

Jersey Child Measurement Programme 2015/2016

Public Health Statistics Unit

States 
of Jersey

Document purpose	To report on the Jersey Child Measurement Programme 2015/16
Title	Immunisation Statistics 2015/16 Report on the Jersey Child Measurement Programme 2015/16 academic year
Author	Public Health Statistics Unit
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Target audience	Public
Circulation list	Dieticians, FNHC, Education, HSSD staff, CMEX, States of Jersey Statistics Unit, Strategic Public Health Unit
Description	Latest obesity statistics for children aged 4-5 years and 10-11 years by academic year. Proportions over time and obesity levels by parish of residence. Includes comparisons to England data.
Data Sources	Child Health Information System, Careplus. Measurements are conducted by the school nurses of Family Nursing and Home Care.
Date that data are acquired	Data normally extracted in August for that academic year
Frequency	Annual
Relevance and key uses of the statistics	Making information publically available for planning, epidemiology, provision of services and to provide comparative information. To respond to information requests for a variety of customers e.g. researchers, charities, public companies, Freedom of Information requests. To provide information to answer Ministerial Questions.
Accuracy	Information received by the Public Health Statistics Unit is clerically checked, with additional validation on data entry with extreme values individually investigated. Data is also compared to previous year's figures.
Completeness	All children resident in Jersey attending a Jersey primary school are eligible to be measured. However, parents are able to opt their children out of the programme; and also those children not present on the day of measurement will not be included. Schools are revisited in the same academic year to follow up those children not measured at the first visit in order to increase the completeness of the data.
Value Type	Numbers, percentages and three-year averages are presented.
Amendment history	
Officer	Amendment date and detail
K Jervis	Data cleansing, validation and analysis. First draft of report.
M Clarke	Editing and final draft of report.
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Jersey Child Measurement Programme 2015/2016

4-5 year olds



1 in 5 are
overweight or obese

10-11 year olds



1 in 3 are
overweight or obese



↓ 7
Percentage
points

The proportion of overweight or obese children has decreased since year 2000



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

Proportion overweight or obese

23%

20%

17%



Urban



Semi -urban



Rural

Proportion overweight or obese

34%

37%

22%



Urban



Semi -urban



Rural

Summary

This report presents data collected through the Jersey Child Measurement Programme (JCMP). The programme was set up to collect timely and accurate information, 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 Jersey survey data, including a breakdown by age, gender and parish area classification. 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.

Key Findings

For academic year 2015/2016:

- A fifth (20 per cent) of children aged 4-5 years were overweight or obese. For 10-11 year olds, the proportion overweight or obese was around a third (30 per cent).
- The prevalence of obesity in 4-5 year olds has remained relatively stable since 2000, whilst the prevalence of overweight or obese children has decreased by 7 percentage points, from 29 per cent to 22 per cent.
- The prevalence of overweight or obese 10-11 year olds has remained relatively stable since measurement of this age group began (2011).
- Differences between genders at both ages were not found to be statistically different, although there were 5 percentage points more obese boys than girls aged 10-11 years.
- One in five 10-11 year olds residing in rural parishes were classified as overweight or obese (22 per cent); this compares to one in three children living in urban (34 per cent) or semi-urban areas (37 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 significantly lower in Jersey (14 per cent) than in England (20 per cent).
- Participation rates of 4-5 year olds in the JCMP was high at 94 per cent of eligible children, whilst a lower proportion (86 per cent) of 10-11 year olds participated.

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.

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 Public Health Statistics Unit to calculate a Body Mass Index (BMI) centile.

This report summarises the analysis of the 2015/2016 JCMP data, showing BMI classification rates ('underweight', 'healthy-weight', 'overweight', 'obese' and 'overweight and obese combined') with breakdowns by child age, sex and home area. The report also contains comparisons over time where appropriate. The results of the England National Child Measurement Programme (NCMP) are used for comparison.

Comparisons between groups and over time have been statistically tested to determine whether differences are likely to be genuine (i.e. statistically significant) or the result of random natural variation. 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

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.

For the academic year 2015/2016, a total of 1,032 children aged 4-5 years were measured as part of the programme. This total represented 94 per cent of the eligible population, but was the lowest participation recorded since the programme was introduced.

Participation of children aged 10-11 years was lower, with 86 per cent of the eligible children participating in 2015/2016; a total of 867 children participated.

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).

Age

The proportion of healthy weight children:



Aged 4-5 years



Aged 10-11 years

Table 1: BMI classifications, percentages

	Aged 4-5 years	Aged 10-11 years
<i>Underweight</i>	<1	1
<i>Healthy weight</i>	79	68
<i>Overweight</i>	10	17
<i>Obese</i>	10	14
<i>Overweight & obese</i>	20	30

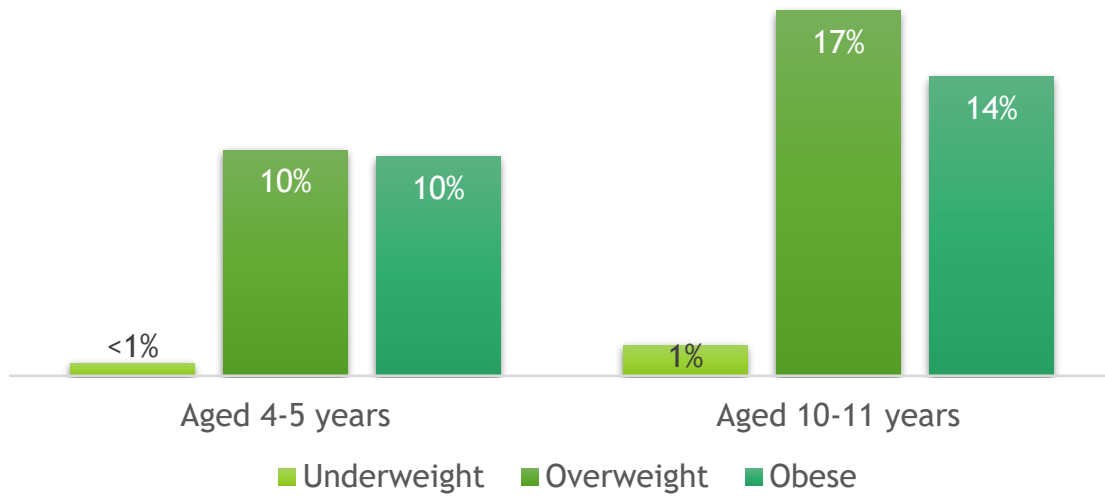
Source: PHSU

Note: percentages independently rounded to the nearest integer

A fifth (20 per cent) of children aged 4-5 years were overweight or obese, this compared to around a third (30 per cent) of children aged 10-11 years.

A significantly higher proportion of children aged 10-11 years were overweight (17 per cent) compared to their younger counterparts (10 per cent).

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

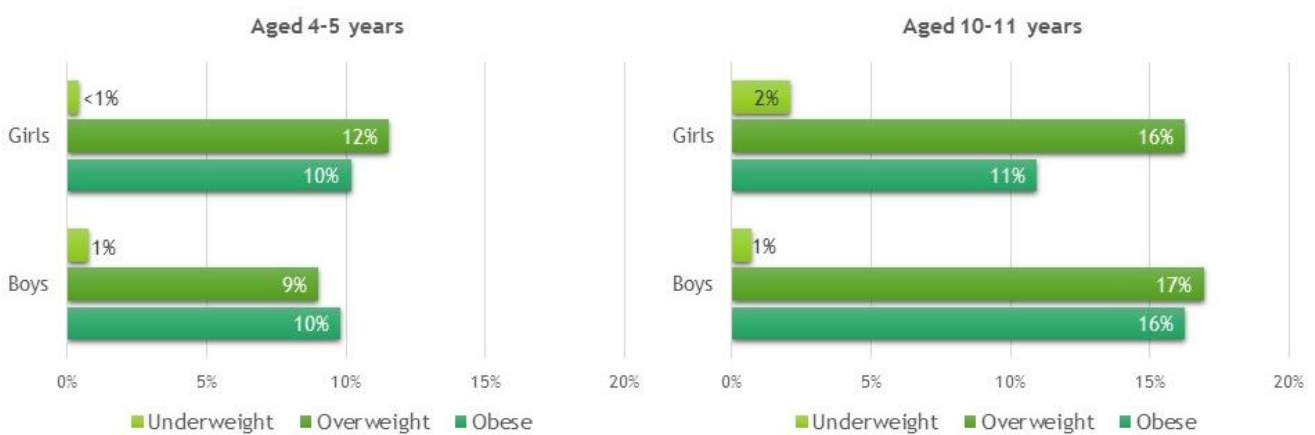


Source: PHSU

Age and Sex

Differences between genders at both ages were not found to be statistically different, although there were 5 per cent more obese boys than girls aged 10-11 years (Figure 2).

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



Source: PHSU

Table 2: BMI classifications by gender, percentages

Gender	Aged 4-5 years		Aged 10-11 years	
	Boys	Girls	Boys	Girls
Underweight	1	<1	1	2
Healthy weight	80	78	66	71
Overweight	9	12	17	16
Obese	10	10	16	11
Overweight & obese	19	22	33	27

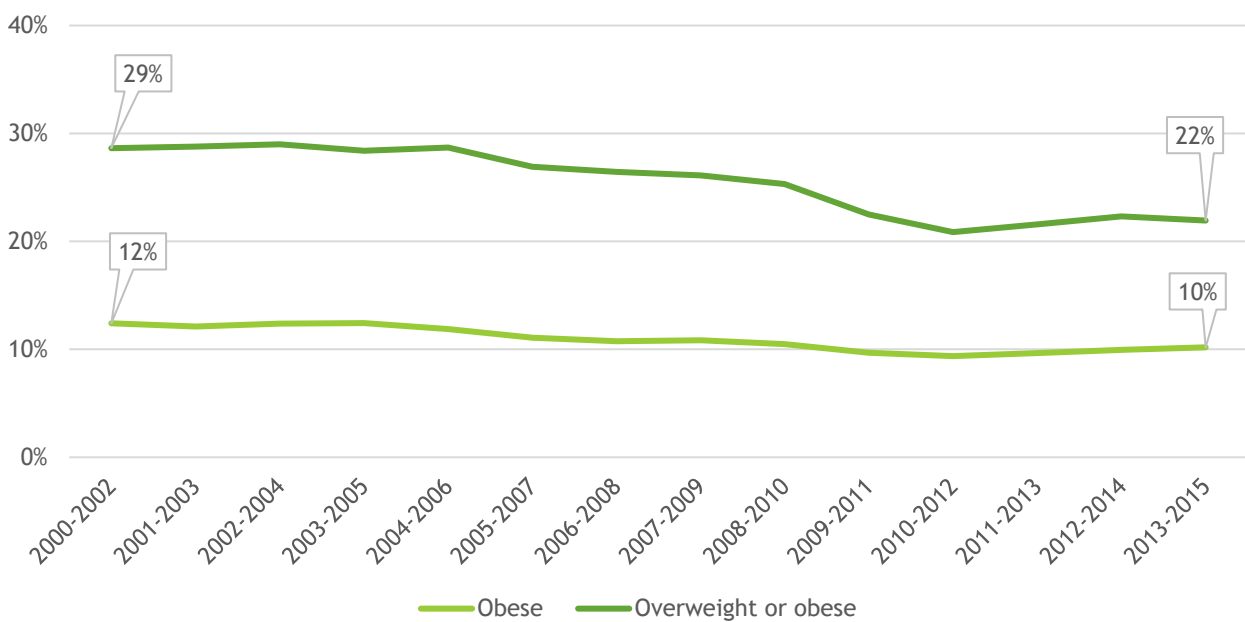
Source: PHSU

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 decreased since 2000-2002, down by 7 percentage points (Figure 3). This fall was mainly driven by a decrease in the proportion of overweight whilst the prevalence of obesity has remained relatively more stable.

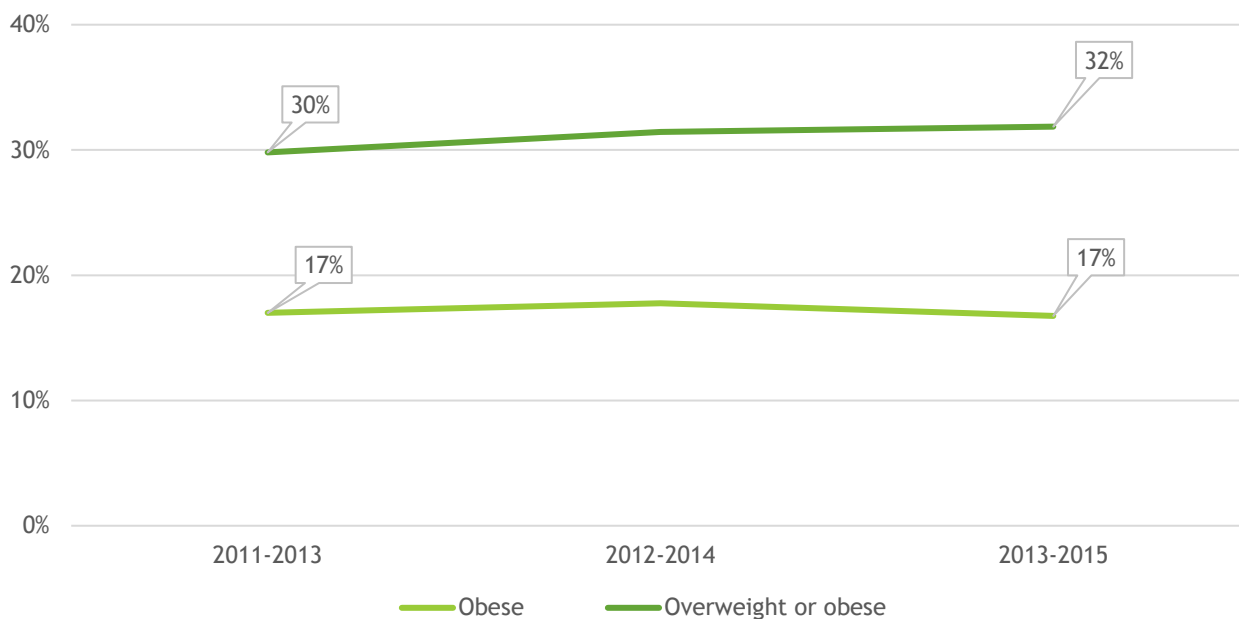
Figure 3: BMI classifications for 4-5 year olds, three year averages



Source: PHSU

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

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



Source: PHSU

Cohort changes

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, 2015/2016, were previously measured in 2009/2010 when aged 4-5 years.

The observed differences in the prevalence of healthy weight and obese children over time were not statistically significant (Table 3).

Table 3: BMI classifications, percentages

	2009/2010	2015/2016
Healthy weight & underweight*	74	70
Overweight	16	17
Obese	10	14
Overweight & obese	26	30

Source: PHSU

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

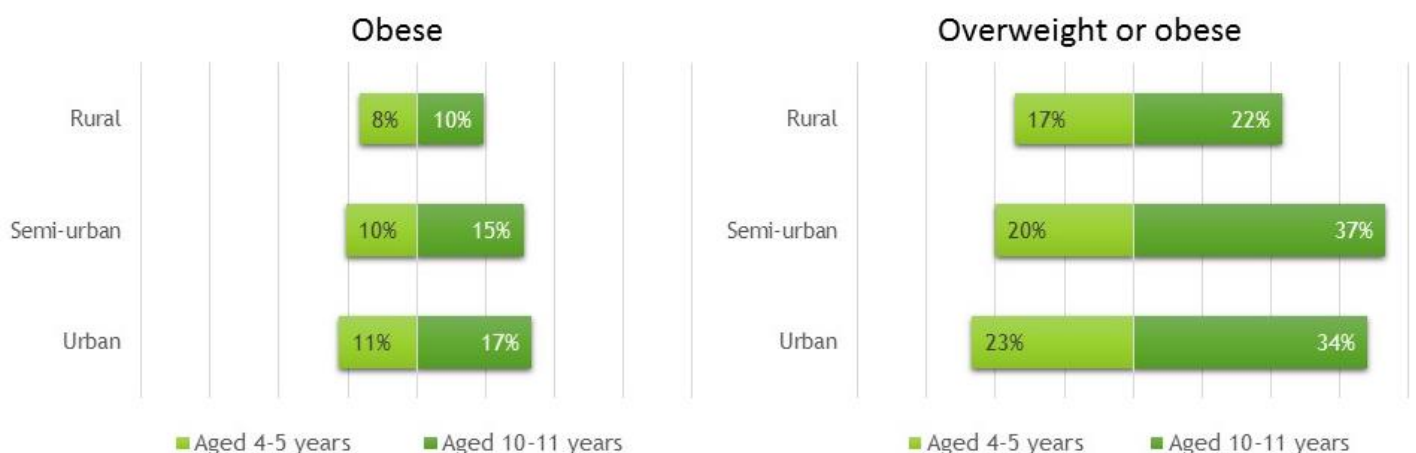
Home area

Parish of residence may be classified into rural, semi-urban or urban areas (see Background Notes).

The prevalence of obesity in both 4-5 and 10-11-year-old children was not statistically different when broken down by parish area (see Figure 5).

However, one in five 10-11 year olds residing in rural parishes were classified as overweight or obese (22 per cent), compared to around one in three children living in urban (34 per cent) or semi-urban areas (37 per cent).

Figure 5: BMI classifications by home area, 2015/2016



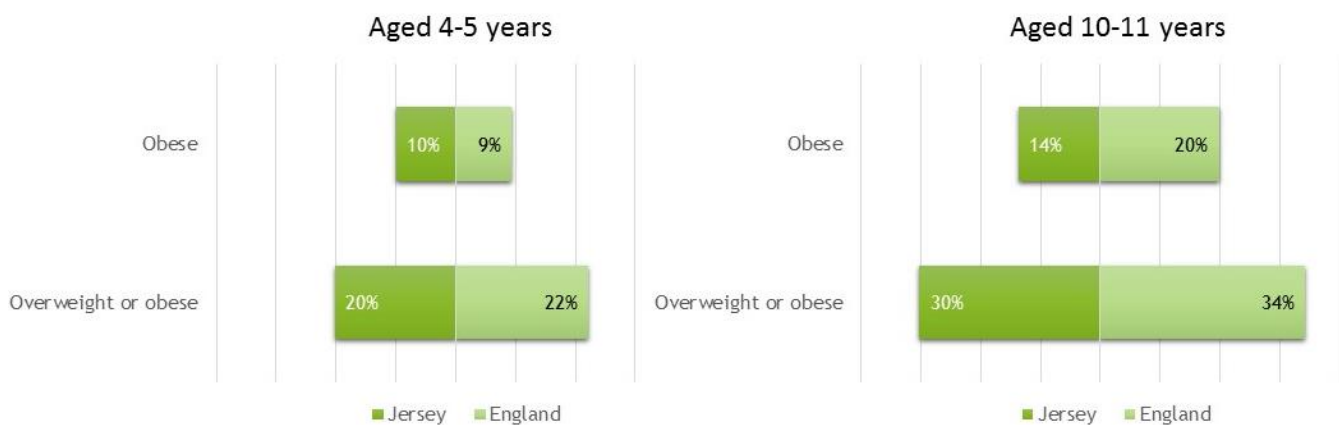
Source: PHSU

Comparison to England

In 2015/2016, 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 significantly lower in Jersey than in England (Figure 6). The prevalence of overweight or obese children in Jersey was also lower than in England.

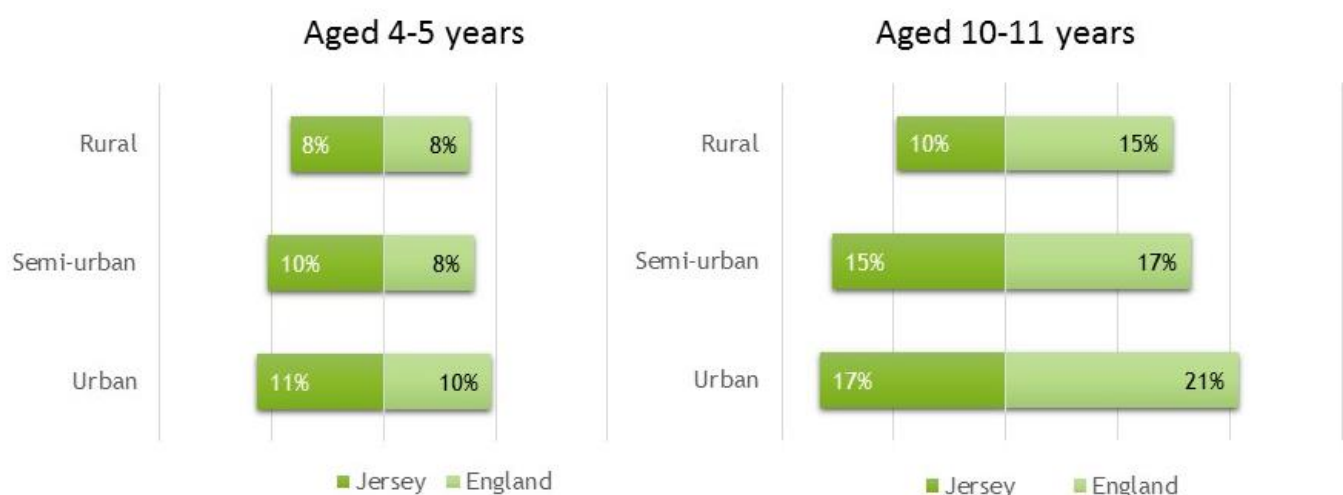
Figure 6: Prevalence of obesity, comparison to England, 2015/2016



Source: PHSU and NHS Digital

Obesity prevalence by home area is compared for Jersey and England in Figure 7.

Figure 7: Prevalence of obesity by home area, comparison to England, 2015/2016



Source: PHSU and NHS Digital

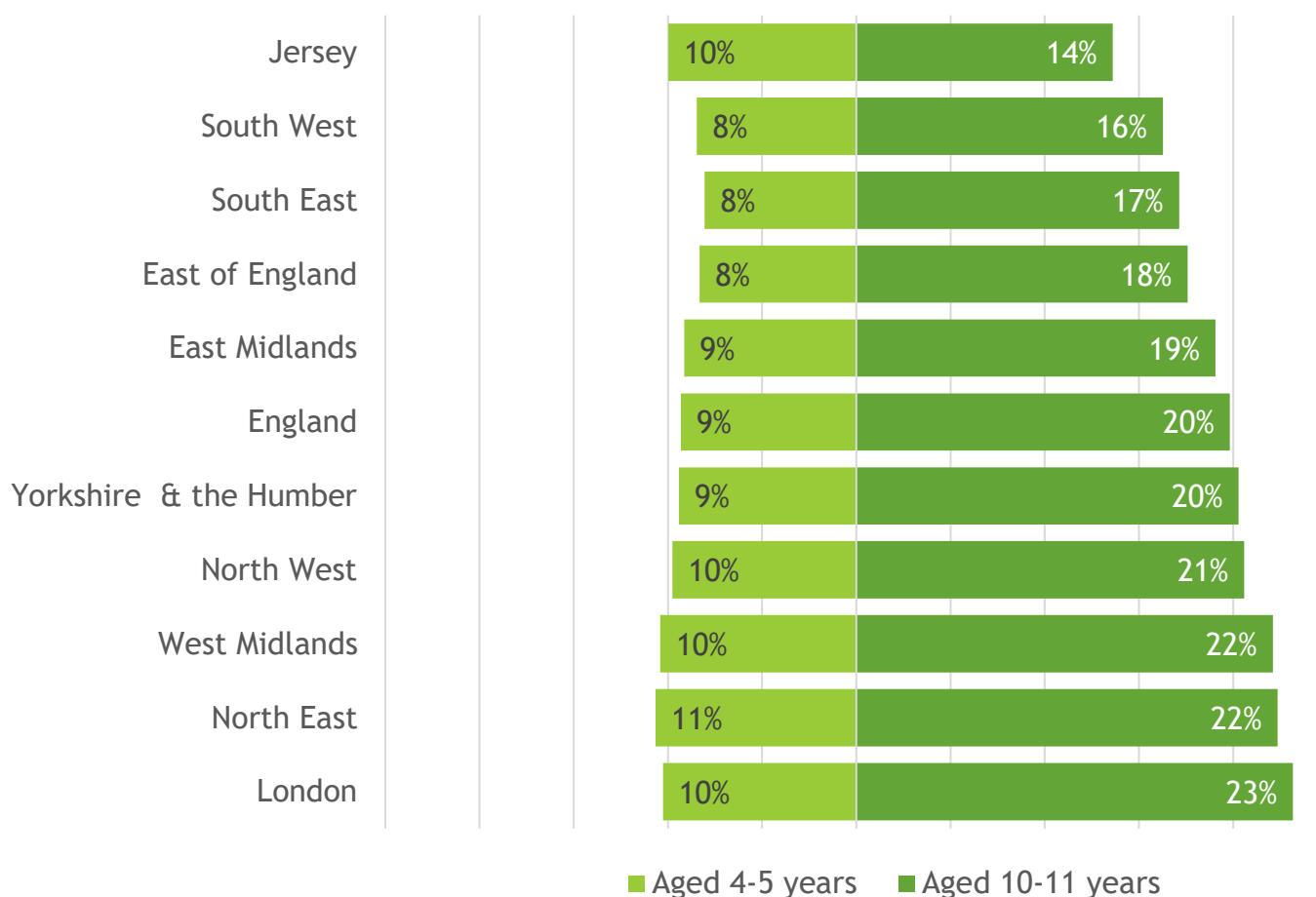
Proportions of obese children aged 4-5 years were similar for all areas in both Jersey and England. However, differences were seen in the older age group, with a smaller proportion of obese children living in rural areas of Jersey (10 per cent) than in rural areas of England (15 per cent).

Comparison to English Regions

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

For 10-11 year olds, the prevalence of obesity was significantly lower in Jersey than for all regions except for the South West.

Figure 8: Prevalence of obesity, Jersey and English regions, 2015/2016



Source: PHSU 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.

The 2015/16 academic year uses an 'opt in' method of parental consent.

Participation and coverage

Participation in the JCMP is not compulsory and each year a small number of parents choose not to consent. Those 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 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.

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.

Potential bias due to non-participation was investigated for the English NCMP by NHS Digital,¹ finding that obesity prevalence was underestimated by around 1 percentage point.² 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 rate 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 definition used to classify children's BMI in this report is the

¹ NHS Digital: National Child Measurement Programme: England, 2015/16 school year. Published November 2016. Available from: www.content.digital.nhs.uk

² For a participation rate of 80% 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% in 2007/08, the underestimate of obesity prevalence reduced to 0.8 pp.

epidemiological one which uses the British 1990 growth reference (UK90) to determine weight status according to a child's age and sex. Children whose BMI is between the 85th and less than the 95th centile are classified as overweight and those at or above the 95th centile are classified as obese. 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). The LMS Growth Add-in was the computer package used to analyse the data.

Small number suppression

Small numbers between one and four have been suppressed to avoid potential identification of individuals. This mainly relates to children who were underweight.

Confidence Intervals (CIs) and Statistical Significance

A confidence interval gives an indication of the likely error around an estimate that has been calculated from measurement based on a sample of the population. It indicates the range within which the true value for the population as a whole can 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 statistically tested to determine whether differences are likely to be genuine (i.e. statistically significant) or the result of natural random variation. Only those differences deemed 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

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