Title of paper:	Update on children's oral health in Nottingham City	
Report to:	Nottingham Children's Partnership Board	
Date:	30th March 2016	
Relevant Director:	Alison Challenger: Interim Director of Public Health Alison Michalska: Corporate Director for Children and Adults	**Wards affected:** All
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Relevant Children and Young People's Plan (CYPP) priority:	
Safeguarding and supporting children and families: Children, young people and families will benefit from early and effective support and protection to empower them to overcome difficulties and provide a safe environment in which to thrive.	☒
Promoting the health and wellbeing of babies, children and young people: From pregnancy and throughout life, babies, children, young people and families will be healthier, more emotionally resilient and better able to make informed decisions about their health and wellbeing.	☒
Supporting achievement and academic attainment: All children and young people will leave school with the best skills and qualifications they can achieve and will be ready for independence, work or further learning.	☐
Empowering families to be strong and achieve economic wellbeing: More families will be empowered and able to deal with family issues and child poverty will be significantly reduced.	☐

Summary of issues (including benefits to customers/service users):

Oral health has implications for general health, educational attainment and the wider economy. Dental caries is the commonest dental disease of childhood but is largely preventable and its prevalence is correlated with deprivation.
Nottingham City Council has statutory responsibilities for monitoring and improving the oral health of the population,

17% of 3 year old and 38.5% of 5 year old children in Nottingham have experience of dental decay (the commonest dental condition affecting children). Both these figures are higher than the average for England and are the 2nd highest among the local authorities in the East Midlands.

Prevention of dental disease should have a focus on; increased use of fluoride, reducing the frequency of sugar consumption, effective daily oral hygiene, seeking regular dental care,

smoking cessation, and oral cancer awareness campaigns. In 2015 the oral health promotion service in Nottingham was re-commissioned to an evidence based specification with a focus on prevention of disease in children. There is good access to NHS dental care across the city. The most recent access survey undertaken by NHS England North Midlands shows that of the 38 practices in the city with NHS contracts, 32 (84%) were taking on new patients. Uptake of services by children is showing signs of improvement.

Recommendations:	
1	The Board is asked to note the local authority's responsibilities in terms of oral health and the issues highlighted regarding the oral health of children living in Nottingham including the potential wider health, educational and economic impacts.
2	The Board is asked to support the revision of the oral health pages of the JSNA
3	The Board is requested to support the development and implementation of an Oral Health Improvement strategy for the residents of Nottingham city which will inform future commissioning strategies and collaborative working with partners.
4	Board members are invited to actively support current oral health promotion activity and encourage increasing numbers of children and young people to access dental services across the city.

1 BACKGROUND AND PROPOSALS

1 Oral health is an important part of general health and wellbeing. Whilst there have been welcome improvements in the oral health of children in England, significant inequalities remain. Oral health was defined by the Department of Health in 1994 as the 'standard of health of the oral and related tissues which enables an individual to eat, speak and socialise without active disease, discomfort or embarrassment and which contributes to general well-being'.

2 Oral health is integral to general health and should not be considered in isolation. Oral disease has detrimental effects on an individual's physical and psychological well-being and reduces quality of life. A range of conditions are classified as oral diseases. The commonest disease is dental caries (or tooth decay). Other important conditions are periodontal (gum) disease and oral cancers. As well as causing pain or infection, poor oral health is associated with low weight and failure to thrive in infancy.

3 Many general health conditions and oral diseases share common risk factors such as smoking, alcohol misuse and poor diet (Watt & Sheiham, 2012). 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.

4 Poor oral health impacts children and families' health and wellbeing. Children who have toothache or who need treatment may have to be absent from school. Parents may also have to take time off work to take their children to the dentist. Oral health is an integral part of overall health; when children are not healthy, this affects their ability to learn, thrive and develop. Good oral health can contribute to school readiness.

5 While oral health in England has improved significantly across the population as a whole over recent decades, marked inequalities persist. People living in deprived communities

consistently have poorer oral health than those living in richer communities. Some vulnerable groups also have worse oral health, including those with physical or mental disabilities, older people, those who are or have been in care, homeless, prisoners and people from some black and minority ethnic groups, for example people of South Asian origin and the travelling community.

6 Tooth decay is the most common oral disease affecting children and young people in England, yet it is largely preventable. When children have toothache or need treatment, this can affect their ability to learn and result in repeated absence from school.

7 While children's oral health has improved over the last 20 years, one in 8 three year olds and more than a quarter of five year olds still had experience of tooth decay in their primary dentition (PHE, 2013 & 2014), and almost half of 15 year olds had experienced decay in their permanent teeth (ONS, 2015).

8 Tooth decay was the most common reason for hospital admissions in children aged five to nine years old in 2012-13 (PHE, 2015). Dental treatment under general anaesthesia (GA), often the only way to treat very young children, presents a small but real risk of life-threatening complications for children.

9 Dental disease also places a significant cost on the NHS, with estimated spending of £3.4 billion per year on dental care (in addition to an estimated £2.3 billion on private dental care) NHS England, 2014).

Roles and responsibilities

10 The Health and Social Care Act (2012) conferred 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.
- Commission oral health surveys as part of the Public Health England (PHE) Dental Public Health Intelligence Programme (DPHIP) http://www.nwph.net/dentalhealth/, formerly known as the NHS Dental Epidemiology Programme. These surveys are undertaken to a national protocol by trained and calibrated examiners.

The same Act also conferred powers to local authorities to make proposals regarding water fluoridation schemes. Primary legislation is the Water Industry Act 1991, as amended (the 1991 Act) and the process for making proposals is set out in The Water Fluoridation (Proposals and Consultation) (England) Regulations 2013.)

11 There is one oral health indicator in the Public Health Outcomes Framework, which is 'caries prevalence in 5 year olds' and this is informed by the biennially collected 5 year old data from the DPHIP. NHS England has also recently introduced an indicator for the number of children having a general anaesthetic for removal of decayed teeth.

12 NHS England is responsible for commissioning all clinical dental services, both primary and secondary care. Health Education England (HEE) is responsible for developing the workforce and PHE supports the whole system with expertise, evidence and intelligence. Collaborative working between all these partners will be required to achieve improvement in oral health.

13 National Institute for Health and Care Excellence (NICE) guidance recommend that oral health should be a core component of joint strategic needs assessments (JSNA) and health and wellbeing strategies (NICE, PH 55, 2014), and that an oral health needs assessment and oral health improvement strategy should be developed for the local population. Both this document and the PHE toolkit 'Commissioning Better Oral Health for Children and Young People (PHE, 2014) provide guidance to local authority commissioners on commissioning

evidence based oral health promotion services appropriate to the needs of their local population.

14 The current oral health elements of the JSNA were written in 2009. PHE have developed an updated Oral Health Needs assessment which can be used to inform the revision of the JSNA and inform the development of an oral health improvement strategy.

Oral health of children in Nottingham

15 The dental epidemiology survey of five year olds (2011/12):

- 229 five year old children were examined in Nottingham.
- The mean number of teeth affected by dental decay amongst the children examined was 1.32 teeth. This is greater than the mean for the East Midlands and England (0.92 and 0.94 respectively).
- 38.5% of the children examined in Nottingham City were found to have experience of dental decay with an average of 3.44 affected teeth.
- Nottingham has the second highest experience of dental decay in the East Midlands (Leicester city highest in England).
- Experience of dental decay correlates with deprivation

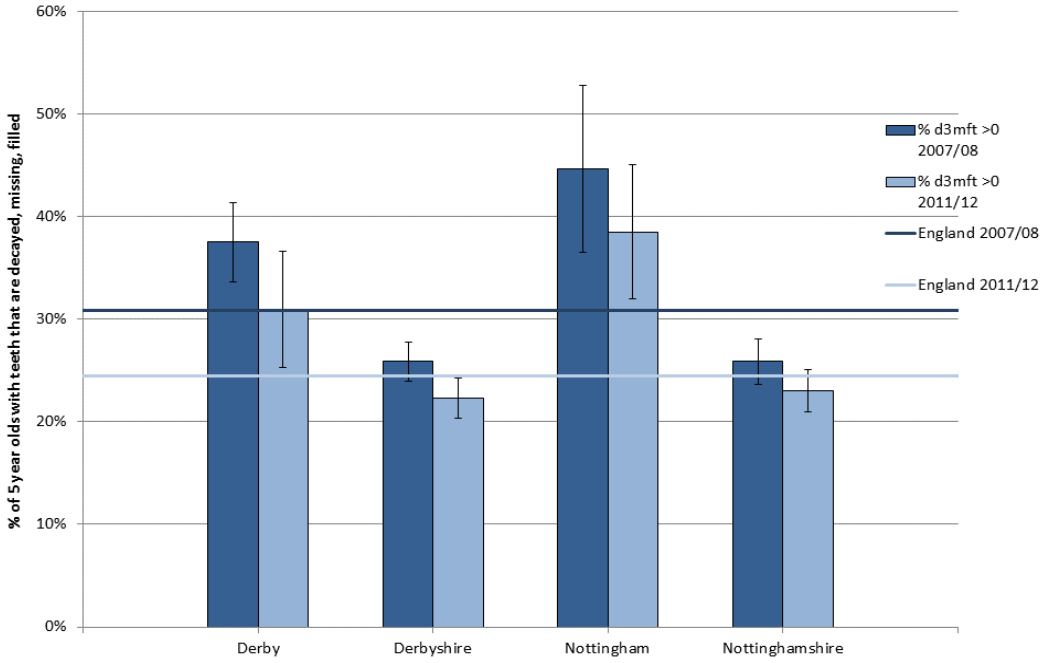
Table 1: Oral health of five year old children 2011/12

	Nottingham City	**Nottinghamshire County**	**East Midlands**	**England**
Decay experience	38.5%	23%	29.8%	27.9%
Active decay	36.5%	20.4%	27.3%	24.5%
One or more fillings	10.6%	11.3%	9.9%	11.2%

Source: PHE, 2013

16 Figure 1 illustrates that the oral health of 5 year olds has improved when compared to the previous survey. Examination of trends over a longer period is not currently possible due to changes in methodology, particularly the adoption of positive consent for participation. As these surveys were undertaken using the minimum sample required by the programme it is also not possible to make comparisons within areas of the city. For the 2014/15 survey an enhanced sample was commissioned which should permit analysis to Area Committee level. The results of this survey are expected to be published in May 2016.

Figure 1: Proportion of five year olds with decay experience by Local Authority, 2007/08 and 2011/12



17 Results from the PHE DPHIP oral health survey of 3 year olds in England 2012/13:

- 255 three year old children were examined in Nottingham.
- 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 (Figure 2).
- 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

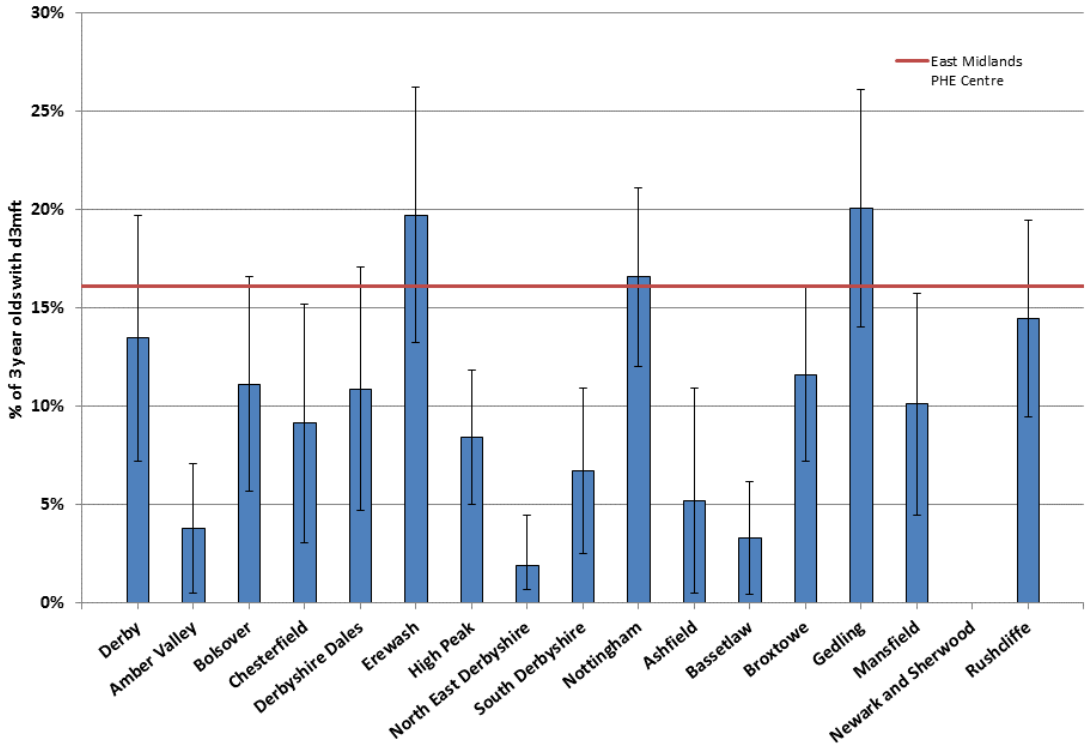
This was the first time that a survey of this age group has been undertaken and indicates the importance of ensuring that prevention is embedded from the earliest stage possible in a child' life.

Table 2: Oral health of three year old children 2012/13

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

Source: PHE, 2014

Figure2: Proportion of three year olds with decay experience by Local Authority, 2013



18 The last NHS Dental Epidemiology Programme survey of 12 year olds was undertaken in 2008/09. In Nottingham 35.2% of 12 year olds examined had experience of dental decay, which was higher than the average for both England (33.4%) and the East Midlands (28%), with an average of 2.29 decayed, missing or filled teeth (DMFT), which was also higher than the England average (2.21) and average for East Midlands (2.04). The average number of decayed, missing or filled teeth in the whole sample was 0.81, which again was higher than the average for England (0.74) and the East Midlands (0.57).

19 In 2014, the PHE DPHIP carried out a survey of 5 and 12 year olds who attend special support schools in England. This is the first time a survey of this group has been undertaken using the same criteria and methodology used for the 5 and 12 year old surveys of children attending mainstream schools.

20 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, with 15% of 5 year olds having 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). Oral cleanliness amongst the 5 year old 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. However, caution is urged when interpreting these findings as the sample size is based on relatively small number of children in some of the participating local authorities, and insufficient 5 year old children were examined in Nottingham special support schools to be able to provide a valid estimate.

21 Amongst 12 year olds in special support schools in the East Midlands the prevalence of decay was 34% which is higher than the mean for England (29.2%). Similarly the average number of teeth affected by decay in 12 year olds which is also higher in the East Midlands (0.9 teeth), compared with the England average of 0.69. In those children with dental decay the average number of teeth affected is also higher in the East Midlands (2.63) compared with England (2.37). Oral cleanliness amongst the 12 year old children examined in

Nottinghamshire was similar to that for 5 year olds with 4% having substantial amounts of plaque. This compares favourably with the regional and national picture of 19% and 19.5% in the East Midlands and England respectively. Again caution is urged when interpreting these findings as the sample size is based on relatively small number of children in some of the participating local authorities, and insufficient 12 year old children were examined in Nottingham special support schools to be able to provide a valid estimate.

Prevention of dental disease

22 Dental caries is a preventable disease, and its prevalence is strongly associated with deprivation. In socially excluded groups, such as the homeless and prisoners, dental decay rates are much higher than the general population.

23 There are two aspects to the control of caries; the control of dietary sugar consumption to reduce the severity of the acid attack on teeth and the use of fluoride to increase the tooth's resistance to this attack.

24 Good dietary practice for dental health is consistent with that for general health and should be an integral part of general health promotion campaigns. Reduction of quantity and frequency of sugar consumption in the diet is the key message, with high sugar content diets also contributing to the burden of obesity. It is also important to encourage provision of supportive environments to give all members of the population the opportunity to have a healthy diet.

25 Fluoride is the only factor that has been shown beyond doubt to increase the resistance of teeth to decay. There is a considerable body of evidence for the safety and efficacy of fluoride delivered by various vehicles in the prevention of dental caries. The use of fluoridated toothpaste is a fundamental building block in the prevention of caries (PHE, 2014).

26 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.

27 Commissioning better oral health (PHE, 2014) also provides evidence based guidance on other community based methods of providing fluoride including supervised tooth brushing and fluoride varnish programmes and Delivering better oral health (PHE, 2014) provides dental practitioners with evidence based guidance on providing preventive care for their patients..

28 Good oral hygiene is the proven method of preventing the development and progression of periodontal (gum) disease. Tooth brushing is also essential for the delivery of fluoride toothpaste. Good practice is best established in childhood and advice should be available for all ages, including those with disabilities and their carers.

29 Training for health and social care and education professionals about the key oral health messages should enable them to deliver consistent and up to date health messages with links to the Personal, Social and Health Education (PSHE) curriculum.

30 Encouraging regular visits to a dentist from an early age and before problems occur is also a cornerstone of the consistent advice offered to all. Regular attendance permits individually tailored preventive advice and the use professionally applied preventive interventions such as fluoride varnish.

31 Many general health conditions and oral diseases share common risk factors such as smoking, alcohol misuse and poor diet. 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. To do so, requires partnership action to address the wider determinants of health, ranging from economic and social policy change (creating healthier environments), to the adoption of healthier behaviours by individuals in the population. It is also fundamentally important to focus also on upstream factors that create inequalities and that cause both poor general and oral health.

Oral Health Promotion in Nottingham

32. The OHP service was re-commissioned last year with the new service commencing in April 2015. The aim of the new service is to deliver an evidence based oral health promotion service based on the recommendations from the PHE document 'Local authorities improving oral health: commissioning better oral health for children and young people.' The oral health promotion programmes will aim 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

33. The four objectives of the service are:
    - To deliver a supervised tooth brushing programme within early years settings, targeting the most deprived wards within Nottingham City.
    - To train key health, social care and education professionals in order for them to deliver oral health brief advice to the citizens of Nottingham City.
    - To distribute oral health resources (tooth brushes and tooth paste) based on evidence of need and to work with key stakeholders, working in Nottingham City.
    - To participate in national oral health awareness campaigns and related national and local health awareness campaigns.

Dental service provision in Nottingham

34. NHS dental services, both primary care and secondary care, are commissioned by NHS England. NHS England North Midlands commission services for Nottingham. There is good access to NHS dental care across the city with 38 dental practices in Nottingham commissioned to provide NHS dentistry. The most recent local access survey (February 2016) indicates that 32 (84%) of practices taking on new NHS patients. Nottingham residents also have access to a range of other dental services, including treatment under general anaesthetic, orthodontics, special care dentistry, domiciliary care and minor oral surgery. Significant additional investment has also been made by NHS England recently to ensure there is sufficient out-of-hours dental provision for the population.

35. The most recent data (July 2014 to March 2015) indicates that 60.6% of Nottingham residents (aged 18 and above) tried to get an NHS appointment in the previous two years and 95.6% successfully obtained one (England – 60.7% & 95% respectively). 83% of residents reported a 'very good' or 'fairly good' experience of NHS dental services in the same time period (England 84.6%) (NHS Outcomes Framework: Indicators 4.4ii & 4a.iii).

36. Dental access data obtained from the NHS Business Services Authority (BSA) for the years 2011 to 2015 shows that for all patients' access has been slowly increasing in Nottingham, mirroring the national trend, but remaining lower than the rate for England. Access rates for children are consistently higher than those for the adult population and for the first time in the

five reference years child access in Nottingham in 2015 was higher than the national rate (66.2% and 65.1% respectively).

37. Delivering Better Oral Health, 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.

38. 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.

Recommendations

i. The Board is asked to note the local authority's responsibilities in terms of oral health and the issues highlighted regarding the oral health of children living in Nottingham.
ii. The Board is asked to support the revision of the oral health section of the JSNA to reflect current data and published guidance.
iii. The Board is requested to support the development and implementation of an Oral Health Improvement strategy for the residents of Nottingham city which will inform future commissioning strategies and collaborative working with partners.
iv. Board members are invited to actively support current oral health promotion activity and encourage increasing numbers of children and young people to access dental services across the city.

2 RISKS

2.1 An oral health improvement strategy would facilitate greater targeting of resources to groups and communities that would gain greatest benefit from oral health improvement programmes.

3 FINANCIAL IMPLICATIONS

3.1 These recommendations will need to be delivered within existing resources. No additional budget has been identified.

4 LEGAL IMPLICATIONS

4.1 Nottingham City Council has a statutory responsibility to provide or commission oral health promotion programmes to improve the oral health of the local population. National guidance recommend that oral health should be a core component of joint strategic needs assessments (JSNA) and health and wellbeing strategies (NICE, PH 55, 2014), and that an oral health needs assessment and oral health improvement strategy should be developed for the local population.

5 CLIENT GROUP

5.1 These recommendations have the potential to benefit all children and young people in the city, but those at increased risk of dental disease (living in deprived communities and vulnerable groups) have the greatest potential to benefit.

6 IMPACT ON EQUALITIES ISSUES

6.1 Minority groups, including travellers and refugee families are included in the groups considered to be at high risk of dental disease and are targeted as part of the recently commissioned oral health promotion programme. Consideration of these groups and other emerging communities would form part of the development of an oral health improvement strategy. Strategy development would need to include the local dental community, NHS England, Health Education England together with wider engagement from the voluntary sector, local communities, and patients (Children and young people, parent and carers).

7 OUTCOMES AND PRIORITIES AFFECTED

7.1 The CYPP priorities that this will contribute to are:

- Develop a framework of sub-partnerships under Nottingham Children's Partnership;
- Enable integrated planning, processes and front line delivery of services to take place effectively;
- Enable cost effective aligning of resources across agencies.