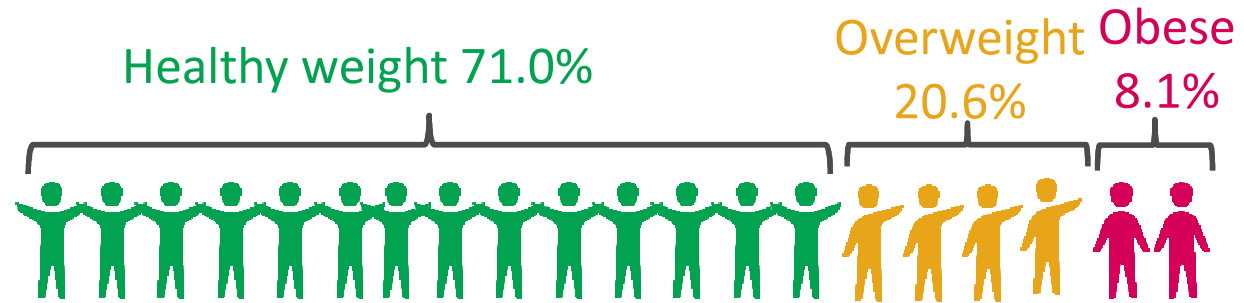
	Underweight	1.2% → 1.6%
	Healthy weight	76.5% → 62.5%
	Overweight	13.1% → 13.8%
	Obese	9.3% → 22.1%

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Linked analysis – changes in weight status in Southampton



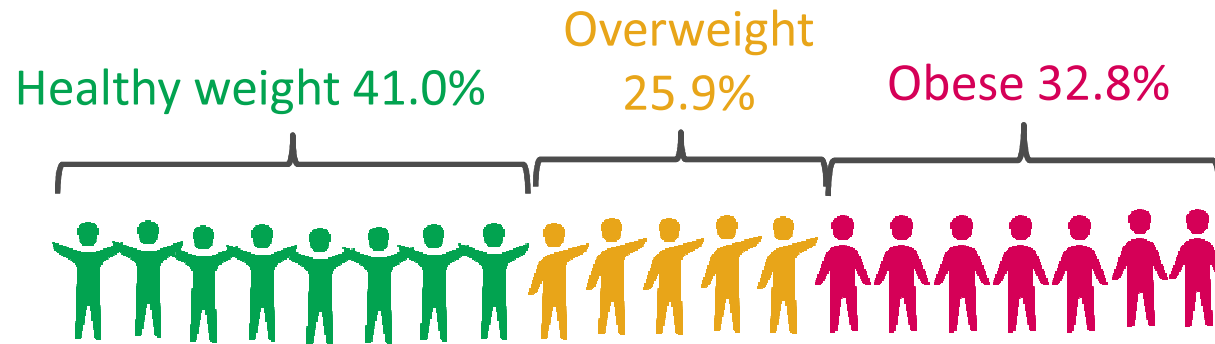
Of the **13.8%** of children who were **OVERWEIGHT** in Year 6



The majority of overweight children in year 6 had been healthy weight in reception, whilst over a fifth had remained overweight and a further 8% had been obese



Of the **22.1%** of children who were **OBESE** in Year 6



Over two-thirds (67%) of obese children had not been obese in reception, in fact the biggest proportion was for those who had been healthy weight (41%)

Further Information



National data and reports

NHS Digital
National Child Measurement Programme, England 2018/19 School Year [NS]
This is part of National Child Measurement Programme
National statistics
Publication date: 19 Oct 2019

Publication
National Child Measurement Programme, England 2018/19 School Year [NS]
This is part of National Child Measurement Programme
National statistics
Publication date: 19 Oct 2019

Summary
This report presents findings from the government's National Child Measurement Programme (NCMP) for England, 2018-19 school year. It covers children in Reception (aged 4-5 years) and Year 6 (aged 10-11 years) in mainstream state-maintained schools in England. The report contains analyses of body mass index (BMI) classification rates by age, sex and ethnicity as well as geographic analyses. A record-level anonymised file will be made available within a month of this publication.

NCMP Public Health England tools

NCMP and Child Obesity Profile

NCMP prevalence data | NCMP data quality | **NCMP small area data** | Contextual indicators

Area type: MSOA | Area: Southampton 001 | District & UA (pre 4/19): Southampton

Indicator: Obese children Year 6, three year average

Area	Count	Value	LCI
Southampton 012	96	27.1	22.8
Southampton 007	67	21.1	16.9
Southampton 004	50	23.6	18.4
Southampton 002	69	26.3	21.1
Southampton 010	53	21.4	16.7
Southampton 015	58	22.6	17.9
Southampton 019	80	23.8	19.1
Southampton 021	57	27.4	22.8
Southampton 020	34	20.4	15.8
Southampton 023	18	30.5	25.1
Southampton 011	40	14.5	10.2
Southampton 009	13	19.6	14.3
Southampton 006	20	17.1	12.8
Southampton 001	27	18.7	13.4
Southampton 005	52	25.2	20.9

Southampton Data Observatory

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Southampton Public Health Annual Reports (PHAR)

Each year the Director of Public Health in Southampton produces a report on the state of health in the city. These reports consider underlying trends, some of the future challenges that the city faces and make recommendations for how health and wellbeing can be improved in Southampton. The latest report for 2017 was published in September 2018 and considers childhood obesity in Southampton and Portsmouth.

2017 PHAR - Childhood Obesity

Childhood obesity is a serious problem confronting both the current generation and also future generations. It is a complex issue that has both individual and societal causes.

<http://data.southampton.gov.uk/health/health-behaviours/healthy-weight/>

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