Introduction

This is the first national dental survey of this age group in England.

Since 1985 standardised and coordinated surveys of child dental health have been conducted across the UK to enable comparable information for use at local, regional and national levels.

In England these surveys are now part of the Public Health England (PHE) dental public health epidemiology programme, supported by the dental public health epidemiology team (DPHET) and the knowledge and intelligence team North West (KIT NW). The surveys follow UK wide standards set down by the British Association for the Study of Community Dentistry (BASCD).

This report just issued is part of the National Dental Epidemiology Oral Health Survey of three year old children 2013. The information produced from Public Health England survey can be used by Public health when conducting the Oral Health needs assessments; it provides information on the prevalence and severity of decay of 3yr old children attending both private and state funded classes attached to schools and playgroups.

Rochdale
The 2013 survey for Rochdale was conducted as a sample (based on 95 volunteers) and conducted according to a standard protocol of a visual examination for missing teeth (mt), filled teeth (ft), and teeth with obvious dentinal decay (d□t).

Survey of children aged 3: percentage of children who have had decay

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
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<tbody>
<tr>
<td>Rochdale</td>
<td>18.9</td>
</tr>
<tr>
<td>North West Region</td>
<td>14.3</td>
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<td>England</td>
<td>11.7</td>
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Survey of children aged 5: average number of teeth affected by decay

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Rochdale</td>
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</tr>
<tr>
<td>North West Region</td>
<td>0.47</td>
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<td>England</td>
<td>0.36</td>
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The proportion of children with tooth decay within the Rochdale borough is worse than the North West Average however the children identified with dental decay have an average of 0.55 teeth affected.

Among the 19% of three year old children with experience of decay they had, on average, half a tooth with decay.
Across Greater Manchester the levels are reported as:-

Three-year-olds with decayed, missing or filled teeth (%):
- Wigan – 8.5
- Trafford – 9.2
- Stockport – 15.4
- Tameside – 16.8
- Bolton – 17.8
- Bury – 18.4
- **Rochdale – 18.9**
- Salford – 24.8
- Manchester – 25.6
- Oldham – 30.4

Mean Number of teeth affected in 3 yr olds with decay.
- Wigan – 0.16
- Trafford – 0.23
- Stockport – 0.42
- **Rochdale – 0.55** (1/2 a tooth)
- Tameside – 0.55
- Bury – 0.61
- Salford – 0.70
- Bolton – 0.76
- Manchester – 1.06
- Oldham – 1.08

% with early Childhood caries (Bottle decay /Nursing caries) this is an aggressive form of decay that affects upper incisors and can be rapid and extensive in attack.
- Wigan - 2.0
- Trafford 2.0
- Stockport 6.2
- Tameside 5.1
- Bury 5.3
- Salford 5.8
- **Rochdale 5.9**
- Bolton 9.1
- Manchester 12.6
- Oldham 13.8

For the first time data was collected that allowed for investigation into a specific type of caries called early childhood caries, It is important to note that an adjustment was made to this survey to allow accurate calculation of severity and prevalence for this young age group, we cannot assume that missing incisors would be naturally lost as is the case for children that take part in the five-year-old survey. Where such teeth were missing in this case, most would have been extracted because of caries, so it is important that these teeth were included when calculating severity and prevalence.

We have no comparable data for Rochdale, however soft visual anecdotal seems to point to some improvement around bottle decay and nursing caries reported by the Oral Health Promotion unit who routinely work within the local nurseries when supporting the training and delivery of the enhanced fluoride scheme, and also during domiciliary visits for those families who require further ongoing support on a 1:1 basis.
What does the information tell us?

In England, 12% of three-year-old children had experience of obvious dental decay (caries), having one or more teeth that were decayed to dentinal level, extracted or filled because of caries the remaining 88% were free from visually obvious dental decay. Across the regions, estimates ranged from 8% in the East of England to 16% in the East Midlands.

What is clear is that caries experience is already apparent in many children by the age of three, but this does not explain all the variation in disease at age five, at regional level, the results have revealed a wide variation in the prevalence and severity of dental decay, however the trend did not match that of the previous five year old survey where the areas
with poorer oral health tended to be in the north, for example the four regions with highest severity in the 3 year old survey were:-

- East Midlands,
- North West,
- London
- Yorkshire and the Humber.

At lower-tier local authority level there was also wide variation with the highest prevalence of caries experience affecting 34% of children in Leicester and below 2% in many other areas. Further analysis is required to investigate this with a range of factors that could be impacting on the estimates.

The level of decay amongst the 3 year old children is better than those children at the age of 5 years; however we do not currently have any available data to compare trends in 3 year olds.

**Cause**

The cause of tooth decay is related to the frequent exposure of sugary food and drinks/fermentable carbohydrates especially if consumed at regular intervals between meals, this causes a spike in acidity which demineralises the enamel on our teeth and can last from anything between 20 minutes to 2 hours; frequent consumption of sugary food and drinks is also a factor in other public health issues concerning children such as obesity, and also the link to deprivation.

**Control**

To control caries it is the fluoride in toothpaste which is the important element of tooth brushing, as fluoride serves to prevent, control and arrest caries. Higher concentration of fluoride in toothpaste leads to better caries control, we advise 1450 fluoride parts per million in Rochdale this can be used by the whole family to allow for optimum protection and also to restrict sugary foods and drinks to mealtimes, this includes healthy snacks such as fresh juice, smoothies, fruit yoghurts and dried fruit, which all contain extrinsic concentrated sugars.

There is evidence to suggest that the preventive action of tooth brushing can be maximised if the following principles are followed:

- Brushing should start as soon as the first primary tooth erupts.

- Brushing should occur twice daily as a minimum – clean teeth last thing at night before bed and at least one other time each day.

- Children under three years should use no more than a smear of toothpaste (a thin film of paste covering less than three quarters of the brush) and must not be permitted to eat or lick toothpaste from the tube.

- Family fluoride toothpaste (1,350-1,500 parts per million fluoride) is indicated for maximum caries control for all children except those who cannot be prevented from eating toothpaste.

The borough of Rochdale has had a dental public health prevention programme (tooth brushing packs, early years education and parental information) established throughout the
lifetime of the 3-year-old children engaging with the parents from as early as antenatal, followed by partnership working with health visitors, school health practitioners and early years workers within both state registered and private nurseries providing tooth brushing instruction and the Golden Grin award for healthy tooth friendly snacking supporting the Henry programme, further to this a tooth brushing in school programme Time for Smiles continues for years 1 and 2.

- There are currently 17 schools taking part (25%) targeting the priority areas first.
- Currently 21 schools have refused (30%) – (However these schools will be approached again at a later date to engage with the scheme).
- 31 schools remaining

Support and information on weaning, dietary habits and tooth brushing are delivered across the borough to young and old as it is important to remember the impact of family elders when delivering information to families with children.

Oral Health Support continues further for those children and vulnerable adults through the Integrated Healthy Lifestyles Service within the Big Life Group supporting families within the home environment, shelters, and various community groups, the Big Life Group take an holistic approach with an integrated team that includes specialist in areas such as Oral Health, Drugs and Alcohol, Exercise and Nutrition.

Source: The source is the PHE DPH Epidemiology Programme
Positive (active) consent from the parents is required for the survey simple non-response to the request for consent was the most common reason for non-consent.

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