Oral health of 0 - 19 year old children and young adults in Suffolk
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An analysis to support “Local authorities improving oral health: commissioning better oral health for children and young people. An evidence-informed toolkit for local authorities
Public Health England 2014

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# Contents

Summary  
1. Why is children’s oral health important?  
2. Understanding the problems: Nationally  
3. Understanding the problems: Suffolk  
4. Summary  
5. Oral health and other priorities in Suffolk  
6. Priorities to improve oral health outcomes and reduce oral health inequalities  
7. References
Summary

This oral health report has been constructed for consideration alongside the launch of a new Public Health England report, Commissioning Better Oral Health for Children and Young People: Local Authorities’ Public Health Role, an evidence-informed toolkit for local authorities.

It is divided into the following Sections:

1. Why is children’s oral health important?
2. Understanding the problems nationally
3. Understanding the oral health problems in Suffolk
4. Oral health related to other priorities in Suffolk
5. Summary
6. Priorities to improve oral health outcomes for children and reducing oral health inequalities

Why is children’s oral health important?
Tooth decay is the most common oral disease affecting children in England, yet it is largely preventable. Despite substantial general improvements in the oral health of children across the UK, marked inequalities remain, with the major burden of disease falling particularly on children from socially disadvantaged or excluded groups. Good oral health is fundamental to general health and wellbeing, and the consequences of dental decay include: pain, time off school, loss of sleep, reduced nutrition, problems with speech and chewing, self-consciousness and embarrassment.

The role of local authorities in improving the oral health of children and young people
Local authorities are statutorily required to provide or commission oral health promotion programmes to improve the health of the local population, to an extent that they consider appropriate in their areas. They are also required to provide or commission oral health surveys.

Understanding the oral health problems in Suffolk
Oral health in children and young people in Suffolk is generally good. 82% of five year olds are free of dental decay, compared to the national average of 72%. However, population averages can mask oral health inequalities. Whilst oral health in five year old children in Suffolk is better than England averages, local data demonstrate that dental decay prevalence in five year olds is higher than the East of England average in Forest Heath. In terms of acute disease, across England 1.7% of five year old children showed signs of sepsis. The percentage of children...
with obvious abscess/sepsis was more than double the national average in Forest Heath. The implications are serious as such teeth will often require extraction, usually under a general anaesthesia, exposing children to unnecessary risk of complications. This is a serious health issue which can and should be prevented. To reflect this, the proportion of five year old children who had one or more teeth extracted on one or more occasions in Forest Heath was 3.3% compared to an England average of 3.1%. To demonstrate the range, the equivalent figure in Suffolk Coastal was 0.3%.

The pattern for twelve year old children in Suffolk is generally similar to that of the five year olds. In Forest Heath only 65 per cent of twelve year olds are free from dental decay, slightly worse than the England average. The confidence intervals show that for some twelve year olds in St. Edmundsbury and Waveney, the experience of dental decay was also above the national average. Similarly, in terms of severity of dental decay at age twelve, the mean D3MFT in Forest Heath is above the national average (0.74) at 0.78. Finally in terms of disease burden in those twelve year old children who already have decay, both Forest Heath and Suffolk Coastal local authority areas have higher values than the average for England. This reiterates how poor oral health is linked with socio-economic deprivation, as these results indicate that a polarisation in caries experience is occurring with an increasing number of children remaining caries free, and the disease becoming concentrated in a diminishing number of socially deprived children.

**Priorities to improve oral health outcomes for children and reduce oral health inequalities**

Oral diseases are largely preventable; and there is a need to develop interventions to achieve sustained and long-term improvements in oral health and reduce inequalities. Improvements in oral health over the past 30 years have been largely unrelated to clinical treatment. The greatest impact has been made by social, economic and environmental factors, alongside the widespread use of fluoride toothpaste.

In moving forward, priorities in Suffolk include:

- Commissioning specific oral health programmes based on the evidence base and needs of the local population.
- On-going commissioning of dental epidemiological surveys by local authorities as part of their statutory requirements is necessary to monitor oral health and progress against the Public Health Outcomes Framework (2013-16) indicator relating to “tooth decay in five year old children”
- Areas with children with high levels of tooth decay should be identified, and preventive services should be targeted to these locations (eg targeted oral
• Health improvement interventions such as community fluoride varnish schemes and tooth brushing programmes) using the principles of proportionate universalism. This requires a combination of both universal and targeted activities, alongside specialist services.

• Local authorities should work towards improving oral health and reducing oral health inequalities through the commissioning of evidence-based oral and general health promotion programmes. This could involve integrating oral health messages into all health promotion strategies to reduce oral diseases in parallel with other chronic diseases such as obesity, cancers, heart disease and diabetes. The ‘common risk factor’ approach focuses on generic prevention by reducing tobacco and alcohol use, improving diet and hygiene, and minimising stress and trauma.

• Local authorities have a responsibility to engage in the planning and evaluation of local dental services and can therefore influence the culture of health services. They have unique powers around health scrutiny in particular, which enable them to review the planning, provision and operation of health services in their area.

• Health and Wellbeing Boards need to work in partnership with NHS England, Local Dental Professional Networks, and providers, to ensure that both preventative and treatment services meet the needs of the local population.

• Ensuring that the Suffolk JSNA includes a section on the oral health needs of the local population, highlighting inequalities, and identifying the strategic direction of service delivery to meet those needs.
1. Why is children’s oral health important?

Tooth decay is the most common oral disease affecting children and young people in England, yet it is largely preventable (Bernabe 2013). Poor oral health can impact upon a child’s ability to sleep, eat, speak, play and socialise with other children. Other consequences include pain, infections, poor diet, and impaired nutrition and growth (Nuttall 2004).

Oral health is thus a fundamental part of overall health and wellbeing. When children are not healthy, this affects their ability to learn, thrive and develop. In this way, good oral health can contribute to school readiness.

There are associations between oral disease and the other major chronic non-communicable diseases (NCDs), namely diabetes, cardiovascular diseases, cancers, and chronic respiratory diseases. They all share common risk factors including an unhealthy diet, tobacco use, harmful use of alcohol, and physical inactivity. Furthermore, oral disease itself may constitute a risk factor for NCDs.

Untreated tooth decay can lead to young children needing dental treatment under general anaesthesia (GA), which presents a small but real risk of life-threatening complications for children (Royal College of Anaesthetists 2008). Tooth decay was the most common reason for hospital admissions in children aged five to nine years old in 2012/13 (Health and Social Care Information Centre 2013). During this period, 60,272 children under 19 years of age were admitted to hospital for tooth extractions with 50% of cases for children nine years or under (Health and Social Care Information Centre 2013).

What is the role of local authorities in improving the oral health of children, and reducing oral health inequalities?

From 1st April 2013 the statutory responsibility for the commissioning of oral health promotion transferred from the NHS to local authorities. The current dental public health functions of local authorities now include a statutory requirement to assess their local population’s oral health needs, develop oral health strategies and commission or provide oral health improvement programmes (NHS Bodies and Local Authorities 2012). They must also provide or commission oral health surveys as part of the Public Health England Dental Public Health Intelligence Programme (NHS Dental Epidemiology Programme for England 2014).
Local authorities can use these oral health surveys to:
- Assess and monitor oral health needs in their local population
- Plan and evaluate oral health improvement programmes
- Plan and evaluate NHS dental services
- Report and monitor the effects of any local water fluoridation schemes covering their local population

Further guidance, Commissioning Better Oral Health for Children and Young People: Local Authorities’ Public Health Role has just been released (PHE 2014). The National Institute for Health and Care Excellence (NICE) will also be publishing the following public health guidance in October 2014 ‘Oral health: local authority strategies to improve oral health particularly among vulnerable groups.’

Policy drivers, outcomes and indicators

The government made a commitment to oral health and dentistry with a drive to (NHS England 2014; Department of Health 2010):
- Improve the oral health of the population, particularly children
- Introduce a new NHS dental contract based on registration, capitation and quality
- Increase access to primary care dental services

The Public Health Outcomes Framework (2013-16) Domain 4 (Healthcare Public Health and Preventing Premature Mortality) includes an indicator related to “tooth decay in five year old children” (Department of Health 2012). Local authorities can use this indicator sourced from the Dental Public Health Intelligence Programme to monitor and evaluate children’s oral health improvement programmes (Department of Health 2012a).

The Children and Young People’s Health Outcomes Framework (2014) and strategy recommends that an integrated and partnership approach is needed to improve health outcomes for children and young people (Public Health England 2014) and also includes the “tooth decay in five year old children” indicator.

The NHS Outcomes Framework (2013-14) includes indicators related to patients’ experiences of NHS dental services (4aiii) and access to NHS dental services (4.4ii) (Department of Health 2012b).

What advice and support can local authorities access from the dental public health workforce?

The specialist dental public health workforce is now based within Public Health England (PHE) centres. They have a key role to support local authorities to deliver their oral health improvement functions.
Background and context: The NHS Dental Epidemiology Programme (NDEP) and surveys of child dental health

In England, surveys of child dental health have provided information for use at local, regional and national levels. At a national level, the British Association for the Study of Community Dentistry (BASCD) were previously responsible for co-ordinating regular surveys of children's teeth. The successor, NHS Dental Epidemiology Programme, was supported by the Dental Observatory (North West Public Health Observatory), which became part of the Knowledge and Intelligence Directorate of Public Health England in April 2013. The purpose of the surveys is to provide information on the current state of children’s teeth and oral health and to measure changes in oral health over time.

At age 5, children usually have 20 deciduous teeth. Dental caries is a common method of benchmarking dental health. It is measured using the $d_3mft$ index and is a record of the number of decayed ($d_3$), missing (m) and filled (f) teeth (t). By convention, lower case $d_3mft$ is used to denote primary (baby) teeth. Data are usually expressed as $d_3mft$ where a tooth is considered as decayed when there is obvious decay into the dentine of the tooth. The proportion of children with decay experience ($d_3mft>0$) is used as proxy measure for decay prevalence.

In September 2013 the data from the 2011/12 National Dental Epidemiology Programme oral health survey of 5-year-old children were released. The following section summarises the data for lower tier local authorities across Suffolk and reports the prevalence and severity of dental caries in this age group, as well as details of the proportion of children whose teeth have been filled, extracted, and who showed signs of sepsis at the time of the examination.

Analysis is also undertaken of the 2008/09 NHS Dental Epidemiology Programme for England Oral Health Survey of twelve year old children, to provide a similar indicative picture of this age group. This survey records oral health status of the permanent (adult) dentition. Upper case D3MFT is used to denote permanent teeth. It should be noted that twelve year old children living in the Ipswich locality did not participate in this survey because the number examined was too small (less than 30) for a robust estimate.
2. Understanding the problems: Nationally

Prevalence of dental decay at age five

The proportion of the population who have decay experience is used as a proxy for prevalence. Whilst children’s oral health has improved over the past 20 years, across England, almost a third (27.9%) of five year olds still had tooth decay in 2012 (Public Health England 2013). This equates to approximately 177,423 five year olds in England who had some experience of tooth decay with 155,801 of five year olds having one or more untreated decayed tooth (National Dental Epidemiology Programme for England 2013). Across the regions, estimates ranged from 21.2% in the South East to 34.8% in the North West (Figure 1).

Figure 1: Percentage of five year old children with decay experience (d3mft > 0) in England by region (National Dental Epidemiology Programme for England: oral health survey of five year old children 2012)

Error bars represent 95% confidence limits

Prevalence of dental decay at age twelve

At a national level 33.4% of pupils were found to have experience of caries, having one or more teeth which were decayed to dentinal level, extracted or filled because of caries. In the East of England, this equivalent figure was 28.0%. Figure 2 shows the differences across the country at strategic health authority (SHA) level.
Figure 2: Percentage of twelve year old children with decay experience (D3MFT > 0) by Strategic Health Authority (NHS Dental Epidemiology Programme for England Oral Health Survey of twelve year old children 2008/2009)

Error bars represent 95% confidence limits
3. Understanding the problems: Suffolk

Prevalence of dental decay at age five in Suffolk

Population averages can mask oral health inequalities. Oral health in five year old children in Suffolk is better than England averages, but 18.4% of this age group was still experiencing tooth decay in 2012.

Figure 3: Percentage of five year old children with decay experience (d3mft>0) by Upper Tier Local Authority Area (National Dental Epidemiology Programme for England 2013)

Local data demonstrate that the prevalence of dental decay in 5 year olds ranged from 24.4% in Forest Heath to 13.7% in Babergh. The 95% confidence limits provide the upper and lower range between which we are 95% confident the true value is contained and shown as error bars. Dental decay prevalence is higher than the East of England average in Forest Heath.
Figure 4: Percentage of five year old children with decay experience (d3mft>0) by Lower Tier Local Authority Area (National Dental Epidemiology Programme for England 2013)
Prevalence of dental decay at age twelve in Suffolk

33.4% of twelve year old pupils nationally were found to have experience of caries by having one or more D3MFT. Local data demonstrate that the prevalence of dental decay in twelve year olds ranged from 34.1% in Forest Heath to 18.5% in Suffolk Coastal. Forest Heath is above the national average with 34.1% experiencing D3MFT and the confidence intervals show that for some twelve year olds in St. Edmundsbury and Waveney, the experience of dental decay was also above the national average.

Figure 5: Percentage of twelve year old children with decay experience (D3MFT>0) by Lower Tier Local Authority Area (National Dental Epidemiology Programme for England twelve year old Survey 2008/09)
Deprivation and oral health

People living in deprived communities consistently have poorer oral health than people living in richer communities (Marmot and Bell 2011). Figure 6 below shows the relationship between levels of deprivation (IMD 2010) against dental decay prevalence in five year olds. Generally, the higher the deprivation the more decay the children are experiencing.

Figure 6: Level of deprivation (PHE 2014) and decay prevalence in five year old children (2011/12) by lower tier local authority (National Dental Epidemiology Programme for England 2013)

- **Level of deprivation (IMD 2010)**
- **Percentage of five year old children with decay experience (2011/12) (d3mft>0)**
Figure 7 below shows the relationship between levels of deprivation (IMD 2010) against dental decay prevalence in twelve year olds. This demonstrates a similar trend, the higher the deprivation the more decay children are experiencing.

Figure 7: Level of deprivation (PHE 2014) and decay prevalence in twelve year old children (2007/8) by lower tier local authority

- **Level of deprivation (IMD 2010)**
- **Percentage of twelve year old children with decay experience (2007/08) (D3MFT>0)**

![Graph showing the relationship between IMD score and dental decay prevalence across different local authorities in Suffolk.](image)
Severity of dental decay at age five

Average number of teeth per child affected by decay

In England, the average number of teeth per child affected by decay (decayed, missing or filled teeth (d₃mft)) was 0.94. The mean d₃mft ranged from 1.38 in Norwich to 0.57 in Waveney (Figure 8). The data show that the mean d₃mft in Forest Heath is slightly higher than the England mean.

**Figure 8: Mean d₃mft by lower tier local authority area (2011/12) (National Dental Epidemiology Programme for England 2013)**
Severity of dental decay at age twelve

Average number of teeth per child affected by decay

In England, the average number of teeth per child affected by decay at age twelve was 0.74. On average, oral health in Suffolk in the twelve year old population is better than the England average, and in some places better than the average for the East of England. The mean D3MFT ranged from 0.78 in Forest Heath to 0.45 in Mid Suffolk (Figure 9). Although Forest Heath is above the national average at 0.78, Mid Suffolk is considerably lower with an average DMFT of 0.45. The confidence intervals show that some twelve year olds living in St Edmundsbury, Suffolk Coastal and Waveney are also experiencing dental decay above the national average.

Figure 9: Mean D3MFT by lower tier local authority area (2007/08) (National Dental Epidemiology Programme for England twelve year old survey 2008/09)

Disease burden in those five year old children who have decay

The average d3mft for the whole sampled population can be compared over time and is an important statistical indicator; however, it does not clearly identify the disease burden in those children who already have decay.

A greater understanding about the extent of disease in the mouths of children affected can be obtained by calculating the average number of decayed, missing or filled teeth in this group with decay. This is referred to as d3mft>0.
A child aged five normally has 20 primary teeth. In England for those children with decay experience, the average number of decayed, missing (due to decay) or filled teeth is 3.38. Figure 10 shows that two local authority areas have higher values than this. These are Forest Heath and Suffolk Coastal.

**Figure 10: Average number of dentinically decayed, missing (due to decay) and filled teeth (d3mft) among five year old children with decay experience (d3mft>0) (National Dental Epidemiology Programme for England 2013)**

![Graph showing average number of decayed, missing, and filled teeth among five-year-old children with decay experience in various local authorities in England. The average for England is 3.38, with Forest Heath and Suffolk Coastal having higher values of 3.91 and 3.80, respectively.](image-url)
Disease burden in those twelve year old children who have decay

The trend is similar in twelve year olds, where Forest Heath and Suffolk Coastal local authority areas have higher values than the average for England. This reiterates how poor oral health is linked with socio-economic deprivation, as these results indicate that a polarisation in caries experience is occurring with an increasing number of children remaining caries free, and the disease becoming concentrated in a diminishing number of socially deprived children.

**Figure 11:** Average number of dentinelly decayed, missing (due to decay) and filled teeth (D3MFT) among twelve year old children with decay experience (D3MFT>0) (National Dental Epidemiology Programme for England twelve year old Survey 2008/09)

Dental treatment received by five year olds

**The care index**

The care index is the proportion of teeth with caries that have been filled. It gives an indication of the restorative care received by children with decay, by dentists. It is derived by taking the number of filled teeth and dividing by the total number of dentinelly decayed, missing and filled teeth and converting to a percentage (ft/d3mft). In using this care index data, care should be taken in making assumptions about the extent or the quality of clinical care available. The higher the care index the more fillings have been undertaken. Figure 12 shows that the care index was 11.2% across England as a whole showing that just over a tenth of decayed teeth are treated by filling them. This index
Oral health of 5 year old children in Suffolk
July 2014

varied between 23.1% in Babergh, to 5% in Suffolk Coastal. The values for St Edmundsbury, Waveney, and Suffolk Coastal all lie below the national average. This suggests that children in these areas are not gaining the appropriate access and/or dental treatment that is required.

**Figure 12: Care index among five year old children by Lower Tier Local Authority Area (National Dental Epidemiology Programme for England 2013)**

Children with sepsis at the time of the examination

Among five year olds nearly all sepsis will be the result of the dental decay process rather than originating from gum problems. Sepsis was defined in the protocol as the presence of a dental abscess or sinus recorded by visual examination of the soft tissues. Untreated caries can give rise to infection of the tooth pulp, which can spread to the supporting tissues and the jaws, culminating in advanced disease conditions that are often painful. The impact of such acute conditions are substantial, and research suggests that poor oral health in children is associated with being underweight and a failure to thrive (Sheiham 2006).

Across England 1.7% of five year old children showed signs of sepsis (Figure 13). The percentage of children with obvious abscess/sepsis was more than double the national average in Forest Heath. The implications are serious as such teeth will often require extraction, usually under a general anaesthesia, exposing children to unnecessary risk of complications. This is a serious health issue which can, and should be prevented.
Figure 13: Percentage of five year old children with evidence of sepsis (National Dental Epidemiology Programme for England 2013)
Dental treatment received by twelve olds

The care index

The care index trends are similar in twelve year olds. The care index for twelve year olds living in Suffolk Coastal is below the national average indicating that children in this locality are not gaining the appropriate access and/or dental treatment that is required.

Figure 14: Care index among five year old children by Lower Tier Local Authority Area (National Dental Epidemiology Programme for England twelve year old Survey 2008/09)
Dental extractions due to decay

The care index alone can only give a limited picture of treatment as it is dependent on access to care. The care index is a measure of restoration of teeth. Where multiple teeth are decayed in 5 year olds, extraction of teeth may be required (possibly under general anaesthetic). The proportion of 5 year old children who had one or more teeth extracted, on one or more occasions across England was 3.1% (Figure 15). These proportions varied between 3.3% in Forest Heath to 0.3% in Suffolk Coastal.

Figure 15: Percentage of five year old children with one or more teeth extracted due to dental decay (%Mt >0) (National Dental Epidemiology Programme for England 2013)
Data have also been extrapolated from the Hospital Episode Statistics (HES) dataset which records inpatient care from National Health Service (NHS) hospitals across England. This database provides details about admission of children (0-19 years) to hospital for extraction of one or more decayed primary or permanent teeth. It should be noted that in 2012/13, 472 children in Suffolk (aged between 0 and 19 years) had teeth extracted under general anaesthetic due to dental decay. Such procedures expose children to small, but significant risks of life-threatening complications (Royal College of Anaesthetists 2008) for an essentially, entirely preventable, disease.

Figure 16 shows the variation in hospital admissions for dental extractions by government office region. This variation reflects a combination of differing levels of dental disease, local service provision and data collection but may not capture all dental extractions including extractions carried out by community dental services on a sessional basis. This probably means that these figures are an underestimation.

**Figure 16: Number of children admitted to hospital for extraction of decayed teeth in 2012 - 13, by Government Office Region (National Dental Epidemiology Programme for England 2014)**
Trends in five year olds: Comparisons with the previous 2007/08 survey

The 2008 and 2012 surveys were methodologically consistent with the same positive consent requirement and weighting applied. It is therefore possible to directly compare the results from these surveys. The response rates were similar in both years at 66.8% in 2008 and 65.2% in 2012. It is possible that there is still some bias and in making comparisons reference should be made to the response levels, particularly when the sample sizes are small.

Comparison of percentage of children with decay (2007/8-2011/12)

In the majority of local authorities the percentage of five year old children with decay experience has decreased when data between the two surveys is compared. However, a small increase is evident is Waveney (19.2% to 21.9%).

Figure 17: Percentage of 5 year old children with decay experience (% d3mft > 0) (National Dental Epidemiology Programme 2013)

Trends in young adults in Suffolk

Local data on the oral health of young adults in Suffolk is not available. However the 2009 Adult Dental Health Survey reported that nationally a quarter of all young adults (aged 16-24 years) had no fillings. The mean DMFT of 16-24 year olds was 0.9 and seventy per cent were caries free. Of those where the DMFT was >0 the average DMFT was 2.9 in the 16-24 year old age group.
4. Summary

Recent oral health surveys have shown that the dental health of children and young people has improved significantly in recent years. Oral health in children and young people in Suffolk is generally good. 82% of five year olds are free of dental decay, compared to the national average of 72%. However, population averages can mask oral health inequalities. A well recognised association exists between socioeconomic status and oral health, and research suggests that oral diseases are increasingly concentrated in the lower income and more excluded groups. Whilst oral health in five year old children in Suffolk is better than England averages, local data demonstrate that dental decay prevalence in five year olds is higher than the East of England average in Forest Heath. In terms of acute disease, across England 1.7% of five year old children showed signs of sepsis. Untreated caries can give rise to infection of the tooth pulp, which can spread to the supporting tissues and the jaws, culminating in advanced disease conditions. The percentage of children with obvious abscess/sepsis was more than double the national average in Forest Heath. The implications are serious as such teeth will often require extraction, usually under a general anaesthesia, exposing children to unnecessary risk of complications. This is a serious health issue which can and should be prevented. To reflect this, the proportion of five year old children who had one or more teeth extracted on one or more occasions in Forest Heath was 3.3% in Forest Heath, compared to an England average of 3.1%. To demonstrate the range, the equivalent figure in Suffolk Coastal was 0.3%.

The pattern for twelve year old children in Suffolk is generally similar to that of the five year olds. In Forest Heath only 65 per cent of twelve year olds are free from dental decay, slightly worse than the England average. The confidence intervals show that for some twelve year olds in St. Edmundsbury and Waveney, the experience of dental decay was also above the national average. Similarly, in terms of severity of dental decay at age twelve, the mean D3MFT in Forest Heath is above the national average (0.74) at 0.78. Finally in terms of disease burden in those twelve year old children who already have decay, both Forest Heath and Suffolk Coastal local authority areas have higher values than the average for England. This reiterates how poor oral health is linked with socio-economic deprivation, as these results indicate that a polarisation in caries experience is occurring with an increasing number of children remaining caries free, and the disease becoming concentrated in a diminishing number of socially deprived children.
5. Oral health and other priorities in Suffolk

Applying the concept of proportionate universalism to oral health improvement for children and young people means that a combination of universal and targeted activities is required alongside specialist services. A variety of opportunities exist to integrate oral health improvement into existing programmes, services and public policies. This section relates oral health to other possible priorities in Suffolk.

Health visiting and Family nurse partnership

Implementing “Making Every Contact Count” (De Normanville, Payne et al 2011) gives all child care professionals a responsibility to provide brief advice to improve children’s overall health and well-being. The children’s workforce can be supported through training and development to deliver appropriate evidence informed brief advice across the life course. There are thus a range of potential opportunities through which oral health may be integrated within currently commissioned programmes.

Examples of opportunities to integrate oral health improvement into health programmes and public policies include at:

- Healthy Child Programme Universal child development checks by Health Visitors (LA responsibility from 2015)
- Family nurse partnership programme (LA responsibility from 2015)

Examples of opportunities of what local government could do to integrate oral health improvement into health programmes and public policies include:

- Inclusion of oral health advice in the Personal Child Health Record “red book” and in the family nurse partnership programme
- Brief oral health interventions with key messages mediated through Health Visitor teams and the family nurse partnership programme

Maternity (antenatal): Pregnancy and oral health

Increased attention to oral health is essential during pregnancy, as all infections, including gum disease, pose a risk to the health of the baby. Of particular concern is the potential of an increased risk of adverse birth outcomes, including preterm birth, low birthweight, and pre-eclampsia in women with periodontitis (Chambrone et al 2011a; Chambrone et al 2011b; Xiong et al 2006).

Pregnancy is a time when women may be most receptive to changing health behaviours, such as smoking reduction or cessation, and receiving preventive dental care. Dental care is free during pregnancy, and until one year after the due date (NHS
Midwives also routinely recommend dental check-ups as part of antenatal care.

Alongside this, there is good evidence to suggest that targeted community-based early-intervention preventive programs can be successful in preventing oral disease and promoting health for not only expectant and/or new mothers, but also their babies and young children (Kilpatrick et al 2009; Douglass, Li and Tinanoff 2008; Twetman 2008). The Marmot Review (2010) and the Public Health White Paper “Healthy lives, healthy people” (Department of Health 2010) highlighted the importance of interventions in early life in improving health and reducing avoidable health inequalities across the life course. This life course approach acknowledges that biological and social experiences throughout life have an impact on long-term health and wellbeing. The early years of a child’s life are thus critical to their future life chances as positive and negative effects accumulate through life. Adopting the life course approach allows the close links between early disadvantage and poor outcomes throughout life to be broken. It is likely that primary care practitioners, including doctors, dentists, nurses, midwives and health visitors do not fully address the importance of oral care during pregnancy during the antenatal period.

Opportunities to integrate oral health improvement into health programmes and public policies at an early stage could include:

- Incorporating educational oral health programmes into ante-natal classes, and ensuring that infant feeding strategies (whether bottle or breastfeeding) are consistent with oral health information
- Using anticipatory guidance and motivational interviewing in maternal child health visits to reinforce the need to continue good oral health practices. This is a good opportunity for nurses to address appropriate preventive care, and any necessary dental care in preparation for overall optimal health in subsequent pregnancies. An oral health component could also be included in home visits for high-risk families
- Ensuring patient-empowerment and self-education through the provision of evidence based and relevant information on oral health, and how to access dental services. The importance of all healthcare professionals delivering the same messages is paramount here.
- Maximising the use of existing data capturing and surveillance mechanisms. For example, midwives routinely record if a pregnant woman has attended a recent dental check-up, but this data is not collated, nor published. This information could be used to identify high-risk groups, and to implement a follow-up mechanism for non-attenders.
Safeguarding

Working Together to Safeguard Children is everyone’s responsibility (HM Government 2013). Poor oral health may be indicative of dental neglect and wider safeguarding issues. Dental neglect is defined as ‘the persistent failure to meet a child’s basic oral health needs, likely to result in the serious impairment of a child’s oral or general health or development’ (Harris, Balmer, and Sidebotham 2009). Signs include visible tooth decay, untreated trauma and multiple hospital admissions for dental care. Paediatricians now acknowledge that dental neglect is an important child protection issue (Royal College of Paediatrics and Child Health 2013). NICE guidance (2009) recommends that providers suspect neglect ‘if parents or carers have access to but persistently fail to obtain NHS treatment for their child’s dental caries (tooth decay)’. Using the concept of “Making Every Contact Count”, all staff across healthcare, social care and education should have sufficient knowledge and understanding to recognise signs of poor oral health and neglect and take appropriate action (De Normanville, Payne et al 2011). Dental teams can thus contribute to a multi-agency approach to safeguard children and guidance is available to support this role.

Improving the oral health outcomes for vulnerable children and young people

Certain groups of children and young people are at risk of poor oral health outcomes. These include children and families with identified needs who require specialist interventions (eg. Troubled Families; Looked after Children; children subject to child protection plans; young carers; teenage mothers; individuals in the Youth Offending Service; individuals in the Not in Education, Employment and Training programme; and children in inpatient settings: acute hospitals: specialist and Child and Adolescent Mental Health Services (CAMHS). The Marmot Review (2010) recommended adopting the approach of proportionate universalism when developing strategies to improve health and reduce inequalities. Applying the concept of proportionate universalism to oral health improvement for children and young people means that a combination of universal and targeted activities is required alongside specialist services. Everyone should receive some support through universal interventions, while children and young people that are particularly vulnerable should receive additional interventions and support. A variety of opportunities exist to integrate oral health improvement into existing programmes, services and public policies which specifically target these groups.

Obesity

Oral diseases share the same determinants and risk factors as the main non-communicable diseases, and for this reason there is now increasing acceptance that oral diseases cannot be dealt with in isolation from other systemic diseases. For example, the contributory factors for dental decay (frequent consumption of refined
Sugars) are shared by other public health concerns in children, such as obesity. The most effective and efficient method of promoting oral health is to integrate oral health with generic health promotion using the common risk factor approach.

Development (Education)

Oral health is an integral part of overall health and when children are not healthy, this affects their ability to learn, thrive and develop. Good oral health can contribute to “school readiness”. To benefit fully from education, children need to enter school ready to learn, to be healthy and prepared emotionally, behaviourally and socially (PHE 2014). School readiness ensures that all children are able to participate fully in all school activities in order to be successful at school. Oral health is therefore an important aspect of overall health status, and crucial to children’s school readiness.

Transition to School nurses

School nurses are the single biggest workforce specifically trained and skilled to deliver public health for school-aged children (5-19). They are in a unique position within community and education settings, supporting multi-disciplinary teams, with relationships within both primary and secondary care. A dental element has recently been included in the National School Nursing Guidance to support the commissioning of public health provision for school aged children 5-19 (Department of Health 2014), which describes a responsibility to contribute to a reduction in dental decay and promote oral health through: brief Interventions; encouraging registration with a dentist and inclusion within a whole school approach to healthy eating within targeted schools.

The link to Primary Care

Local dental practices are vital in improving oral health for their patients through the implementation of the Public Health England document “Delivering Better Oral Health - a guide to practice based prevention” (2014). The NHS dental contract is currently subject to review and new models are being piloted. These new contractual arrangements will provide dental teams with the responsibility for improving the health of their practice population. There is also the additional drive to develop the relationship between dental practices and their communities. Alongside this, there are a range of providers delivering specific oral health improvement programmes (e.g community dental services, and general dental practices) and oral health improvement programmes that are integrated within local authority commissioned programmes for children and young people (e.g. school health and children’s centres).
6. Priorities to improve oral health outcomes for children and reduce oral health inequalities

Oral diseases are largely preventable; and there is a need to develop interventions to achieve sustained and long-term improvements in oral health and reduce inequalities. Improvements in oral health over the past 30 years have been largely unrelated to clinical treatment (Watt and Sheiham 2012). The greatest impact has been made by social, economic and environmental factors alongside the widespread use of fluoride toothpaste. There is potential for further decline by reducing sugar consumption, and appropriate exposure to fluorides and fissure sealants. In moving forward, priorities include:

- On-going commissioning of dental epidemiological surveys by local authorities as part of their statutory requirements is necessary to monitor oral health and progress against the PHOF indicator
- Priorities should continue to be driven by knowledge of local populations and careful assessment of needs and evidence-based practice
- Areas with children with high levels of tooth decay should be identified, and preventive services should be targeted to these locations (eg targeted oral health improvement interventions such as community fluoride varnish schemes and tooth brushing programmes) using the principles of proportionate universalism (Marmot Review 2010). This requires a combination of both universal and targeted activities, alongside specialist services.
- Local authorities should work towards improving oral health and reducing oral health inequalities through the commissioning of evidence-based oral and general health promotion programmes
- Local authorities have a responsibility to engage in the planning and evaluation of local dental services and can therefore influence the culture of health services. They have unique powers around health scrutiny in particular, which enable them to review the planning, provision and operation of health services in their area
- Health and Wellbeing Boards need to work in partnership with NHS England, Local Dental Professional Networks, and providers, to ensure that both preventative and treatment services meet the needs of the local population
- Ensuring that the Suffolk JSNA includes a section on the oral health needs of the local population, highlighting inequalities, and identifying the strategic direction of service delivery to meet those needs.
- Integrating oral health messages into all health promotion strategies to reduce oral diseases in parallel with other chronic diseases such as obesity, cancers, heart disease and diabetes. The ‘common risk factor’ approach focuses on generic
prevention by reducing tobacco and alcohol use, improving diet and hygiene, and minimising stress and trauma.
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