Public Health England has recently published its findings from the above survey, the first national dental survey for 3 year olds. In this age group the impact of infant and young child feeding is of particular note, and essential action in areas with high levels of decay would be to stop the prolonged use of feeding bottles that contain sugar sweetened beverages. Bury has worse rates of decay and early childhood caries than England and the North West. Township level figures are also provided, but should be treated with caution due to small numbers.

Contents
Introduction .......................................................................................................................... 2
Methodology .......................................................................................................................... 2
Data Summary ....................................................................................................................... 2
Data Detail ............................................................................................................................. 3
Township Level .................................................................................................................... 4
Definitions ............................................................................................................................. 4
Source .................................................................................................................................... 4
Further information ............................................................................................................. 5
Introduction

Public Health England has recently published its findings from the 2013 Oral Health Survey of three-year-old children, the first national dental survey for this age group.

Early childhood caries (ECC) is an aggressive form of decay that affects upper incisors and can be rapid and extensive in attack. It is associated with long term bottle use with sugar-sweetened drinks, especially when these are given overnight or for long periods of the day.

There is wide variation in the levels of dental decay experienced by three-year-old children living in different parts of the country.

PHE state that in this young age group the impact of infant and young child feeding is of particular note, and essential action in areas with high levels of decay would be to stop the prolonged use of feeding bottles that contain sugar sweetened beverages.

There is a moderate association between decay in three year olds and decay in five year olds at Lower Tier Local Authority level, but it was found that decay in three year olds was less associated with deprivation than for decay in five year olds.

Methodology

Children attending nurseries and playgroups were randomly sampled, then consent was required from parents or a suitable adult before children were examined. As children who did not attend such sites were could not be included, PHE acknowledge that there is the possibility of underestimating the extent of dental decay, but state that this bias cannot be directly measured.

The survey results were then weighted to reflect the deprivation profile of each Local Authority.

Data Summary

- Over 18% (almost one in five) of children in Bury had evidence of decayed, missing or filled teeth – this is significantly worse than the figure for England overall, and is higher than the North West region
- Bury also had worse levels of early childhood caries than England and the North West
- These figures may underestimate the actual level of disease (due to sampling bias, the need for positive consent and the way decay is defined)
There is variation between Bury Townships, with Whitefield & Unsworth and Bury East having the highest rates (although these figures should be treated with caution due to small numbers).

**Data Detail**

Overall, of the three-year-old children in England whose parents gave consent for their participation in this survey 12% had experienced dental decay. The average number of decayed, missing or filled teeth (dmft) in the whole sample (including the 88% who were decay free) was 0.36.

The four regions with highest severity were East Midlands, North West, London and Yorkshire and the Humber.

NB – data for LAs in the North West was collected in 2010/11 and combined with data from the rest of the nation that was taken in 2012/13.

Table 1: Summary of survey results:

<table>
<thead>
<tr>
<th>Area</th>
<th>% of children examined</th>
<th>Mean no. of dmft teeth</th>
<th>% of children with dmft teeth</th>
<th>% of children with ECC²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>England</strong></td>
<td>8.1</td>
<td>0.36</td>
<td>11.7</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>North West</strong></td>
<td>14.1</td>
<td>0.47</td>
<td>14.3</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Greater Manchester</strong></td>
<td>9.3</td>
<td>0.68</td>
<td>19.6</td>
<td>7.7</td>
</tr>
<tr>
<td><strong>Bury</strong></td>
<td>8.7</td>
<td>0.61</td>
<td>18.4</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Figures in **bold** are significantly worse than England

1 Decayed, missing or filled
2 Early childhood caries

As can be seen in Table 1, above, in Bury 8.7% of the eligible population were surveyed (this equates to 209 three year olds).

Over 18% (almost one in five) of three year olds in Bury had evidence of decayed, missing or filled teeth – this is significantly worse than the figure for England overall, and is higher than the North West region (but lower than the figure for Greater Manchester).

A similar story can be seen for the average number of decayed, missing or filled teeth – Bury has a significantly higher number than England, and is higher than the North West but lower than GM.

Early childhood caries (ECC) is an aggressive form of decay that affects upper incisors and can be rapid and extensive in attack. It is associated with long term bottle use with sugar-sweetened drinks, especially when these are given overnight or for long periods of the day. The rate of ECC was higher in Bury (5.3% of children) than for England (3.9%), and for the North West (5.1%).
Township Level

PHE also supplied LAs in Greater Manchester with a further geographical breakdown of the survey – in Bury, this was at Township level. This data can be seen in Table 2, below:

Table 2: Survey results by Bury Township

<table>
<thead>
<tr>
<th>Area</th>
<th>% of children examined</th>
<th>Mean no. of dmf teeth</th>
<th>% of children with dmf teeth</th>
<th>% of children with ECC²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitefield &amp; Unsworth</td>
<td>41</td>
<td>1.2</td>
<td>34.1%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Bury East</td>
<td>36</td>
<td>0.9</td>
<td>25.0%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Prestwich</td>
<td>18</td>
<td>0.4</td>
<td>16.7%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Radcliffe</td>
<td>50</td>
<td>0.3</td>
<td>12.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Bury West</td>
<td>34</td>
<td>0.5</td>
<td>11.8%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Rams, Tott &amp; N Manor</td>
<td>30</td>
<td>0.1</td>
<td>6.7%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Dr Gill Davies (Specialist in Dental Public Health, PHE North West and Dental Public Health Intelligence Team) advised that these figures be used as guidance, rather than treated as statistically robust, as the numbers involved are very small. Statistical significance was not calculated at this level, as it was felt that it would imply a false level of confidence in this data.

As can be seen in the table above, Whitefield and Unsworth had the highest rates of decayed, missing or filled teeth and early childhood caries.

Children were assigned to Townships based on their residential postcode, rather than the postcode of the nursery or playgroup they attended.

Definitions

Decayed, missing or filled (dmf): This involves visual-only examination for missing teeth (mt), filled teeth (ft) and teeth with obvious dentinal decay (dt). The definition of decay used in this survey is widely accepted in the literature, acknowledging that it provides an underestimate of the true prevalence and severity of disease.

Early Childhood Caries (ECC): Caries affecting any surface of one or more upper primary incisors, regardless of the caries status of any other teeth.

Source

Further information

For general information on dental health and related surveys please see the Dental Public Health Intelligence Programme webpage: http://www.nwph.net/dentalhealth/

If you have any questions about this briefing please contact the Performance & Intelligence team at PI.SDU@bury.gov.uk