

## Briefing on Body Mass Index of Primary 1 Children in Scotland, School Year 2018/19

Tuesday 10<sup>th</sup> December 2019

### Key findings from 2018/19:

- 22.4% of Primary 1 children were at risk of overweight or obesity
- 12.2% were at risk of overweight, and 10.2% at risk of obesity
- There has been no significant movement on last year's overall figures
- In the *most deprived* areas, 26.4% of children were classified as at risk of overweight or obesity, compared with 17.6% in the *least deprived* areas
- **There are now substantial inequalities in child healthy weight in Scotland.** The proportion of children at risk of obesity in the *most deprived* areas is now **more than double** that of those in the *least deprived* areas (13.7% vs 6.5%); this gap is widening due to obesity risk increasing in the *least deprived* areas and in 2019 is at its widest since records began

### Background

Today, Information Services Division (ISD) Scotland published their annual report detailing the proportion of Primary 1 children in schools across Scotland who have a healthy, low or high body mass index (BMI).<sup>1</sup> This data is calculated from height and weight measurements collected during Routine Child Health Reviews on Primary 1 children aged between 4 and 6, covering 76% of this population group in 2018/19.

Overweight and obesity in childhood is associated with a number of health problems, including early markers of cardiovascular disease, asthma and breathing difficulties, hypertension, and insulin resistance.<sup>2</sup> Additionally, it can have damaging emotional and behavioural impacts including, stigmatisation, bullying, low self-esteem and school absence.<sup>3</sup>

Children with obesity have a higher likelihood of having obesity as adults<sup>4</sup>, increasing their risk of associated health problems such as type 2 diabetes, heart disease and various cancers.<sup>5</sup> Thus, maintaining a healthy weight in childhood is beneficial to health throughout the life course.

## **BMI in Primary 1 children in Scotland**

The overall proportion of children in each of the BMI categories (healthy, low and high) has remained relatively constant since 2001/2 when few NHS board were recording data, and since 2011/12 when all areas of Scotland were recording data.

In 2018/19, 22.4% of Primary 1 children were at risk of overweight or obesity, with 12.2% at risk of overweight and 10.2% at risk of obesity. There has been no clear movement on last year's overall figure of 22.5% at risk of overweight or obesity; of which 12.3% were at risk of overweight and 10.2% were at risk of obesity. In 2018/19 2.8% of Primary 1 children were at risk of severe clinical obesity, defined by a BMI  $\geq$ 99.6<sup>th</sup> centile, compared to 2.6% last year.

Small differences in BMI distribution by gender have been apparent since 2001/2. In 2018/19, boys were at slightly higher risk than girls of overweight or obesity combined, at 23.3% vs 21.6%, respectively.

Comparing these results to other sources of data on BMI in children we can see results are similar. The 2018 Scottish Health Survey, which records BMI of children in Scotland across a smaller sample, found that 26% of children aged 2-6 years were at risk of overweight or obesity combined.<sup>6</sup> The 2018/19 National Child Measurement Programme in England found that 22.6% of Reception children (aged 4-5) were at risk of overweight or obesity combined.<sup>7</sup>

## **Inequalities in child healthy weight in Scotland are now substantial**

In 2019, the gap in obesity prevalence is now the widest it has been since records began.

Children living in more deprived areas were *slightly more likely* to be at risk of overweight (12.8% most deprived; 11% least deprived), but *much more likely* to be at risk of obesity than those in less deprived areas (13.7% most deprived; 6.5% least deprived; *Figure 1*).

The inequalities gap in obesity prevalence has been widening since records began in 2001/2, due to obesity rates increasing in the most deprived areas, while decreasing in the least deprived areas. The gap has widened still since last year, when 13% were at risk of obesity in the most deprived areas (vs 13.7% this year) and prevalence has remained the same in the least deprived areas (~6.5%).

This is consistent with findings elsewhere. In 2012, a report commissioned by the Scottish Government identified deprivation as one of the main factors significantly associated with overweight and obesity in children.<sup>8</sup> The 2018 update of this report identified a statistically significant association between area deprivation and the proportion children who moved into the overweight category between the ages of 6 and 10.<sup>9</sup> Of those living in the most deprived quintile, 17% moved into the overweight category, compared to only 11% of the least deprived.

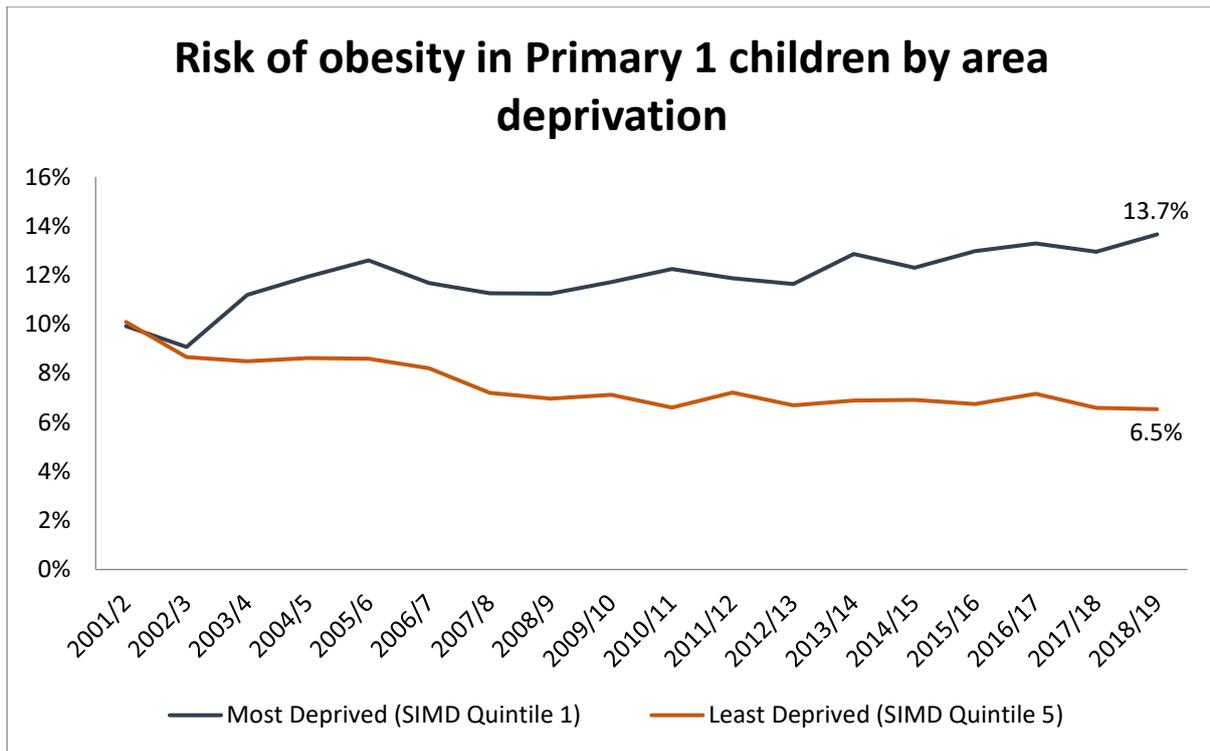


Figure 1. Percentage of Primary 1 children at risk of obesity, by deprivation, school year 2018/19, all participating NHS Boards/Scotland

This trend was also clearly evident in the most recent English National Child Measurement Programme. Gaps in obesity by area deprivation rose from 2006/7 to 2018/19 in both reception and Year 6 children<sup>7</sup> For reception children, this gap widened from 4.5% to 6.5%. In Scotland the gap is 7.2%.

### Conclusion

Despite the overall proportion of Primary 1 children at risk of overweight or obesity remaining fairly constant since 2001/02, the risk of obesity has continued to rise in the most deprived areas and fall in the least deprived, revealing substantial inequalities in child healthy weight in Scotland. In 2019, the obesity gap is now the widest it has been since records began.

*Read more, including recent policy actions from the Scottish Government aimed at preventing and reducing childhood obesity and next steps, in [our blog](#) and in our [Childhood Obesity briefing](#). Find out more about Obesity Action Scotland’s policy asks on our [website](#).*

## References

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