

Jersey Child Measurement Programme 2016/2017

Statistics Unit

States 
of Jersey

Table of contents

Summary.....	3
Key findings	3
Introduction.....	4
Participation.....	4
Age.....	5
Age and sex.....	6
BMI category over time.....	7
Cohort over time	8
Parish area type	8
Comparison to England	9
Comparison with English regions.....	10
Background notes.....	11
Data sources	11
Participation and coverage	12
Calculating prevalence	12
Small number suppression	12
Confidence intervals (CIs) and statistical significance	12
Area classification	13
Contact information	13

Jersey Child Measurement Programme 2016/2017

4-5 year olds



1 in 5 are
overweight or obese

10-11 year olds



1 in 3 are
overweight or obese



No change in the proportion of
overweight or obese since 2011
(following 8% drop in previous
decade)



No change in the proportion of
overweight or obese since
measurement started in 2011

Proportion overweight or obese

22%



Urban

21%



Semi -urban

17%



Rural

Proportion overweight or obese

37%



Urban

34%



Semi -urban

25%



Rural

Summary

This report presents data collected through the Jersey Child Measurement Programme (JCMP). The programme was set up, in line with a States of Jersey strategy, to tackle childhood obesity. A summary of the methodology and scope of the JCMP are included in the background notes section of this report. This document provides a summary of the findings from the latest Jersey survey data (2016/2017), including a breakdown by age, sex and parish type. Comparisons over time using data from previous rounds of the JCMP are reported, and comparisons are also made to data from the National Child Measurement Programme for England 2016/2017.

Key findings

For academic year 2016/2017:

- participation rates were high, with 98 per cent of 4-5 year olds and 95 per cent of 10-11 year olds participating in the JCMP. In the previous round, 2015/2016, the participation rates were 94 per cent of 4-5 year olds and 86 per cent of 10-11 year olds
- in the latest round of measurements, 2016/2017, an 'opt-out' method of parental consent was implemented, a change from the 'opt-in' method used previously
- a fifth (20 per cent) of children aged 4-5 years were overweight or obese
- the prevalence of obesity in 4-5 year olds has remained relatively constant since 2000. The prevalence of children who were overweight or obese has remained flat since 2011 following a decrease from 29 per cent to 21 per cent in the preceding 10 years (based on a three year average)
- for 10-11 year olds, the proportion of children who were overweight or obese was around a third (32 per cent)
- the prevalence of obese 10-11 year olds has remained constant since the measurement of this age group began in 2011, as has the prevalence of 10-11 year olds classified as overweight or obese (based on a three year average)
- differences between genders were not statistically significant for 4-5 year olds. However, the proportion of obese 10-11 year old boys (21 per cent) was significantly higher than obese girls of the same age (14 per cent)
- one in ten 10-11 year olds residing in rural parishes were classified as obese (10 per cent); this compares to one in five children living in urban (21 per cent) or semi-urban areas (20 per cent)
- the prevalence of obesity in 4-5 year olds was similar in both Jersey and England with around one in ten children being classified as obese. At age 10-11 years, obesity prevalence was 17 per cent in Jersey compared to 20 per cent in England
- the level of obesity in Jersey is comparable with the southern English regions (i.e. those regions with the lowest levels of obesity across England)

Introduction

The Jersey Child Measurement Programme (JCMP) annually measures around 2,000 children and provides robust data on rates of childhood obesity. The programme was first introduced in 1995 measuring children aged 4-5 years; the programme was expanded in 2011 to include children aged 10-11 years.

Information provided by the JCMP helps States of Jersey departments to plan public health strategies and continue to improve health services; therefore, a high participation rate is important to ensure comprehensive data is available.

Height and weight measurements of children are collected by the school nurses of Family Nursing and Home Care (FNHC). The measurements are used by the States of Jersey Statistics Unit to calculate a Body Mass Index (BMI) centile.

This report summarises the analysis of the 2016/2017 JCMP data, showing BMI classifications 'underweight', 'healthy-weight', 'overweight' and 'obese'. The 'overweight' and 'obese' categories are often aggregated to produce a 'combined overweight and obese' grouping which includes everyone over healthy weight. The reports contains breakdowns by child age, sex and parish area; and comparisons over time where appropriate. The results of the England National Child Measurement Programme (NCMP) 2016/2017 are used for comparison¹.

Comparisons between groups and over time are tested for statistical significance. Only statistically significant differences have been described using terms such as 'higher', 'lower', 'increase' or 'decrease'.

For further detail about the data collection process, analysis and statistical testing, please see the Background notes section of this report.

Participation

The 2016/2017 academic year saw the introduction of an 'opt-out' method of parental consent.

In 2016/2017, participation rates for 4-5 year olds increased to 98 per cent, their highest ever. Children aged 10-11 had a 95 per cent participation rate (up from 86 per cent in 2015/2016).

Reasons for non-participation include the child not being present at school on the day measurements are taken, parental consent not given or children refusing to take part. The effect of non-response bias is anticipated to be small (see Background notes).

¹ NHS Digital: National Child Measurement Programme: England, 2016/2017 school year. Published 19th October 2017. Available from: <http://digital.nhs.uk/>

Age



Table 1: BMI classifications, percentages

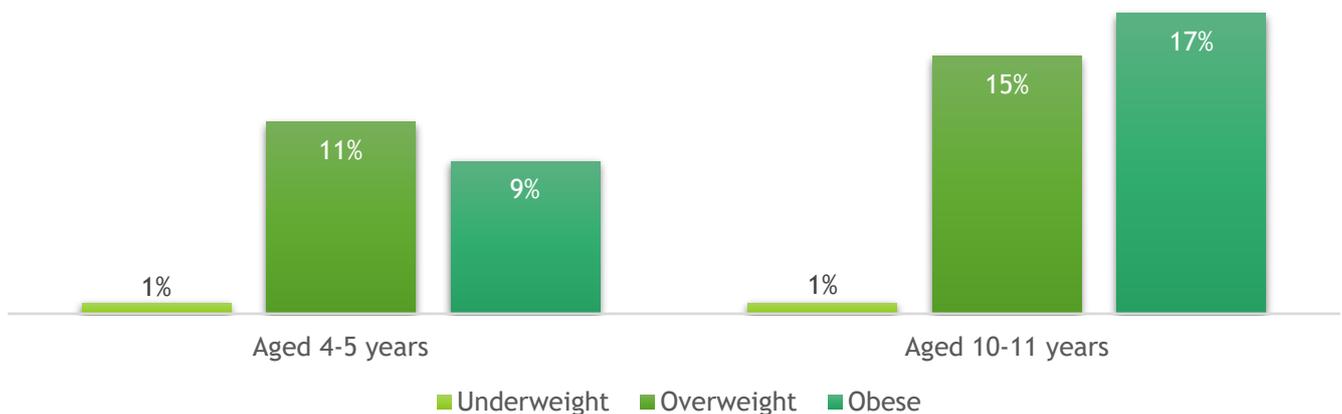
	Aged 4-5 years	Aged 10-11 years
Underweight	1	1
Healthy weight	80	67
Overweight	11	15
Obese	9	17
Combined overweight and obese	20	32

Source: Statistics Unit
 Note: percentages independently rounded to the nearest integer

A fifth (20 per cent) of children aged 4-5 years were in the categories of overweight or obese. A third (32 per cent) of children aged 10-11 years were classified as being overweight or obese.

A significantly higher proportion of children aged 10-11 years were obese (17 per cent) compared to their younger counterparts (9 per cent). This difference was due to a particularly high prevalence of obesity in boys aged 10-11 years.

Figure 1: Prevalence of underweight, overweight and obesity by age group

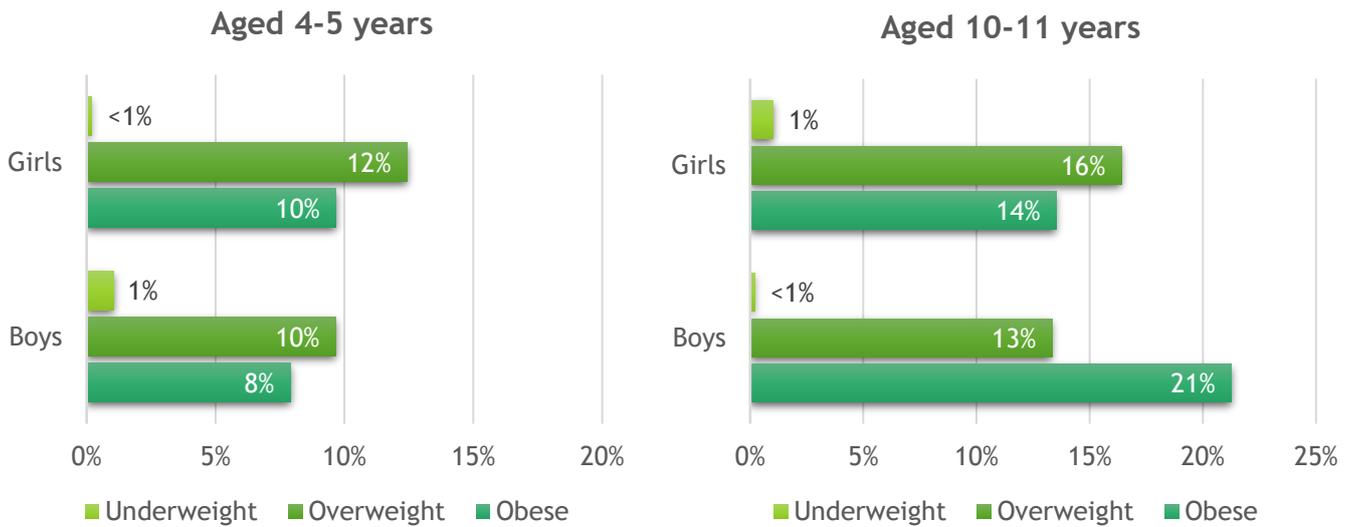


Source: Statistics Unit

Age and sex

Differences between ages and sexes were, on the whole, not statistically different (Figure 2). However, 21 per cent of 10-11 year old boys were obese, a significantly higher proportion than either 10-11 year old girls (14 per cent) or 4-5 year old boys (8 per cent).

Figure 2: Prevalence of underweight, overweight and obesity by age group and sex



Source: Statistics Unit

Table 2: BMI classifications by gender, percentages

Gender	Aged 4-5 years		Aged 10-11 years	
	Boys	Girls	Boys	Girls
Underweight	1	<1	<1	1
Healthy weight	81	78	65	69
Overweight	10	12	13	16
Obese	8	10	21	14
Combined overweight and obese	18	22	35	30

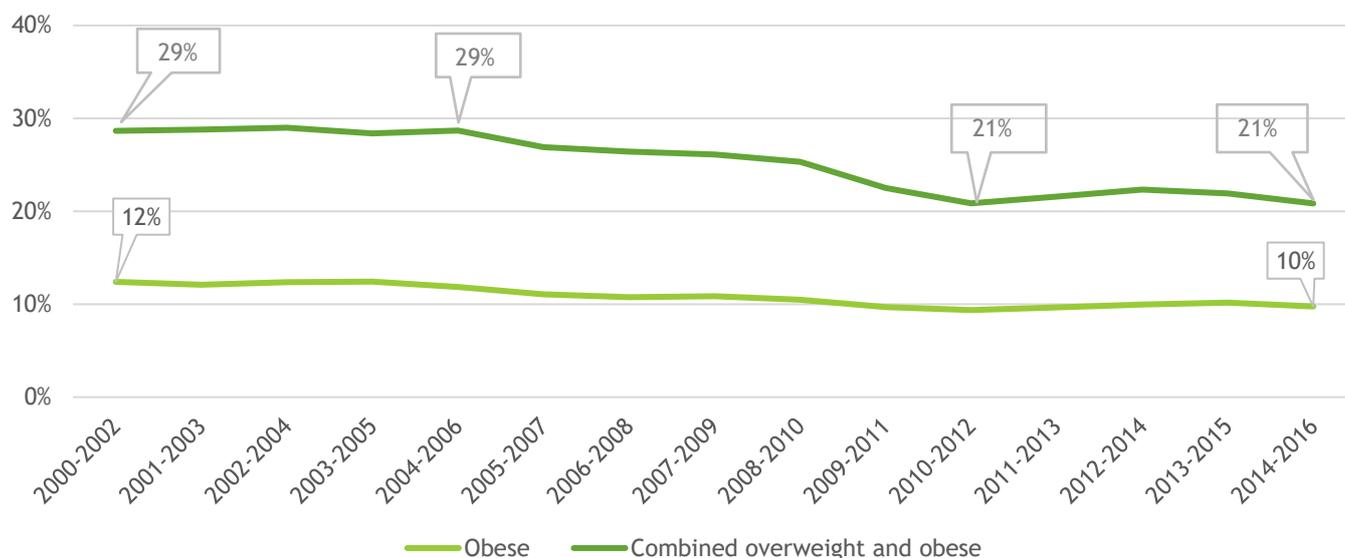
Source: Statistics Unit

Note: percentages independently rounded to the nearest integer

BMI category over time

The proportion of 4-5 year olds classified as overweight or obese has remained essentially flat at around 21 per cent since 2010-2012, following an 8 per cent decrease (29 per cent to 21 per cent) between 2004-2006 and 2010-2012 (Figure 3). This fall was mainly driven by a decrease in overweight children, with levels of obese children remaining at a relatively similar level.

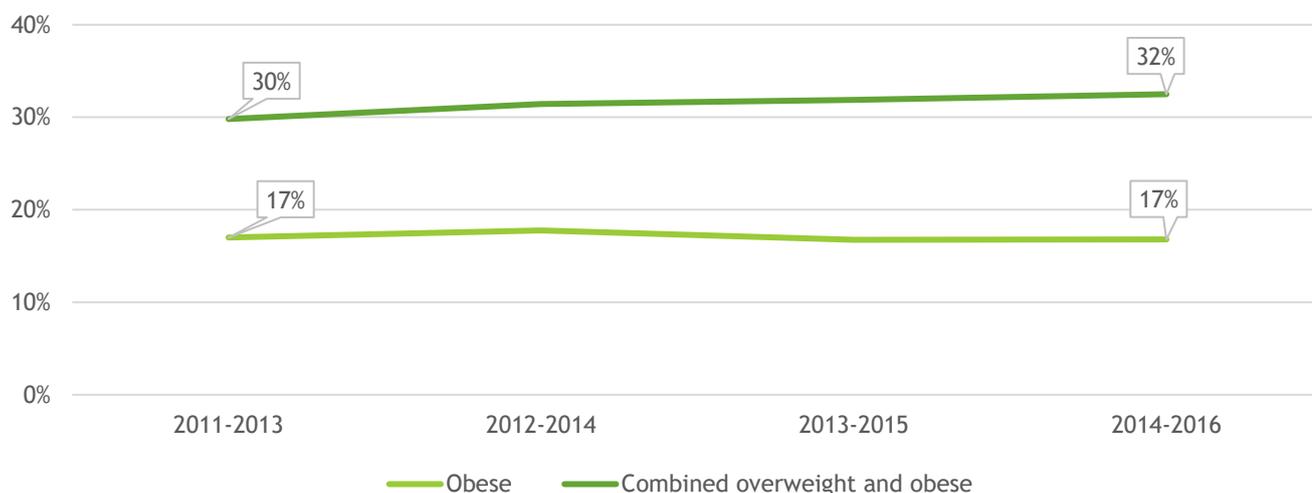
Figure 3: BMI classifications for 4-5 year olds, three year averages



Source: Statistics Unit

Since the JCMP was expanded to include measurement of 10-11 year olds in 2011/2012, the prevalence of obese children has remained constant at a sixth and the prevalence of combined overweight and obese children has remained at around a third (Figure 4).

Figure 4: BMI classifications for 10-11 year olds, three year averages



Source: Statistics Unit

Cohort over time

Changes in obesity prevalence for the same cohort of children can be examined using JCMP data. Those children aged 10-11 years in the most current academic year, 2016/2017, were previously measured in 2010/2011 when aged 4-5 years (Table 3).

While a similar proportion of this cohort are overweight (12 per cent in 2010/2011 and 15 per cent in 2016/2017), a significantly higher proportion are obese (9 per cent in 2010/2011 and 17 per cent in 2016/2017). The proportion of this cohort either overweight or obese increased from 21 per cent when in reception (in 2010/2011), to 32 per cent when in Year 6 (in 2016/2017).

Table 3: BMI classifications, percentages

	2010/2011	2016/2017
Healthy weight & underweight*	79	68
Overweight	12	15
Obese	9	17
Combined overweight and obese	21	32

Source: Statistics Unit

Note: percentages independently rounded to the nearest integer

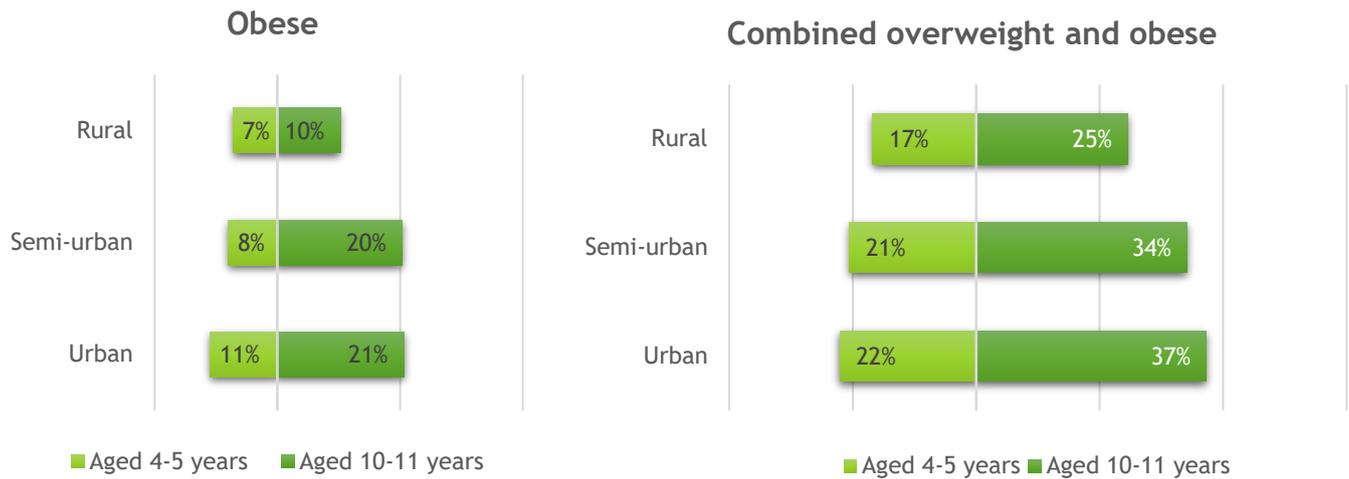
*Before 2011, the proportion of underweight children was not calculated and underweight children were included in the healthy weight category

Parish area type

There was a significant difference in the proportion of obese 10-11 year olds residing in rural parishes (10 per cent), compared to around one in five children living in urban (21 per cent) or semi-urban areas (20 per cent). This pattern is repeated in the proportion of combined overweight and obese 10-11 year olds: 25 per cent from rural parishes; and 37 per cent from urban parishes (see Figure 5).

The proportion of obese, and combined overweight and obese, 4-5 year-old children was not statistically different when broken down by parish area.

Figure 5: BMI classifications by parish area type, 2016/2017



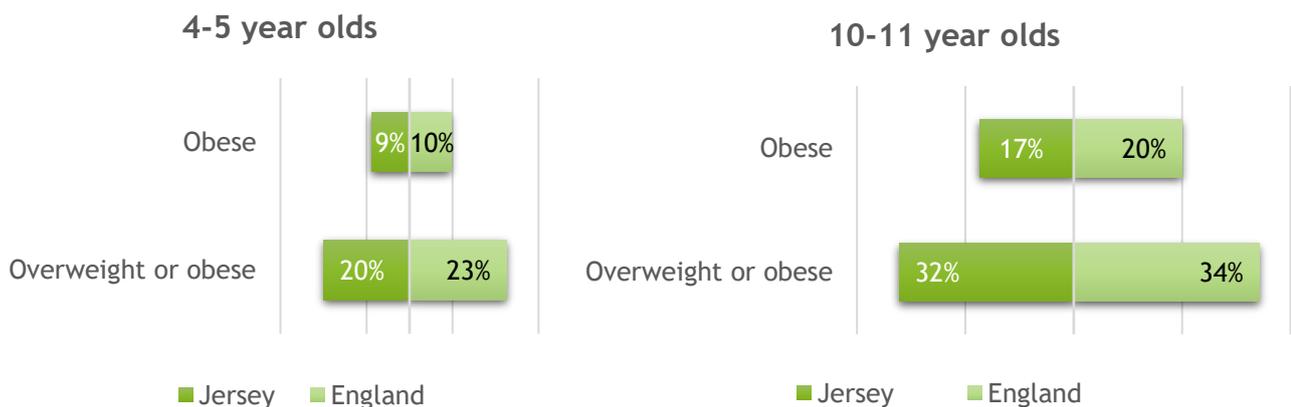
Source: Statistics Unit

Comparison to England

In 2016/2017, the prevalence of obesity in 4-5 year olds was similar in Jersey and England with around one in ten children being classified as obese in both jurisdictions.

At age 10-11 years, obesity prevalence was lower in Jersey than in England (Figure 6); the prevalence of combined overweight and obese children was statistically similar.

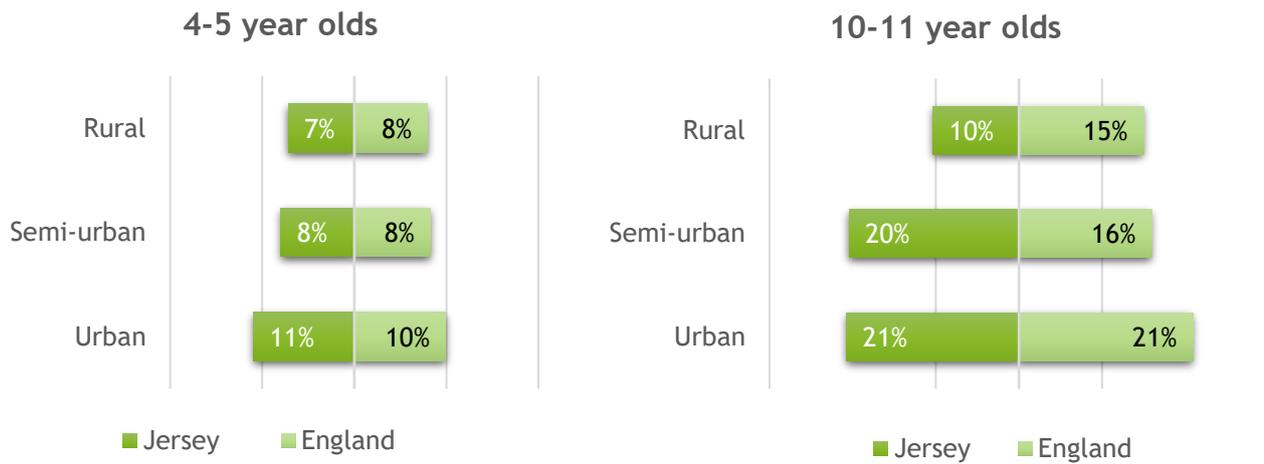
Figure 6: Prevalence of obesity, comparison to England, 2016/2017



Source: Statistics Unit and NHS Digital

Obesity prevalence by Jersey parish area type is compared with English home area type in Figure 7.

Figure 7: Prevalence of obesity by parish area type, comparison to England, 2016/2017



Source: Statistics Unit and NHS Digital

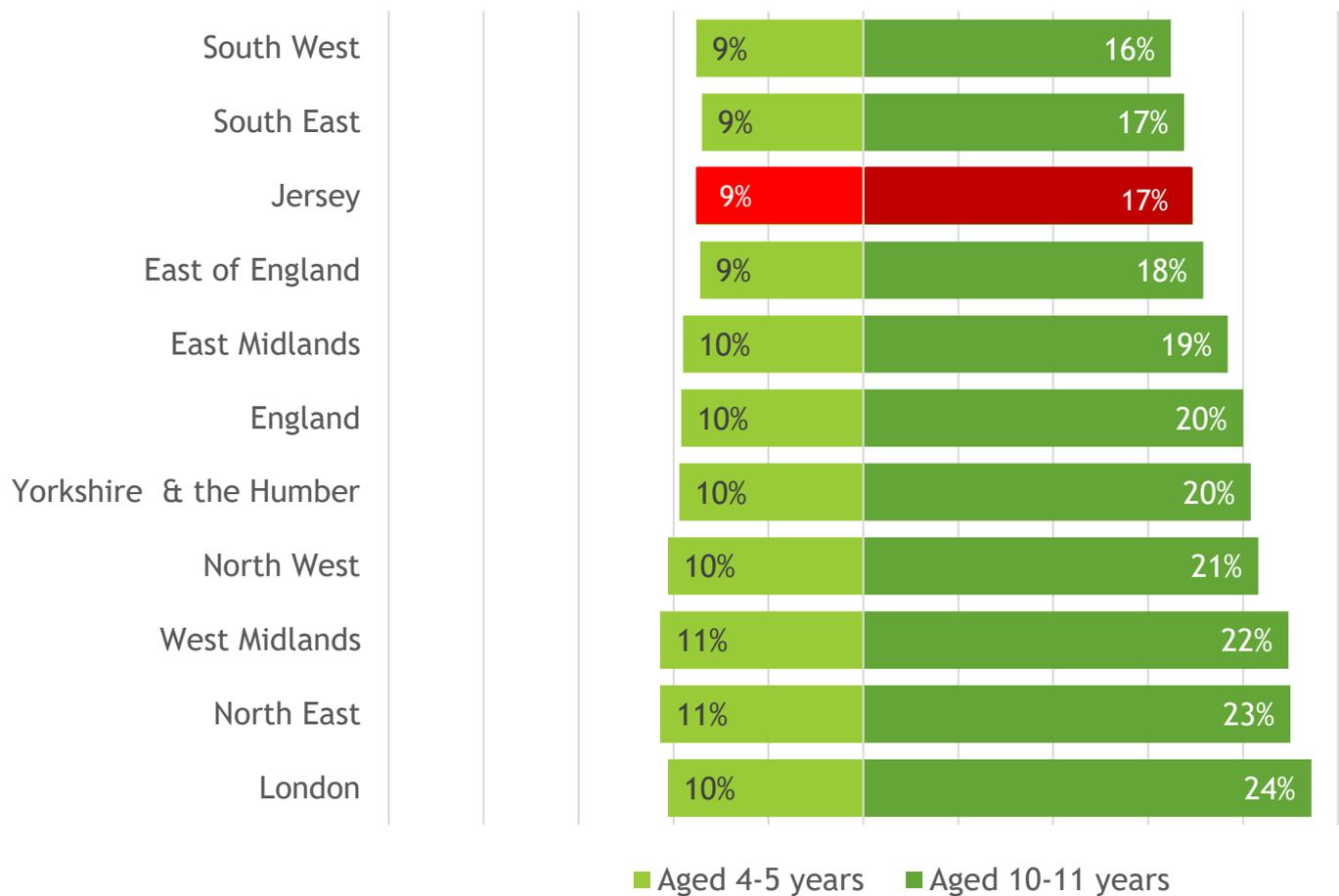
Proportions of obese children aged 4-5 years were similar for all area types in both Jersey and England. However, differences were seen in the older age group. A significantly smaller proportion of 10-11 year old children living in rural parishes of Jersey are obese (10 per cent) compared to those living in rural areas of England (15 per cent). Conversely, a significantly larger proportion of children living in semi-urban Jersey parishes are obese (20 per cent) compared to those living in semi-urban England (16 per cent). 10-11 year olds living in urban areas of both jurisdictions have similar proportions of obesity (21 per cent).

Comparison with English regions

Obesity prevalence in children aged 4-5 years was not significantly different in Jersey compared to any of the English regions, as shown in Figure 8.

For 10-11 year olds, the prevalence of obesity in Jersey was similar to the English regions with lower than average levels of obesity (i.e. South West, South East, East of England and East Midlands). Jersey continues to have significantly lower levels of obesity than Yorkshire and the Humber, North West, West Midlands, North East, London and also the overall English average.

Figure 8: Prevalence of obesity, Jersey and English regions, 2016/2017



Source: Statistics Unit and NHS Digital

Background notes

Details about the methods employed in analysing and interpreting information used to compile the Jersey Child Measurement Programme (JCMP) report are presented here.

Data sources

In Jersey, the height and weight of children aged 4-5 years and 10-11 years is measured annually by the school nurses of Family Nursing and Home Care (FNHC). Children aged 4-5 years have been measured since 1995 as part of the school entry medical. The 2011/12 academic year was the first year of measurement for children aged 10-11 years.

Different from previous surveys, the 2016/17 academic year used an 'opt out' method of parental consent. The higher participation rates this year may be as a result of the new parental consent method.

Participation and coverage

All children resident in Jersey and attending a Jersey primary school (with the exception of schools for children with special need requirements) are eligible to be included in the JCMP.

Participation in the JCMP is not compulsory and each year a small number of parents choose not to consent. Additionally, children absent from school on the day of measurement may not be included, (although FNHC does endeavor to re-visit schools to ensure all eligible children are measured). Therefore, the dataset is a high coverage sample of the year group and the derived prevalence figures are estimates assumed to apply to the entire population. These estimates are subject to natural random variation. Confidence intervals have been used in the analysis for this report to take account of such variation.

Potential bias due to non-participation was investigated for the English NCMP by NHS Digital,² finding that obesity prevalence was underestimated by around 1 percentage point.³ This bias was found to decrease as the participation rate increased. Therefore, any potential effect from non-response bias in the JCMP is anticipated to be of a similar magnitude given the high participation rates observed.

Calculating prevalence

BMI is a measure of weight status that adjusts for height, calculated by a person's weight in kilograms divided by the square of their height in meters. BMI is then classified as either **underweight, healthy weight, overweight** or **obese**. The epidemiological definition, which uses the British 1990 growth reference (UK90) to determine weight status according to a child's age and sex, is used in this report.⁴ Children whose BMI is between the 85th and 95th centile are classified as overweight and those at or above the 95th centile are classified as obese. A BMI below the 2nd centile is classified as underweight.

This definition is used for population monitoring rather than clinical purposes and is comparable to UK data but not to international data (there are separate clinical and international classifications for children's BMI).

Small number suppression

Small numbers, one to four individuals, have been suppressed to avoid potential identification of individuals.

Confidence intervals (CIs) and statistical significance

A confidence interval gives an indication of the likely statistical uncertainty around a value that has been calculated. A confidence interval indicates the range within which the true value for the

² NHS Digital: National Child Measurement Programme: England, 2016/2017 school year. Published 19th October 2017. Available from: <http://digital.nhs.uk/>

³ For a participation rate of 80 per cent in 2006/7, it was estimated that the obesity prevalence was underestimated by 1.3 percentage points (pp); and for a participation rate of 88 per cent in 2007/08, the underestimate of obesity prevalence reduced to 0.8 pp.

⁴ 'Growth monitoring with the British 1990 growth reference'. Cole *Arch Dis Child*.1997; 76: 47-49 as used by ONS in the National Child Measurement Programme.

population as a whole could be expected to lie, taking natural random variation into account. Confidence intervals should be considered when interpreting results.

Comparisons between groups or over time have been tested for statistical significance. Only those differences calculated as statistically significant have been described in this report using terms such as 'increase', 'decrease', 'higher' or 'lower'.

Area classification

The parish of residence of each child is classified into three area classifications:

Urban – St. Helier

Semi-urban – St. Brelade, St. Clement, St. Saviour

Rural – Grouville, St. John, St. Lawrence, St. Martin, St. Mary, St. Ouen, St. Peter, Trinity.

Contact information

All enquiries and feedback should be directed to:

Statistics Unit

Chief Minister's Department

Cyril Le Marquand House

St Helier

JE4 8QT

PublicHealthStatistics@gov.je