Children and Young People's Oral Health

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Executive summary

Introduction

Oral health is an important part of general health and wellbeing and should not be considered in isolation. Whilst there have been welcome improvements in the oral health of children in England, significant inequalities remain. Oral disease can have detrimental effects on an individual's physical and psychological well-being and reduces quality of life.

The World Health Organisation defines oral health as 'a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing. The mouth is affected by diseases such as dental caries and periodontal disease and other conditions such as trauma, mouth cancer and developmental abnormalities, all of which can have an adverse effect on an individual's well-being' (WHO, 2012).

As well as causing pain or infection, poor oral health can be associated with low weight and failure to thrive in infancy. The impacts are not only limited to the individual but also the family and society, including school absence, and the need for parents to take time off work to attend hospital appointments related to dental decay. Good oral health can therefore contribute to school readiness.

Risk factors for oral diseases include poor diet, particularly one high in quantity and frequency of sugar consumption, poor oral hygiene, tobacco use and harmful alcohol use. These are also risk factors for the four leading chronic diseases – cardiovascular diseases, cancer, chronic respiratory diseases and diabetes – and oral diseases are often linked to chronic disease.

The most common oral disease in children is dental caries. Prevalence of gum (periodontal) disease is low in children and oral cancers are considered to be rare in children (Cancer Research UK 2016) .

The prevalence of oral disease varies by geographical region. In Nottingham, the proportion of five-year-olds free from dental decay was 64.4% (England - 75.2%) (Public Health England 2016b).There is also a social gradient in relation to experience of dental caries, which in both children and adults is higher among poor and disadvantaged population groups.

The burden of oral diseases and other chronic diseases can be decreased simultaneously by addressing common risk factors (Public health England 2016b).

Good oral health can be promoted by:

- increased access to and use of fluoride
- reducing the frequency and quantity of sugar consumed;
- encouraging effective daily oral hygiene
- seeking regular dental care
- preventing tobacco use and decreasing alcohol consumption in the adolescent years, to reduce the risk of oral cancers, periodontal disease and tooth loss in adulthood

Access to good quality dental services is essential not only to treat dental disease but also to promote preventive care. Even when there is good availability of dental services the uptake of these services is lower amongst those living in deprived areas, those on low incomes and with lower levels of educational attainment.

Unmet need and gaps

- The proportion of children (under 18 years), and particularly very young children living in Nottingham and accessing dental services is low compared to the Midlands and England
- There is anecdotal evidence that first dental attendance is frequently symptomatic and not preventive.
- Although the rate of fluoride varnish application for children in the City is good, there is considerable room for improvement to ensure universal access to two applications per year for each child.
- There is a belief amongst the population that access to dental services is poor. This together with poor rates of patient satisfaction with NHS Dental Services and the reasons for this dissatisfaction are unclear and warrant further investigation.
- Making Every Contact Count is an important approach to ensuring oral health messages are delivered at every opportunity. However, local evidence collected from front line workers would suggest that this is not happening systematically and more work needs to be done to embed this approach across the workforce.

Recommendations for consideration by commissioners

1. As responsibility for commissioning for oral health is shared between local authorities and NHS England, commissioners should work together collaboratively, with support from PHE and other stakeholders to improve the oral health of the population of Nottingham.

2. Ensure that opportunities to 'Make Every Contact Count' with children, young people and their families are maximised by collaborative working across health, social care and education, which is underpinned by co-ordinated training to ensure delivery of consistent evidence based oral health promoting messages.

3. Consider continued commissioning of a supervised tooth brushing programme for nurseries/primary schools with possible expansion of the service to further early-years settings, taking in to account current financial pressures and budget cuts.

4. Explore the feasibility of a water fluoridation scheme as one of a range of interventions to improve oral health in Nottingham City.

5. Give consideration to commissioning a targeted fluoride varnish application programme, drawing on the experience of other programmes and previous local experience.

6. Explore appropriate incentives to encourage dental services to contribute to both oral health and wider health and well-being by shifting their focus from being primarily treatment focussed to a preventive focus.

7. Explore the development of an accreditation programme for local NHS dental practices to encourage provision of child-friendly preventive focussed services.

8. Encourage parents in the City to attend a dental practice with their child before their first birthday, followed by regular visits to help children familiarise well with the environment and maintain good oral health.

9. Through their commissioning decisions commissioners should ensure equitable access to NHS dental services within reasonable travel time for every citizen in the City. This should include access to urgent care and out of hour's dental services.

10. Ensure that information about how to access NHS Dentistry is easily available to all sectors of the community, including new residents, through a wide range of agencies.

11. Explore the perception of lack of access to NHS Dental Services and the reasons for the poor level of patient satisfaction reported by City residents, then using this information to support future commissioning decisions.

12. Develop commissioning of consultant led paediatric dental services, care pathways and managed clinical network based on the NHS England Paediatric Dentistry Commissioning guidance (NHSE, in draft).

13. Develop local pathways and protocols to ensure appropriate information sharing occurs between agencies involved in the care of children and young people, including dental practices, to identify children for whom dental neglect may be part of wider neglect / child protection concerns.

14. Review current protocols and procedures for ensuring that all looked after children who are the responsibility of the local authority have access to appropriate dental care.

15. Where resources dictate that programmes or services need to be targeted the focus should be on the provision of services for children and young people and families especially those living in local areas that are the most deprived.

16. Ensure access to appropriate resources to support promotion of good oral health and access to services. This should include working collaboratively with the population groups themselves and services they are in contact with together with interpretation and translation Services. This may include the translation of oral health promotion materials for non-English speaking parents/careers, but may also include the provision of pictorial resources.

17. Encourage the use of protective sports equipment, for example gum shields, and safe physical environments where children play to reduce the risk of dental injuries.

18. Encourage the prescription of sugar free medicines for children and those with special needs who are at higher risk of dental caries (decay).

What do we know?

1) Who is at risk and why?

Oral health is an important part of general health and wellbeing and should not be considered in isolation. Whilst there have been welcome improvements in the oral health of children in England, significant inequalities remain. Oral disease can have detrimental effects on an individual's physical and psychological well-being and reduces quality of life (Figure 1).

The World Health Organisation defines oral health as 'a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing. The mouth is affected by diseases such as dental caries and periodontal disease and other conditions such as trauma, mouth cancer and developmental abnormalities, all of which can have an adverse effect on an individual's well-being' (WHO, 2012).

As well as causing pain or infection, poor oral health can be associated with low weight and failure to thrive in infancy. The impacts are not only limited to the individual but also the family and society, including school absence, and the need for parents to take time off work to attend dental appointments. Good oral health can therefore contribute to school readiness.

Risk factors for oral diseases include poor diet, particularly diets high in quantity and frequency of sugar consumption, poor oral hygiene, tobacco use and harmful alcohol use. These are also risk factors for the four leading chronic diseases – cardiovascular diseases, cancer, chronic respiratory diseases and diabetes – and oral diseases can be associated with chronic disease.

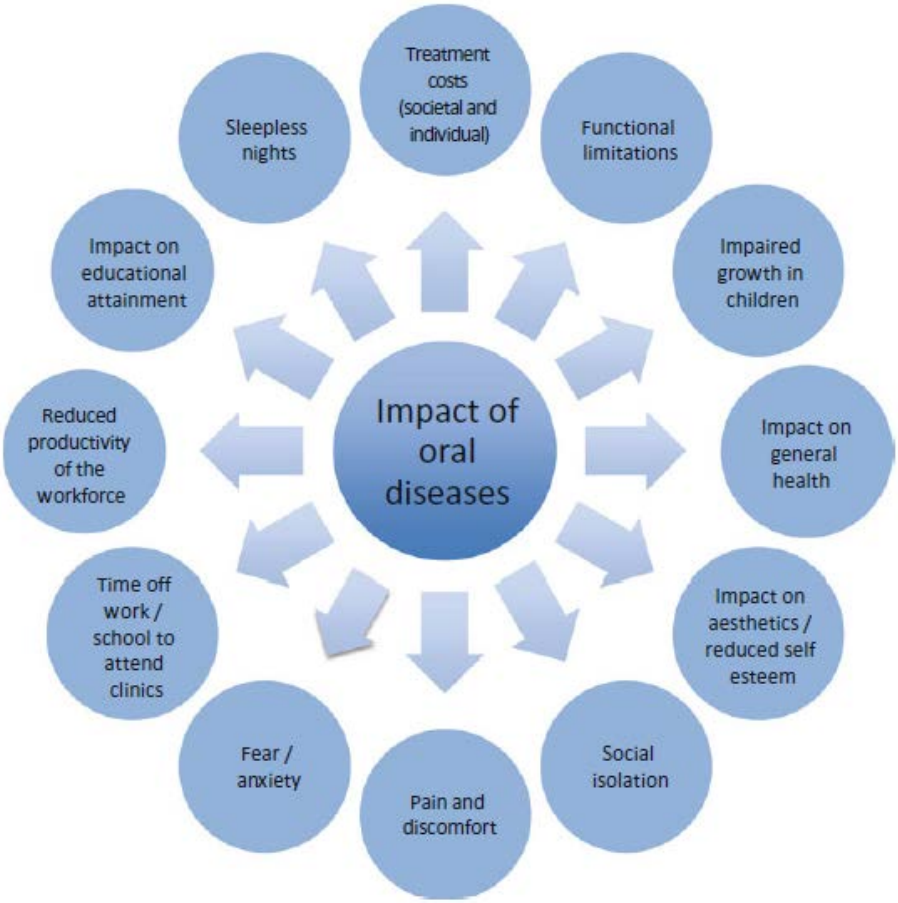


Figure 1 The impact of untreated oral diseases

Adapted from (Daly et al. 2013)

Oral Disease

The mouth is affected by diseases such as dental caries and periodontal (gum) disease and other conditions, such as trauma, mouth cancer and developmental abnormalities, all of which can have an adverse effect on an individual's wellbeing.

Dental Caries (Tooth Decay)

Dental caries is the most common disease of the dental tissues and affects the majority of the population. It is caused by bacteria in the mouth utilizing sugars in the diet as a source of food and producing acids as a by-product. The acids dissolve away the tooth substance leading to dental decay, abscess formation and eventually tooth loss. A diet rich in sugars which are consumed frequently throughout the day provides a favourable environment for the development of dental caries and eventual tooth loss. Very young children often have no alternative but to undergo a general anaesthetic to have multiple diseased teeth removed. There is substantial evidence to show that people from socially deprived backgrounds experience considerably more dental disease than other members of the population due to lack of opportunities that would enable them to improve their oral health. The main issues are poor diet and limited access to fluorides and dental care.

Tooth decay is the most common hospital diagnosis in children aged 5-9 years and the number one reason for admission to hospitals in England (Health & Social Care Information Centre 2015b). Dental treatment under general anaesthesia, often the only way to treat very young children and those with disabilities, presents a small but real risk of life-threatening complications for children. It is estimated that poor dental health costs the NHS £3.4 billion annually (Public Health England 2014).

Periodontal disease

Periodontal (gum) disease affects the structures which support the teeth; these are the tissues and ligaments which secure the teeth to the jaw bones. This disease is caused by a build-up of plaque around the teeth leading to the development of inflammation. The gums become swollen and bleed spontaneously. In susceptible individuals the disease progresses by destroying the supporting structures of the teeth, the teeth become loose and if unchecked the disease results in tooth loss.

Trauma

Teeth may be traumatised as a result of accidents and participation in contact sports. The upper incisor teeth are at greatest risk and experience most damage.

Mouth Cancer

Mouth cancer is the major fatal condition which affects the oral tissues. There is a high risk of developing mouth cancer in people who smoke and those who consume excessive amounts of alcohol. Amongst people living in the UK who originate from South Asia, the use of Pan (leaf of the vine, Piper betel, areca nut, slaked lime (calcium hydroxide) and spices) is linked to very high levels of mouth cancer.

Developmental abnormalities of the oral-facial tissues

Although not the result of disease processes, defects in the development of oral tissues and facial skeleton may result in teeth being displaced sufficiently that the malocclusion produced impacts on oral health. Significantly adverse alignment of children's teeth makes them more susceptible to physical disease, trauma and also impacts on personal appearance, leading to potentially low self-esteem. There are a large number of rare genetic conditions which affect the teeth and facial skeleton. The most common are clefts of the lip and/or palate.

Population groups at increased risk of oral disease

a. Pregnant and nursing mothers

Although some women are at greater risk of some oral conditions (periodontal problems and erosion due to vomiting) during pregnancy, the more significant reason for engaging these expectant and new mothers is the potential to impact on the health and oral health of the child as part of the life-course.

b. Vulnerable Children and Young People

There is substantial evidence to show that people from vulnerable groups including people with physical and learning disabilities and complex health needs and those from socially deprived backgrounds experience considerably more dental disease than other members of the population (PHE, 2015). This can be due to lack of opportunities that would enable

them to improve their oral health, including access to a healthy diet, fluoride and dental care.

c. Children in Care and safeguarding

Under the Children Act (1989), a child is legally defined as 'looked after' by a local authority if he or she is provided with accommodation for a continuous period of more than 24 hours or is subject to a care order or a placement order.

Nottingham City has the highest proportion of children (0-18 years) in care, 89 per 10,000 in the East Midlands (Nottingham City Council 2016). Statutory guidance under the care planning regulation requires children in care to have the appropriate dental care needs met as part of their statutory health assessment. Frequent movement of children between different carers creates particular challenges for assessing and meeting health needs including dental check-ups and treatments. This is particular important when planning local service provision. Many children in care come from families from lower socio-economic groups, and it can therefore be anticipated that they may already be experiencing poor oral health, or be at risk of poor oral health (Scott & Hill 2006). In addition they are more likely to have greater health needs than their peers from the equivalent socio economic groups, resulting in significant health inequalities for children in care (Department of Health n.d.).

Young children in general are reliant upon their parents/carers to maintain their oral health. This includes managing oral hygiene, diet, and seeking treatment when required.

The National Institute for Health and Clinical Excellence (NICE) recognised dental neglect as a type of child neglect and made recommendations related to persistent failure by parents/carers to obtain dental treatment for a child's dental decay, and that child maltreatment should be considered if a child has an oral injury and the explanation is absent or unsuitable. Neglect of a child's oral health can lead to pain, failure to thrive and impaired quality of life.

Risk Factors

Many general health conditions and oral diseases share common risk factors such as ***poor diet, smoking and alcohol misuse***. Oral diseases are largely preventable; and there is a need to put in place evidence-based interventions to achieve sustained and long-term improvements in oral health and reduce inequalities. In taking a 'common risk factor approach' to address these risk factors, general health will also be improved (Chestnutt 2016).

Diet

Sugars are the most important dietary factor contributing to dental caries and the evidence is strong of the association between dental caries and the daily total amount of sugar consumed (Scientific Advisory Committee on Nutrition 2015) together with the frequency of consumption of sugar containing fodd, drinks and snacks.

All age groups consume more sugar than the government's recommended daily limit (10% of daily energy intake), which negatively impacts on tooth decay among other public health concerns (Bunn & McDowell 2015).

Breastfeeding provides the best nutrition for babies and should be encouraged. It has been noted that breastfed children can develop dental caries, however prolonged and exclusive breastfeeding alone does not appear to be the cause (Kramer et al. 2007).

From six months of age infants should be introduced to drinking from a free-flow cup, and from age one year feeding from a bottle should be discouraged (DBOH, PHE, 2014). Persistent use of baby feeding bottles and use of non-free flow cups, particularly if they contain sweetened liquids are associated with increased risk of tooth decay.

Sugar should not be added to weaning foods or drinks (DBOH, 2014). Parents need to be supported to make considered choices when weaning children. Most commercially produced weaning foods contain higher levels of added sugars and sweeteners than home prepared food.

Prescription of sugar free medicines should be encouraged.

Tooth-brushing

Tooth brushing should be encouraged as a normal part of a healthy lifestyle and a necessary life skill. It is essential for the physical removal of plaque to maintain gum health and also as a vehicle to introduce fluoride into the mouth.

Brushing should be introduced as soon as the first tooth erupts and parents/ carers should brush / supervise brushing. It is recommended that teeth are brushed with a family fluoride toothpaste twice a day (last thing at night before bed and on one other occasion). Toothpaste should contain no less than 1,000ppm. For children under 3 years only a smear should be used and a pea-sized amount for 3-6 year olds.

Access to Dental Care

Parents should be encouraged to take their children for regular visits to a dentist from an early age and before problems occur.

Encouraging such attendance of young children at a dental practice should be viewed primarily as an opportunity to provide:

- *tailored preventive advice and care, including the use of professionally applied preventive interventions such as fluoride varnish and*
- *reinforce the development of good oral health habits from an early age.*

Dental care should complement home and community based interventions.

Sadly for many children, their first experience of dental services is an emergency appointment in response to tooth ache as a result of dental decay. Lack of attendance for regular dental care, despite obvious need, is recognised as neglect under the UK guidelines (NICE, 2009).

2) Size of the issue locally

Oral Health of Children in Nottingham

Surveys of child dental health are undertaken as part of the Public Health England (PHE) Dental Public Health Intelligence Programme, for more information see, PHE Dental Public Health Intelligence Programme.

Three-Year-Olds' Survey – 2012/13

- 255 three year old children resident in Nottingham City were examined.
- The mean number of teeth affected by dental decay amongst the children examined was 0.5 teeth. This is greater than the mean for the East Midlands and England (0.43 and 0.36 respectively).
- 16.5% of the children examined in Nottingham City were found to have experience of dental decay with an average of 3.05 affected teeth.
- 4.2% of the children examined had experience of early childhood caries (aggressive form of decay affecting the upper baby incisor teeth).
- Relationship to deprivation not as strong as that seen in five year olds

Table 1: Oral Health of Three Year Old Children 2012/13

	Nottingham City	Nottinghamshire County	East Midlands	England
Percentage with decay experience	16.6%	11.1%	15.3%	11.7%
Percentage with active decay	16.1%	9.5%	14.7%	11%
Percentage with Early Childhood Caries	4.2%	2%	3.7%	3.9%

Source: PHE, 2014

Five Year Old Survey – 2014/15

- 404 five year old children resident in Nottingham City were examined (this was an enhanced sample to facilitate analysis to Area Committee level as shown in Fig. 2)
- The mean number of teeth affected by dental decay amongst the children examined was 1.2 teeth. This is greater than the mean for the East Midlands and England (0.9 and 0.8 respectively).
- 35.6% of the children examined in Nottingham City were found to have experience of dental decay with an average of 3.4 affected teeth.
- Nottingham has the second highest experience of dental decay in the East Midlands.
- Experience of dental decay correlates with deprivation (Fig. 2).

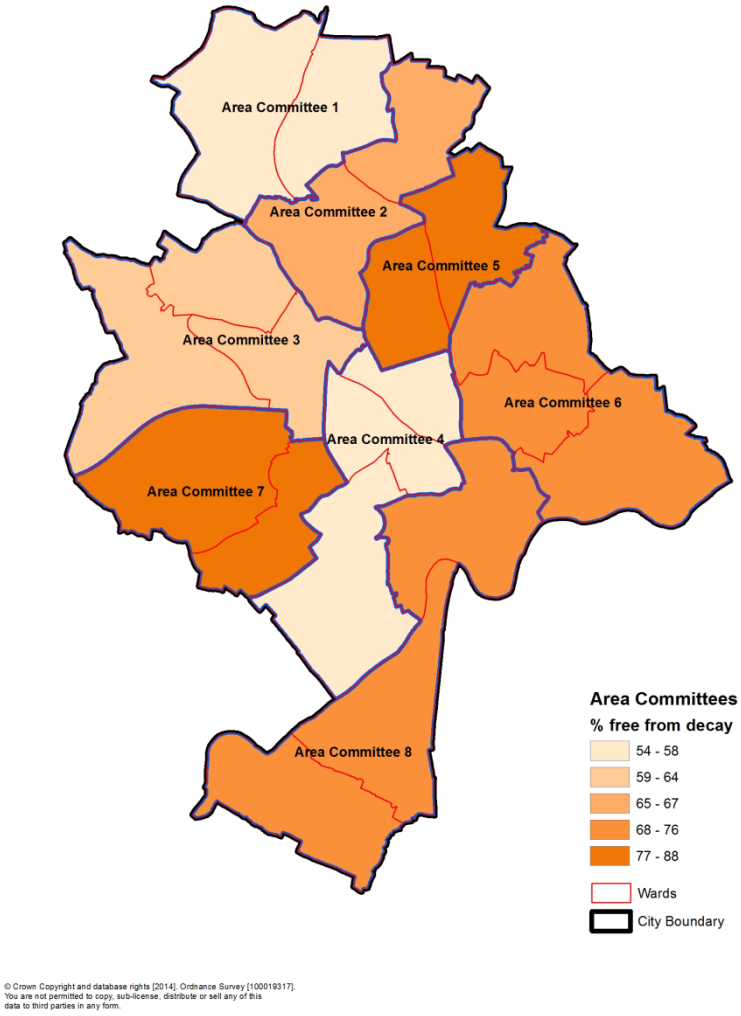
Table 2: Oral Health of Five Year Old Children 2014/15

	Nottingham City	Nottinghamshire County	East Midlands	England
Percentage with decay experience	35.6%	21%	27.5%	24.7%
Percentage with active decay	33.4%	18.6%	24.3%	21.5%
Percentage with one or more fillings	13.8%	11.3%	11.9%	12.0%

Source: PHE, 2016

There is considerable variation in the prevalence of tooth decay at the area committee/ward levels in the City (Fig. 2). 6 out of the 8 local area committees had decay prevalence higher than the England average (Fig. 3).

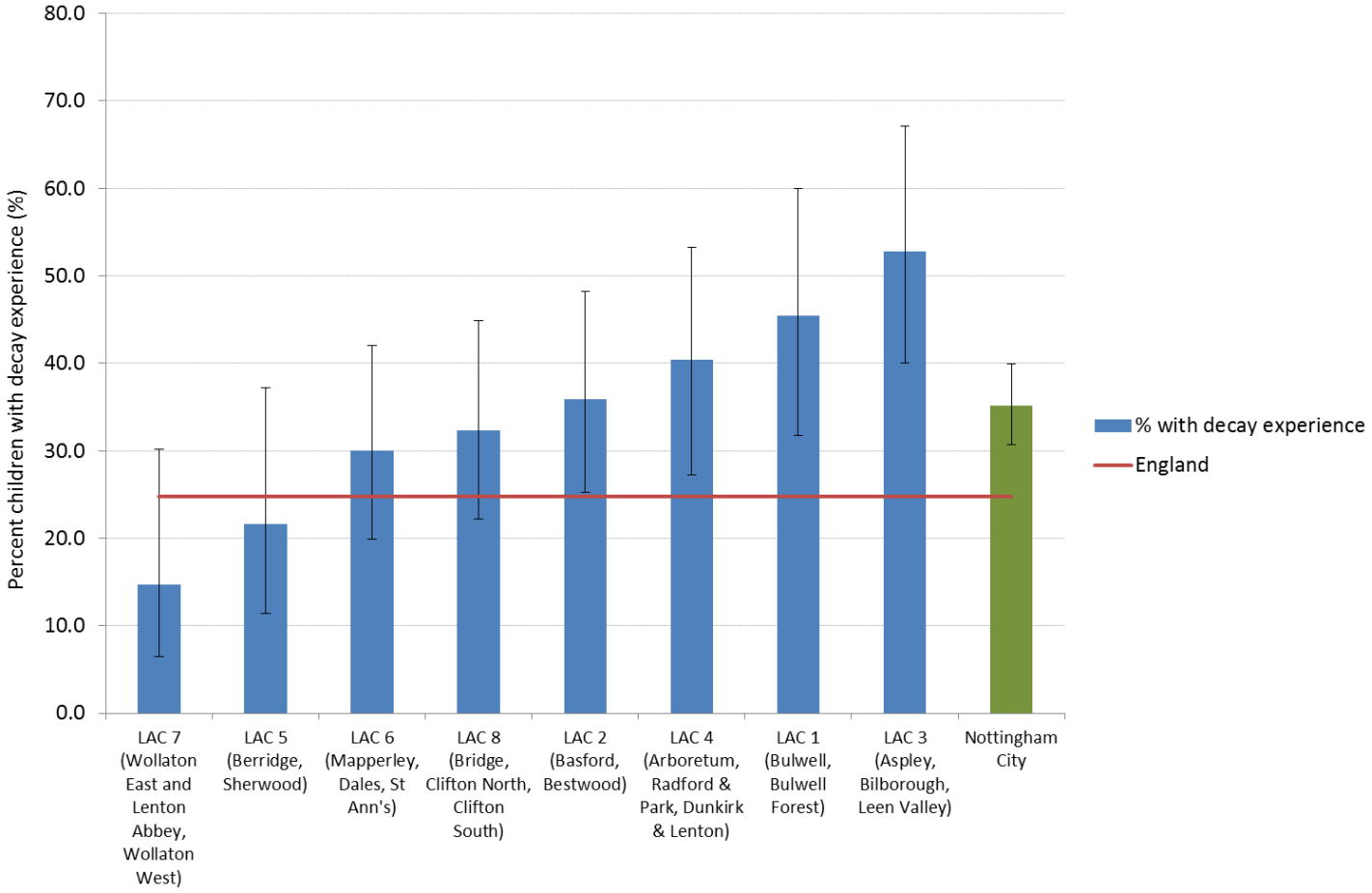
Fig. 2: Percentage of 5-Year-Olds Free From Tooth Decay in Nottingham by Area Committees



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Local Area Committee 3 comprising Aspley, Bilborough and Leen Valley has the worse prevalence of tooth decay among 5-year olds in the City.

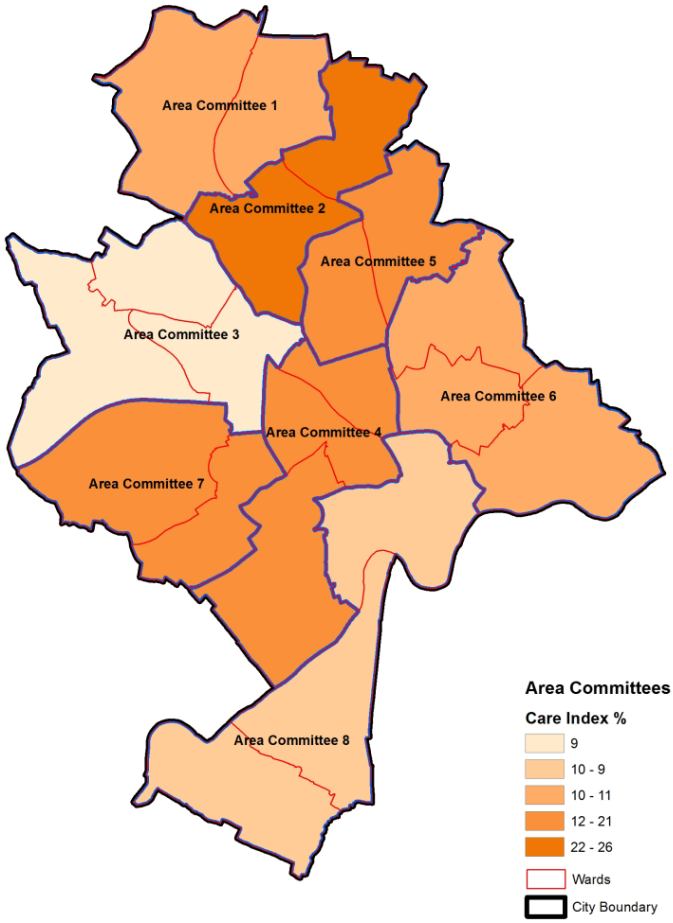
Fig 3: Percentage of 5-Year-Olds with Tooth Decay Experience by Area Committee



Source: PHE, 2016

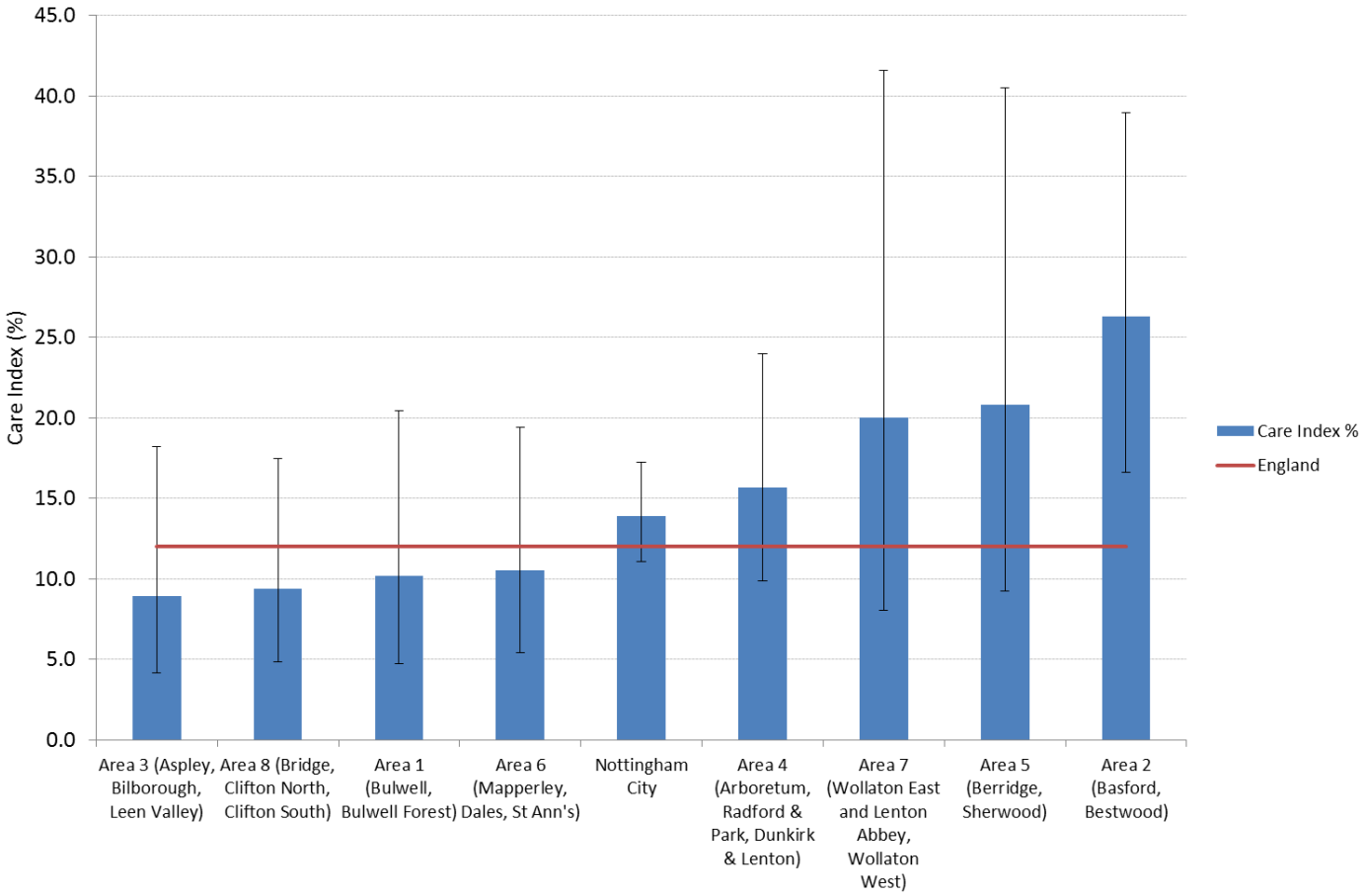
The ***Care Index*** gives an indication of the restorative activity of dentists in each area. It is the percentage of teeth with decay experience that have been treated by filling (ft/d3mft). Opinions differ regarding the appropriateness and benefit of filling decayed primary teeth and there is a lack of definitive evidence-based guidance on this. Care should be taken in making assumptions about the extent or the quality of clinical care available when using this index. Other intelligence such as levels of deprivation, disease prevalence and the provision of dental services should be taken into account when trying to interpret the implications of high or low scores. Children living in 4 out of the 8 Area Committees have care index higher than the England and Nottingham City average (Fig 5). Area Committee 2 (Basford and Bestwood) has the highest care index. This suggests that those children who access dental services in these areas are receiving the appropriate care to manage their dental disease.

Fig. 4: Care Index by Area Committee in 5 Year Olds



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Fig. 5: Care Index Percentages by Area Committee in 5 Year Olds



Source: PHE, 2016

Oral hygiene

The number of children with substantial amounts of plaque at the time of the examination provides a proxy measure of children who do not brush their teeth or brush them irregularly. In addition, such children will not benefit from the protective effects of fluoridated toothpaste. Of the 404 children examined in Nottingham, 24 had a little visible plaque and none had substantial plaque. This data suggests that messages about good oral hygiene practices are being heeded by the population, however it should be recognised that the children for whom positive consent was not given for survey participation could have poorer oral health and hygiene.

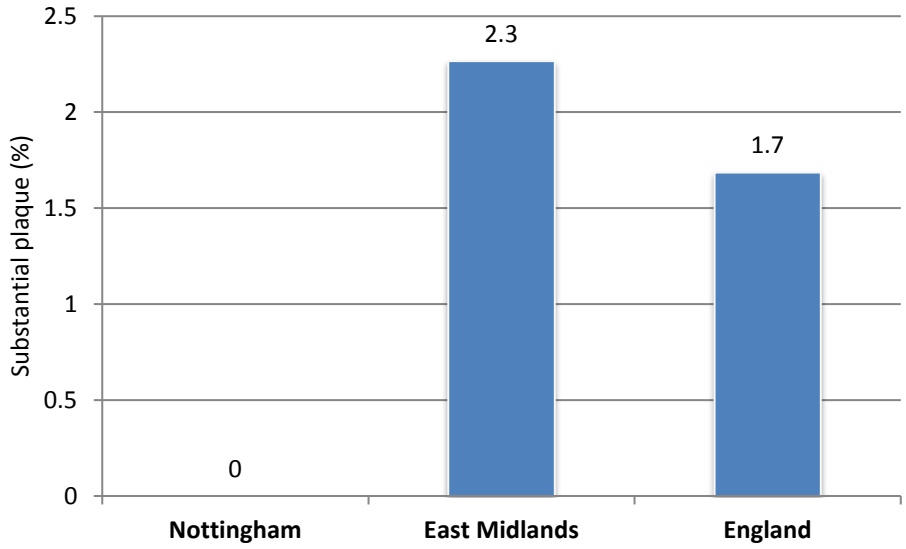
Figure 6 compares the proportion of 5-year-olds with substantial plaque in Nottingham City to East Midlands and England.

Dental sepsis

At the age of five-years, nearly all sepsis will be the result of the dental decay process rather than originating from gum problems. A small number of cases will be linked to traumatic injury of teeth, but no diagnosis was recorded during this survey. The prevalence of dental sepsis for the sample of 5 year old children living in Nottingham examined is higher

than the East Midlands and England averages (due to low numbers the % has not been disclosed)

Fig. 6: Percentage of 5-Year-Olds with Substantial Plaque



Source: PHE, 2016

Twelve-Year-Olds' Survey – 2008/09

- 423 twelve year old children resident in Nottingham City were examined.
- The mean number of teeth affected by decay amongst the children examined was 0.87 teeth. This is greater than the mean for the East Midlands and England (0.74 and 0.74 respectively).
- 36% of the children examined in Nottingham City were found to have experience of dental decay with an average of 2.43 affected teeth.
- Experience of dental decay correlates with deprivation

Table 3: Oral Health of Twelve Year Old Children 2008/09

	Nottingham City	East Midlands	England
Percentage with decay experience	36%	33.2%	33.4%
Percentage with active decay	22.8%	17.9%	17.5%
Percentage with one or more fillings	42%	48%	47%

Source: NHS, 2010

The 2013 United Kingdom children's dental health survey shows that significant numbers of front teeth are permanently damaged as a result of trauma with around one in ten children having sustained dental trauma to their incisors (12% at age 12 and 10% at age 15). At all age groups boys tend to damage their teeth more often than girls, however is this survey 12

year old boys were twice as likely as the same age girls to sustain damage to their teeth. The most commonly damaged teeth are the upper incisor teeth. (CDH survey, 2015 http://content.digital.nhs.uk/catalogue/PUB17137/CDHS2013-Report2-Dental-Disease.pdf).

Children Attending Special Support Schools

In 2014, Public Health England Dental Public Health Intelligence Programme carried out a survey of 5 and 12 year olds who attend special support schools in England. There is no comparative data as this is the first time a survey of this group has been undertaken, however the criteria and methodology used is the same as that for the 5 and 12 year old surveys of children attending mainstream schools.

In total, 149 local authorities out of 152 took part in the survey, however. In only 14 local authorities were sufficient 5 and 12 year olds examined to produce a valid estimate, therefore East Midlands region is compared to England.

Five Year Olds in Special Schools

The survey demonstrates that the dental health of five year old children attending special schools in the East Midlands is better than that for England. Across the East Midlands 107 five year olds were examined, of which 15% had experience of dental decay (England 22%), with an average 0.48 teeth affected by decay (England 0.88 teeth). Of those children with decay the average number of teeth affected in the East Midlands is 3.19 teeth (England 3.9 teeth). However, caution is urged when interpreting these findings as the sample size is based on a relatively small number of children.

Oral cleanliness amongst the children examined in the East Midlands was similar to the national picture with substantial amounts of plaque being recorded for 4.7% of 5 year olds in the East Midlands compared with 4.3% in England.

Twelve Year Olds in Special Schools

In the East Midlands 34.1% of 12 year old children attending special schools have dental decay (England 29.2%), with an average of 0.9 teeth affected per child examined (England 0.69). However the mean number of teeth affected in the children with decay are 2.63 (England 2.37). Again although higher than the England average, this is based on a sample size of less than 20 children, so caution is urged when interpreting this data.

Oral cleanliness amongst the 12 year old children examined was poorer than that found amongst five year olds, with substantial amounts of plaque found in 19% and 19.5% of 12 year olds examined in the East Midlands and England respectively.

Looked After Children

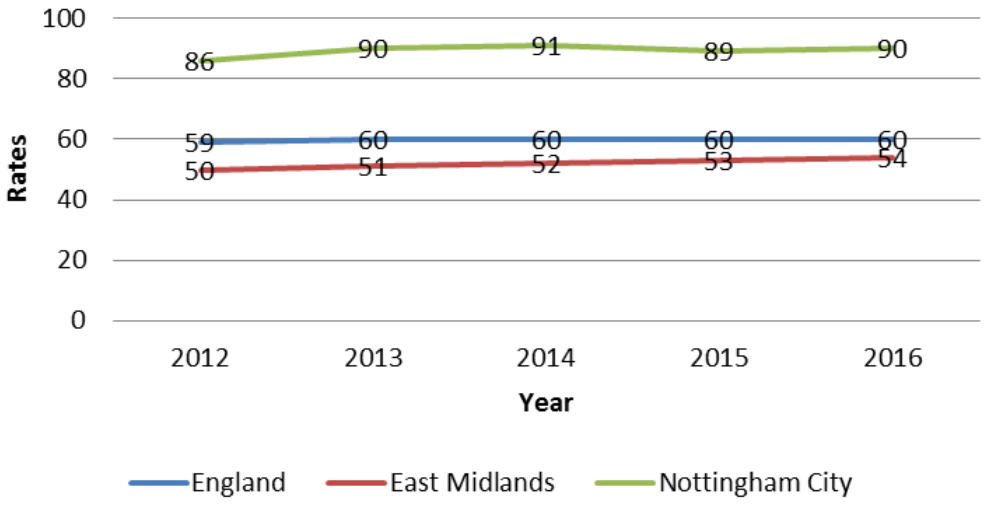
Under the Children Act (1989), a child is legally defined as ‘looked after’ by a local authority if he or she is provided with accommodation for a continuous period of more than 24 hours or is subject to a care order or a placement order. Statutory guidance requires that all children should receive an oral examination, including very young children, even if their teeth have not

yet developed, and that they should have access to dental treatment (Ref - Statutory Guidance on Promoting the Health and Well-being of Looked After Children. DCSF, London, 2009)

Local authorities are required to provide data annually to the Department for Education (DfE) about children in care. This includes a range of health data, but the only dental indicator recorded is the number of children who had their teeth checked by a dentist during the twelve month reporting period[1].

Figure 7 illustrates that in 2012/16 the rate of looked after children in Nottingham City was higher than the East Midlands and England average respectively.

Fig. 7: Rates of Children Looked After aged under 18 Years in Nottingham City, East Midlands and England



* The rates per 10,000 children under 18 years have been derived using the mid-year population estimates provided by the Office for National Statistics.

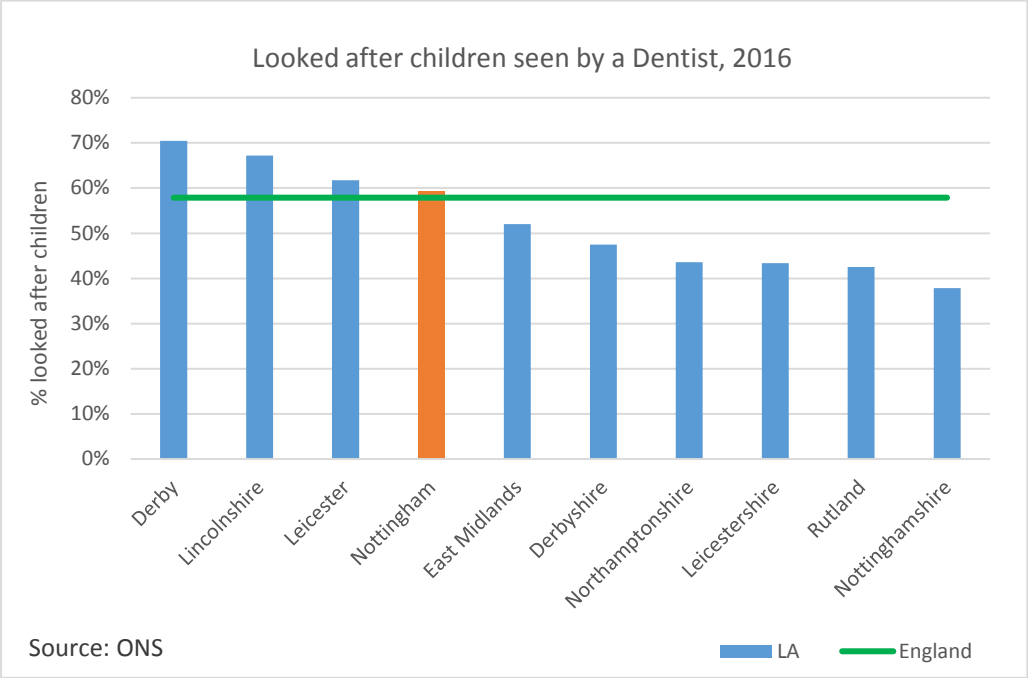
Source: National Statistics, 2016

Figure 8 illustrates that in 2015/16, the proportion of looked after children in Nottingham who were seen by a dentist was slightly higher than the National and East Midlands average of 58% and 52% respectively. However, compared to the statistical neighbour group average of 65%, a lower proportion of children were seen by a dentist in Nottingham (59%).

[1] Children looked after by local authorities in England: Guide to the SSDA903 collection (1 April 2013 to 31 March 2014), DfE, London, 2013

Regionally, there are variations in the proportion of looked after children seen by a dentist with less than 40 % seen in Nottinghamshire and over 60% seen in Derby , Lincolnshire and Leicester

Fig. 8: Percentage of Looked-after Children Seen by a Dentist, 2016



Access to Dental Care

Dental attendance is measured by the proportion of patients who have attended a dentist within the previous 24 months. Access, as a measure, provides an indication of the number of unique patients that are considered NHS patients. Access rates are expressed as a percentage of the area population and are calculated using 24 months of scheduled data.

NICE guidance recommends that the shortest interval between oral health reviews should be 3 months for any patient and that in children the longest interval between reviews should be 12 months and 24 months in adults. There is evidence that the rate of progression of dental caries can be more rapid in children and adolescents than in older people, and it seems to be faster in primary teeth than in permanent teeth. Periodic developmental assessment of the dentition is also required in children (Ref - nice.org.uk/guidance/cg19)

Current Dental Provision

In Nottingham there are:

- 38 NHS general dental practices (Fig. 9), of which 3 are child only contracts.
- A recent local dental access survey demonstrated that 27 (71%) of these practices were accepting new patients (May 2017).

In recent years access to NHS dental services has occasionally been an issue, with some reports suggesting that it is difficult to obtain an appointment with an NHS dentist. There have been changes in the way dental services have been organised and paid for in England with the introduction of a new dental contract in England in 2006. Prior to the new contract a dental practice could open and apply to provide NHS dental services in locations of their choice. All dentists providing NHS dental services at the point of transfer to the new contract were given a contract which can exist in perpetuity, and limits NHS England's ability to redistribute service provision to areas with higher needs. There was however considerable investment by the former Nottingham PCT in NHS dental services in response to centrally determined dental access targets. The current distribution of dental practices is therefore a legacy of these events.

Figure 9 shows the location of dental practices mapped against deprivation and also shows local transport links. The map shows that NHS dental practices are not necessarily located in the areas with highest levels of deprivation where there is liable to be the greatest unmet need, however there is reasonable geographic distribution of practices.

Fig 9: Location of Dental Practices by Wards and Against Deprivation in Nottingham

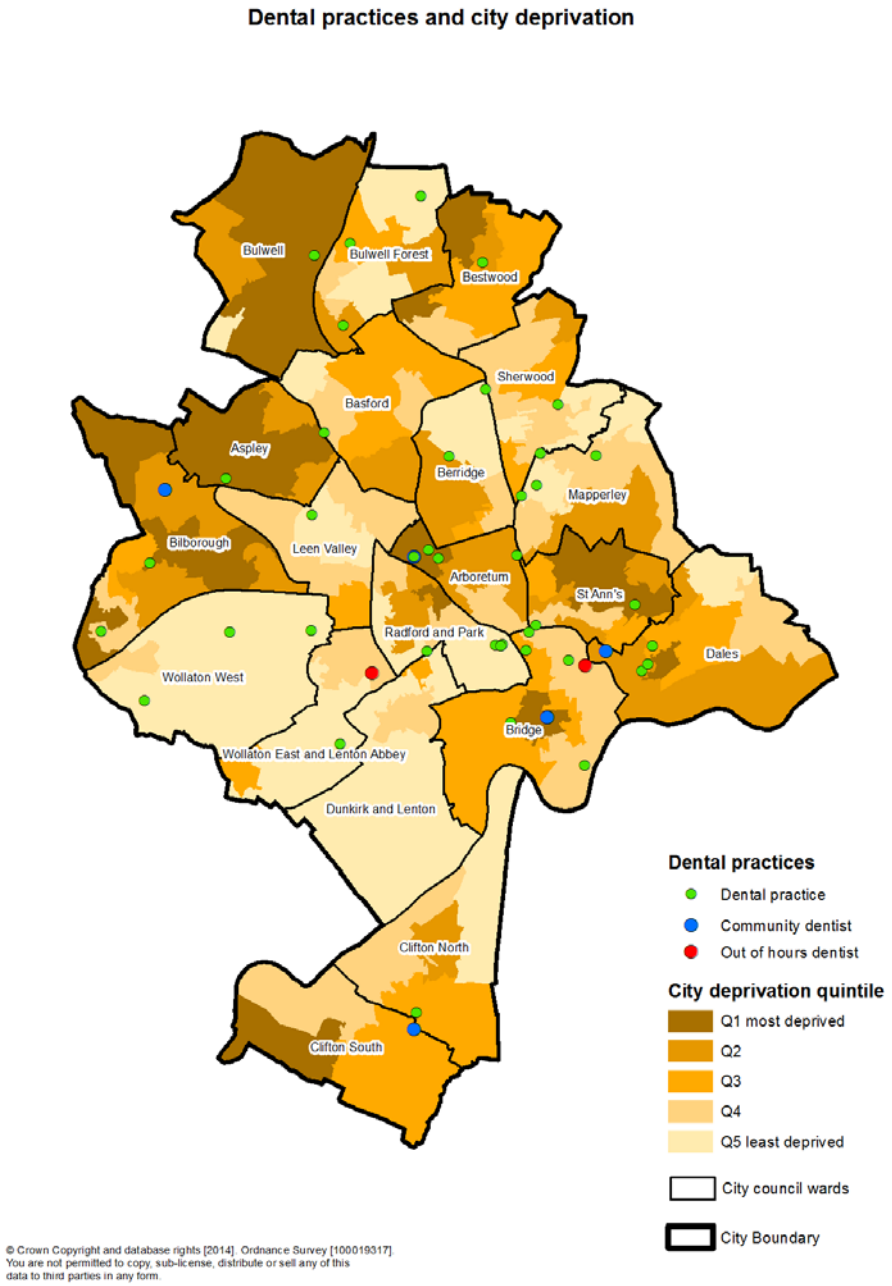
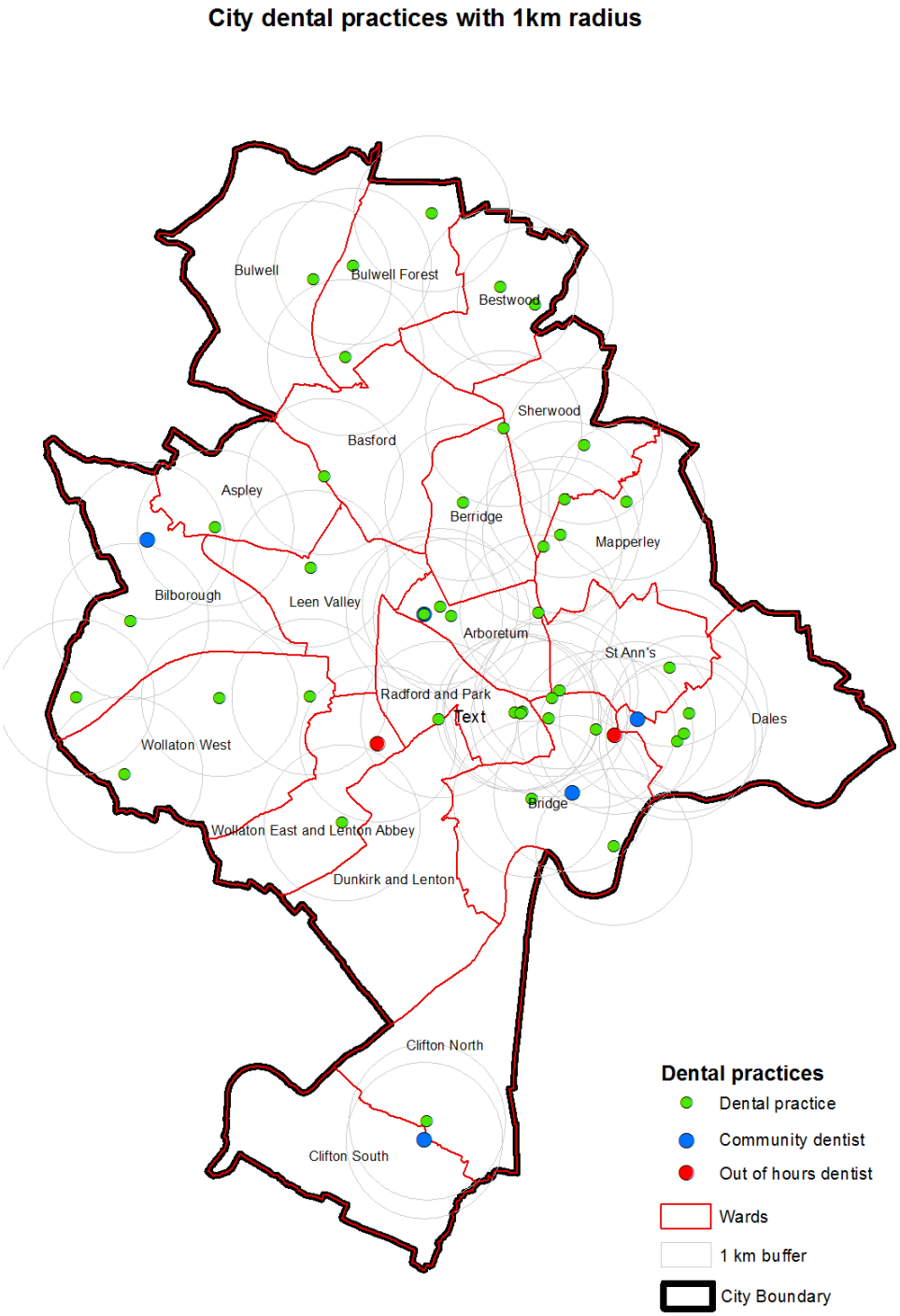


Fig. 10: Location of Dental Practices in Nottingham within a 1km Walking Radius



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Figure 10 shows the location of NHS dental practices within a 1 km walking radius depicting that almost all residents in Nottingham can access an NHS dental practice within walking distance, apart from gaps noted in Clifton North, Clifton South, Dunkirk and Lenton, east of Dales, Bulwell, north of Bilborough and parts of Wollaton

Fig.11 Location of Dental Practices in Nottingham Against Transport Routes

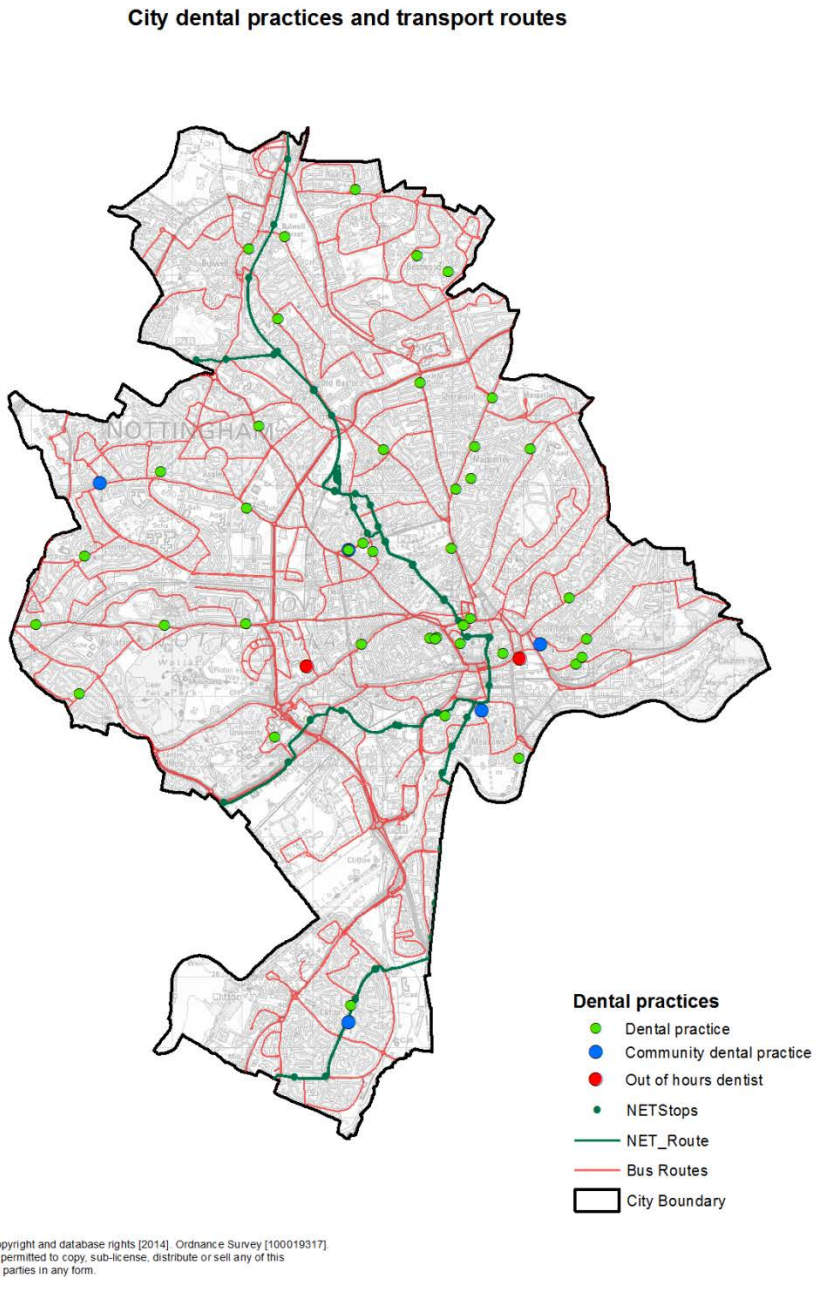
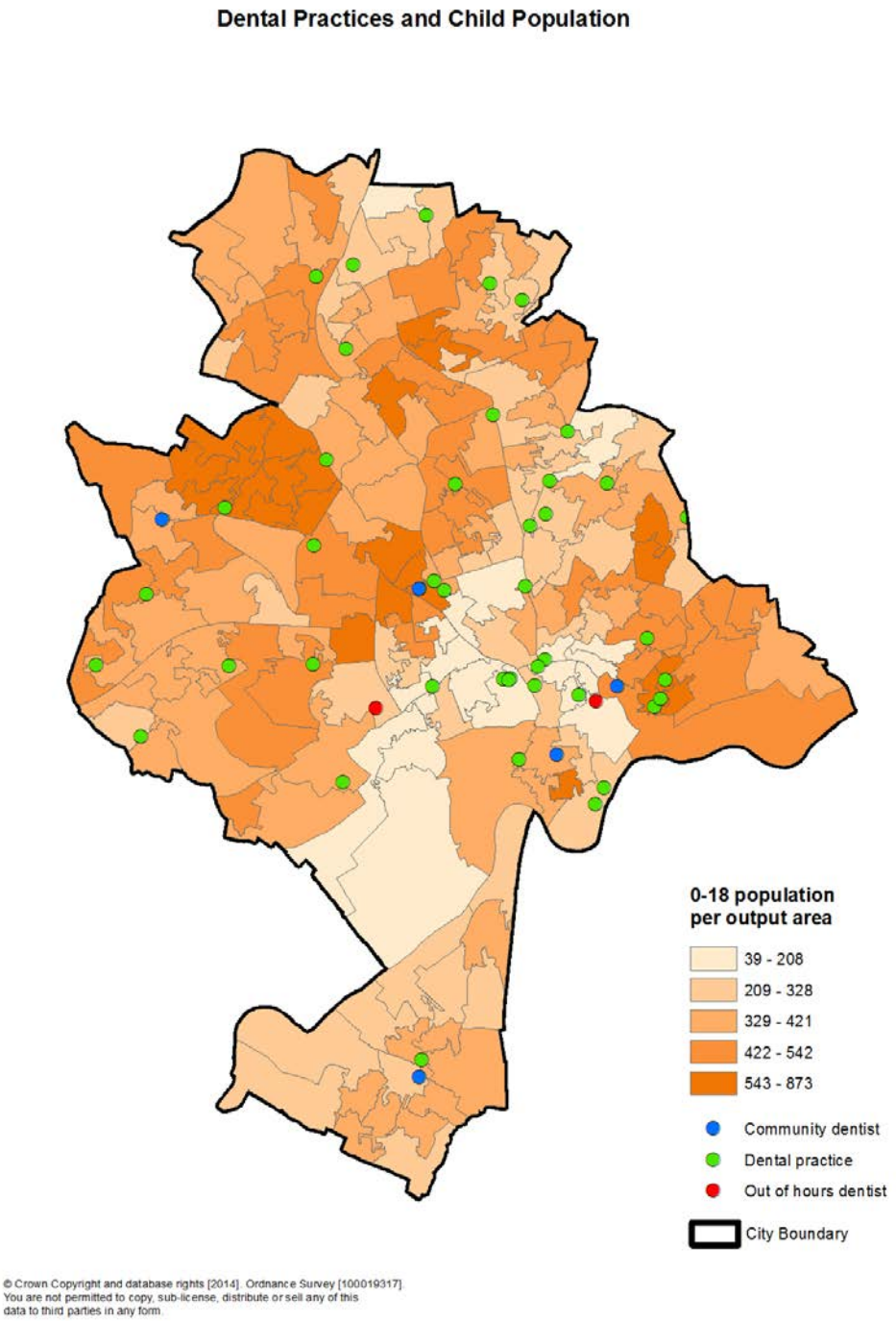


Figure 11 shows that all of the dental practices are accessible by transport links. Practices in the city centre are accessible by tram and bus links; however, the majority of practices are accessible by bus with very few being accessible by tram.

Fig:12 Location of Dental Practices in Nottingham against the child population



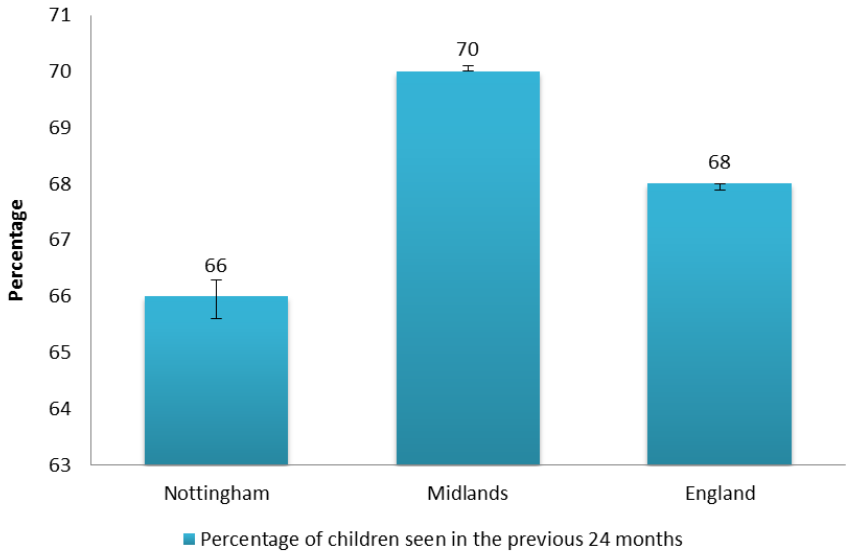
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Figure 12 shows that dental practices are not necessarily located in areas with high densities of children. Many of the practices are located in the city centre where few children reside. There is a lack of practices in areas with high densities of children such as Bulwell and Aspley in the North West of the city.

Uptake of NHS dental services

Figure 11 shows that the proportion of children Nottingham seen by an NHS dentist in the 24 months from October 2014 to September 2016 which is lower than the proportion for England and Midlands.

Fig 11: Percentage of children seen by an NHS Dentist in the previous 24 months



Midlands: Derbyshire, Nottinghamshire, Hertfordshire, South Midlands, Leicestershire and Lincolnshire

Source: NHS Business Service Authority (Oct, 2016)

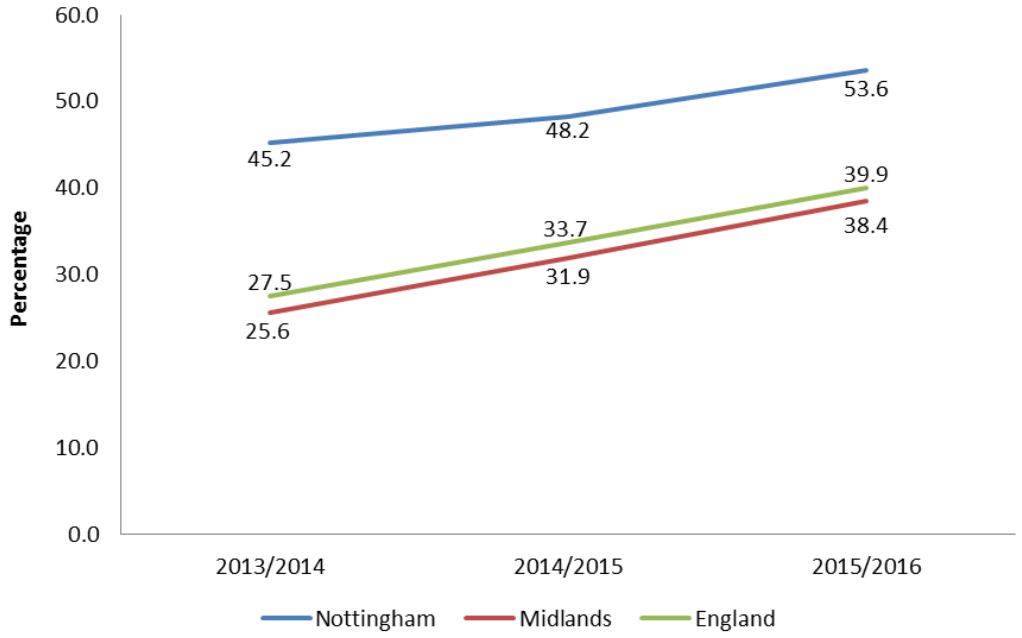
Preventive care

Fluoride Varnish

National evidence informed guidance (DBOH, 2014) recommends that all children aged 3 years and over should have fluoride varnish applied every six months, and that this frequency can be increased for children (including those <3years) who are considered to be at high risk of dental decay. Fluoride varnish can only be prescribed by a dentist (individual patient) or a Patient Group Directive (community based programmes) and can only be applied by GDC registered practitioners (dentists, therapists, hygienists and dental nurses with additional training).

Figure 12 shows that the proportion of children receiving fluoride varnish in Nottingham City has been consistently higher than the proportion in receipt of this form of preventive care

across the Midlands and England. **Fig 12: Rate of Fluoride Varnish application in Children (3-16 years) in Nottingham, compared to the Midlands and England (2013–16)**



Source: **NHS Business Service Authority (Oct, 2016)**

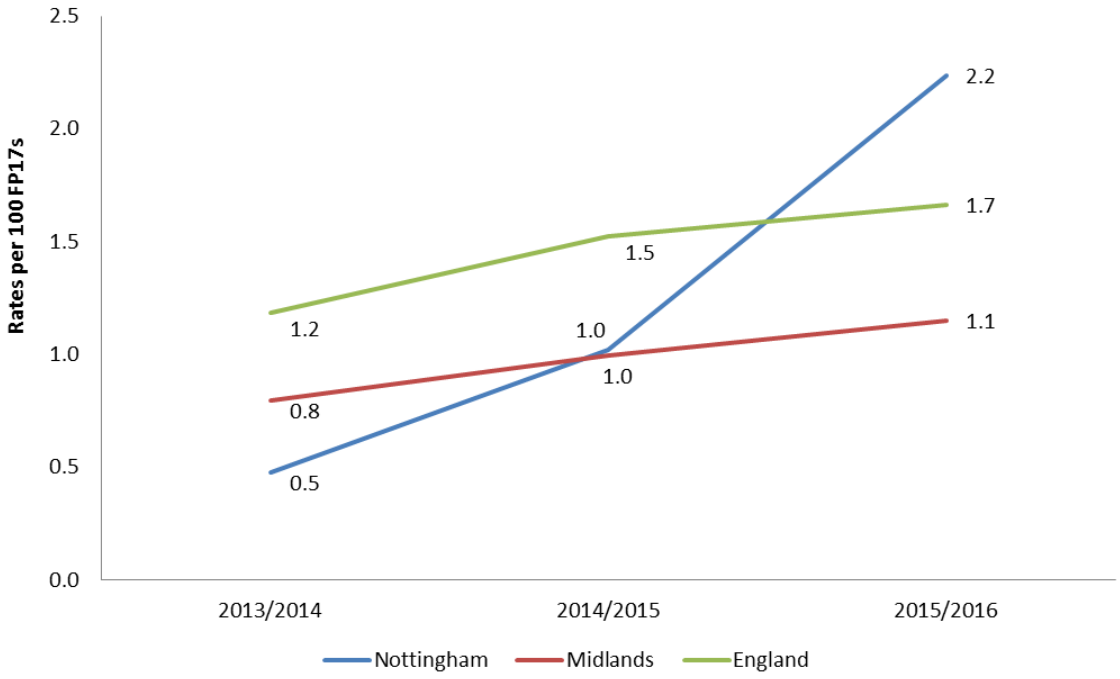
Fissure Sealants

Fissure sealants are plastic coatings that are painted on to the grooves of the molar (back) teeth. The sealant forms a protective layer that keeps food and bacteria from getting stuck in the tiny grooves in the teeth and causing decay. To be most effective fissure sealants should be applied to the permanent molars as early after eruption as possible. Fissure sealants can only be applied by dentists, therapists or hygienists.

Fissure sealants are recommended for those at high risk of developing caries (DBOH, 2014).

Figure 13 shows that the rate of fissure sealant applications has increased steeply between 2014/15 and 2015/16 for Nottingham and is now higher than that for both the Midlands and England.

Fig 13: Rates of Fissure Sealants for children (3-16 years) in Nottingham, compared to the Midlands and England (2013–16)



Source: **NHS Business Service Authority (Oct, 2016)**

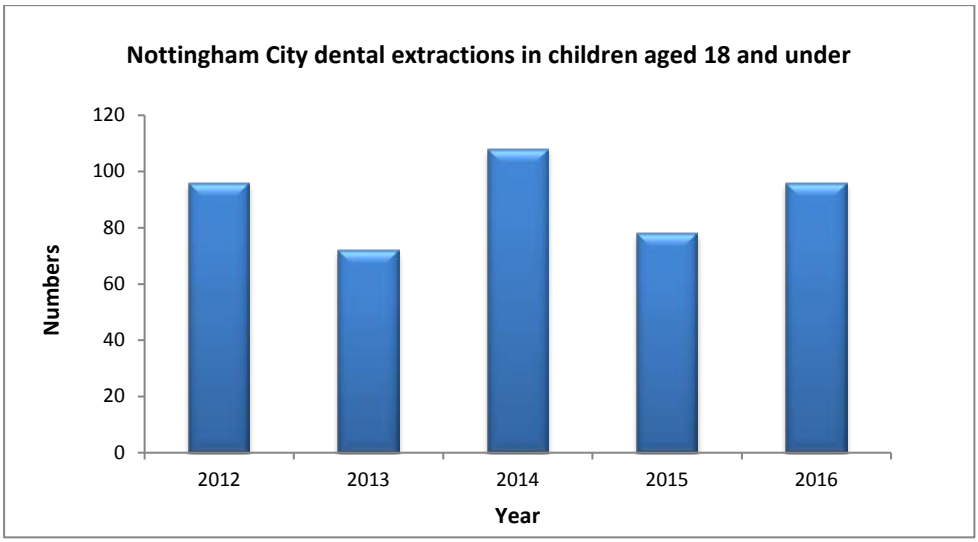
Dental extractions in children

The primary reason for extraction of teeth in children will be dental decay, although a proportion of the extractions in children over 10years will be as part of planned orthodontic treatment. Figures 11 & 12 show data on the number of children having dental extractions in primary care. All of these extractions will have been undertaken with local anaesthetic (some also with the aid of sedation).

Very young children or some children with special needs are unable to co-operate with treatment under local anaesthetic or sedation and often have no alternative but to undergo a general anaesthetic to have their multiple diseased teeth removed. All dental general anaesthetics have to be carried out in a hospital setting. These patients are not reflected in the extraction data from dental practices (Fig 14 & 15).

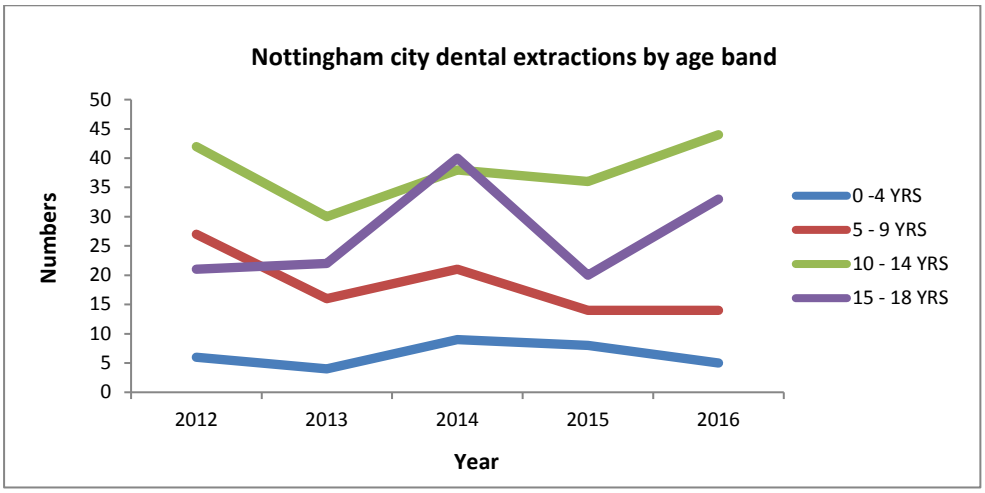
An analysis of Hospital Episode Statistics (HES) data between 2012 and 2016, a total of 450 dental extractions were carried out in children aged between 0 and 18yrs in Nottingham city, averaging 90 dental extractions per year. This is an underestimate of the number of children receiving general anaesthetics for the extraction of teeth in Nottingham as the majority receive this form of care though the Community Dental Service. This care is provided in Queen's Medical Centre, however it is not recorded as part of the HES data. Work is underway by NHS England both nationally and locally to improve the quality of this data.

Figure 14: Number of dental extractions in children 18 years and younger in Nottingham City



Source: NHS Business Service Authority (Oct, 2016)

Fig. 15 Number of dental extractions in children by age band in Nottingham City



Source: NHS Business Service Authority (Oct, 2016)

3) Targets and performance

There are currently two national performance indicators which respect to the oral health of children:

Public Health Outcome Framework for England, 2013-16 (Domain 4.02)

- Proportion of five year old children free from obvious dental decay

  Data is provided bicennially from the PHE Dental Public Health Intelligence programme (fieldwork commissioned by local authorities) .

NHS Outcome Framework 2015-16 (Domain 3.7)

- Tooth extractions in secondary care for children under 10

  Data is sourced from Hospital Episode Statistics (HES).

Local targets

Nottingham North Rebalancing Foundation – Dental programme

This local initiative aims to ensure that all 3 year olds receive a dental examination.

4) Current activity, service provision and assets

Local Authority Commissioned Services

The Health and Social Care Act (2012) transferred the responsibility for health improvement, including oral health improvement, to local authorities. Local authorities are now 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 (UK Government 2012).

The oral health promotion programmes based on the recommendations from Public Health England document Local authorities improving oral health: commissioning better oral health for children and young people and NICE guidance (PH55) aim to encourage identified individuals, groups and communities to improve and their oral health by: increased use of fluoride; reducing the frequency of sugar consumption; effective daily oral hygiene; seeking regular dental care; smoking cessation and oral cancer awareness.

Oral Health Promotion Service

The local authority commissioned Oral Health Promotion Service delivers an evidence based oral health promotion service based on the recommendations from the Public Health England document 'Local authorities improving oral health: commissioning better oral health for children and young people. The current service commenced in April 2015.

The oral health promotion service aims to encourage identified individuals, groups and communities, for example children and young people and vulnerable groups, to maintain and improve their oral health by:

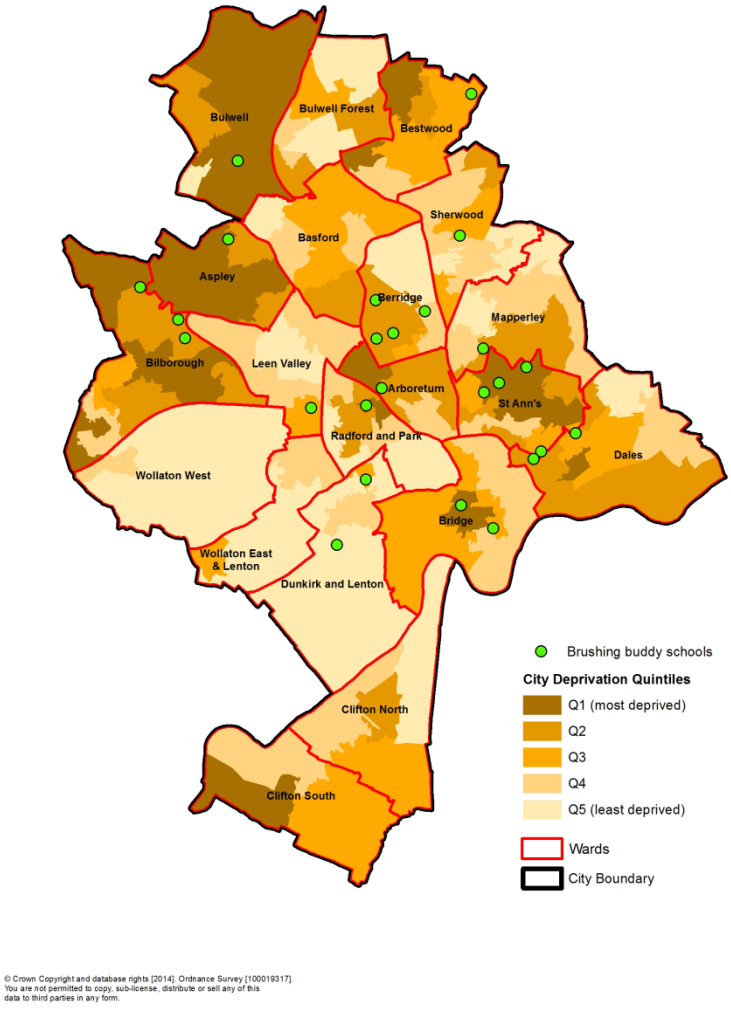
- increased use of fluoride
- reducing the frequency of sugar consumption
- effective daily oral hygiene
- seeking regular dental care
- smoking cessation awareness campaigns
- oral cancer awareness campaigns

The service does this through:

Supervised Tooth Brushing Programme

The programme facilitates daily supervised tooth brushing within nurseries and primary schools (reception and year 1) targeting the 25 schools in the most deprived wards within Nottingham (Figure 16). There is high participation (99.9% positive parental consent) and early evaluation indicated wider benefits within the school setting and families. The programme provides training and support to school staff, supplies of tooth paste and brushes and quality assurance of the programme.

Fig. 16: Location of 25 Schools Involved in Brushing Buddies against Deprivation in Nottingham



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- **Training of key health, social care and education professional**
  Oral health training is provided for the wider health, social care and education workforce. This is based on a capacity building approach to support oral health improvement in their daily role to make every contact count in helping change behaviour and improve health and wellbeing.

  The training of professionals (such as nurses, midwives, health visitors, school nurses, early years professionals, identified staff within schools, children centre professionals, school nurses and health improvement professional, care assistants) ensures that oral health messages are appropriate, evidence-based and consistent.

- **Distribution of Oral Health Resources**

  Tooth brushes and toothpaste are provided for distribution at key child development checks by Health Visitors to encourage the adoption of good oral health practices and

start tooth brushing as soon as first teeth erupt. This element is provided on either a *universal* or *targeted* basis dependant on evidence of need and work with key stakeholders.

- **Participation in national oral health awareness campaigns and related national and local health awareness campaigns.**
  The oral health promotion team deliver both focussed oral health campaigns and also embed oral health messages in wider health campaigns.

Public Health Nutrition Service

This service currently provided by Nottingham City Care supports the improvement of the oral health of children through offers the following activities:

- Maternity and health visiting antenatal and postnatal contact
- Bump, Birth and Baby groups which incorporates healthy eating activities. Promotion of breastfeeding. Breastfeeding support via the Baby Feeding Peer Support and health visiting teams and signposting into these services via the Small Steps Big Changes (SSBC) family mentors.
- Weaning advice - healthy family foods for babies and young children First Foods programme promotes good oral health for babies and practical food sessions in Early Help venues promote healthy nutritious snacks and drinks.
- Eatwell courses - focus on practical food and nutrition skills building and include sugar as a topic.
- Holiday Lunch Clubs programme - this runs during school holidays and promotes healthy family lifestyles, including oral health.

Other Activities and Assets

Nottingham North Rebalancing Foundation - Dental Programme

The Nottingham North Rebalancing Foundation is a charitable organisation seeking to improve the lives of the residents of the north of the City. One of three health programmes, the dental programme seeks to improve the oral health of young children by encouraging uptake of dental care and preventive programmes. This dental programme aims to increase the number of under 3's accessing dental checks and fluoride varnish from 20% to 30% by the end of 2016.

In the past year the Foundation has introduced another charitable organisation, Tooth Team, to the programme. Tooth Team will be rolling out a programme of supervised tooth-brushing and twice yearly fluoride varnish application in schools in the area, and will work collaboratively with the City Council's commissioned oral health improvement work. The team also facilitate dental appointments with local dental practices for young families.

Dental Treatment Provision

NHS England is responsible for commissioning all clinical dental services, both primary and secondary care. The former Nottingham City PCT invested significantly in additional capacity in response to nationally imposed dental access targets. This additional capacity was targeted to areas with poorer access and higher needs.

Nottingham residents have access to a range of dental services, including treatment under general anaesthetic, orthodontics, special care dentistry, domiciliary care and minor oral surgery. Significant additional investment has also been made in recent years to ensure there is sufficient out-of-hours dental provision for the population.

The majority of dental care for children is provided by primary care dentist (General Dental Services) in high street dental practices. Dental treatment for children is free.

In certain circumstances children will be referred to other services.

Community dental services provide care from five clinic locations across the city. They provide care for patients who have a physical, sensory, intellectual, mental, medical, psychological and/or emotional or social impairment or disability, or more often a combination of these, whose needs may not be accommodated in NHS general dental services.

As part of this provision for children with more complex dental needs they provide care under general anaesthesia (at Queens Medical Centre) and sedation.

NHS England dental commissioning guidance for Paediatric Dentistry (NHSE, in draft) encourages development of consultant led paediatric dental services and local managed clinical networks for those involved in providing paediatric dental care. Development of such a consultant led service will need to form part of future procurement of CDS services.

It should also be noted that:

- NHS dental services are commissioned for anyone who wishes to use them, regardless of where they live. Patients may therefore access NHS dental services in any locality of their choice.
- Under the current contractual agreement, patients are not registered with an NHS dentist to receive dental care.
- Attendance at a dental practice for a dental examination may not necessarily translate into oral health improvement.
- Young children can require considerable time and patience even to undertake an examination.
- The patient and parent may not return for further treatment or review until there are further problems.
- Although there is considerable knowledge about the barriers that patient experience or perceive in accessing care, these need to be explored and clarified in the context of the Nottingham City population.

Interpretation and Translation Services

The local authority commissioned Oral Health Promotion service provides resources in English and does not routinely provide all resources in different languages. However, they work closely with partners and clients to ensure that resources are adapted to suite the audience. Self-help materials are available in a wide range of formats, including the most commonly spoken languages; they also ensure that schools provide a family support worker or volunteer to help with interpretation and translation when needed.

Pictorial resources are often used to support hearing and literacy difficulties and are useful when there is not a written form of a language.

A comprehensive interpretation and translation service is also available for both patients and health professionals in Nottingham to facilitate care through the Interpreting and Translation Service of Nottingham City Care.

5) Evidence of What Works

Delivering better oral health: an evidence-based toolkit for prevention 3rd Ed. (PHE, 2014) provides dental teams with evidence based guidance for delivery of preventive care and methods of helping patients improve their self-care. This builds on the guidance of the earlier editions which has initiated a reorientation of dental care towards prevention of disease rather than treatment of existing disease, a principle that also underpins the current Dental Contract Reform Programme.

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) and Oral health: local authorities and partners (NICE, 2014) both provide evidence informed guidance to local authorities to support their commissioning duties regarding the improvement of and maintenance of the oral health of children.

Diet and sugar

Adoption of healthier eating habits promotes good oral and general health, including prevention of dental decay.. Reduction in both the amount and frequency of foods and drinks with added[2] sugar will contribute. (Moynihan & Kelly 2014, SACN, 2016, PHE 2014)

Fluoride

Fluoride is widely found in nature and in food such as tea, fish and some natural water supplies. It is the only factor that has been shown beyond doubt to increase the resistance of tooth to decay for individuals and communities. There is a considerable body of evidence for the safety and efficacy of fluoride delivered by various vehicles in the prevention of dental caries.

Water fluoridation

At a community level the most effective way of reducing the impact of decay is to adjust the level of fluoride in the public water supply to the optimum concentration of 1 part per million.

The PHE document, Improving oral health: a community water fluoridation toolkit for local authorities provides evidence to demonstrate that water fluoridation is safe and effective. Water fluoridation is the sole measure that has been demonstrated to reduce the inequality gap of oral health between the richest and poorest children.

Children in local authorities with water fluoridation schemes have less tooth decay than those without a scheme. It is estimated that, 45% fewer children aged 1-4 years in fluoridated areas are admitted to hospital for tooth decay than those in non-fluoridated areas. Nottingham City does not currently benefit from water fluoridation.

Fluoridated toothpaste

The use of fluoridated toothpaste is a fundamental in the prevention of caries. There is a large body of evidence for the benefits of brushing twice daily with fluoridated toothpaste (DBOH, 2014, CBOH, 2014, NICE 2014)

[2] Added sugar: defined as sugars or syrups added to foods and drinks by the manufacturer, cook or consumer, plus sugars present in honey, syrups, fruit juices and fruit concentrates

Fluoride varnish

There is good evidence of the caries-preventive effectiveness of fluoride varnish in both permanent and primary dentition (Marinho et al. 2013). Delivering Better oral health recommends that all children aged 3 years and older should receive two application s per year, with additional applications for those considered a greater risk. Fluoride varnish can be used in the dental clinic (individual) is also recommended as a targeted measure to communities at increased risk of disease (CBOH, 2014 and NICE, 2014).

Effective daily oral hygiene

The proven method of preventing the development and progression of periodontal (gum) disease is the efficient removal of plaque deposits around teeth and oral appliances (DBOH, 2014).

Oral hygiene / tooth-brushing is also essential for the delivery of fluoride toothpaste, the most readily available form of fluoride. Good practice is best established in childhood

Supervised Tooth Brushing

Supervised tooth brushing programmes are more effective in areas of high tooth decay rates and less effective when children are already brushing their teeth at least twice a day with fluoride toothpaste. The positive impact on inequalities depends on appropriate targeting of high risk populations, high sentient rates, compliance and retention (CBOH, 2014). Successful implementation depends on engaging with parents, schools and early year settings. Programmes such as the local *Brushing Buddies*, supports children to develop independent and habitual healthy behaviours.

Seeking regular dental care

Encouraging the attendance of young children at a dental practice should be viewed primarily as an opportunity to provide preventive advice and reinforce the development of good oral health habits from an early age and should complement home / community based interventions (DBOH, 2014). Considerable effort is required to affect shifts in cultural beliefs and behaviours with respect to dental care, moving from one where children's first experience of dental care is often when they already have decay and pain to one where parents seek check-ups and advice from an early age.

Tobacco use

Smoking is a known risk factor for periodontal (gum) disease. The rate of progression of periodontal disease and its severity are greater in smokers compared with non-smokers for similar levels of oral hygiene. Smoking is a known risk factor for the development of mouth cancer. Additionally smoking acts synergistically with alcohol to increase an individual's potential to develop mouth cancer (DBOH, 2014).

Alcohol

Excessive consumption of alcohol is a risk factor for the development of mouth cancer, and as already described acts in a synergistic manner with smoking to potentiate the risk of developing mouth cancer (DBOH, 2014). Binge drinking combined with smoking is likely to be

one of the factors responsible for a rise in oral cancer in men and women in their twenties and thirties, the younger people start smoking and drinking the greater the risk.

Human Papilloma Virus (HPV)
HPV infection is also a risk factor for oral cancer in young adults.

6) What is on the horizon?

Changes in the population

Nottingham City's population is increasing and projected to continue to rise. Migration and excess of births over deaths are the main reasons for the population growth.

The proportion of children in the population is lower than the England average, although not for under-4s. Birth-rates are comparatively high. The number of children (under 15) is projected to increase by 6,600, mostly in the next few years reflecting the recent increase in birth rate.

Nottingham City has a large BME population which now accounts for just over one third of the total population, having increased from just under a fifth in 2001. Given the changes in ethnic groups between the 2001 and 2011 census, and the younger age profile of BME groups in the City, the percentage of the population in BME groups is likely to continue to rise.

Migrants are a diverse group consisting of those who migrate for work, education, family, socio-political reasons, persecution and war. The health needs of the migrant population are very heterogeneous, reflecting the great diversity of where people come from, the circumstances of their migration and the environment in which they live post migration.

Nottingham City is multicultural; with citizens for whom English is a second language. Locally, the birth rate is increasing together with the proportion of children who have English as a second language. The Department of Health's paper 'Standards for Better Health' emphasises the importance of communicating with all members of society to provide equity of access to health services for patients whose first language is not English.

Barriers to accessing and accepting dental care are not restricted to the BME and migrant populations but the type of barrier and the magnitude will vary within and between groups. The challenge for both the local authority and the NHS is to deliver services that are appropriate, assessable and culturally sensitive and meet the needs of an expanding and changing population.

Deprivation

The association between socio-economic status and oral health with oral diseases being increasingly concentrated in the lower income and excluded groups is very well established.

Although the health inequality gap between Nottingham and England is narrowing, there are concerns that this gap may widen with the predicted increase in the population over the coming years.

New Dental Contract

The current dental contract introduced in 2006 does not reward practices in providing preventive care. In response to issues that became apparent with this contractual model, the Dental Contract Reform programme, led by the Department of Health and NHS England, have been tasked with developing a new contractual model for primary care dental services based on a care pathway approach.

The aim of the new contractual model is to provide high quality, personalised clinical care, that:

- focuses on a preventive approach based on individual need and risk
- improves outcomes and effectiveness,
- encourages patients to take responsibility for protecting and maintaining their own oral health
- places importance on a long term continuing care relationship between the patient and dental team

The piloting stage has been completed and a number of practices across England are currently involved in testing a prototype contract.

7) Local Views

Patient Satisfaction

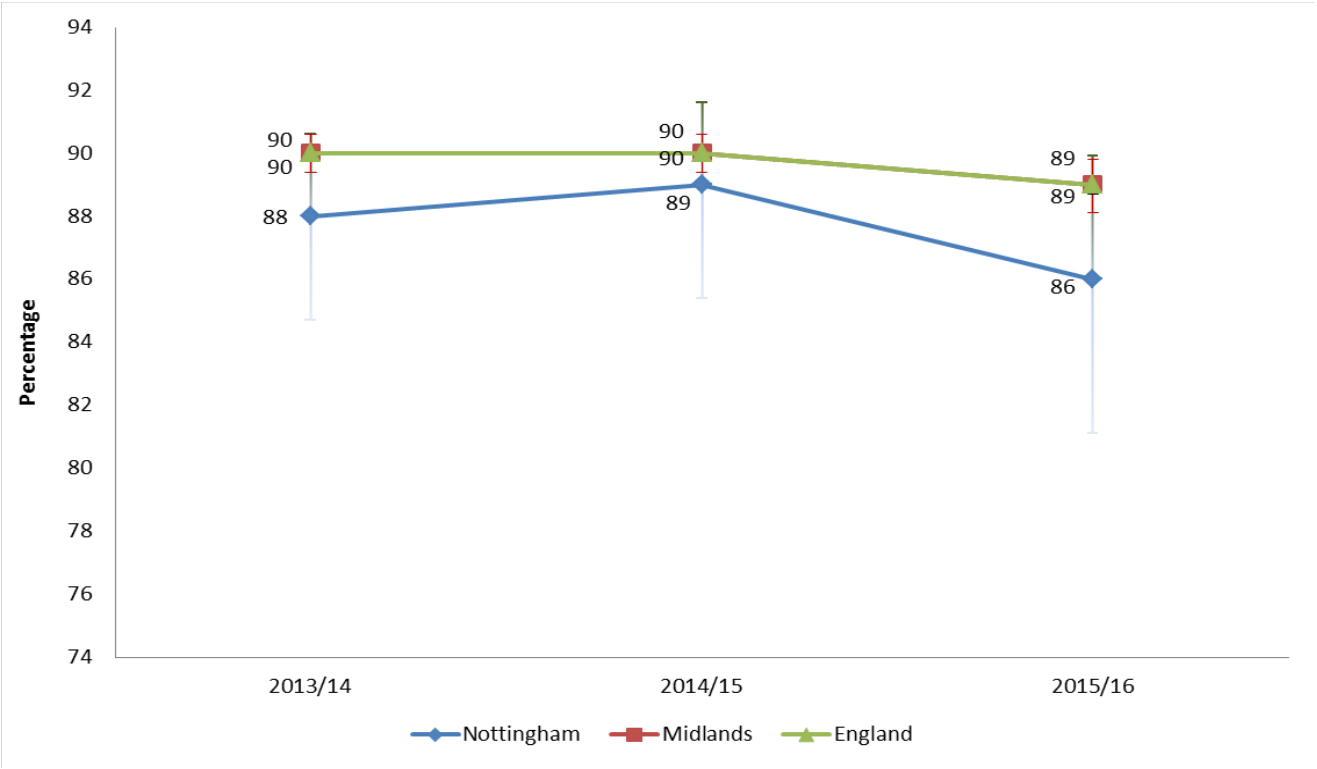
The NHS Dental Service questionnaires measure patients experience in terms of:

- the treatment they received
- the length of time taken to get an appointment

Figures 18 and 19 show the results of both indicators between 2013 and 2016. Satisfaction rates for Nottingham residents have been consistently below the England and Midlands rates on both indicators.

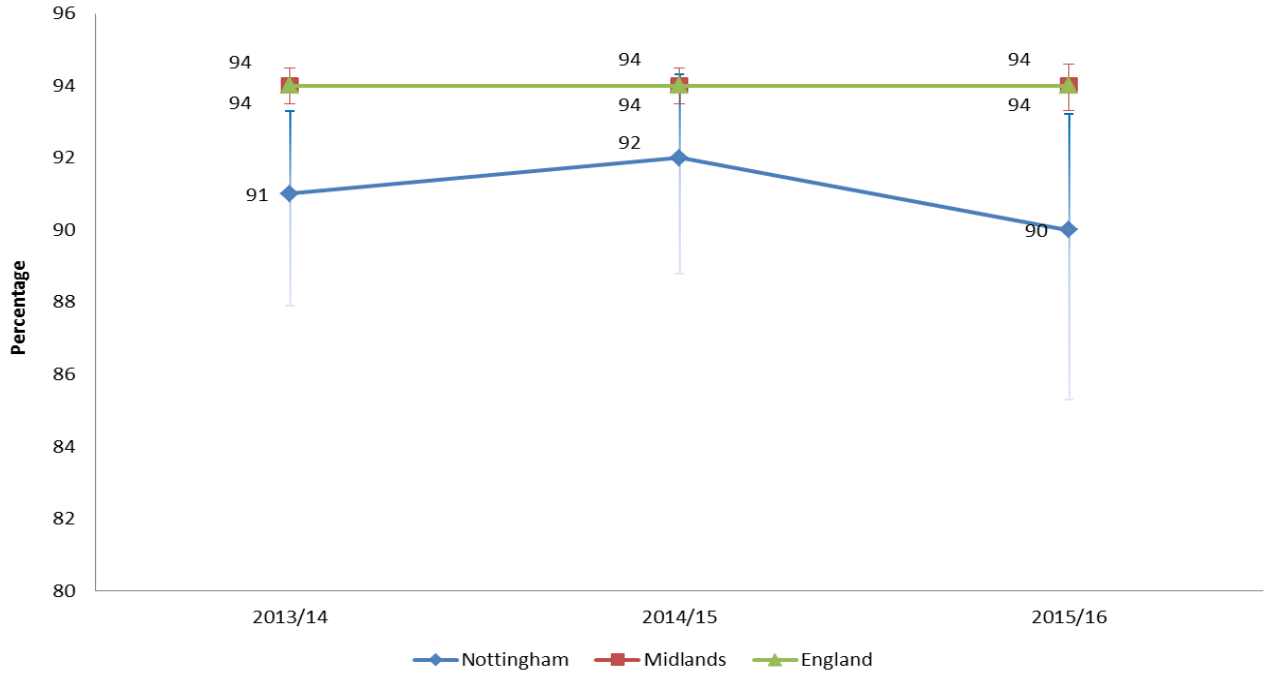
These are both relatively blunt measures that don't explore the reasons behind why patients respond in the way that they do, for example a patient may choose to wait longer in order to see a particular dentist rather than one who has an earlier available appointment. They may express dissatisfaction about care based on the quality of the care received or what is and is not available within NHS dental services.

Fig 18: Percentage of patients satisfied with time to wait for an appointment



Source: **NHS Business Service Authority (Oct, 2016)**

Fig 19: Percentage of patients satisfied with dentistry received



Source: **NHS Business Service Authority (Oct, 2016)**

What does this tell us?

8) Unmet needs and service gaps

- The proportion of children (under 18 years), and particularly very young children living in Nottingham and accessing dentl services is low compared to the Midlands and England
- There is anecdotal evidence that first dental attendance is frequently symptomatic and not preventive.
- Although the rate of fluoride varnish application for children in the City is good there is considerable room for improvement to ensure universal access to two applications per year for each child..
- There is persisting erroneous belief amongst the population that access to dental services is poor. This together with poor rates of patient satisfaction with NHS Dental Services And the reasons for this dissatisfaction are unclear and warrant further investigation.
- Making Every Contact Count is an important approach to ensuring oral health messages are delivered at every opportunity. However, feedback from frontline workers would suggest that this is not happening systematically and more work needs to be done to embed this approach across the workforce.

9) Knowledge gaps

Gaps in local knowledge

In Nottingham, it is unclear:

- Why people choose not to access dental healthcare services, in particular why parents are reluctant to engage with prevention to avoid dental disease.

Gaps in National/International Evidence

The report on the National Dental Epidemiology Programme for England: oral health survey of five-year-old children (2015) reported that there is a lack of definitive evidence-based guidance on the appropriateness and benefit of filling decayed primary teeth. A large scale UK based randomised controlled trial is currently being undertaken to answer this question.

Further research is also required to clearly establish the nature of the relationship between dental decay levels and childhood obesity as free sugar is a contributory factor that leads to both dental decay and obesity. The PHE Dental Public Health Intelligence programme survey of the dental health of five year old children (2016/17) will link oral health data with the children's Child Measurement programme data to attempt to answer this question.

What should we do next?

10) Recommendations for consideration by commissioners

1. As responsibility for commissioning for oral health is shared between local authorities and NHS England, commissioners should work together collaboratively, with support from PHE and other stakeholders to improve the oral health of the population of Nottingham.

2. Ensure that opportunities to 'Make Every Contact Count' with children, young people and their families are maximised by collaborative working across health, social care and education, which is underpinned by co-ordinated training to ensure delivery of consistent evidence based oral health promoting messages.

3. Consider continued commissioning of a supervised tooth brushing programme for nurseries/primary schools with possible expansion of the service to further early-years settings, taking in to account current financial pressures and budget cuts.

4. Explore the feasibility of a water fluoridation scheme as one of a range of interventions to improve oral health in Nottingham City.

5. Give consideration to commissioning a targeted fluoride varnish application programme, drawing on the experience of other programmes and previous local experience.

6. Explore appropriate incentives to encourage dental services to contribute to both oral health and wider health and well-being by shifting their focus from being primarily treatment focussed to a preventive focus.

7. Explore the development of an accreditation programme for local NHS dental practices to encourage provision of child-friendly preventive focussed services.

8. Encourage parents in the City to attend a dental practice with their child before their first birthday, followed by regular visits to help children familiarise well with the environment and maintain good oral health.

9. Through their commissioning decisions commissioners should ensure equitable access to NHS dental services within reasonable travel time for every citizen in the City. This should include access to urgent care and out of hour's dental services.

10. Ensure that information about how to access NHS Dentistry is easily available to all sectors of the community, including new residents, through a wide range of agencies.

11. Explore the perception of lack of access to NHS Dental Services and the reasons for the poor level of patient satisfaction reported by City residents, then using this information to support future commissioning decisions.

12. Develop commissioning of consultant led paediatric dental services, care pathways and managed clinical network based on the NHS England Paediatric Dentistry Commissioning guidance (NHSE, in draft).

13. Develop local pathways and protocols to ensure appropriate information sharing occurs between agencies involved in the care of children and young people, including dental practices, to identify children for whom dental neglect may be part of wider neglect / child protection concerns.

14. Review current protocols and procedures for ensuring that all looked after children who are the responsibility of the local authority have access to appropriate dental care.

15. Where resources dictate that programmes or services need to be targeted the focus should be on the provision of services for children and young people and families especially those living in local areas that are the most deprived.

16. Ensure access to appropriate resources to support promotion of good oral health and access to services. This should include working collaboratively with the population groups themselves and services they are in contact with together with interpretation and translation Services. This may include the translation of oral health promotion materials for non-English speaking parents/careers, but may also include the provision of pictorial resources.

17. Encourage the use of protective sports equipment, for example gum shields, and safe physical environments where children play to reduce the risk of dental injuries.

18. Encourage the prescription of sugar free medicines for children and those with special needs who are at higher risk of dental caries (decay).

Key contacts

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