Impact of the Saturation Point Policy on the take up of school meals

Report of the Corporate Director of Children's Services

Open Report

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Summary:

This report provides a summary analysis of the change in take up of school meals since the introduction of the Saturation Point Policy in 2010.

In order to demonstrate the effectiveness of the Policy, some increase in meal uptake might be expected. However, although the overall number of meals provided has increased since 2009 (pre Saturation Point Policy implementation) the percentage of pupils taking a school meal appears to have reduced slightly* when compared to the increase in school age population. This is not uniform across the borough with some wards experiencing an increase in uptake while others experience a decrease and there is no clear correlation with the number of take away food outlets in a particular area.

It is unlikely that this drop in meal uptake is directly related to the implementation of the Policy. There are many other potential factors to be taken into account that and it would be safest to say that, on the basis of data currently available, there is no clear causal link between the implementation of the Saturation Point Policy and the take up of school meals.

*Meal uptake data prior to the introduction of the cashless catering system was calculated rather than counted and, as a result, was generally a little overstated. This should be taken into account when comparing with more recent data.

Recommendation
The Committee is recommended to conclude its investigation into school meal provision.

Reason
The impact of the Saturation Point Policy on school meal uptake is the final element in the investigation.
1. Introduction and Background

1.1 Barking and Dagenham has one of the highest levels of childhood obesity in the country. It is generally accepted that a key contributory factor is access to unhealthy food and, in particular, the proliferation and poor nutritional standards of takeaway food.

This has been recognised for some time and in 2010 the Borough adopted a Saturation Point Policy which aimed to reduce the risk of obesity amongst the population, particularly among children, by:

- Reducing prevalence and clustering of hot food takeaways, especially those in close proximity to schools (both primary and secondary)
- Seeking contributions from developers of new hot food takeaways towards initiatives to tackle obesity
- Working with outlets to improve the nutritional value of the food they sell
- Improving opportunities to access healthy food in new developments

The Policy forms part of a strategic approach to tackling the Borough's obesity problem.

The impact of the Saturation Point Policy on the take up of school meals and obesity in the Borough forms the basis of this report.

2. Data and Analysis

2.1 School Meal uptake

In order to see what impact the Policy has had on the uptake of school meals a comparison was made between data for 2009-10\(^1\) – i.e. before the Policy was implemented – and the most recent data for 2012-13.

Overall, there has been a small reduction in the take up of meals since 2009, but this is not consistent across wards. There is significant variation in the changes between wards ranging from reductions of nearly 27% in Chadwell Heath to gains of almost 43% in Gascoigne. None of the changes appear to have any direct correlation with the number of hot food takeaway shops in the ward.

There is a general trend of increasing meal uptake to the West of the Borough and decreasing towards the East, although this may have more to do with changing demographics than other factors.

The map below shows these changes on a ward basis.

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\(^1\) Meal uptake data prior to the introduction of the cashless catering system was calculated rather than counted and, as a result, was generally a little overstated. As a result comparisons with more recent data tend to show a level of reduction which should be taken into account.
As stated above, there is no direct correlation, either positive or negative, between school meal uptake and the number of takeaway food shops in a particular ward (and hence to the Saturation Point Policy) and so it should be concluded that the Policy has not had any measurable effect on meal uptake.

It should be noted that with any analysis of data without a control group (one that is kept separate from the changes made), it is not possible to say if the final result would have been different if the change had not been made – i.e. if the Saturation Point Policy had not been implemented would the meal uptake figures have been worse (or better) than the data shows.

2.2 Obesity

For completeness, the data relating to childhood obesity have also been analysed on a ward basis and over a similar timescale.

Children are measured at primary school in Reception (age 4-5) and Year 6 (age 10-11) as part of the Child Measurement Programme. The table below shows a
breakdown by ward of obesity for both age groups based on the 2011-12 survey data (the most recent available).

<table>
<thead>
<tr>
<th>Obesity among school pupils 2011-12</th>
<th>% obesity (aged 4-5)</th>
<th>Rank</th>
<th>% obesity (aged 10-11)</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbey</td>
<td>15.4</td>
<td>3</td>
<td>21.5</td>
<td>17</td>
</tr>
<tr>
<td>Alibon</td>
<td>12.5</td>
<td>15</td>
<td>25.9</td>
<td>6</td>
</tr>
<tr>
<td>Becontree</td>
<td>12.9</td>
<td>14</td>
<td>24.9</td>
<td>10</td>
</tr>
<tr>
<td>Chadwell Heath</td>
<td>11.8</td>
<td>17</td>
<td>25.8</td>
<td>7</td>
</tr>
<tr>
<td>Eastbrook</td>
<td>13.9</td>
<td>8</td>
<td>24.3</td>
<td>11</td>
</tr>
<tr>
<td>Eastbury</td>
<td>13.6</td>
<td>10</td>
<td>22.6</td>
<td>15</td>
</tr>
<tr>
<td>Gascoigne</td>
<td>13.8</td>
<td>9</td>
<td>23.9</td>
<td>12</td>
</tr>
<tr>
<td>Goresbrook</td>
<td>13.5</td>
<td>11</td>
<td>25.2</td>
<td>8</td>
</tr>
<tr>
<td>Heath</td>
<td>14.9</td>
<td>4</td>
<td>26.2</td>
<td>3</td>
</tr>
<tr>
<td>Longbridge</td>
<td>13.0</td>
<td>13</td>
<td>23.1</td>
<td>14</td>
</tr>
<tr>
<td>Mayesbrook</td>
<td>14.5</td>
<td>6</td>
<td>24.9</td>
<td>9</td>
</tr>
<tr>
<td>Parsloes</td>
<td>14.6</td>
<td>5</td>
<td>26.0</td>
<td>5</td>
</tr>
<tr>
<td>River</td>
<td>15.6</td>
<td>2</td>
<td>28.3</td>
<td>2</td>
</tr>
<tr>
<td>Thames</td>
<td>17.0</td>
<td>1</td>
<td>23.7</td>
<td>13</td>
</tr>
<tr>
<td>Valence</td>
<td>11.8</td>
<td>16</td>
<td>21.9</td>
<td>16</td>
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<tr>
<td>Village</td>
<td>14.0</td>
<td>7</td>
<td>29.5</td>
<td>1</td>
</tr>
<tr>
<td>Whalebone</td>
<td>13.4</td>
<td>12</td>
<td>26.1</td>
<td>4</td>
</tr>
<tr>
<td>Barking and Dagenham</td>
<td>13.9</td>
<td>-</td>
<td>23.9</td>
<td>-</td>
</tr>
<tr>
<td>England</td>
<td>9.6</td>
<td>-</td>
<td>19.0</td>
<td>-</td>
</tr>
</tbody>
</table>

Obesity at aged 4-5 (reception) was highest in Thames (17% were measured as obese) followed by River (15.6%). The highest prevalence of obesity among year 6 pupils aged 10-11 was in Village (29.5% obese) and River (28.3%). Abbey has one of the highest percentage levels of reception age pupils measured as obese (15.4%) while also having the lowest (local) level of obesity among 10-11 year olds (21.5%).

In November 2012 there were 167 retail outlets in Barking and Dagenham that could be described as hot food takeaways².

The maps below show these data by ward / area layered with additional information showing where hot food takeaways are located.

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² There were a further temporary 20 mobile units not included in the analysis
Again, analysis of the data suggests that there is no significant correlation between the prevalence of hot food takeaways and obesity at ward level.\(^3\)

The chart below shows obesity data and prevalence of hot food takeaways at ward level further demonstrating the lack of correlation between the data sets. The ward data has been ordered by prevalence of take away outlets, Abbey having the highest number and Longbridge the least.

![Obesity by ward 2009-10 to 2011-12 showing little correlation with prevalence of fast food outlets](chart)

In order to assess the impact of the SPP, it is necessary to look at the change in obesity since the Policy was introduced. The maps below show this change for Reception pupils (age 4-5) and Year 6 pupils (age 10-11).

\(^3\) Statistical analysis has been carried out on both sets of data to examine the possible correlation between the prevalence of hot food takeaways and obesity at ward level to ascertain if there is a link. At reception age these figures produce a Pearson’s correlation\(^*\) of 0.06 and should therefore be considered as having no correlation.

\(^*\) Pearson’s correlation is a mathematical calculation to show if there is a link between data sets. Results vary from +1, (a positive correlation), through 0, (no correlation), to -1, (a negative correlation).

Obesity at aged 10-11 and hot food takeaways data shows a Pearson’s correlation of -0.13 which is a very weak negative correlation (a negative correlation would suggest pupils living in areas with more takeaways are less likely to be obese). Again, this should not be considered as a true correlation.
It should be noted that these maps show the general trend of changes within the population of each ward, they do not show the specific changes within each cohort of children that have been measured, i.e. the groups of children measured in 2009 are not the same children measured in 2012 – the year groups remain the same, but not the individuals.

Again, although the data shows some elements of interest, there is no clear correlation between the change in obesity levels at Reception and Year 6 and the implementation of the Saturation Point Policy in 2010.

2.3 Conclusions

Analysis of the available data suggests that the Saturation Point Policy has had no direct impact on the take up of school meals or the level of obesity in primary age children.

It is, however, not possible to say definitively that the Policy has had no impact, as it is not known how these changes would have developed if the Policy had not been implemented and proliferation of hot food takeaway shops had been allowed to continue.

3.0 Background Papers Used in the Preparation of the Report:


Fast food and childhood obesity: exploring possible correlations. Andrew Meehan

3.1 Acknowledgements

Andrew Meehan Data Analyst Children’s Services
Phil Canham Research and Intelligence Officer, Corporate Policy and Research

3.2 List of appendices:

Appendix 1 Case Study: Barking and Dagenham, Supplementary Planning Document (2010) Saturation Point: Addressing the health impacts of hot food takeaways,