

## 4.1.10 Oral health of Children

### Context

Poor oral health has a number of wider negative impacts on people including pain and discomfort, lost days at school or work, self-consciousness and low self-esteem.

Poor oral health is a disease of poverty, with those experiencing social inequalities having more dental disease and accessing dental services less. Oral health problems include:

- Dental decay.
- Gum disease.
- Oral cancer.
- Facial and dental injuries.
- Dental crowding or displacement treated by orthodontic treatment.

The decayed, missing or filled teeth index (DMFT for adult teeth and dmft for first teeth) is commonly used as a measure of dental health status within a population. It represents the number of decayed and untreated (DT, dt) teeth, missing due to extraction (MT, mt) and filled teeth (FT, ft) in an individual's mouth and the average value for a population. The lower the DMFT / dmft value, the better the dental health of the individual or population.

### National and local targets

Improving the oral health of children is identified as a priority within the NHS Operating Framework 2011/12<sup>1</sup>, as well as in Equity and Excellence: Liberating the NHS (2010)<sup>2</sup> and Healthy Lives, Healthy People – Our Strategy for Public Health in England (2010)<sup>3</sup>.

The “Public Health Outcomes Framework (2013-16)<sup>4</sup>,” Domain 4 (Healthcare Public Health and Preventing Premature Mortality) includes an indicator related to “tooth decay in five year old children” [17]. Local authorities can use this indicator sourced from the Dental Public Health Intelligence Programme to monitor and evaluate children's oral health improvement programmes [17]. The Children and Young People's Health Outcomes Framework (2014)<sup>5</sup> and strategy recommends an integrated and partnership approach is needed to improve health outcomes for children and young people [9] and also includes the “tooth decay in five year old children” indicator. Because of poor oral health of children within Bradford, oral health is a priority in the Health and Wellbeing strategy and is included in the Health & Wellbeing Action Plan.

The following local targets were previously set by NHS Bradford and Airedale Primary Care Trust's Oral Health and Dental Strategy Group in 2009 and an action plan was put in place to deliver process and outcome targets.

#### Outcome Targets:

OHO1	dmft of 5 year olds should be no more than 2 by 2012
OHO2	% of five year olds with dental decay should be no more than 50% by 2012
OHO3	% reduction in dmft of the most deprived 20% of 5 year olds at least as great as that of least deprived 20% of 5 year olds by 2012

There has been significant progress made across the district and in 2012 all three outcome (OHO1, OHO2, and OHO3) targets have been achieved.

### Process Targets 2013/14

OH Imp 1	% of 6-9 month health visitor interviews to involve oral health intervention promoting early tooth brushing	87%
OH Imp 2	Number of children in target age range receiving a fluoride varnish application within previous 24 months	12000
OH Imp 3	% of all schools where 25% or more children take free school meals taking part in evidence based 2 year tooth brushing programme	78%
OH Imp 4	Number of dental practices to be recruited to Health Promoting Practice Award programme Number of HPDPA practices CPD training delivered	35 35
OH Imp 5	% of childcare settings to achieve First Steps to Healthy Teeth award	95%
OH Imp 6	New target Number of children recruited to programme in Islamic Schools, Mosques and Madrasses	1200

An on-going programme of reviewing and refreshing the oral health programmes which come under the 'Bradford and Airedale - Building Brighter Smiles' banner continues. These programmes are based on the principles of proportional universalism and follow a life-course approach and involve families of children from birth to school age. Progress has been made on all oral health key performance indicators and although 2013-2014 targets are challenging we continue to strive to achieve them.

### Relevant strategies and local documents

- Delivering Better Oral Health 2<sup>nd</sup> Edition 2009
- Health Equity Audit of Children and Young People in Bradford District 2009
- Healthy Lives, Healthy People – Our strategy for public health in England 2010
- Children and Young People's Health and Lifestyle Survey 2010
- NHS Equity and Excellence: Liberating the NHS 2010
- Bradford Oral Health Needs Assessment 2012
- National Dental epidemiological programme for England: oral health survey of five-year –old children, 2012. A report on the prevalence and severity of dental decay
- NHS Outcomes Framework 2013/14
- Public Health Outcomes framework 2013 - 16
- Health and Wellbeing Strategy, Health Inequalities Action Plan 2013

### What do the data tell us?

When interpreting data from the 2011/2012 survey <sup>6</sup> and particularly when comparing trend data over time it is important to consider that, following guidance from the Deputy Chief Dental Officer in 2005, the protocol in 2007/2008 required that positive consent was obtained prior to the survey from the child's parent or from someone with the competence to give consent on behalf of the child. In previous surveys, parents were informed about the survey and unless they objected, the children were examined. The methodology used in the 2011/2012 survey was the same as in 2008 therefore it is possible to make comparisons between the two.

The data has been weighted to model the underlying deprivation profile of the population. However, it is possible that the non-responders have different levels of dental decay, over and above that explained by

deprivation alone. Within Bradford and Airedale in the 2011/2012 survey, 52% of those sampled were examined; 63% were examined across the region and 65% nationally.

The 2011/2012 survey shows over the past five years the number of 5 year olds free from tooth decay has increased from 48% in 2007/08 to 54% in 2011/2012 and the average number of teeth affected by tooth decay has reduced from 2.42 in 2007/08 to 1.98 in 2011/2012. However, the proportion of children with dental disease at age 5 years was 46% (52% 2007/08); again this was higher than regional 34% (39% 2007/08) and national 28% (31% 2007/08) figures. Whilst Bradford is one of the worst off areas for dental decay there has been a significant improvement in decay experience since the last survey in 2007/08 it is important to maintain this improvement.

Marked inequalities exist according to socio-economic status and ethnicity, with children and young people residing in the most deprived areas having significantly higher levels of dental disease when compared to those from the least deprived. There is a positive association between increasing deprivation and mean dmft; children in the least deprived (quintile 5) have a mean dmft of 0.74, which is significantly lower than those from the most deprived (quintile 1), who have a mean dmft of 2.67<sup>6</sup>.

### Mean dmft by Deprivation Quintile 2007 and 2012

Deprivation Quintile	Most								Least	
	Quintile 1		Quintile 2		Quintile 3		Quintile 4		Quintile 5	
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Confidence interval (Lower-Upper)	3.03-4.35	2.5-2.8	2.54-3.70	1.2-1.5	1.25-2.27	1.0-1.3	1.17-2.05	0.6-0.8	0.56-1.14	0.6-0.9
Mean dmft	3.69	2.67	3.12	1.36	1.76	1.12	1.61	0.68	0.85	0.74

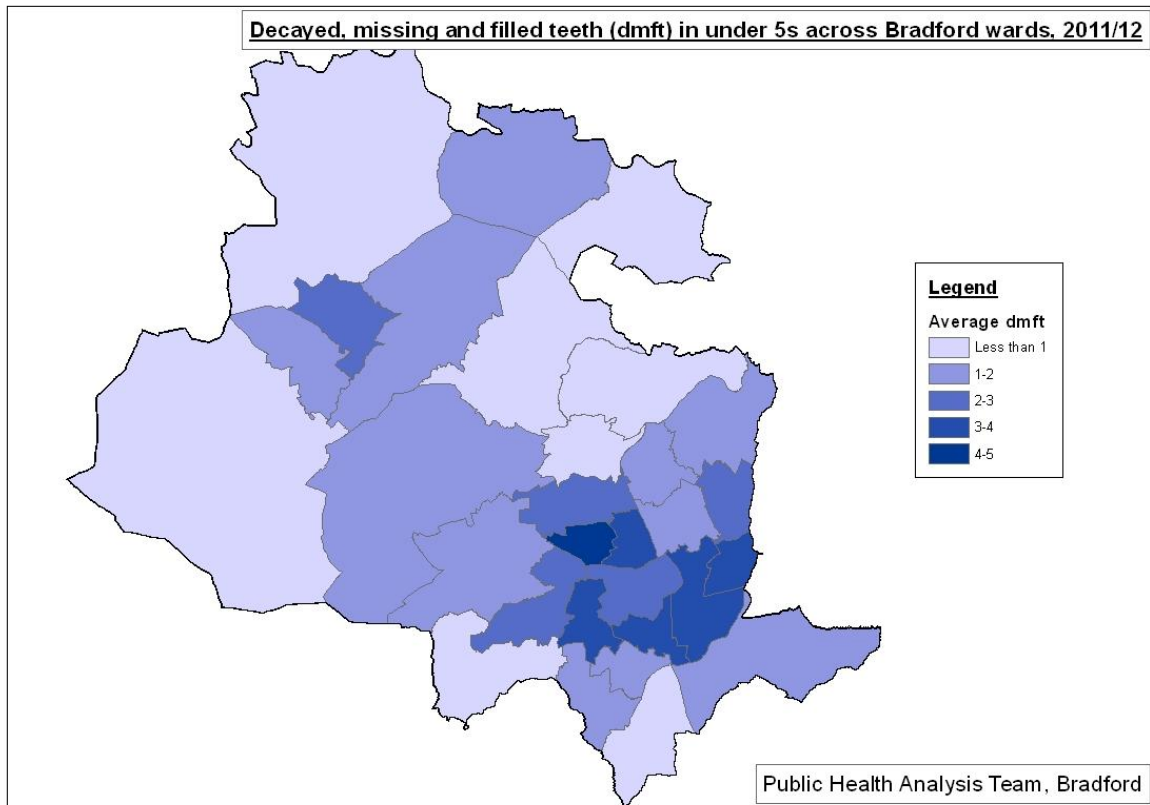
Source: City of Bradford Metropolitan District Council, Public Health Information

South Asian 5 year old children have higher levels of disease than their white peers living in areas of similar socio-economic status.

When the oral health of 5 year olds in 2011/2012 was examined by ward, stark inequalities were demonstrated with areas such as Toller (dmft 4.40) and Bradford Moor (dmft 4.00) and Little Horton (3.73) having significantly higher levels of disease than the average for Bradford and Airedale whilst Baildon (dmft 0.32); Worth Valley (dmft 0.35); and Craven (dmft 0.44); had significantly lower levels of dental disease than the district average.

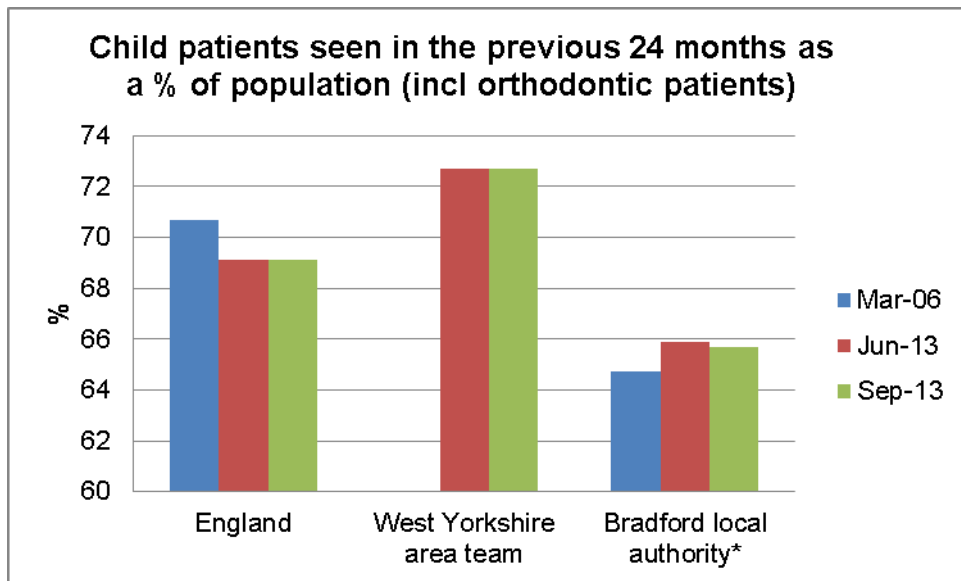
Because of poor oral health, Bradford has had an intensive and proactive approach, investing in improving oral health initiatives such as the community fluoride varnish and fluoride toothpaste and tooth brushing programmes. It is important that these evidence based programmes continue in order to maintain these improvements and address inequalities which have demonstrated significant improvements in oral health in Bradford children in the last four years including those in areas of the most deprived 20% of 5 year olds (most deprived quintile: 2.67 dmft in 2012 from 3.69 dmft in 2007) which shows a significant difference.

**Mean dmft by Ward 2011/12**



Source: Public Health Analysts Team, Bradford

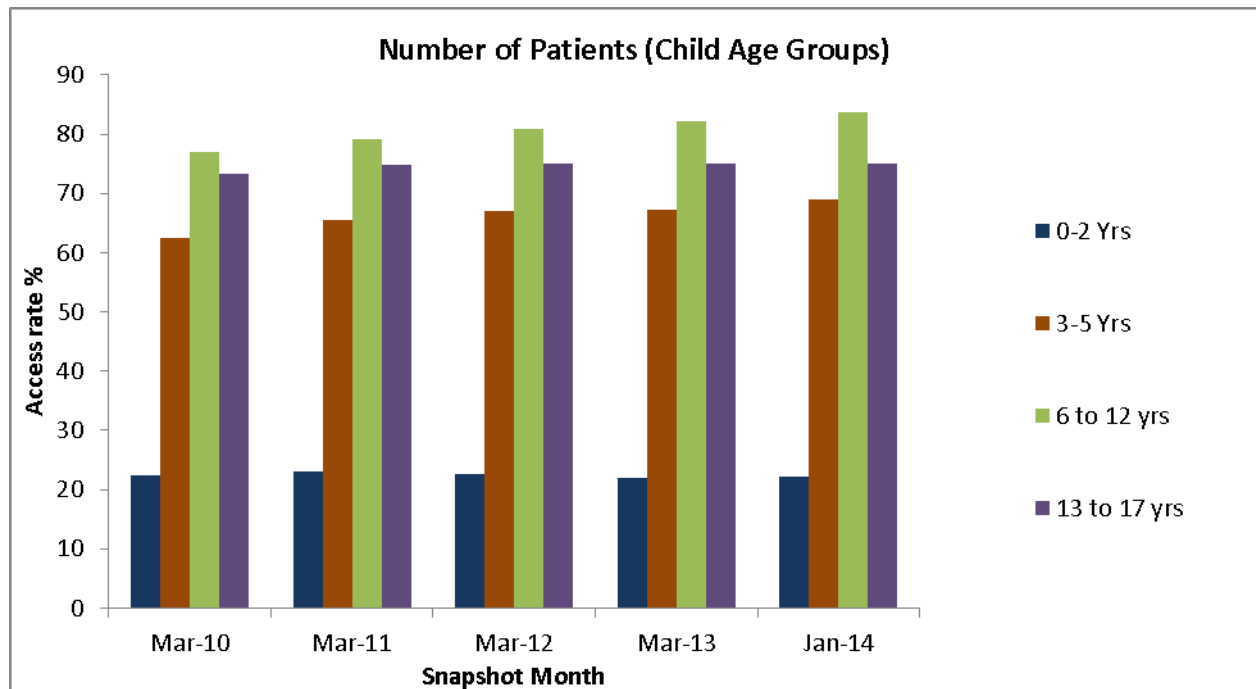
Dental access for children in the district has continued to improve. There has been progress in the proportion of children accessing dental care. In the quarter ending September 2013, 66% of children in Bradford district had attended the dentist in the previous 24 month period. Although this is below the average for England (70%) and below the average for Yorkshire and The Humber (73%) numbers have increased from March 2006.



Health & Social Care Information Centre NHS Dental Statistics for England: 2012/13  
<http://www.hscic.gov.uk/catalogue/PUB11625/nhs-dent-stat-eng-2012-13-anx2.xlsx>

NB: It is not possible to map data prior to 2013/14 to the new Area Teams and Local Authority level.  
 \*March 2006 data relates to Bradford and Airedale PCT data

### Child Patients resident in Bradford Local Authority Access Rate



Source: NHS Business Services Authority

The above chart shows a low level of registrations in 0 to 2 year old children in Bradford district. As these children are not accessing the dentist at this age there will be opportunities missed regarding prevention and advice. It is therefore important that a partnership approach is used in the delivery of oral health initiatives. Oral health programmes as part of an integrated care pathway delivered across the life course is key for example, to establishing access to fluoride through the tooth brushing and fluoride varnish programmes.

### What do our stakeholders tell us?

In the 2010 Health and Lifestyle Survey carried out in Bradford schools, children and young people were asked about access to dental services:

- 75% of pupils surveyed said that they had visited a dentist in the last 6 months.
- Compared with an England sample, young people in Bradford were about as likely to have visited the dentist in the last 6 months.
- On average, pupils brushed their teeth twice on the day preceding the survey.
- About a quarter of primary school pupils and 14% of secondary school pupils said they last went to the dentist because they were having trouble with their teeth, as opposed to having a check-up.
- Young people in the most deprived communities and among South Asian and other groups were more likely than others to have made their last visit to the dentist because they were having trouble with their teeth.

More recently a pilot survey was conducted with children aged of 11-16 at Tong High School (September 2011). Of the 599 questionnaires received from these children 97% had visited a dentist and 83% said their last visit was for a regular check-up.

## Future needs and gaps in provision

- Oral health pathways should be integrated and embedded within child health systems and policy frameworks to develop integrated care pathways to meet the needs of children and families and to utilise the strength of universal services to deliver oral health prevention and early intervention.
- Oral health interventions and programmes are based on **best practice** and evidence of what works. For example, optimising children's exposure to fluoride, such as the application of fluoride to the teeth. This can be achieved by ensuring that children access fluoride varnish application programmes and brushing teeth twice daily with fluoride toothpaste from as soon as the first teeth erupt.
- In Bradford and Airedale, programmes have been commissioned that specifically address the poor oral health of young children. 'Bradford and Airedale Building Brighter Smiles Programme' the success to these programmes depends upon children accessing the various elements of them for example, the fluoride varnish programme.
- Ensure good local partnership working in oral health improvement, for example via the Children and Young People's Partnership; Health and Wellbeing Strategy, Health Inequalities Action Plan and linking to the Yorkshire and Humber Dental Public Health Team.
- The procurement of additional primary care dental services will continue to improve access to care for children. This care is focused on quality and on oral health improvement.
- Involvement of key stakeholders through engagement and consultation.
- Skill mix is utilised and developed.
- Robust information and intelligence is used to plan, develop and evaluate services.
- Integration of oral health within broader Public Health and Children's Services initiatives, following a common risk factor approach; e.g. around obesity, smoking, breastfeeding and weaning; Ensure consistent oral health messages delivered by health professionals and those working with children in children's centres and schools; ensuring training workforce where necessary.

## Summary of priorities

- To reduce oral health inequalities and achieve sustained improvements in oral health for all.
- To adopt a life course, place based approach to oral health improvement and actively engage with children, young people and adults.
- To prioritise oral health improvement of young children.
- To ensure that everyone in Bradford and Airedale who wants access to an NHS dentist can do so.

## References

- <sup>1</sup> The NHS Outcomes Framework 2013/14 (2012) Department of Health  
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<https://www.gov.uk/government/collections/public-health-outcomes-framework>
- <sup>5</sup> Children and Young People's Health Outcomes Framework (2014) Public Health England, Department of Health

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- <sup>6</sup> National Dental Epidemiology programme for England: oral health survey of five-year-old children 2012. A report on the prevalence and severity of dental decay. (2013) Public Health England, Department of Health  
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- <sup>7</sup> Every Child Matters in Bradford District: A report of the Health and Lifestyle Survey for Children and Young People 2009-10, NHS Bradford and Airedale, Education Bradford, Bradford Metropolitan District Council 2010.  
<http://www.bradford.nhs.uk/observatory/Docs/Documents/Every%20Child%20Matters%20Bradford%202010.pdf>