



States of Guernsey
Public Health Services

Guernsey Child Measurement Programme 2022

Findings from the ninth round of child measurement

Public Health intelligence Unit, October 2022

READER INFORMATION	
Title	Guernsey Child Measurement Programme, 2022; findings from the ninth round of child measurement [SUMMARY REPORT]
Document Purpose and key uses	Purpose: to detail the results of measurement in schools for 2020 and 2022. Uses: Public Health surveillance and monitoring; information for stakeholders and members of the public
Publication date	October 2022
Target audience	Public
Available at	www.gov.gg/publichealthinfo
Data sources	Height and weight data for children measured in schools in 2020 and 2022
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Completeness	Considered complete for the 87% of participating children
Value types	Numbers, percentages, confidence intervals
Author	Health Intelligence Unit

Findings from the ninth round of child measurement

Context

Since 2013, the heights and weights of children in school Years 1 and 5 have been recorded annually during the spring term, then analysed to allow population-level surveillance of weight status in children aged 5/6 years and 9/10 years. This Public Health Services report details the results obtained from the ninth measurement year, 2022.

Prior to 2022, the last measurement year was in 2020. In 2020 measurement went ahead as planned, however the results were not reported due to the diversion of resources in connection with the COVID-19 pandemic. No measurements took place in 2021 as the planned measurement weeks coincided with the Bailiwick's second COVID-19 lockdown. This report therefore highlights results from the 2022 measurement round and brings trend data up-to-date, including the previously un-reported results from 2020. The most up-to-date three-year average included in this report combines data from 2019, 2020 and 2022.

Results Statement

The results of the ninth round of child measurements in schools in Guernsey and Alderney show that:

- Of measured children in Year 1, 81.4% were found to have a healthy weight status. This dropped to 72.3% among measured Year 5s.
- **Among those in Year 1, 17.7% (around one in six) of measured children were found to have excess weight;** 9.0% with overweight and 8.7% with obesity.
- **Among those in Year 5, 26.7% (around one in four) of measured children were found to have excess weight;** 10.6% with overweight and 16.1% with obesity.
- In real terms, 1,144 were measured and 252 children were found to have overweight or obesity across the two year groups.
- Participation remained high at 87% despite a reduction due to absences (impact of COVID-19).
- Feedback was requested for 28% of eligible children.
- There are some early signs of an upward trend in the level of excess weight for Year 1 and a downward trend for Year 5 (*Figures 1-3*). The apparent increase over time for Year 1 excess weight may be the result of the relatively high overweight plus obesity level for 2020 exerting an upward influence on the last two data points (Figure 2). Results from different statistical tests are mixed and overall **there is not currently strong statistical evidence for any directional change in the levels of excess weight among children.**

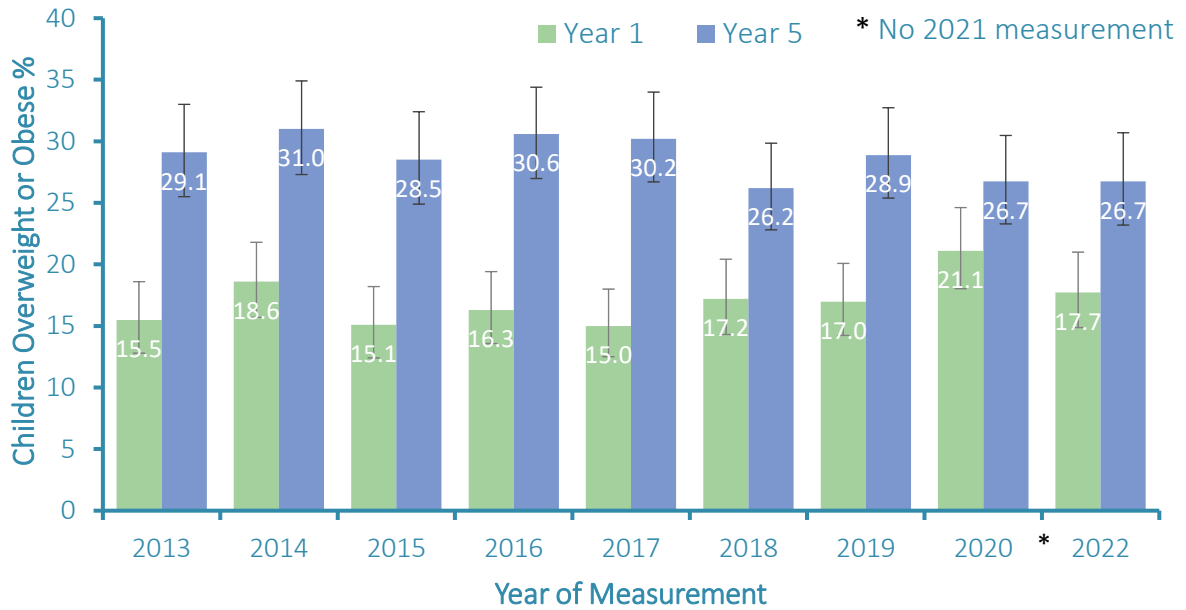
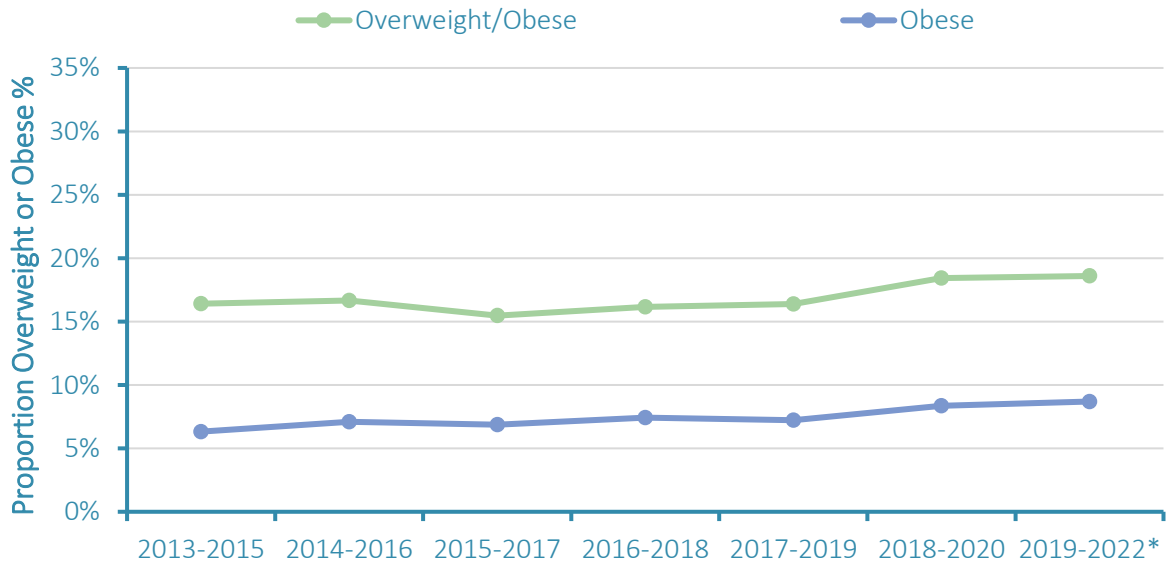
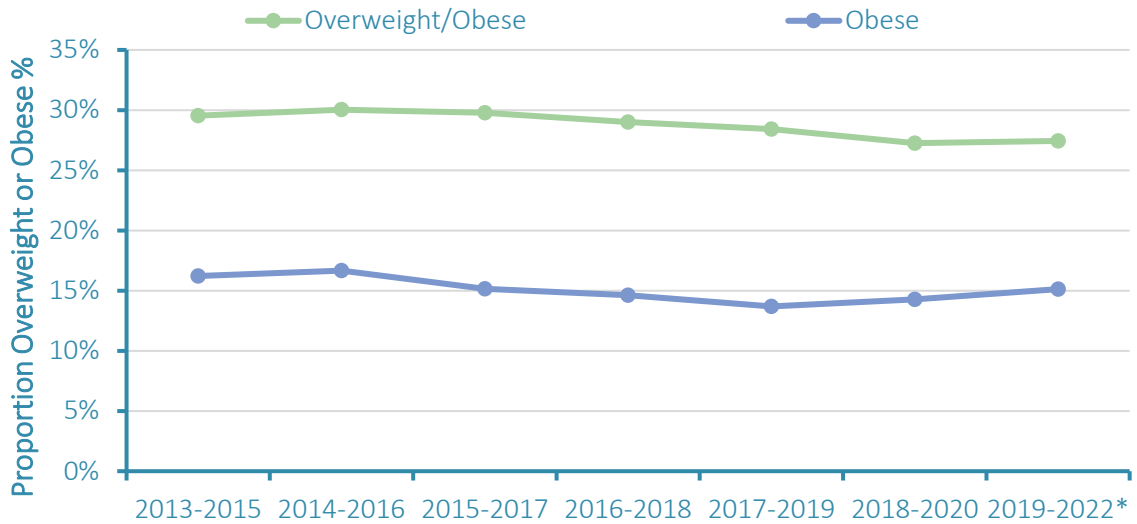


Figure 1. Proportion of children in each year group with an overweight or obese weight status, by year of measurement.



*No figures for 2021

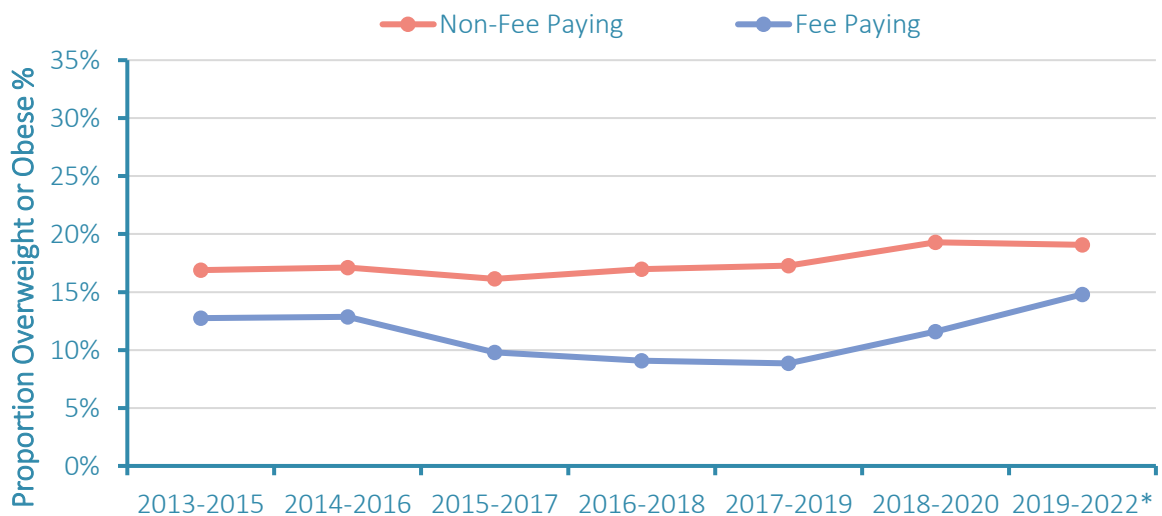
Figure 2. Proportion of Year 1 children measured with an overweight or obese weight status over time (three-year averages).



*No figures for 2021

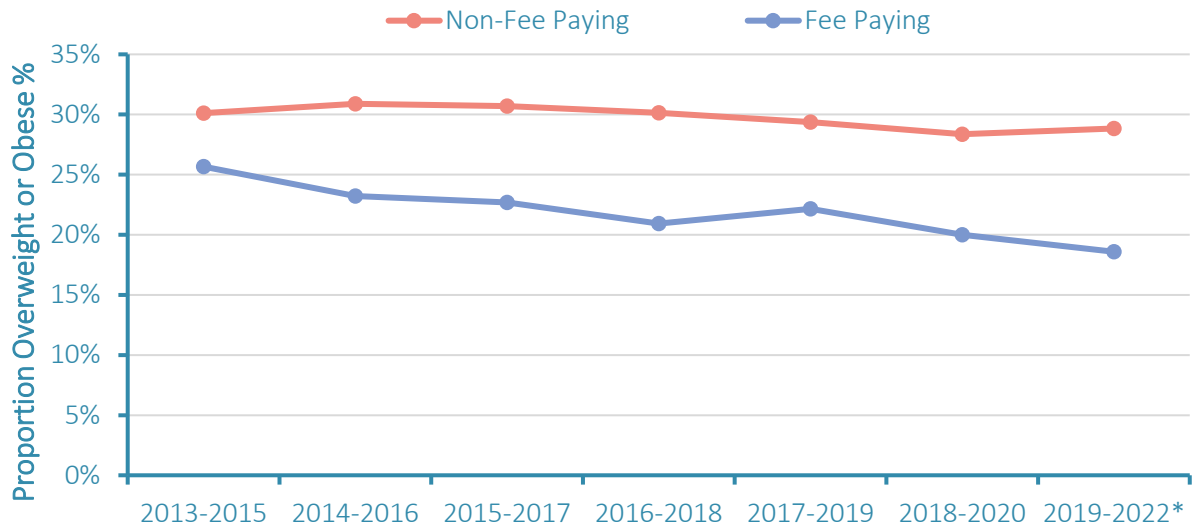
Figure 3. Proportion of Year 5 children measured with an overweight or obese weight status over time (three-year averages).

- Proportions of unhealthy excess weight are at similar levels before and after the main period of the COVID-19 pandemic.
- Data from England has consistently shown that overweight and obesity are more prevalent in areas of greater deprivation. There is no direct measure for deprivation in the Bailiwick — the nearest available marker is school fee status. In line with what we would expect from English findings and following a pattern also seen in Jersey, a health inequality by school fee status was identified whereby Year 1 **children attending non-fee paying schools had higher proportions of unhealthy excess weight than children at fee paying schools**, with the difference becoming more pronounced by Year 5 (*Figure 4, Figure 5*).



*No figures for 2021

Figure 4. Year 1 – Three-year average of proportion of children that have an overweight or obese weight status, by school fee status.



*No figures for 2021

Figure 5. Year 5 – Three-year average of proportion of children that have an overweight or obese weight status, by school fee status.

- Looking at subgroups of the combined 2019, 2020 and 2022 dataset, evidence of differences were observed between children in Year 5 such that boys had higher proportions with unhealthy excess weight than girls and children attending non-fee paying schools had higher proportions than fee paying schools.
- The children measured as Year 1 in 2018 were re-measured as Year 5s in 2022. From their first to their second measurement (an interval of four years) the prevalence of overweight and obesity among that cohort increased from 17.2% to 26.7%. A large increase has been observed for all the cohorts measured twice since the start of the measurement programme.
- Children who have been measured when they were in Year 1 and in Year 5 were matched (participant matching) and the movement between weight status categories, examined. The graph below shows the results of this analysis looking at how their weight statuses have changed (*Figure 6*). It shows for those that had each weight status at the first measurement in Year 1 (each column), the proportion with each weight status by the second measurement in Year 5 (split within the column). For example, 23% of Year 1 children with an overweight status had a healthy weight status in Year 5.

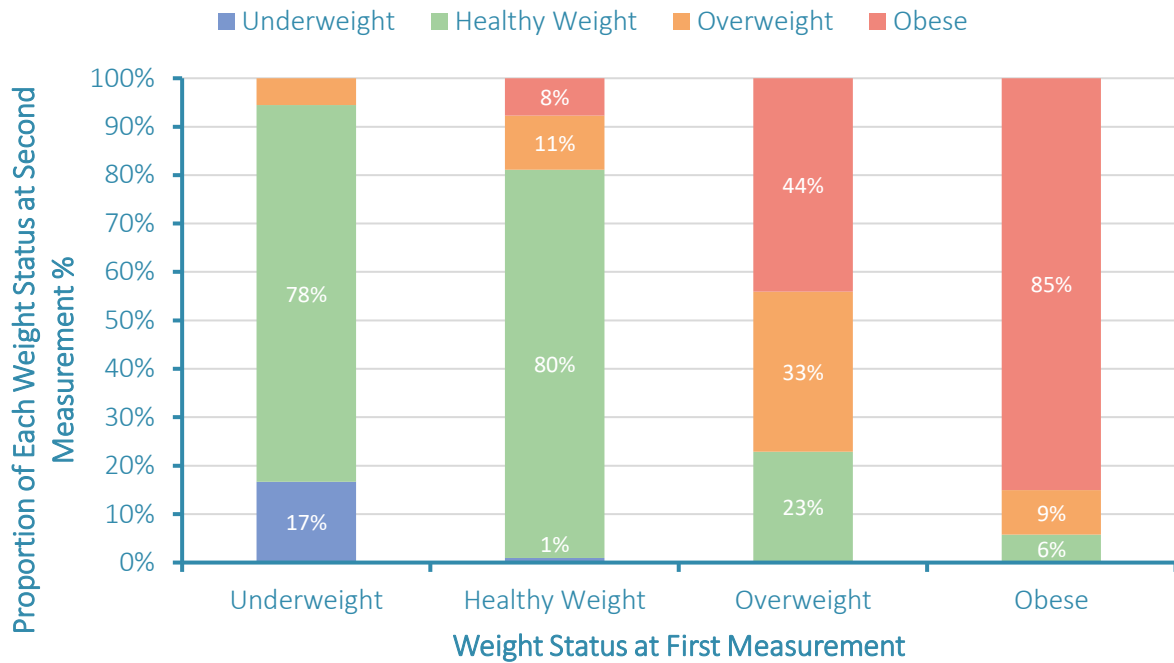
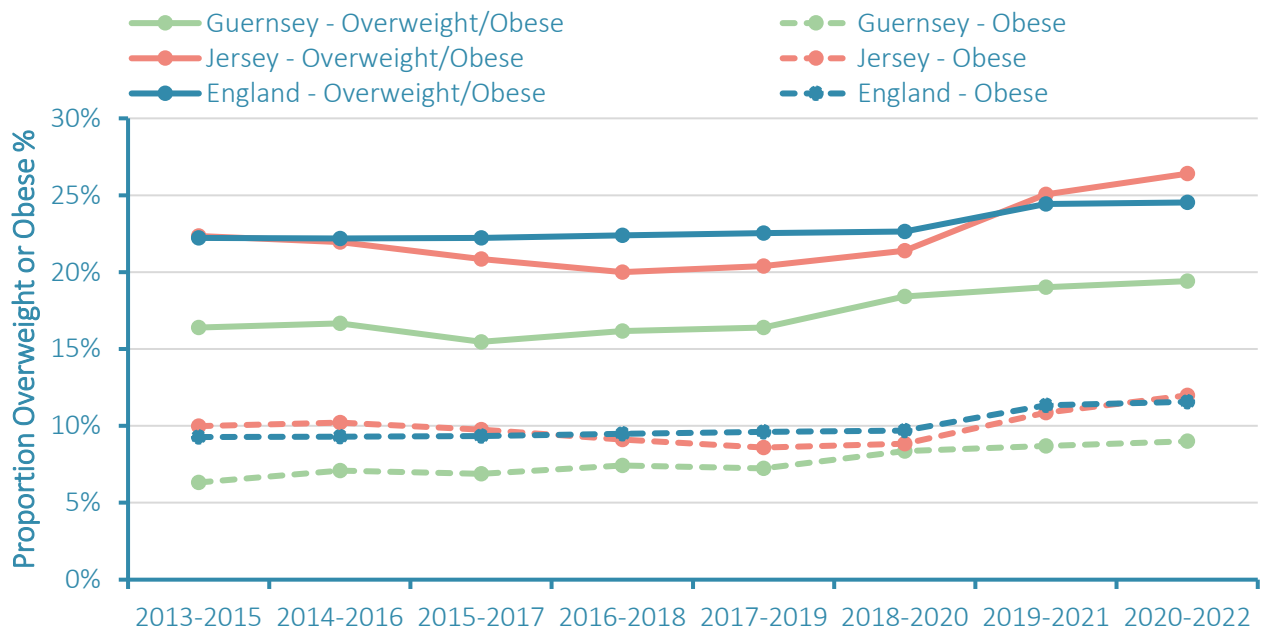


Figure 6. Participant-matching results: Change in weight status between first and second measurement for 2015, 2016, 2018 Year 1 cohorts combined (N=1,347).

- These findings suggest it is difficult for children’s weight status to change once they live with obesity (though improvements are achieved by some) whereas it is easier for children to retain a healthy weight when they already have a healthy weight status.
- Those with an obese weight status in Year 1 for cohorts 2015-18 (excluding 2017) are more likely to still live with obesity in Year 5 compared to those with the same weight status in the 2013-15 cohorts. This suggests that moving from an obese weight status to overweight or healthy weight may be becoming increasingly difficult for Primary school aged children over time.

- The latest available results for England are for children measured in the academic year 2021/22¹ and for Jersey, 2021/22². Differences between reporting years, as well as the different measurement year groups (England and Jersey measure Reception and Year 6) mean that **exact like-for-like comparisons cannot be drawn** between these figures and the results from the GCMP. A comparison of Guernsey’s three-year averages against Jersey and England figures is shown below (*Figure 7, Figure 8*). Results for England have been combined into three-year averages to increase comparability.



*There are no Guernsey figures for 2021. Guernsey’s averages for 2019-21 and 2020-22 included in the graph above exclude 2021 and are, therefore, two-year averages including 2019, 2020 and 2020, 2022 respectively.

Figure 7. Year 1: Comparison of results from the GCMP (Year 1) with those from Jersey and England’s Child Measurement Programmes (Reception).

- The graph above shows that the proportion of children in Guernsey with overweight or obesity is consistently and notably below Jersey and England despite the Guernsey children measured being older (from Year 1 as opposed to Reception). Although this is a positive result from Guernsey’s perspective, the proportion of children overweight and obese is still pronounced.

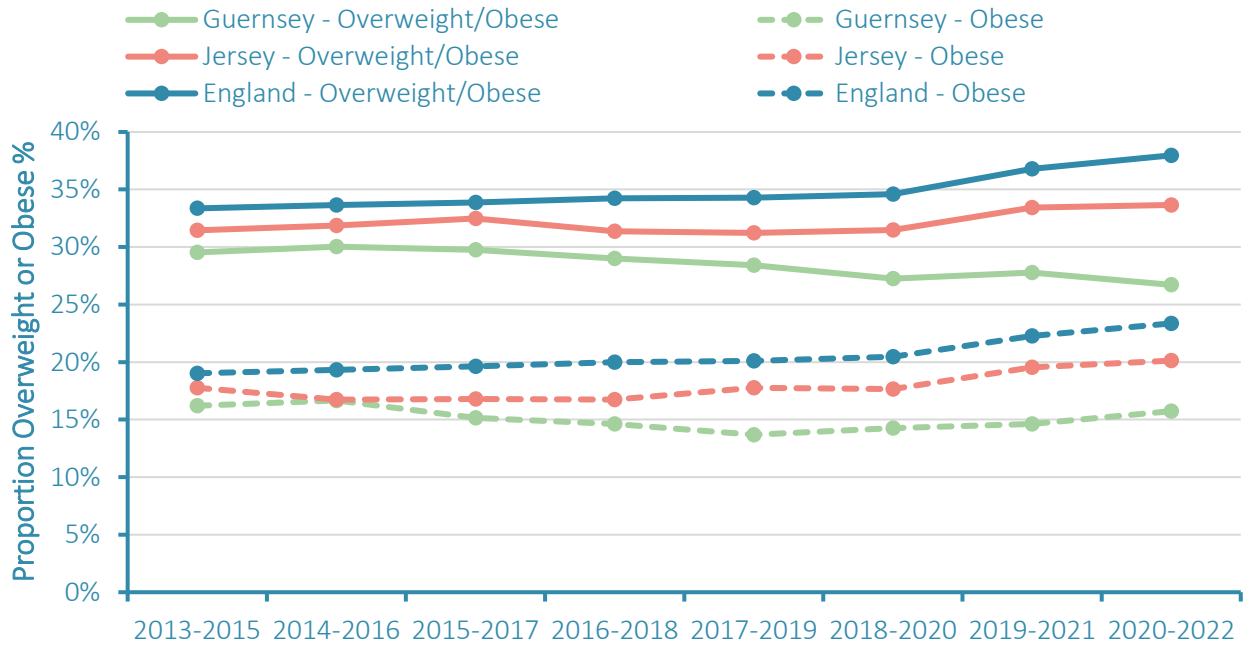
¹ NHS Digital, *National Child Measurement Programme: England, Provisional 2021/22 School Year Outputs* Published 19th July 2022.

[Part 1: Age, time series and sex - NHS Digital](#) [Accessed 22/07/22]

² States of Jersey, *Jersey Child Measurement Programme 2021/22* Published 22nd September 2022.

[Child Measurement 2021-2022.pdf \(gov.je\)](#) [Accessed 26/09/22].

Note that the Jersey three-year average figures in the link above are labelled differently to this report e.g. for 2021/22 Jersey label these as 2021 in the three-year averages but are labelled as 2022 in this report. The graph above ensures comparisons are being made with the same school year.



*There are no Guernsey figures for 2021. Guernsey’s averages for 2019-21 and 2020-22 included in the graph above exclude 2021 and are, therefore, two-year averages including 2019, 2020 and 2020, 2022 respectively.

Figure 8. Year 5: Comparison of results from the GCMP (Year 5) with those from Jersey and England’s child measurement programmes (Year 6).

- The graph above shows Guernsey to be slightly below Jersey and England for the older age groups. The children measured from Guernsey are younger (from Year 5 as opposed to Year 6) so this would be expected given the observation of increasing excess weight with increasing age.

Methodology Notes

- Measurement in schools took place between January and March 2022;
- The programme utilises opt-out consent. Opt-outs are accepted from parents in advance or on the day from children who do not wish to be measured;
- Heights and weights were used to calculate Body Mass Index (“BMI”) values. Age-sex specific centile values for height, weight, and BMI were also calculated with reference to the UK1990 growth reference curve;
- The distribution of weight status discussed in this report, relates to UK1990 reference curve population thresholds which are conventionally used in population monitoring (see below);

Weight Status	Population Thresholds (Centiles)	
	Greater than or equal to (\geq)	Less than ($<$)
Underweight	0	2
Healthy weight	2	85
Overweight	85	95
Obese	95	100

- BMI is generally considered a good measure of excess weight due to high correlations between individuals who have excess fat and those who have a high BMI. It is not, however, a direct measure of body fat and does not account for the proportion of the body made up of muscle. Examples could arise where individuals with low levels of body fat are assigned an unhealthy weight status category but these occurrences are likely to be very infrequent. Despite its limitations, when looking at data with a population perspective it is a reasonably consistent, accurate and useful tool.
- Analytical and statistical methods applied to GCMP data include point estimates, confidence intervals and use of the Altman Method, in addition to Shapiro-Wilk and Mann-Whitney U Tests. The Shapiro-Wilk Test was used to test the normality of BMI centile distributions for various subgroups. All subgroups tested were found to be non-normal which indicated the need for non-parametric statistical tests. We used the Mann-Whitney U Test to examine differences in BMI centile distributions between subgroups. We also applied linear regression using ‘least squares’ methodology, that is, a straight line of best fit was used to examine possible trends. A t-test was then applied to consider whether the gradient of this line was not equal to zero.
- A calculated p value less than or equal to 0.05 is considered to show increasing evidence of a difference.