London Borough of Barnet

Children and Young People's Oral Health Needs Assessment

November 2022

Table of Contents

Acknowledgements

This health needs assessment was undertaken by Maeve Gill, Public Health Specialty Registrar.

I would like to extend my thanks to everyone who supported and contributed towards the development of this needs assessment. Special thanks to the following colleagues:

Public Health and Family Services teams, Barnet

Emma Waters	Consultant in Public Health
Rachel Wells	Consultant in Public Health
Jeremy Hooper	Insight & Intelligence Lead – Public Health
Olivia Cowie	Public Health Intelligence Analyst
James Rapkin	Head of Organisational Intelligence and Insight
Lauren Neil	Health Improvement Officer
Clare Slater-Robbins	Senior Children and Young People Commissioner
Sharon Smith	Senior Public Health Strategist
Andy Whiting	Early Years/Primary Service Manager
Louise Jennings	Barnet Education and Learning Service

External Supporters and Contributors

Rakhee Patel	Consultant in Public Health and Primary Care (North Central London lead), NHS England and NHS Improvement - London Region
Huda Josef	Consultant in Dental Public Health and Primary Care (Children and Young People lead), NHS England and NHS Improvement - London Region
Andrew Read	Consultant / Clinical Director Dental Services Whittington Health NHS Trust
Ayesha Masood	Oral Health Improvement Lead, Whittington Health NHS Trust
Alan Ross	Secretary of Barnet Local Dental Committee
Ebun Oliver-Wallace	Locality Lead, School Nursing, Solutions4Health
Manisha Limbu	Oral Health Promoter, Solutions4Health
Ken Binnah	Oral Health Promoter, Solutions4Health
Susan Yadin	Dental Strategic Adviser - Community and Specialist Dental Services Central London Community Healthcare NHS Trust

I would like to thank all the participants who took part in the focus group and stakeholder engagement interviews.

Yvonne Conway	Designated Nurse for CLA/LAC - Barnet and Islington
Toni Pankhurst	Interim Named Nurse for Looked After Children

Tania Barney	Health Education Partnership
Paresh Patel	Local Dental Committee
Farah Ramjohn	Local Dental Committee
Krupa Rughani	Chair of Barnet Local Dental Committee

Figures

Tables

Executive Summary

Oral health is a key marker of general health in children and while tooth decay is preventable, it remains an important public health issue due to its impact on children's ability to sleep, eat, speak, play, with wider social and NHS costs. In addition, the experience of tooth decay is socially patterned with significant oral health inequalities.

The National Dental Epidemiology Programme (NDEP) oral health survey in 2019 showed that just under a quarter of five-year-olds in Barnet (24.8%) had tooth decay. Although this does not differ significantly from the proportions reported in London and England, 1 in 4 children in Barnet have experience of tooth decay, posing a significant public health burden. Data also confirmed that this proportion varies between different wards: rates of tooth decay reported in some of the most deprived wards in the borough were between 35% to 40% in West Hendon, Childs Hill and Burnt Oak. Further, although more recent data is not yet available, we anticipate that the COVID-19 pandemic will have worsened the prevalence of tooth decay and that pre-existing oral health inequalities are likely to have been exacerbated. Barnet Councillors on the Health Overview and Scrutiny Committee (HOSC) wanted to understand the oral health needs of Barnet's children. This Children and Young People's Oral Health Needs Assessment (CYP OHNA) sought to understand the local picture and offer recommendations for improvement.

The report is divided into **five** chapters:

1. The **first** outlines the aims, objectives, methodology, scope and limitations.
    a. The currently commissioned oral health promotion services in Barnet are focused on the 0-19 year old population and this needs assessment focused on that group.
    b. It included understanding the available data on the oral health of Looked After Children (LAC) as a known vulnerable group.
    c. Future oral health needs assessments may follow for children with Special Educational Needs (SEN) and also for the later stages of the life course.
2. The **second** chapter outlines the national context.
    a. This includes the wide ranging impacts of poor oral health: tooth decay remains the leading reason for hospital admissions for 5- to 9-year olds.
    b. It describes the financial consequences of oral diseases, with tooth extractions for 0- to 19-year olds estimated to cost the NHS approximately £50m annually.
    c. It outlines evidence for oral health inequalities and that influences on these operate at different levels: upstream, midstream and downstream.
        i. Upstream social factors are the overriding influences that create opportunities for people, for example, economic policies which shape the income of an individual.
        ii. Midstream factors refer to an individual's day-to-day living conditions. These range from access to healthy, affordable food through to psychological factors such as stress and access to affordable dental care.
        iii. The downstream factors affecting oral health are related to health behaviours, which for children are largely related to sugar consumption in their diet and regular tooth-brushing with fluoride tooth paste.

d. London-wide evidence on the negative impact of the COVID-19 pandemic on children's oral health is also presented.

e. National policy guidance on the recommended effective interventions to promote good oral health in children and to reduce oral health inequalities is described, including cost effectiveness evidence.

3. The **third** chapter describes the oral health status of children in Barnet and identifies health inequalities where possible.

    a. The data showed evidence of inequality in the prevalence of decay across Barnet by deprivation: almost 35% of 5-year-olds in the most deprived quintile of the borough have experience of dental decay compared with 10% of 5-year-olds in the least deprived quintile. This is consistent with statistically significant differences in the prevalence of decay by deprivation observed in London-wide data.

    b. There is also London-wide evidence of statistically significant differences in the prevalence of tooth decay by ethnic group.

    c. In terms of accessing NHS dental services, in 2019/20 – prior to the COVID-19 pandemic – only about half (53%) of 0-19 year olds accessed NHS dental care, but this fell to 21% in 2020/21, due to the pandemic's impact on dental services.

    d. The Barnet rate of hospital admissions for children to have their teeth extracted, based on combined data from 2018/19 to 2020/21, is similar to the rate in England (3.4 per 1,000 population), but lower than the London rate (4.0 per 1,000 population). However, rates within Barnet were socially patterned: highest in the most deprived quintile (4.3 per 1,000 population) to lowest in the least deprived quintile (2.5 per 1,000 population).

    e. There are 56 NHS General Dental Practices (GDPs) in the borough who deliver NHS services to children under 18-years-old, though as children can access dental care in any location it is difficult to interpret where Barnet's children are accessing services.

    f. Prior to the COVID-19 pandemic, the percentage of LAC having dental checks was approximately 80%. This reduced to 31% in 2020/21 but recovered to 69% in 2021/22 due to a pan-London Healthy Smiles pilot, which was launched in November 2021.

4. Chapter **four** describes the current provision of oral health services in Barnet and perspectives from parents and professional stakeholders.

    a. Accounts - from a focus group with eight parents with 3-to-4 year old children in a deprived ward of the borough - suggested that children's preferences to consume sugar are shaped by cues from their physical environments (e.g. shops) and social environments (e.g. older sibling behaviour). Their accounts also highlighted the challenges in relying on families alone to prevent tooth decay through individual toothbrushing behaviour at home. Knowledge was necessary but not sufficient in the context of busy family lives. A wider supportive environment may be required to ensure children receive enough fluoride to prevent decay.

    b. The main areas of need expressed by professional stakeholders involved locally and regionally in oral health were:

        i. oral health partnership arrangements need to be renewed;

        ii. oral health needs to be integrated within multiple programmes;

iii. multilevel action on the social determinants is required;

iv. co-ordination of oral health promotion activities could be improved;

v. 'one off' dental health education activities, that are not within a comprehensive settings-based approach, are not recommended;

vi. some workforce training materials do not yet adhere to national guidance;

vii. training needs were identified for Early Years (EY) and some social care staff, as well as foster carers;

viii. quality assurance of supervised toothbrushing interventions is essential;

ix. provision of toothbrushes and toothpaste needs to be reviewed particularly in relation to acute cost-of-living pressures that families are currenlty experiencing.

x. Further ward level dental survey data would be helpful to understand the impact of the COVID-19 pandemic;

xi. commissioning additional evidence-based interventions such as targeted fluoride varnishing could reduce oral health inequalities;

xii. there is a gap in the provision of NHS dental treatment to the half of Barnet's LAC placed outside of London;

xiii. and there is a gap in understanding the specific oral health needs of children with SEN, who are a vulnerable group, and older people.

5. Chapter **five** discusses the extent to which current programmes and services fit with national policy guidance and the needs identified by stakeholders. Pragmatic recommendations - based on what is within Barnet local authority's sphere of influence - to improve children's oral health were developed. These are grouped according to those deliverable within existing resources and secondly those that would require additional resources.

    a. There are two main areas of recommendation for existing resources.

        i. Firstly, to enhance partnership working by establishing a Barnet Oral Health Partnership, further embed oral health across existing programmes and co-produce an oral health action plan.

        ii. Secondly, to maximise the impact of the small, existing oral health promotion service by focusing on training the wider health, education and social care professional workforces; quality assuring the supervised toothbrushing pilot and ensuring it is targeted within areas of deprivation, reviewing the provision of toothbrushes and toothpaste in response to acute cost-of-living pressures and adopting the oral health training module for foster carers that is being developed London-wide.

    b. With additional resources, the recommendations focus on considering the commissioning additional interventions to improve intelligence and close inequalities - such as targeted community fluoride varnishing programmes and improving access to dental treatment for LAC placed outside London - as well as considering the oral health needs of SEN children and across the whole life course.

1. Background and methodology

1.1 Introduction

Good oral health is essential for good general health and wellbeing. Poor oral health can have a negative impact throughout life and can cause pain, infection and lead to difficulties with eating, sleeping, learning, socialising and wellbeing. Tooth decay is the most common oral disease affecting children and young people in England, yet it is largely preventable. Oral health and general health are influenced by wider social determinants, such as living conditions and access to healthcare, as well as by behavioural risk factors such as healthy diets.

One quarter (24.5%) of Barnet's 5-year-old children have visibly decayed teeth[1]. This proportion is slightly less than the proportion observed across London (27.0%), and slightly higher than the England average (23.4%) but these differences are not significant. Among that quarter of Barnet's 5-year-olds with decay experience, they have on average 3.6 teeth that are decayed, missing or filled. This number of teeth is similar to London (3.4) and England (3.4) averages. Importantly, the distribution of 5-year-old children with decay is not evenly spread across the borough: levels are higher in more deprived wards, with almost 4 in 10 experiencing decay in Burnt Oak (39.0%) and 3 in 10 in West Hendon (35.3%) and Childs Hill (34.5%).

Barnet Councillors on the Health Overview and Scrutiny Committee (HOSC) have wanted to understand the oral health needs of Barnet's children. This children and young people's oral health needs assessment seeks to understand the local picture and offer recommendations for improvement.

1.2 Aim and objectives of this report

The aim of this needs assessment was to examine and describe the oral health status and needs of Barnet's children and young people and identify effective interventions to promote good oral health, to inform the development of an oral health action plan in 2023.

The objectives of this needs assessment were to:

- describe the national policy guidance on effective interventions to promote good oral health in children and to reduce oral health inequalities;
- describe the oral health status of children and young people in Barnet and identify health inequalities where possible, including Looked After Children (LAC) who are a vulnerable group;
- provide an overview of the current oral health promotion, prevention and treatment services within Barnet;
- understand the experience of some parents of early years children of trying to prevent dental decay and maintain good oral health;
- understand the views of professional stakeholders working on oral health;
- assess the extent to which current services fit with national policy guidance and the identified needs of children;
- and make pragmatic recommendations to improve oral health for children in Barnet, considering the sphere of influence of the local authority and resourcing constraints.

1.3 Methodology

This needs assessment followed a Stevens and Raftery health needs assessment approach[2] which focuses on three key strands of information. Firstly, epidemiological evidence was considered to understand the prevalance of oral health issues. Secondly, comparative evidence was considered to understand oral health in relation to other geographical areas and over time where possible. Thirdly, corporate evidence was collated to incorporate stakeholder views and expertise.

The epidemiological evidence was largely drawn from the National Dental Epidemiological Survey, which enables an understandng of Barnet data as compared to London and England. Local data on hospital admissions for tooth extractions came from Hospital Episode Data and data on visits by children to NHS dentists came from NHS Business Services Authority. Further local data was drawn from the Children and Young People Profile developed by the Public Health Intelligence team.

A pragmatic literature review was conducted to identify the relevant national guidance on the prevention of oral health problems in children, including evidence on the effectiveness and cost effectiveness of different oral health interventions. The relevant reports were obtained from searching national government websites, including Public Health England (PHE, as was), Depart for Health and Social Care (DHSC) and National Institute for Clinical Excellence (NICE). Expert views from regional Dental Public Health Consultant colleagues were also incorporated.

Qualitative data came from a range of stakeholder interviews with professionals working locally on oral health. These included: General Dental Practitioner members of the Local Dental Committee; the Medical Director and Oral Health Improvement Lead of the Community Dentistry Service; Designated Nurses for LAC in Barnet and Named Nurse for LAC in Barnet; an Advisor from the Health Education Partnership (HEP) commissioned service and Regional Dental Public Health Consultants from NHS England. Additional insights about the lived experience of parents trying to prevent dental decay came from a focus group with eight parents with 3-to-4 year old children who attended a nursery in a deprived ward of the borough. The qualitative data collection and analysis followed the Framework analysis methodology, which is appropriate for policy relevant qualitative research[3].

1.4 Scope and limitations

The currently commissioned oral health promotion services in Barnet are focused on children and young people. For this reason, this needs assessment focused on the 0-19 year old population in Barnet. It covered oral health promotion and population-level prevention of oral health problems for children. It also included understanding the available data on the oral health of LAC as a known vulnerable group. Due to the rapid nature of this assessment, conducted between June to October 2022, this document should be considered as a first step to understand the oral health needs of children and young people and the beginning of an iterative approach to meeting their needs. In particular, at the time of publication, we were not able to provide a more detailed assessment of the needs of children with Special Educational Needs (SEN) and this has been noted as a recommendation for future work. Orthodontics, oral surgery, oral medicine and special care dentistry were also out of the scope of this needs assessment.

Further needs assessments may be undertaken to assess oral health needs across the later phases of the life course.

2. National context

2.1 Importance of good oral health

Good oral health is essential for general health and wellbeing. It includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain or discomfort[4]. Poor oral health can have a negative impact throughout life and can cause pain and infection, leading to difficulties with eating, sleeping, socialising and well-being. In children in particular, poor oral health also impacts on school readiness and can impair nutrition and development. Poor oral health can also affect confidence and self-esteem. Children with poor oral health are likely to have time off school and their parents and carers are likely to have time off work to take them for treatment.

Tooth decay is the most common oral disease affecting children and young people in England, yet it is largely preventable. Untreated tooth decay can lead to young children needing dental treatment under general anaesthesia: this has emotional, psychological and developmental impacts on children[5]. Extraction of teeth with general anaesthetic is often a child's first introduction to dental care and can lead to fear and anxiety with lifetime consequences[5]. Dental treatment under general anaesthesia presents a small but real risk of life-threatening complications for children, although safety continues to improve[6]. Tooth decay remains the leading reason for hospital admissions among 5- to 9-year-olds[6]. In total, 29,849 0- to 19-year-olds were admitted to hospital because of tooth decay in 2021-22[7]. The rates of tooth extraction for children and young people living in the most deprived communities was three times that of those living in the most affluent[8]. These national figures are lower than pre-COVID tooth extraction rates which indicates that children are still waiting to see a hospital dentist as dentistry is still recovering from the COVID-19 pandemic, rather the lower levels of need according to the Royal College of Surgeons[7].

2.2 Financial costs of oral diseases

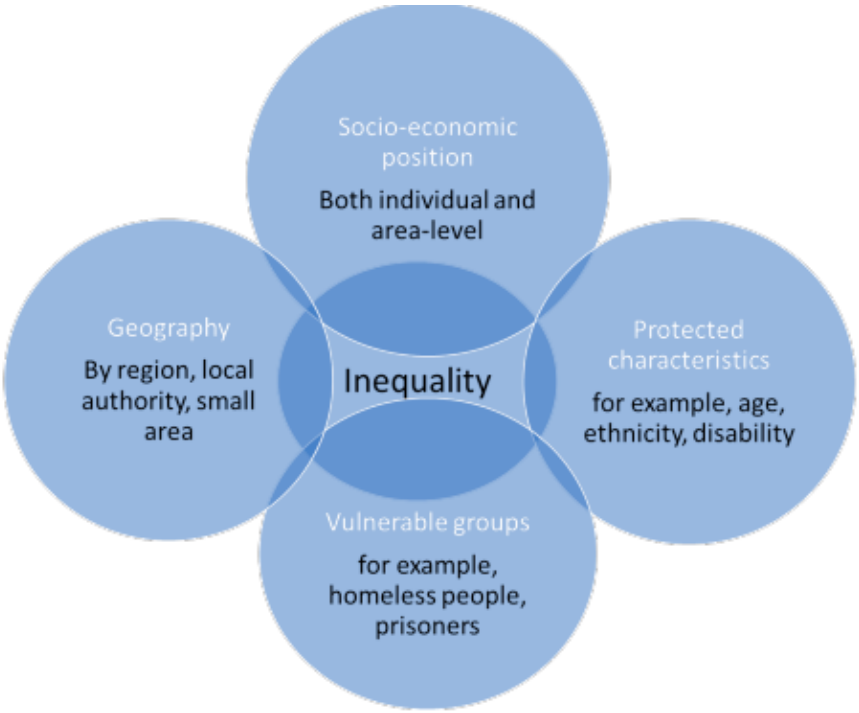
In England oral diseases place significant costs on society and the NHS for what are essentially preventable diseases. The NHS spent £3.6 billion on dental care in 2017 to 2018 in England, with a similar amount is estimated to be spent on private sector dental care in the UK[9]. In 2015 to 2016 the cost of tooth extractions alone was approximately £50.5m among children aged 0 to 19 years in England[10], the majority of which were for tooth decay. This represented the biggest cost to the NHS for this age group across all areas of healthcare. The data available on the actual costs of treatment predate the COVID-19 pandemic, which has placed NHS hospitals under unprecedented pressure for acute hospital admission, from which it is still working to recover. One strategy to reduce pressure on hospitals over the longer-term is to reduce the need for preventable admissions[5].

2.3 Inequalities in oral health

In 2020, Public Health England (PHE, as was) published *Inequalities in Oral Health in England* and made clear that good oral health is not enjoyed equally across the population[8]. They defined oral health inequalities as differences in levels of oral health that are avoidable and deemed to be unfair, unacceptable and unjust[11]. The report demonstrated that a consistent stepwise relationship exists across the entire social spectrum with oral health being worse at each point as one descends along the social hierarchy, a relationship known as the social gradient[12]. They also noted that the most marginalised and socially excluded groups in society such as homeless people, prisoners, people with disabilities and refugees experience extreme oral health inequalities with very high levels of oral

diseases. This is known as an example of a 'cliff edge' of inequality[13]. The report concludes that the impacts of poor oral health disproportionally affect the most vulnerable and socially disadvantaged individuals and groups in society and that these differences in oral health across population groups do not occur by chance, nor are they inevitable. Figure 1 shows four dimensions where there is evidence for differences between population groups: socioeconomic position, protected characteristics, vulnerable groups and geography. Importantly, these are frequently overlapping dimensions, with individuals often belonging to more than one of these categories.

Figure 1. Dimensions of inequalities, taken from Inequalities in Oral Health in England



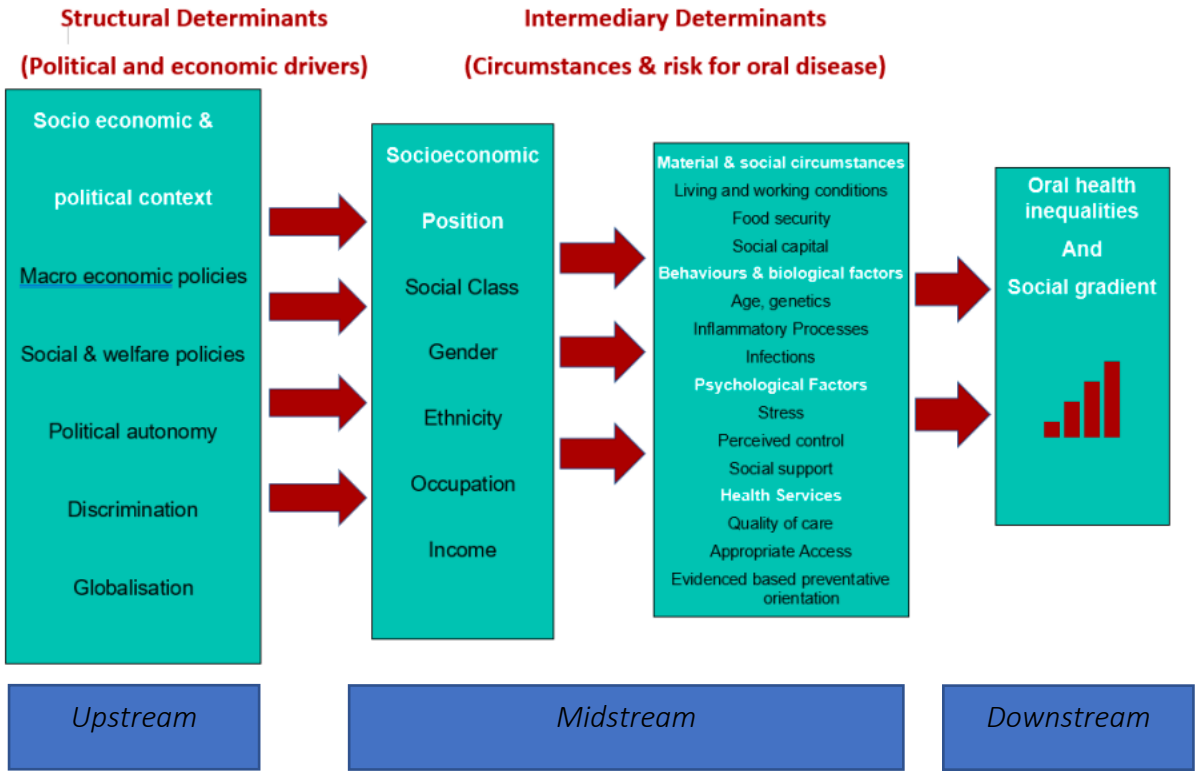
From a local authority perspective, public sector organisations in the health sector in England have legal duties and responsibilities to address inequalities. These legal duties result from two pieces of legislation:

- The Equality Act 2010 which sets out the public sector Equality Duty
- The Health and Social Care Act 2012 which sets out the Health Inequalities Duty.

2.4 Causes of oral health inequalities

Action to tackle oral health inequalities needs to be guided by a theoretical understanding of the underlying causes of health inequalities in society.

Figure 2. Conceptual framework for the social determinants of oral health inequalities



Source: Watt, RG. Sheiham, A. (2012). Integrating the common risk factor approach into a social determinants framework. Community Dentistry and Oral Epidemiology 40, 289 to 296.

Figure 2 shows that the factors which affect oral health inequalities operate at different levels. These are classified as upstream, midstream and downstream causes of oral health inequalities. Upstream social determinants are the overriding influences that create opportunities for people, for example, economic and welfare policies which shape the income of an individual. Midstream determinants refer to an individual's social position and day-to-day living conditions. These range from their material circumstances in terms of access to healthy, affordable food through to psychological factors such as stress or social support and access to affordable health care. The downstream determinants of oral health are related to health behaviours, which for children are largely related to sugar consumption in their diet and hygiene practices. These downstream factors are heavily influenced by the midstream and upstream factors.

2.5 Impact of Covid-19 pandemic

In June 2021, PHE published *The impact of COVID-19 on London's children and young people*[14] and they noted several direct impacts on oral health, which are likely to have worsened the prevalence of tooth decay. These included that:

- Children had long periods with limited access to routine dental care and preventative advice, leading to long waiting lists.
- School closures resulted in more limited access to prevention programmes such as supervised toothbrushing and fluoride varnishing programmes.
- Reprioritisation of general anaesthetic services due to COVID-19 lead to prolonged episodes of pain, repeat prescriptions for antibiotics and untreated tooth decay resulting in sleepless nights, difficulty concentrating on schoolwork and stress for parents.
- In England, 365,000 babies became eligible for their first dental visit during the first lockdown period, when non-urgent dental care was paused.
- Health visitors and school nurse duties and community outreach activities were limited reducing their provision of oral health advice, as well as their opportunity to act on any safeguarding concerns, which may be less likely to be noted due to the decrease in face-to-face contact.

They also noted that it was very likely that the disruption to dental care provision had disproportionately impacted more disadvantaged children, widening existing oral health inequalities. They also noted that during lockdown children increased snacking on sugary food, increasing their risk of tooth decay.

2.6 National oral health policies and guidance on prevention of oral diseases

The PHE team leading on Dental Public Health transitioned into the Office for Health Improvement and Disparities (OHID) on 1st October 2021. Improving the oral health of children is an OHID priority. OHID has an ambition that every child will grow up free of tooth decay, to help give them the best start in life. Nationally, oral health outcomes are reported as part of the Public Health Outcomes Framework[15], which includes an indicator related to "tooth decay in five-year-old children" (E02).

Under the arrangements introduced by the Health and Social Care Act 2012, Councils have a statutory duty to provide or commission oral health promotion programmes, to an extent that they consider appropriate in their areas. They are also required to provide or commission oral health surveys as part of the National Dental Epidemiology Programme (NEDP)[16]. These responsibilities were given to them as part of the transfer of public health to local government in 2013.

PHE (formerly), OHID (since 2021) and NICE have published toolkits and guidance to support local authorities to improve the oral health of their population. These are the specific sources of policy guidance that are relevant to support commissioners in improving the oral health of children and young people:

- ***Local authorities improving oral health: commissioning better oral health for children and young people an evidence informed toolkit for local authorities (PHE 2013)[18].*** This includes the guiding principles of commissioning oral health improvement programmes for children 0-19 years old; provides evidence of effective oral health promotion interventions; recommends taking a life-course and integrated approach, partnership working and putting children and

young people at the centre of commissioning oral health services. The Regional Dental Public Health Consultants have confirmed that this remains the most relevant toolkit to guide local authorities.

- In November 2021, OHID published the latest updated to ***Delivering better oral health: an evidence-based toolkit for prevention*** (DBOH), which was first published in 2007[17]. This is to support dental teams in improving their patient's oral and general health. This is the 'gold' standard for practice in England and was developed with the support of the four UK Chief Dental Officers. It seeks to ensure a consistent UK wide approach to prevention of oral diseases. Although, dental teams providing frontline care are the principal audience for this evidence-based toolkit, it is also relevant to all professionals who have a role in promoting oral health and preventing oral disease, such as oral health promotion teams.

- ***Improving oral health: a community water fluoridation toolkit for local authorities by PHE (updated in 2021)[18]***: is a toolkit to help local authorities to make informed decisions on implementing water fluoridation schemes. It outlines the role that water fluoridation can play in oral health improvement strategies and closing oral health inequalities and notes this an intervention that does not require behaviour change by individuals. This has been included here for completeness but we have been advised by Regional Dental Public Health Consultants that changes to water fluoridation in London are not assessed to be pragmatic due to the need for pan-London agreement to make changes to the water supply.

- ***Improving oral health: supervised tooth brushing toolkit (PHE 2016)[19]:*** is designed to support commissioning of one specific intervention - supervised toothbrushing programmes in early years and school settings - to ensure programmes are safe and effective. The evidence based around the delivery of supervised toothbrushing shows that it is sensitive to changes in delivery and to be effective it is important that specific programmes model closely the existing evidence-based methodology. For example, in addition to the supervised toothbrushing in settings, toothpaste and toothbrush packs should be sent home with supporting information for holiday periods.

- ***NICE guideline PH55 'Oral health improvement for local authorities and their partners[20]***: describes ways to promote and protect oral health by improving diet and oral hygiene, and by encouraging regular visits to the dentist. This guideline is for local authorities, health and wellbeing boards, commissioners, directors of public health, consultants in dental public health and frontline practitioners working more generally in health, social care and education. It includes 21 specific recommendations covering everything from developing an oral health strategy to including oral health promotion into specifications for all early years services. It also recommends considering targeted supervised toothbrushing schemes and fluoride varnishing programmes in nurseries in areas where children are at high risk of poor oral health.

- ***NICE Quality standard QS139 'Oral health promotion in the community'[21]***: This quality standard covers activities undertaken by local authorities and general dental practices to improve oral health. It particularly focuses on people at high risk of poor oral health or who find it difficult to use dental services. It also includes implementation support resources.

In addition to the PHE, OHID and NICE guidance for prevention of oral health diseases mentioned above, there are other guidelines and campaigns supporting oral health promotion for children and young people:

- Early years providers have a responsibility to promote the health of children in their setting, as set out in the ***Early Years Foundation Stage Statutory Framework***, updated in September 2021[22]. The framework's safeguarding and welfare section includes a new requirement to promote good oral health in early years.
- Oral health is now within the statutory health education for primary schools to teach as part of ***Personal, Social, Health and Economic*** (PSHE) education[23]. By the **end** of *primary* school pupils should know about dental health and the benefits of good oral hygiene and dental flossing, including regular check-ups at the dentist.
- The ***Dental Check by One (DCby1***)[24] is a campaign that was initiated in 2017 by dental professionals. It aims at raising awareness amongst parents and carers to take their children for a dental check as soon as their first teeth come through and before they turn 1 year of age.

2.7 Commissioning effective oral health interventions for children

PHE's aforementioned toolkit for commissioning better oral health for children and young people includes a set of principles for what good commissioning looks like. These include integrating oral health improvement into existing programmes, such as the healthy child programme for 0- to 19-year-olds. They also recommend reviewing commissioned oral health programmes to ensure they involve upstream, midstream and downstream interventions (see Figure 3) and that they use both targeted and universal approaches. Upstream actions should be complemented by specific downstream interventions (such as the widespread delivery of fluoride and consistent messages around diet advice) to effectively prevent oral disease.

Figure 3. Upstream/downstream: options for oral disease prevention

Source: Watt RG. From victim blaming to upstream action: tackling the social determinants of oral health inequalities. Community Dent Oral Epidemiol 2007; 35: 1–11.

A ‘common risk factor approach’ should be adopted wherever possible to tackle shared risk factors for a number of chronic diseases. For example, healthy food and drink policies in childhood settings have a wide range of impacts on oral health, childhood obesity and many other diseases.

In terms of providing local authorities with evidence as to which specific interventions to commission for their circumstances an evidence review was conducted to assess the effectiveness of oral health improvement programmes. This review also classified interventions based on the target population, the level of intervention (mid/down or upstream), the strength of the evidence, the impact on inequalities, resource considerations and implementation issues. Based on all of these factors, PHE reached an overall recommendation as to whether interventions were: recommended, emerging, of limited value or to be discouraged. Table 1 summarises the eight recommended interventions and the single intervention that was discouraged[1].

Table 1. Summary of recommended and discouraged interventions for children

Name of intervention	Intervention classification	Target Population	Overall recommendation	Rationale
1. One off dental health education by dental workforce targeting the general population	Downstream	Preschool, school children,	Discouraged	Evidence of ineffectiveness
2. Oral health training for the wider professional workforce (e.g., health, education, social care)	Midstream	Preschool, school, young people	Recommended	Deliverable, encouraging/ uncertain impact on inequalities, some evidence of effectiveness
3. Integration of oral health into targeted home visits by health/social care workers	Downstream	Preschool, school children,	Recommended	Deliverable, encouraging impact on inequalities, sufficient evidence of effectiveness
4. Targeted community-based fluoride varnish programmes	Downstream	Preschool, school children,	Recommended	Strong evidence of effectiveness, costly, encouraging/ uncertain impact on inequalities
5. Targeted provision of toothbrushes and tooth paste (i.e.	Downstream	Preschool, school children,	Recommended	Some evidence of effectiveness, good use of resources

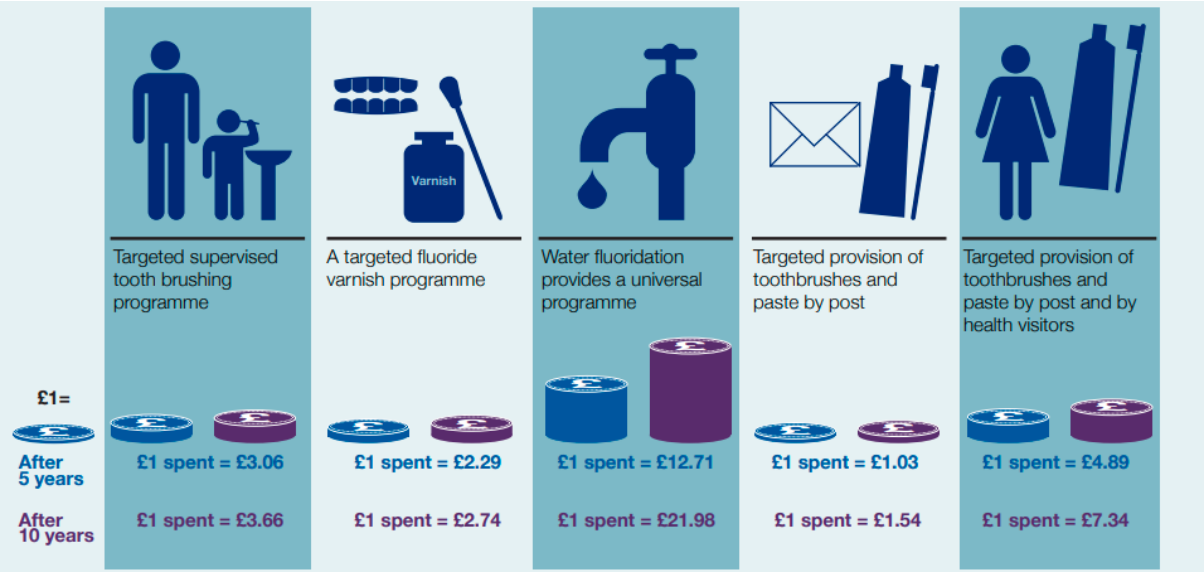
[1] Fluoridation of public water supplies is excluded as based on advice from Regional Dental Public Health Consultants, this is not pragmatic for Barnet.

postal or through health visitors)				
6. Supervised tooth brushing in targeted childhood settings	Midstream	Preschool, school children,	Recommended	Strong/sufficient evidence of effectiveness, good/uncertain use of resources
7. Healthy food and drink policies in childhood settings	Midstream/ Upstream	Preschool, school children, young people	Recommended	Good use of resources, encouraging impact on inequalities some evidence of effectiveness
8. Targeted peer (lay) support groups/peer oral health workers	Midstream	Preschool, children, young people	Recommended	Good cost considerations, sufficient evidence of effectiveness
9. Influencing local and national government policies	Upstream	Preschool, children, young people	Recommended	Good cost considerations, some evidence of effectiveness

2.8 Cost effectiveness of some oral health interventions for 0–5-year-olds

A rapid review of evidence of the cost-effectiveness of a subset of the PHE recommended interventions has also been conducted to help local authorities to maximise the value of their investment in preventative interventions[25]. This work was limited by the number of cost-effectiveness studies in this area. Figure 4 shows the scale of return that local authorities are likely to see after five years. For every £1 invested in the following programmes, savings that are likely in terms of reductions in dental treatment are shown. The tools shows that the greatest Return on Investment (ROI) is from Water fluoridation (£12.71), followed by targeted provision of toothbrushes and paste by post and by health visitors (£4.89); then targeted supervised toothbrushing programme (£3.06); then targeted fluoride varnish programme (£2.29) and finally targeted provision of toothbrushes and paste by post (with an ROI of £1.03).

Figure 4. Return on investment of oral health improvement programmes for 0–5-year-olds



Source: PHE. The modelling used the PHE Return on Investment Tool for oral health interventions (PHE, 2016).

2.9 Regional policy

This needs assessment has focused on national guidance and evidence though there are also several regional policies that shape oral health in the borough. These include the London Vision[26], the Mayor's Health Inequalities Strategy[27], Every Child a Healthy Weight[28], Healthy Schools London award[29] and Healthy Early Years London award[30]. Barnet commissions specific support to schools and early years settings to support them to achieve London awards, please see section 4.2 for more detail.

3. Oral health status of children in Barnet

3.1 Borough profile and wider determinants of oral health

Barnet has a large and growing population. It is the second largest borough in London, with a population of 389,300 which is a 9.2% increase since 2011[31]. Of this population, there are 96,000 children who are 19 or under, making up about a quarter of the whole population. It is the third largest borough in terms of number of early years children's places with 10,552 places[32]. It is an ethnically and culturally diverse borough with 48% of 0-9 year-olds coming from Black, Asian and Minority Ethnic (BAME) backgrounds[33]. Christianity is the largest faith community in Barnet accounting for 39.2% of the total population, Judaism is the second largest faith community (equal to 19.3% of the Barnet population) and the Muslim community accounts for 11.8% of the population of Barnet.

In terms of socio-economic circumstances, in 2018/19, 13.10% of children were living in relative poverty[2] (compared with 18.4% in England and 17.6% in London), 10.8% were in absolute poverty[3] (compared with 15.3% in England and 14.1% in London). Reviewing five years of data from 2014/15 to 2018/19 indicates that levels of relative and absolute poverty have increased: in 2014/15 10.3% were in relative poverty and 10.2% were in absolute poverty. In 2018, 11.29% of Barnet children were in receipt of Free School Meals (compared with 13.6% in England and 15.6% in London)[34].

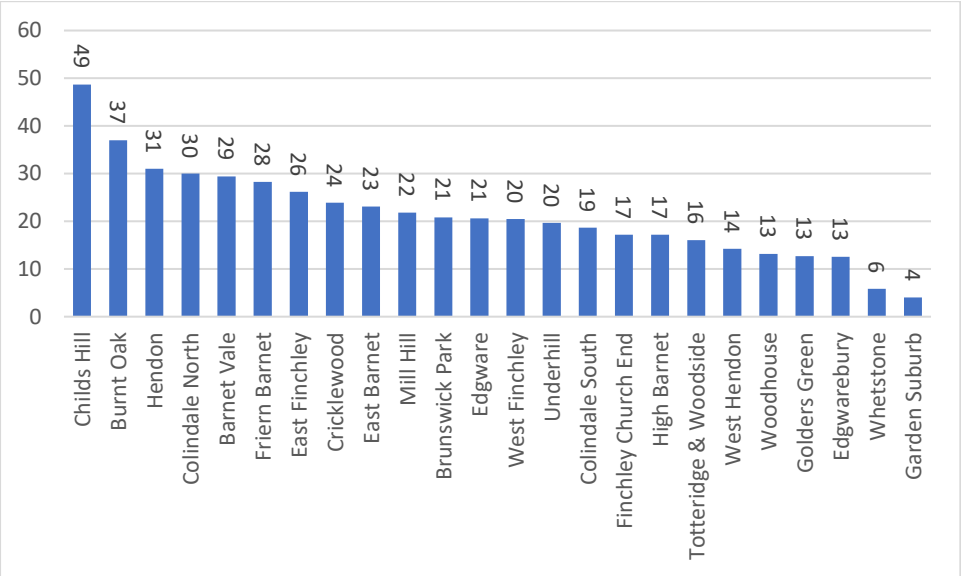
Although more recent local data is unavailable, national data for 2020/21[35] indicates that the numbers of children in relative poverty and absolute poverty are higher than they were five years ago. In 2020/21, in England, 2.8 million children (19%) were in relative poverty and 2.3 million children (16%) were in absolute poverty. Latest national data also suggests that eligibility for Free School Meals continues to increase with data for 2021/22 indicating that 22.5% of pupils or 1.9 million pupils are now eligible[36]. The Resolution Foundation estimated in early September 2022 that these national trends are expected to continue with 30% of children projected to be living in absolute poverty by 2023/24[36].

[2] Relative poverty is defined as children living in households with income below 60% of the median in that year (https://commonslibrary.parliament.uk/research-briefings/sn07096/). Income here is measured before housing costs are deducted.

[3] Absolute poverty is defined as children living in living in households with income below 60% of (inflation-adjusted) median income in some base year, usually 2010/11 (Poverty in the UK: statistics - House of Commons Library (parliament.uk). Income here is measured before housing costs are deducted.

The distribution of poverty is spread unequally across the Borough. For example, almost 50% of 0-to 15-year-olds living in Childs Hill are in income deprived families, compared with 4% in Garden Suburb.

Figure 5. Percentage (%) of all children aged 0-to-15 living in income deprived families by ward

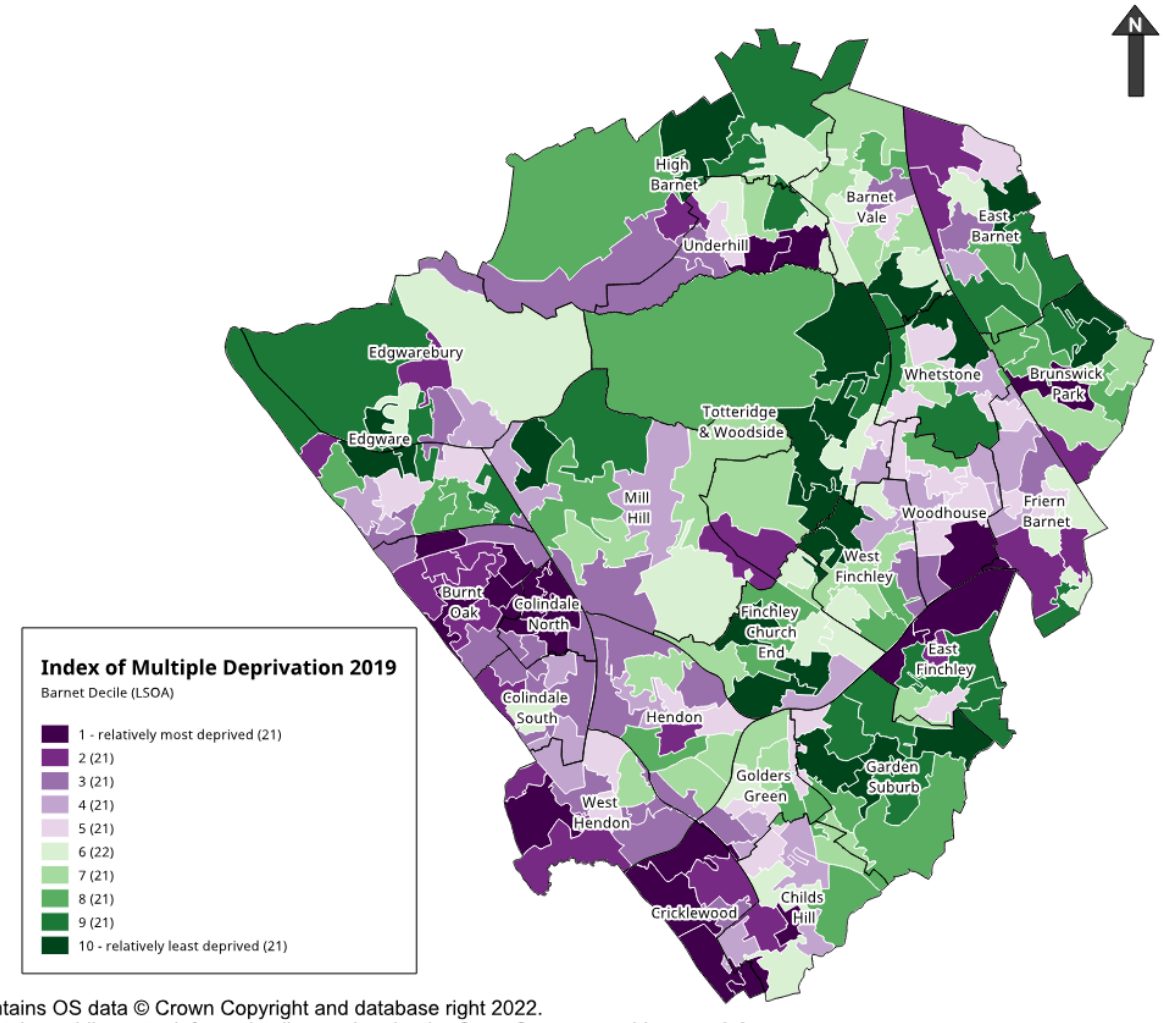


Source: Income Deprivation Affecting Children Index IDACI, 2019[4]

[4] This measures the proportion of children aged 0-15 who are living in income deprived households. These are defined as families that either receive Income Support or income-based Jobseekers Allowance or income-based Employment and Support Allowance or Pension Credit (Guarantee), or families not in receipt of these benefits but in receipt of Working Tax Credit or Child Tax Credit with an equivalised income (excluding housing benefit) below 60% of the national median before housing costs. The measure is based on 2012 data and statistical methods are used to construct an index score.

The Index of Multiple Deprivation (IMD) combines information from seven domains (income, employment, education, skills and training, health and disability, crime, barriers to housing and living environment) to produce an overall relative measure of deprivation. It also enables us to understand deprivation at an even more granular, neighbourhood level (termed Lower Super Output Area, LSOA). The latest data from 2019 shows us that living conditions across Barnet vary significantly.

Figure 6. Deprivation decile by neighbourhood in Barnet, 2019.



Source: Index of Multiple Deprivation, 2019

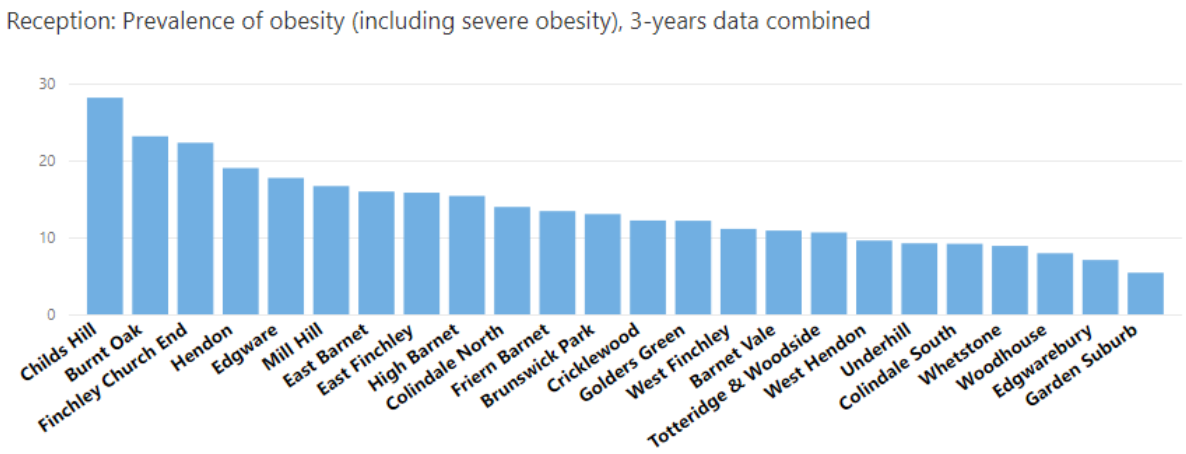
In Barnet the 10% of most deprived neighbourhood areas are:

- In the west and south-west of the borough, in Burnt Oak, Colindale, West Hendon, Cricklewood and Childs Hill;
- In the north of the borough in Underhill;
- In the east of the borough in Brunswick Park, Woodhouse and the border between Woodhouse and East Finchley.

Childhood obesity and dental caries share some risk factors such as excessive consumption of free sugars and social deprivation. For example, there is a strong relationship between deprivation and

both obesity and dental decay in children[37]. Data from the National Child Measurement Programme (NCMP) shows an almost linear relationship between obesity prevalence in children and the IMD decile for the area where they live[38]. Similarly, data from the National Dental Epidemiology Programme for England shows that the IMD score explains 44% of the variation in the severity of tooth decay across local authorities[1]. Evidence from two systematic reviews concluded that there was some evidence to suggest that dental caries and obesity may be more likely to occur within the same population[37]. Within Barnet, significant variation exists in prevalence of obesity. For example, Figure 3 shows that the prevalence of obesity in Childs Hill (28.2%) is five times greater than the prevalence in Garden Suburb (5.4%) for Reception age children[39].

Figure 7. Reception prevalence of obesity (including severe obesity), 3-years data combined by ward



Across the borough, there was some improvement in the prevalence of obesity for Reception children between 2006/7 (8.8%) to 2019/20 (7.7%). However, the impact of the COVID-19 pandemic appears to have eroded these gains as prevalence was 9.0% in 2021/22 data. The prevalence of obesity among children in Year 6 has worsened: 2006/7 (17.3%) to 2021/2022 (20.4%)[40]. Further, although local data at ward level is not yet available, the latest national data for 2021/22 showed that obesity prevalence was over twice as high for children living in the most deprived areas (13.6% in Reception; 31.3% in Year 6) than for children living in the least deprived areas (6.2% in Reception; 13.5% in Year 6)[43].

3.2 Epidemiology of oral health

3.2.1 Oral health in children in England

In terms of the most recent national data, the COVID-19 pandemic interrupted data collection and reporting from the National Dental Epidemiology Programme (NDEP) so data is not yet available to clarify the impact that the pandemic itself has had on the oral health of children. However, it is anticipated that oral health outcomes will have worsened based on the trends observed for childhood obesity[4]. Other research has demonstrated that the COVID-19 pandemic revealed and amplified pre-pandemic socioeconomic and ethnic inequalities so it is anticipated this will also be true for oral health inequalities[4].

The NDEP oral health survey of five-year-olds from 2019 showed that in England just under a quarter (23.4%) have tooth decay[1]. Each child with tooth decay will have on average 3 to 4 teeth affected[1]. For those children at risk, tooth decay starts early. Despite a national picture which showed improvements in oral health in 5-year-old children from 2015 (24.7%) to 2019 (23.4%), stark inequalities remain[1]. According to the 2019 NDEP, 5-year-old children living in the most deprived areas in the country (37%) were almost 3 times more likely to have experienced dental caries than children living in the least deprived areas (13%)[1]. Moreover, there was a clear gradient in the association between area deprivation and prevalence of decay experience, with higher levels of the outcome in successively more deprived areas[12].

3.2.2 Oral health of children in Barnet

Data collection for the oral health survey of five-year-olds took place in 2021/22 however, these data are not expected to be published until the start of 2023. For now, we are reliant on data published in 2019 to better understand oral health in Barnet, where some enhanced sampling was also undertaken in five Barnet wards[41].

Table 2. Comparison of oral health measures in Barnet, Merton (as a statistical neighbour within London), London and England, 2019.

Indicator	Barnet	Statistical neighbour within London: Merton	London	England
Prevalence of experience of dental decay (%; *95% Confidence Interval, CI*)	24.5 (19.6 –30.8)	27.7 (21.9-34.3)	27.0 (26.0-28.0)	23.4 (23.1-23.7)
Mean number of teeth with experience of dental decay in all examined children (95% CI)	0.9 (0.61-1.14)	1.0 (0.66-1.28)	0.9 (0.88-0.97)	0.8 (0.78-0.81)
Mean number of teeth with experience of decay in those with experience of dental decay (95% CI)	3.6 (2.84-4.29)	3.5 (2.72-4.30)	3.4 (3.30-3.53)	3.4 (3.36-3.44)

Source: PHE, Barnet Oral Health Profile November 2020

Table 2 shows that in 2019, average levels of dental decay in London (27.0%) were statistically significantly higher than the average in England (23.4%). In Barnet, average levels of dental decay (24.5%) were higher than the average for England, and lower than the average for London and Merton (27.7%), our statistical neighbour, but there is no evidence that these differences are statistically significant which may be due to the small sample size in Barnet (207 children).

In 2019, in Barnet, of the quarter of children with experience of dental decay, on average 3.6 teeth were affected. This measure of the severity of decay was not statistically significantly different to the severity of decay seen in Merton (3.5 teeth), in London (3.4) or nationally (3.4).

Table 3 shows there is variation in the prevalence of dental decay across wards within Barnet. Although as an average across the Borough, one quarter of 5-year-olds experience dental decay, which is a similar figure to the national average, in some wards where enhanced sampling was undertaken this figure is closer to 40% of all five-year-olds: 39.0% in Burnt Oak; 34.5% in Childs Hill; 35.3% in West Hendon. These wards were selected for enhanced sampling based on their socioeconomic characteristics. In addition, in these wards, of the children with dental decay the average number of teeth affected ranged from 2.8 in West Hendon up to 4.8 in Childs Hill and Colindale. However, as the numbers of children surveyed were small, it is not possible to conclude that the severity of decay seen in these wards was statistically significantly different to the severity of decay seen across Barnet.

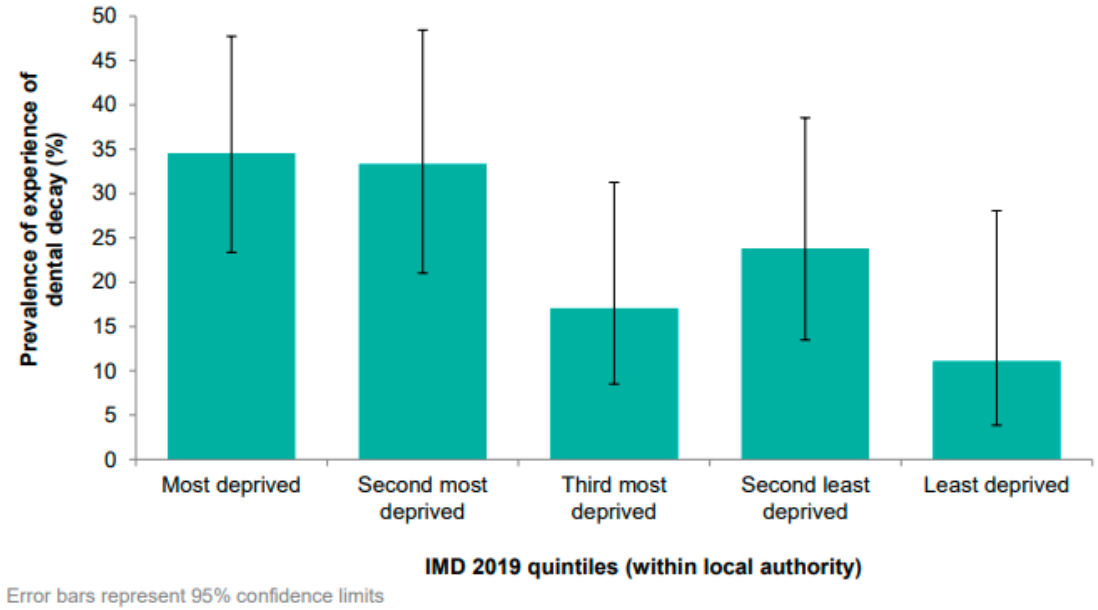
Table 3. Prevalence and severity of experience of dental decay experience in 5-year-olds in Barnet, in wards where an enhanced sample was undertaken, 2019.

Ward	Prevalence of experience of dental decay (%; 95% CI)	Mean number of teeth with experience of dental decay in all examined children (95% CI)	Mean number of teeth with experience of dental decay among children with any experience of dental decay (95% CI)
Barnet Average	24.5	0.9 (0.61 - 1.14)	3.6 (2.84 - 4.29)
Burnt Oak	39.0	1.3 (0.58 – 2.00)	3.3 (1.99 - 4.64)
Childs Hill	34.5	1.7 (0.63 - 2.68)	4.8 (3.05 - 6.55)
Colindale	18.7	0.9 (0.35 - 1.44)	4.8 (2.88 - 6.69)
Coppetts	26.1	1.0 (0.34 - 1.70)	3.9 (2.10 - 5.73)
West Hendon	35.3	1.0 (0.44 - 1.56)	2.8 (1.90 - 3.76)

Source: PHE, Barnet Oral Health Profile November 2020

There is also evidence of inequality in the prevalence of decay across Barnet by deprivation: almost 35% of 5-year-olds in the most deprived quintile of the borough have experience of dental decay compared with 10% of 5-year-olds in the least deprived quintile. Due to the small sample size, it is not possible to conclude that this pattern is statistically significant. However, it is supported by wider statistically significant evidence of oral health inequalities in London seen by deprivation and is in line with national findings.

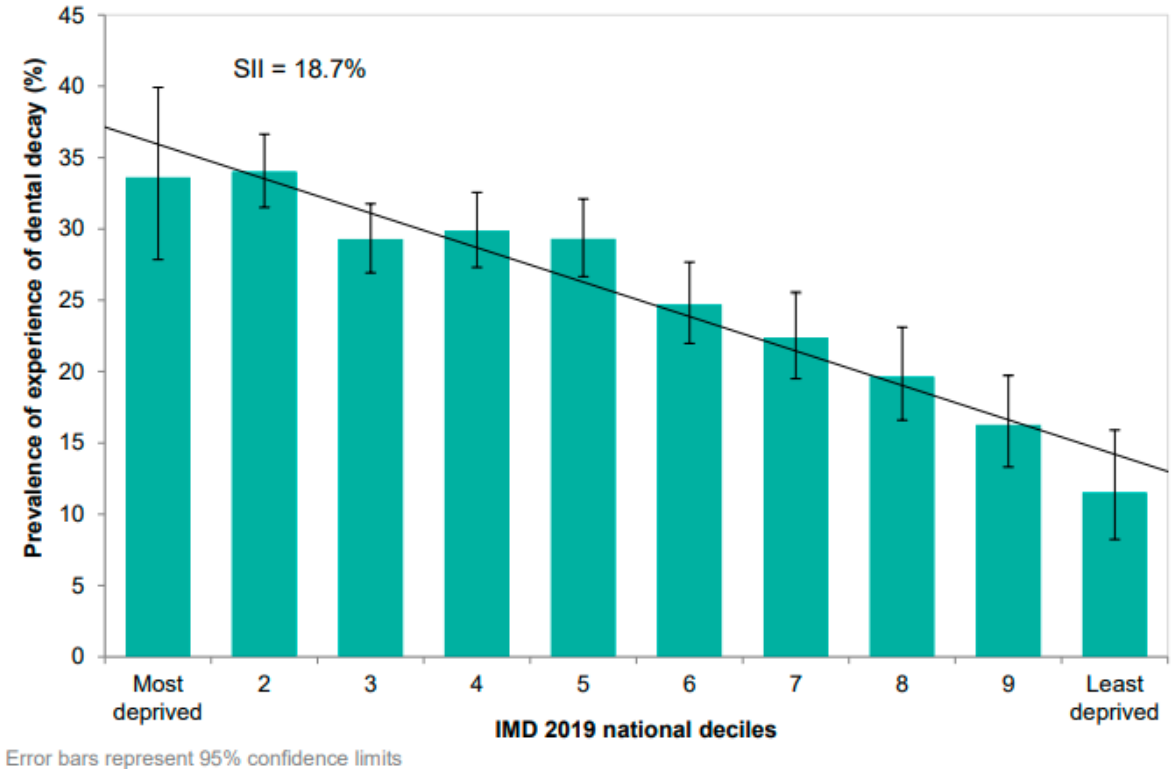
Figure 8. Prevalence of experience of dental decay in 5-year-olds in Barnet, by local authority IMD 2019 quintiles.



Source: PHE, Barnet Oral Health Profile November 2020

Evidence from across London, seen in Figure 9, shows that approximately 34% of 5-year-olds in the ten percent of most deprived neighbourhoods have experience of dental decay, compared with the 10% of 5-year-olds in the ten percent of least deprived neighbourhoods. This difference is statistically significantly different.

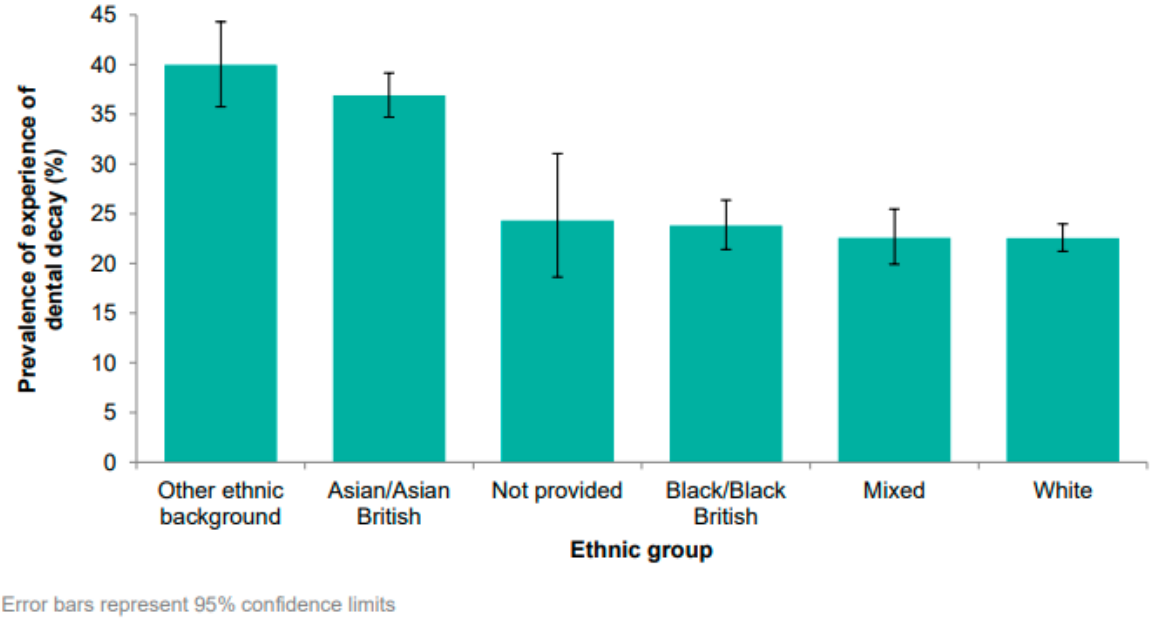
Figure 9. Prevalence of experience of dental decay in 5-year-olds in London by IMD 2019 deciles.



Source: PHE, Barnet Oral Health Profile November 2020

Evidence from across London, seen in Figure 10, also demonstrates statistically significant differences by ethnic group: 40% of 5-year-old children identified as coming from Other Ethnic Background and 37% of Asian/Asian British had experience of dental decay. This was statistically significantly higher than the prevalence of experience of decay in other ethnic groups: 24.3% of those who did not provide their ethnic background; 23.8% of Black/Black British; 22.6% of Mixed Ethnic Background; and 22.6% of those of White ethnicity.

Figure 10. Prevalence of experience of dental decay in 5-year-olds in London by ethnic group.

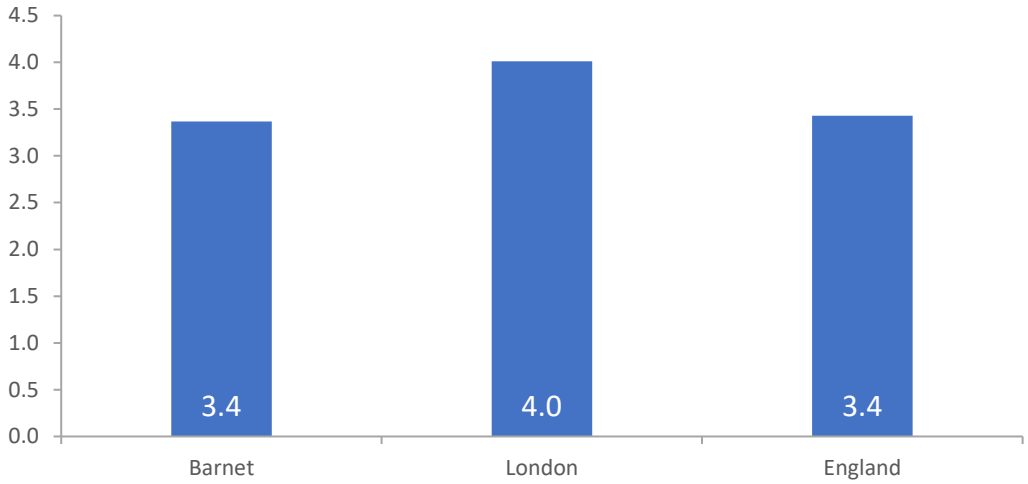


Source: PHE, Barnet Oral Health Profile November 2020

3.3 Hospital admissions for tooth extractions for children in Barnet

To understand the impact of dental decay on children it is important to understand how many children aged 0-19 years olds have had to go to hospital to have a tooth extracted[42].

Figure 11. The rate of hospital admissions per 1,000 population for tooth extractions for 0-to-19-year-olds for 2019-2021 for Barnet, London and England.

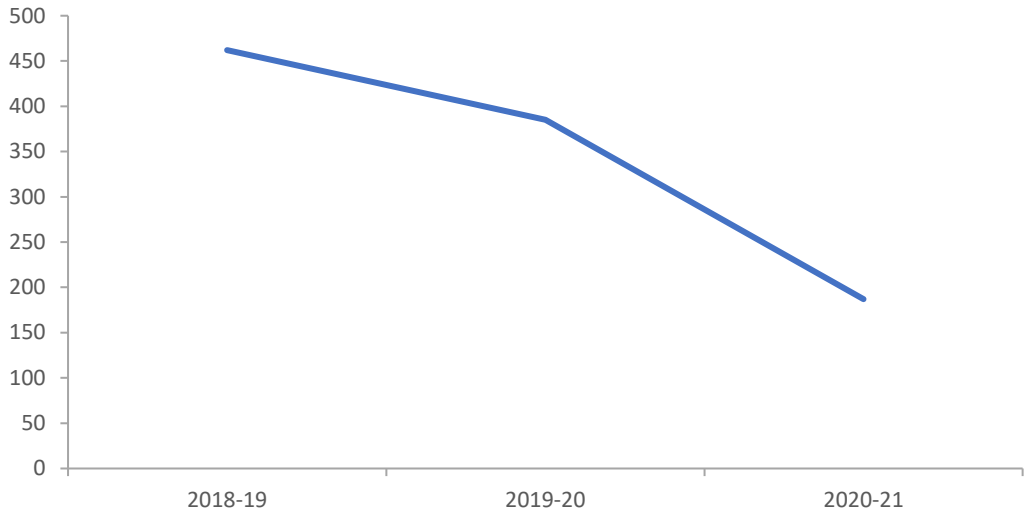


Source: Hospital Episode Statistics (HES), NHS Digital, December 2021.

Figure 11 shows a comparison of the rate of hospital admissions for tooth extractions amongst 0–19-year-olds in Barnet, London and England between 2018/19 to 2020/21. These data relate to the extraction of one or more primary or permanent teeth. Although no assumptions can be made about the methods of anaesthesia, it is likely that most admissions involved general anaesthetic and most teeth extracted will have been removed because of tooth decay. The data show that Barnet's rate of extractions of 3.4 per 1,000 population is the same as the rate for England, 3.4 per 1,000 population but is lower than the rate of 4.0 per 1,000 population for London.

It is important to note that these data are based on combining the number of tooth extractions from three years: 462 in 18/19; 385 in 19/20 and 187 in 20/21. The data that follows in Figure 12 showed a significant reduction in the number of tooth extractions in 20/21. This is due to the continued impact of the COVID outbreak on non-COVID related hospital episodes, rather than sudden reduction in need or demand, so rates of tooth extractions are likely to increase in future years.

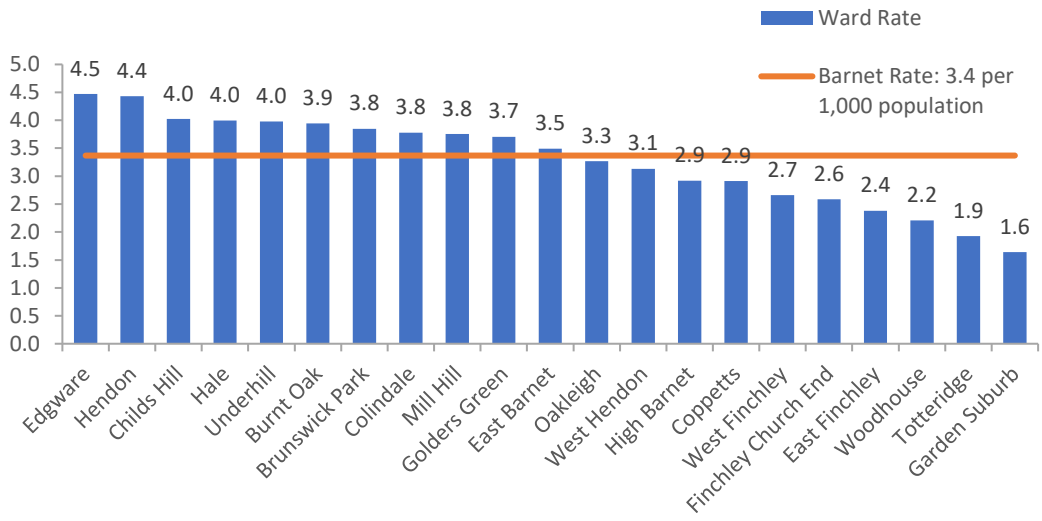
Figure 12. Number of tooth extractions for 0-to-19 year olds from 2018/19 to 2020/21 in Barnet



Source: Hospital Episode Statistics (HES), NHS Digital, December 2021.

Figure 13 shows that the rate of extractions varies across the borough: from 4.5 tooth extractions per 1,000 population in Edgware to 1.6 tooth extractions per 1,000 population in Garden Suburb.

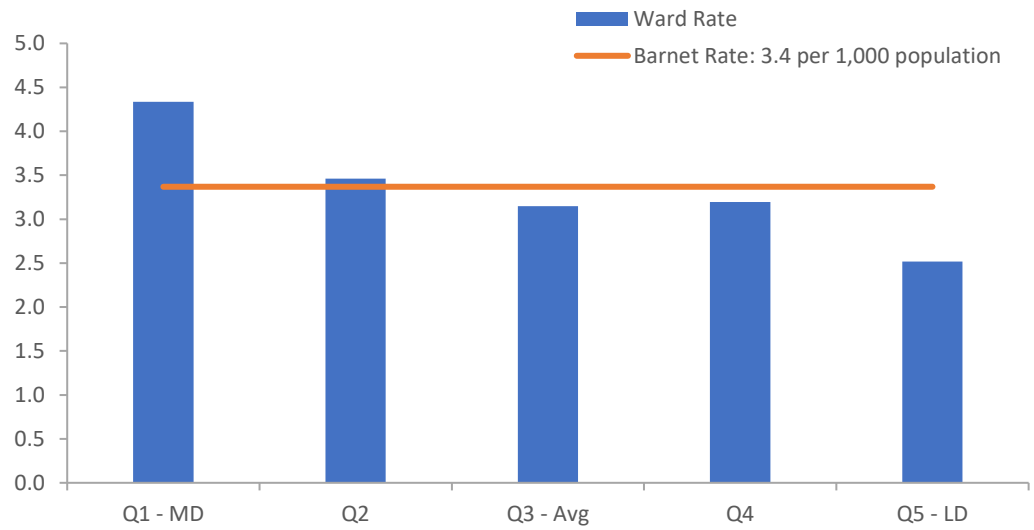
Figure 13. The rate of hospital admissions per 1,000 population for tooth extractions for 0-to-19-year-olds by ward 2018-2021



Source: Hospital Episode Statistics (HES), NHS Digital, December 2021.

When the analysis of tooth extraction admissions is conducted by considering admissions based on quintiles of deprivation, evidence of inequalities is again seen. Figure 14 shows a trend with the rate of admissions being highest in the most deprived quintile (4.3 admissions per 1,000 population) to lowest in the least deprived quintile (2.5 admissions per 1,000 population).

Figure 14. The rate of hospital admissions per 1,000 population for tooth extractions for 0-to-19-year-olds by deprivation quintile 2018-2021

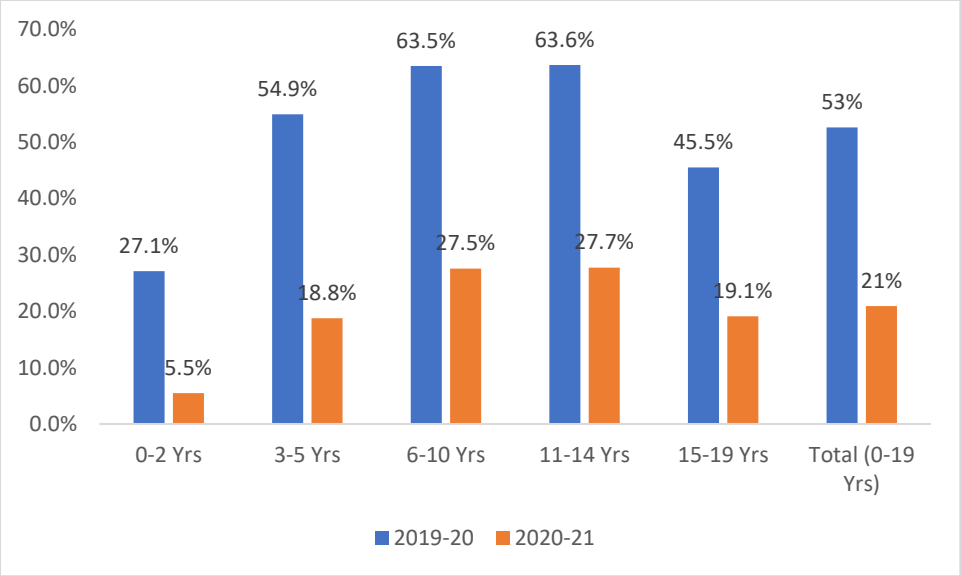


Source: Hospital Episode Statistics (HES), NHS Digital, December 2021.

3.4 Access to NHS dental services amongst children and young people in Barnet

Figure 15 below shows access to NHS dental services among 0-19-year-old children and young people in Barnet comparing access in 2019/20 to 2020/21. These data are based on unique patient data, so if the same child attended more than once, this has been accounted for and they will only be counted once. The data is based on children who are resident in Barnet and not where their treatment took place, which could be in another borough.

Figure 15. Percentage (%) of 0- to- 19-year-olds resident in Barnet who accessed NHS dental services in 2019/20 compared with 2020/21



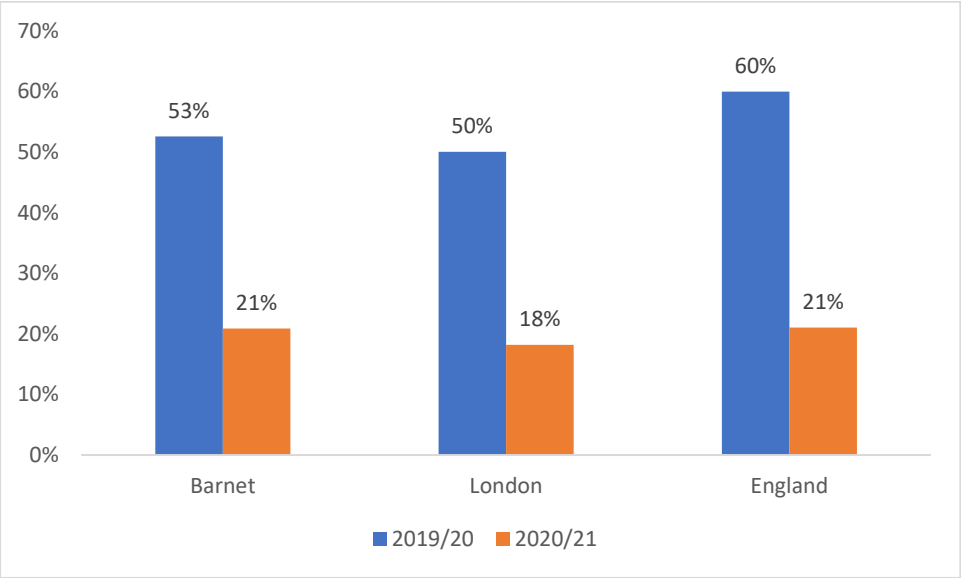
Source: Population, Office for National Statistics (ONS), 2019; Dental access figures provided by NHS England Dental Public Health, July 2022[43].

In the 12 months of 2019/20, 52,836 0–19-year-old children, resident in Barnet, accessed NHS dental services. This equates to 53% of 0-19 year olds accessing NHS dental services based on ONS population estimates. Whereas in the 12 months of 2020/21 this number fell to 21,000 children, representing just 21.0% of 0-19 year olds. This significant reduction in access in all age groups of children is due to the impact of the COVID-19 pandemic.

In 2019/20 just over a quarter of 0–2-year-olds accessed NHS dental services (27.1%), rising to over half of 3-5 year olds (54.9%) and then about 64% of 6-14 year olds. This trend of increasing access to NHS dental services continues until the ages of 11-14 years, where the proportion of children who accessed NHS dental services fell to 45.5%. This age-related pattern of NHS dental access is in line with national data, for example, NHS dental access for 0-2 year olds is low nationally.

The data for 2021/22 also demonstrates a trend of increasing access to NHS dental services as age progresses, up to the ages of 11-14 years, access then reduce for the age bracket of 15–19-year-olds. However, all access rates were significantly reduced with only 5.5% of 0–2-year-olds, 18.8% of 3-5 year olds, 27% of 6-14 year-olds and 19% for 15-19 year olds accessing NHS dental services.

Figure 16. Percentage (%) of 0-to- 19-year-olds who accessed NHS dental services in Barnet, London and England in 2019/20 compared with 2020/21



Source: Population, ONS, 2019; Dental access figures provided by NHS England Dental Public Health, July 2022.

Figure 16 compares access to dental services for 0–19-year-olds resident in Barnet with London and England. In 2019/20, there was a higher proportion of Barnet children accessing NHS dental services (53%) than London (50%) but fewer than for England (60%). However, this still indicates that even before the impact of the pandemic, only one in two 0-to-19 year olds had been accessing NHS dental services. In 2020/21, the reduction in access to NHS dental services experienced in Barnet (21%) was mirrored nationally (21%) but remained slightly higher than the average for London (18%). However, overall, only one in five 0-to-19-year-olds in Barnet and across England accessed NHS dental services in 2020/21 which indicates the significant impact COVID-19 has had on children accessing dental treatment.

There are approximately 120 General Dental Practices (GDPs) registered with the Care Quality Commission (CQC) in Barnet. Of these, 56 are NHS dental practices which are commissioned by NHS England[44]. NHS dental services are commissioned and aligned with a national contract. The national contract is based on the Units of Dental Activity (UDAs) which dental providers deliver over a 12-month period. In total, in the financial year 2021/22 there were 278,800 UDAs delivered; 78,292 of these were for children under 18 years old[5]. This represents an overall proportion of the activity on under 18-year-olds of 28.1% across all GDPs. However, there was a wide variety in the UDAs different GDPs provided to children under 18-years-old. For example, three dental practices provided less than one hundred UDAs to children under 18, whereas 31 practices each provided over 1,000 UDAs to children. This may be reflective of the size of the practices but also means that it is difficult to interpret where the NHS GDPs who are seeing the most children are located across the borough. In addition, children can access dental services anywhere and therefore some people may choose to access a

[5] The UDAs could relate to treatment of the same patient more than once, which is one of the reasons why dental access by children is not directly comparable to the number of UDAs delivered by Barnet GDPs.

dental service in neighbouring boroughs which means further work, encompassing those boroughs would be required to enable a more nuanced interpretation of which NHS GDPs are seeing most children.

3.5 Oral health of LAC children in Barnet

As the corporate parents of children in their care, Barnet Local Authority is responsible for the promotion of a child's physical, emotional and mental health and acting on any early signs of health issues, including annual health assessments, immunisation, medical and dental care treatment[45].

There were 335 children looked after in Barnet on 31st March 2022 (preliminary data, which includes those looked after for short periods of time, as well as those looked after for longer). For children who are looked after continuously for at least 12 months by the local authority, data is recorded as to whether they have been seen by a dentist in the last year.

Table 4. Proportion (%) of children looked after continuously by Barnet for the preceding 12 months, who had their teeth checked by a dentist in that year.

Year	Total number of children continuously looked after by Barnet	Number of continuously LAC who had their teeth checked by a dentist in the last year	Proportion (%)
2022	196	135	69
2021	217	68	31
2020	187	147	79
2019	200	156	78
2018	207	178	86

Source: Looked After Children Statistics in England: 903 Data

The above table shows that historically around 80% of continuously looked after children had annual oral health assessments (79% in 2020, 78% in 2019 and 86% in 2018). However, only 31% of continuously looked after children received a check in 2021, which is likely to be due to the impact of COVID-19 pandemic. Data for the year ending on March 31st 2022 suggests that 69% of continuously looked after children had their teeth check in the last year which is an improvement but the proportion is not yet back to pre-pandemic levels. Healthy Smiles, a pilot oral health improvement programme for children looked after was launched in November 2021 to promote access to NHS dental services and enable completion of annual oral health assessments (see Section 4.3 for more detail).

4. Current provision of CYP oral health services in Barnet

4.1 Oral health promotion service

As part of the Healthy Child Programme, Solutions4Health has been newly commissioned to provide oral health promotion and prevention services in Barnet since 1st April 2022. The contract is for five years. This has meant there has been a change in provider and none of the previous oral health team remained with the service. There are two main aspects to the service: delivery of a universal Oral Health Programme and delivery of a targeted supervised toothbrushing pilot in early years settings to reduce inequalities in children's oral health. The annual funding for the universal Oral Health Programme is £59,000 per annum, that is included as part of the overall Healthy Child Programme contract. The targeted supervised toothbrushing pilot has been funded by the North Central London inequalities fund for £75,000 for 18 months (equivalent to £50,000 per annum). There are two dedicated members of staff who are oral health promoters delivering these work programmes.

The aim of the commissioned Oral Health Programme in Barnet is to ensure oral health key messages for young children are widely known by training professionals about oral health. This means they will then have the skills to inform parents of the importance of prevention of dental decay and encourage them to take their children to local GDPs for advice in line with Delivering Better Oral Health (DBOH) 2021 toolkit. The aim is for the team to promote messages by working closely with its professional partners and stakeholders e.g., early years settings, childminders, health visitors, school nurses and schools using a Train the Trainer model.

The expected outcome from the programme is that more children and young people know how to achieve and have better oral health to prevent tooth decay and reduce hospital admissions. There is also an expectation that there will be an oral health champion based within the school nursing and health visiting teams. The provider also has two specific targets:

- that 85% of staff in Early Years (EY) settings, Children's Centres or health visiting receive oral health and tooth brushing training per year;
- and 95% of school nursing staff receive basic oral health training per year.

The service specification does not include a specific requirement regarding the distribution of toothbrushes and toothpaste but under the previous provider health visitors had been distributing toothbrushes and toothpaste at the mandatory 1 year and 2.5 year health visitor reviews. This did not happen during COVID-19 as these reviews were conducted virtually but there is now some distribution during face-to-face appointments. In addition, Solutions4Health have distributed some toothbrushes and toothpaste packs to Children's Centres.

The aim of 'Barnet Young Brushers' is to pilot a targeted supervised toothbrushing programme in EY settings in the most deprived areas of the Barnet. The pilot aims to offer supervised toothbrushing to 40 EY settings, aiming to cover Colindale, Burnt Oak, Woodhouse and Childs Hill wards over an initial 18-month period (from autumn 2021 until end of March 2023). The oral health promotion team train and support EY workers to supervise brushing daily in accordance with national guidance for two cohorts of children (aged three and four) and outcomes and learnings are being monitored to inform any future commissioning of the programme.

The pilot is being monitored using the following key performance indicators:

- Number of EY settings engaging with the programme

- Number of children receiving daily supervised toothbrushing, with breakdown by age and by ethnicity.
- Proportion of children aged 5 with visibly decayed teeth (monitored via the NDEP).

Solutions4Health has shared some early reporting on the Oral Health Programme, covering the initial three months of establishing the new service. Between 1st April and June 2022 some of the following oral health promotion and prevention activities were:

- 6 EY Staff received oral health training,
- 41 Parents trained at coffee morning sessions in school, nursery or activity centre settings,
- 141 Parents and 151 children attended Face-to-Face oral health sessions within children's centres,
- 51 families attended three oral health sessions at Chipping Barnet, Finchley and Colindale libraries,
- 254 children in Nursery, Reception and Year 1 received oral health presentations at 6 events in nurseries and schools.

Of the initial reported activities, many delivered training activities have been to parents and children. This type of training is targeting the general population and could be considered 'one-off' dental health education to the general population. Training of EY staff, however, is a recommended intervention. The training materials being used by Solutions4Health for training the wider professional workforce have been reviewed by Regional Dental Public Health Consultants and they have highlighted that the training materials do not yet fully reflect the DBOH 2021 guidance. As a result, Solutions4Health are in the process of updating their training materials.

Solutions4Health confirmed that as of October 2022, 60 Early Years settings have been recruited to join Barnet Young Brushers. During operational monitoring meetings in August 2022, it came to light that there were challenges faced by the previous provider in recruiting EY settings in the most deprived wards of the borough. Of the recruited settings, 32 are in deprived wards. EY setting compliance with the programme is variable and not all settings have been through a quality assurance process, as per PHE's supervised toothbrushing toolkit**.**

4.2 Oral health in public health programmes

There are several programmes across the Barnet Public Health team which aim to support healthy food and drink policies in childhood settings and to influence local government policies, both of which are PHE recommended interventions. Through taking a whole systems and whole settings approach, programmes are developed and delivered that support healthy environments, policies, education and other structural interventions that encourage sustainable healthier behaviours. These include a mix of programmes directly delivered by the public health team, as well as a commissioned service.

Health Education Partnership (HEP) is commissioned to support schools and early years settings in the borough to achieve Healthy Early Years (HEYL) and Healthy Schools London (HSL) awards. These awards focus on a whole setting approach and include making sure food policies are in place and menus are audited to adhere to food standards. In Barnet we currently have 119 registered schools and 105 registered early years settings.

As a health area, early years settings need to evidence their work in oral health to meet criteria for the HEYL Bronze Award. This includes teaching children about how to keep their teeth clean, the importance of going to the dentist and having activities and information in place for parents to support

their child's oral health. Currently 49 settings have achieved the HEYL Bronze award. EY settings can build upon this foundation by selecting oral health as the focus of initiatives implemented to achieve silver and gold awards.

Schools are required to deliver an effective PSHE curriculum addressing health and wider issues, including oral health promotion. HEP are also commissioned to help support Primary and Secondary schools through hosting a network and training programme for PSHE leads as well as offering a PSHE framework for delivery and comprehensive resource list.

The directly delivered programmes include:

- **Barnet's Food Plan 2022-25:** The Barnet Food Plan is a 5 Year plan that recognises the multifaceted role that food plays in our lives and brings together opportunities and actions that support a healthy food environment that addresses the health of our population, health of the planet and addresses food insecurity.
- **Children and Young People's Healthy Weight Management Action Plan:** This is an overarching plan that aims to promote an environment that enables children, young people and their families to eat well, drink plenty of water, be physically active and maintain a healthy weight. As an umbrella plan it incorporates a range of programmes and actions to support this ambition including:
    - **Infant feeding strategy and Breastfeeding Welcome:** the infant feeding strategy aims to support children to have the best start in life through protecting, promoting, supporting and normalising breastfeeding in Barnet. (This also includes commissioned infant feeding support services provided by Solutions4Health as part of the wider Healthy Child Programme to support parents). The Breastfeeding Welcome scheme launched by Barnet Public Health aims to help normalise breastfeeding borough wide, and support mothers to find welcoming places to breastfeed. Breastfeeding Welcome is also part of the wider Healthier High Streets programme.
    - **Barnet School Food Support Plan**: the is a plan designed to facilitate school food standards compliance and improve whole-school food provision across Barnet. The plan builds on views from young people, the experience within the HSL programme and surveys undertaken as part of the developing Barnet Food Plan. The aim of the Schools Food Support Plan is to ensure that school-age children can access nutritious food while at school.
    - **Sugar Smart**: this is a national public health campaign founded by the charity Sustain. It tackles high sugar consumption within communities by encouraging settings to become Sugar Smart. In Barnet, 43 EY and 26 Schools have signed up to be Sugar Smart settings. A sugar smart setting will be taking proactive action to reduce sugar consumption and raise the awareness of the health benefits of reducing sugar in diets.
    - **Water Only Schools:** A water only school is one where the only drink available to students is water (and milk in nursery classes). Schools should ensure that children are not bringing sugary drinks onto the school premises, including for after school or with their lunch. Currently there are 17 schools in Barnet signed up as part of their HSL award.
    - **School Superzones:** are place-based interventions around schools in areas of the greatest disadvantage. They aim to protect children's health and enable healthy

behaviours through the place-shaping powers of local partnership working. There are two school superzones being developed around Edgware Primary School and Saracens High School.

- **Project work including:** SMILE which promotes a balanced diet using the Eat Well Plate design; Great Junk Food Debate which supports community action and peer engagement to understand healthier choices and influence the food environment; cooking and menu planning interventions such as the Ministry of Food; and nutritional activities as part of the Barnet Active Creative Energised (BACE) Holiday activities scheme where food is available to children eligible for Free School Meals (FSM) during school holidays.

The Public Health team also follows a Health in All Policies[46] approach which is a way of integrating health while making decisions and drawing policies across all sectors. Using this approach, the team seeks to embed work on oral health across many programmes of local authority work, many delivered by other partners. They also work closely with a range of partners within the voluntary sector (e.g. Bread N Butter, Give Help Share) on healthy food and drink programmes.

4.3 Treatment, care and support for oral health

All clinical dental services for children are currently commissioned by NHS England (NHSE). This includes general, community and specialist care, and hospital and out-of-hours urgent dental care services. NHSE is therefore responsible for the commissioning and performance management of clinical dental services in Barnet. There is some suggestion that dental commissioning responsibilities will transition into a host Integrated Care Board (ICB) but will continue to commission on a pan-London footprint. We are linking in with North Central London partners and regional dental public health consultants to understand developments here.

Primary care dental services in Barnet are mainly provided by independent contractors that are also commonly known as high street dentists or general dental practitioners within the general dental service. The Local Dental Committee is a statutory NHS body representing general dental practitioners in Barnet. Their key function is liaison and information sharing between national and regional dental organisations and local dental practitioners.

It is useful to note that unlike with GPs, there is no 'registration' process for patients with dentists and dentists do not have a continuing obligation to see patients, although most do. In addition, the Chief Dental Officer has further emphasised the focus on emergency treatment following on from COVID-19, which further lessens the focus on seeing regular patients. Entitlement for free dental care is as follows: children until their 18th birthday, or under 19 years of age and in full-time education; those who are pregnant or have had a baby in the last 12 months; people treated in an NHS hospital and treatment is carried out by the hospital dentist (but there may be some payment e.g. for dentures or bridges); people receiving low income benefits, and under 20 years old who a dependant of someone receiving low income benefits.

For children with additional or complex needs, which cannot be met in primary dental care ('high street dentists') the community dental service (CDS) provides specialist dental services. This would include children unable to cooperate due to severe dental anxiety, a complex medical history, or with a significant physical or learning disability such as autism. The CDS can only be accessed by referral from a high street dentist or other health or social care professional, and care includes treatment

under sedation or general anaesthesia. In Barnet, this service is run by Whittington Health NHS Trust, who are also responsible for undertaking dental epidemiological surveys in the borough.

For Looked After Children, there is a specific LAC nursing team provided by Central London Community Healthcare Trust (CLCH). Statutory guidance mandates that Initial Health Assessments (IHA) are to be completed within 20 working days of a child or young person being received into care. These reviews will be undertaken by doctors: 0–8-year-olds are seen by paediatricians at the Royal Free Hospital; 9 year olds and upwards are seen by LAC trained GPs. During the IHA they are asked about their oral health, if they are registered with a dentist, whether they are going to register and about their toothbrushing habits. Any concerns or pain are noted, and a health plan is developed. This plan is then shared with health and social care colleagues. These include sharing with the GP, universal services (school nursing or health visiting as appropriate for the child's age), social worker, Independent Reviewing Officer (IRO), foster carer, keyworker and where age appropriate, the child themselves. Part of the plan is for the child to see a dentist regularly going forward, either every 6 or 12 months, although there is no statutory guidance on frequency. Statutory guidance also recommends that a Review Health Assessment (RHA) needs to be undertaken six monthly for children under 5 years and annually for children and young people aged 5-to-18 years old. The RHA is completed by the Named Nurse for LAC or one of the specialist nurses for LAC. This will also include reviewing oral health and whether the child has seen a dentist.

In addition to the LAC Health service that CLCH provides and responding to the needs of LAC after the COVID-19 pandemic in London, the Healthy Smiles Oral Health Pilot was launched in November 2021. Healthy Smiles aims to provide oral health assessments and dental care for LAC across London. The Barnet LAC nursing team are actively referring into and signposting the Healthy Smiles programme with social work colleagues. There has recently been a change in protocol and it no longer requires the LAC nurses to be the people to make the referral to Healthy Smiles, foster carers now can also make a referral. As a result, the LAC team do not know the total number of Barnet referrals into the Healthy Smiles pilot, as not all referrals come through them.

4.4 Focus group insights

To further understand the lived experience of trying to prevent dental decay and maintain the oral health of early years children, we held a face-to-face focus group with eight parents with 3-to-4-year-old children who attended a nursery in a deprived ward of the borough. The qualitative data collection and analysis followed the Framework analysis methodology[3]. The focus group was audio recorded and transcribed. The topic guide included questions on experiences of toothbrushing, sugar consumption in the diets of children and visiting dentists. The insights and findings are described below.

The main themes covered in the focus group were:

- **There is a gap between understanding and lived experience in terms of the frequency of toothbrushing**: parents understood the need to brush teeth twice a day but experienced issues in making this happening every day. These included: children being bored; children wanting and needing milk to fall asleep and not brushing their teeth after this. Parents reported that it was harder to brush teeth in the evenings before children fall asleep and easier to do in the morning. Several questions were asked about the use of bottles in the evenings as sleep aides and how to balance the need for children to fall asleep, with the need to clean their teeth after having milk.

- **An awareness of key fluoride toothpaste messages:** parents expressed that they understood the importance of using the right toothpaste for their right age and right amount; however, some noted that they had some trouble getting children to spit, with their children preferring to swallow toothpaste in response to the updated oral health message: 'spit, don't rinse'.
- **Expressed an inevitability about children's desire to consume sugar:** parents reported beliefs that included that some children develop a "sweet tooth" after exposure to chocolates and juice from older siblings; they also expressed that view that "kids are kids" and there is an inevitability that if they go outside and see sugary foods in the environment, with friends, they are going to want to have those sweets.
- **Children are growing up being exposed to sugary foods:** parents believe that most exposure to sugary foods is from seeing it on TV and in shops; less from advertising on billboards or on public transport.
- **Protecting children through education about sugar:** parents shared the view that they believed that education is important from the earliest ages to educate children that there is a difference between the foods that are available and the foods that are good for you.
- **Barriers to accessing dentists**: parents reported that even where older siblings already been seen by a dentist, they could not get appointments for younger siblings but more recently this has improved. Parents also reported that local dentists try to accommodate families with afterschool appointments, but these fill quickly so often it resulted in taking children out of school to see the dentist, and school holiday appointments are filled a long way in advance.
- **Some experiences of children requiring treatment and being subject to long waiting times:** one parent shared an experience of needing to wait for two months for a child with a cavity for treatment so ended up seeking a private dental appointment in the end.
- **Some parents reported children being given fluoride varnish when they visited the dentist, but not all.**
- **Mixed understanding about eligibility for NHS dental treatment**: not all parents were aware that free NHS dental services are available for children up to their 18th birthday, some thought it was until children were 16 years old.

Their accounts showed that children's preferences to consume sugar are shaped by cues from their physical environments (e.g., shops) and social environments (e.g., older sibling behaviour). Their accounts also highlighted the challenges in relying on families alone to prevent tooth decay through individual toothbrushing behaviour at home. Knowledge was necessary but not sufficient in the context of busy family lives. A wider supportive environment may be required to ensure children receive enough fluoride to prevent decay. In terms of being able to access NHS dentists for their children, these parents had had trouble in having young children seen and treatment delays although they also spoke about NHS dentists being as accommodating as they could of children and recent improvements, which accords with wider data about the recovery of dental services. Overall, the themes from the focus group fit with the PHE guidance about needing to create supportive environments and tackling tooth decay with upstream, midstream and downstream interventions.

4.5 Stakeholder engagement

Stakeholder engagement was conducted from July to September 2022. Qualitative data to understand the oral health needs of children and young people in Barnet came from a range of professionals involved locally and regionally in oral health. These included: General Dental Practitioner members of the Local Dental Committee (LDC); the Medical Director and Oral Health Improvement Lead of the Community Dentistry Service; Designated Nurses for LAC in Barnet and Named Nurse for LAC in

Barnet; an Advisor from the Health Education Partnership (HEP) commissioned service and Regional Dental Public Health Consultants from NHS England.

4.5.1 Views and experiences from Barnet's Local Dental Committee

We held a discussion with Barnet's Local Dental Committee in August 2022 to understand their views on the oral health needs of children and young people in Barnet. The following needs were identified in the discussion and in subsequent correspondence:

Opportunity to better co-ordinate oral health promotion activities with LDC

- Historically, the LDC have not always been aware of the oral health promotion activities that were planned and occurring in the borough. There is appetite from the LDC to better join up across the local system. The LDC suggested that they could perhaps also provide insight into areas that are experiencing high levels of demand where health promotion efforts could be targeted.
- LDC expressed the view that it is crucial that health promotion and education services are continuous, with sustained funding and effort.
- GDPs are currently facing issues around managing expectations of new patients around what will happen in the first 15 min appointment (diagnostic tests and referrals for treatment will take time and require further appointments for example). There may be an opportunity for Solutions4Health oral health promoters to weave these messages into their work with children and families to set more realistic expectations of what can be achieved in a single appointment.
- The role of the oral health promoters in educating health visitors and school nurses was also mentioned. Once the newly commissioned Solutions4Health oral health team are more established there may be opportunities to share their messaging with LDC members to ensure greater alignment in oral health messaging across allied professions.

Access to NHS Dentists in Barnet remains challenging

- Since the introduction of the 2006 dental contracts, the commissioning of UDAs has not increased and not kept pace with population growth in Barnet, like other areas. This sets up an inevitable situation of there not being enough NHS dentistry capacity for the local population.
- Historically the dentists in Barnet were efficient at delivering all of their allocated UDAs. It is helpful to understand that there is no over payment for delivery of say 105% of UDAs and there was clawback if less than 96% delivered. The point was also raised that UDAs are not necessarily the only NHS dentistry capacity as some dentists will see adults privately and then see their children for free, but this isn't recorded via the UDA system.
- Data presented from NHS Business Services Authority (NHS BSA) on the number of Barnet dentists (NHS versus Private) requires careful interpretation as just because a practice has an NHS contract, this does not convey the amount of the practices' activity that is for NHS dentistry, which is why it is helpful to analyse the UDAs themselves.

Intense GDP staffing pressures

- These remain intense and the worst that some have experienced in 20 years of dental practice. This is due to a culmination of several factors including the pandemic, Brexit and stress/workforce burnout.

4.5.2 Views and experiences from the Community Dentistry Service (CDS)

We met with Andrew Read, Clinical Director of Whittington Health in July to understand the perspective of community dentistry colleagues on the oral health needs of children and young people in Barnet. The key points raised in the discussion, and subsequent correspondence including with Ayesha Masood, about needs were as follows:

Absolute size of Barnet means number of children living with decay is significant

- Although Barnet's rates of dental decay are less than the London average, it is still roughly a quarter of five-year-olds who have dental decay and in the second most populous borough in London, that is a really significant number of children living with decay.

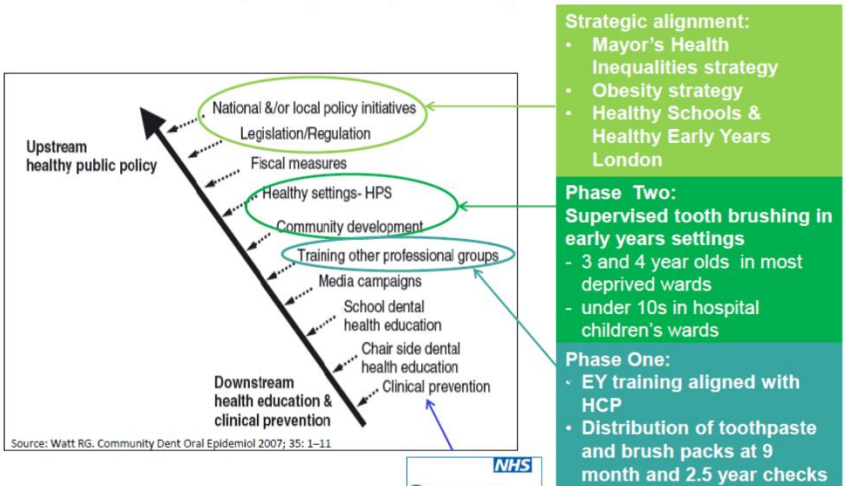
Commissioning gap of midstream interventions identified in Barnet

- Although PHE's advice is to focus on the wider determinants of oral health, contrasting professional opinions exist. The view from a CDS perspective is that midstream interventions such as targeted fluoride varnishing programmes, targeted supervised toothbrushing programmes and distribution of fluoride toothbrushing packs should be prioritised at the current time, especially given the cost-of-living pressures that families are experiencing.
- For example, nearby boroughs of Camden and Islington have been funding fluoride varnish programmes for 10-12 years and they are considered important public health prevention interventions with evidence of associated reductions in caries experience.
- The CDS report that many families are struggling with the cost of living, to the point of desperation. These immediate pressures should make us think about short-term pragmatic interventions that could be helpful to them: for example, an expansion of the targeted scheme to distribute toothbrushing packs.

Quality assurance of supervised toothbrushing interventions is essential

- Although supervised toothbrushing interventions are often easier to commission (compared with the greater initial cost of targeted fluoride varnishing) compliance is not guaranteed and delivering a high quality supervised toothbrushing programme requires a suitably experienced provider and sustained investment of time and resources. Key factors include someone visiting settings every 4-6 months, replenishing stocks with recurrent money and demonstrating system leadership. Brent began a supervised toothbrushing programme in 2017 and has now reached 6,000 children, across 40 to 50 different sites.
- See Figure 17 below for details of a how a Local Authority may include supervised toothbrushing as one intervention within the Watt framework.

Figure 17. Example of a Local Authority Multi-Level Approach



Special Educational Needs (SEN) Children in Barnet are a vulnerable group in terms of their oral health promotion needs, as well as children living in poverty

- SEN children are not just disadvantaged in terms of their oral health but also in their ability to access and accept dental treatment. The recommendations must include plans for targeted interventions for this group: this should include supervised toothbrushing programmes, distribution of toothbrushing packs, partnership working and parental workshops. A significant proportion of families with a SEN child are living under real financial pressure.
- In the experience of the CDS the significant numbers of children living in poverty, with and without SEN, are deserving of being described as 'vulnerable' and these children are the ones sitting on general anaesthetic waiting lists.

4.5.3 Views and experiences from Designated and Named Nurses for LAC

We met with Yvonne Conway and Toni Pankhurst in September 2022 to understand the perspective of the Designated LAC nurse and Named LAC nurse on the oral health needs of LAC. The key points raised in the discussion on needs were as follows:

Accessing NHS dentists is hard for LAC but Healthy Smiles has helped for the 50% of LAC who are placed in Barnet

- Currently NHS dentists are unable to see all LAC, so the nursing team are now signposting LAC to the Healthy Smiles pilot. Or, if the child has anxiety and fear of the dentist, they will refer them to the CDS.
- The Healthy Smiles pilot has been well received by LAC nurses but one identified need is that approximately half of Barnet's 330 LAC are placed in out-of-borough placements. These placements are spread widely geographically (e.g. some over the border in Hertfordshire and some much further away), with only some being in other London boroughs. So, for the children who are not in London based placements, they cannot access Healthy Smiles and are likely to face delays in dental treatment.

Oral health training needs identified for foster carers and social care staff in care homes

- Currently the LAC health team are asked annually by Family Services to offer a health-based training as part of the training package offered to foster carers. Oral health promotion is usually included this. The training is optional and it is unlikely to reach all foster carers. Foster carers do undertake a range of standard training when they initially become foster carers but there is no oral health training delivered by the LAC nursing team as part of this.
- In terms of barriers to maintaining for LAC, there is a training need in terms of understanding key oral health messages for some social care staff, for example staff based in care homes. Further support for some social care staff would be helpful.

Resource gap in provision of toothbrushes, toothpaste and disclosing tablets

- As the LAC Nursing team used to be part of the same provider as the prior oral health promotion team they used to be given toothbrushes and toothpaste for distribution in consultations and they provided support and advice to LAC health team. This is not occurring with the new provider.
- LAC Nurses also felt it might be effective in working with older children to use plaque revealing disclosing tablets as this would give nurses some objective evidence about areas of plaque on children's teeth. This would be a better basis for opening the discussion around oral health. This would require the team to be provided with the resources for disclosing tablets, which is mentioned in DBOH toolkit as being helpful to identify areas that are being missed with toothbrushing. Capacity in the team, whether this would be for all or only a subgroup of older LAC and the time taken to carry this out as part of the RHA would all require consideration.

LAC nursing operational challenges

- The LAC Nurses reflected that the data that is annually reported (called the 903 data) only reflects a partial picture as that only covers children who have been continuously in care for 12 months. Many children who come in and out of care are missing from this data, but any that have been in care for up to 20 days, will still be seen by a doctor.
- One challenge in supporting the oral health of LAC is that the children and young people often move around a lot and it's very hard to provide continuity of dental care when that is the case. Particularly when they move in and out of the borough. The Designated Nurse and Designated Doctor are escalating this issue on behalf of Barnet LAC (and across North London Central (NCL) system) to NHSE.
- A further challenge is access to dental care for Unaccompanied Asylum-Seeking Children (UASC) and Care Leavers (18+ to 25 year olds). These are an important cohort of young people, that have added health inequalities. They come under the remit of the LAC health team and all involved professionals in Barnet as their corporate parents, but free access to NHS dental services ceases once a child turns 18 years old.
- Dentistry is part of the Pan London Compact for Care experienced young people, along with other health recommendations. It is noted in the records for the Pan London Compact that accessing this will be challenging due to how dentistry is commissioned.

4.5.1 Views and experiences from Health Education Partnership (HEP)

HEP is commissioned by Barnet Public Health to deliver the HEYL, HSL and PSHE Support. We met with Tania Barney in September to understand the perspective of an experienced practitioner used to supporting EY settings and schools to design and undertake oral health promotion interventions. The key points raised in the discussion in relation to oral health needs in Barnet were as follows:

Oral health interventions require significant dedication and often lead to modest improvements

- HEP identified that in the 10 EY settings who have achieved a HEYL Silver Award for their work on oral health, despite the significant work dedicated to oral health promotion, outcomes do not appear to shift significantly within individual settings. For example, the process usually requires approximately 12 months of work from a setting. It involves undertaking baseline surveys, putting in place at least two interventions over six months and then undertaking an endline survey. For some of the settings it appears that the endline measures, such as number of parents reporting that they brush their child's teeth twice a day for 2 minutes using fluoride toothpaste, show modest improvements and sometimes fall short of the set target.

EY settings may not have capacity to undertake oral health interventions; number of EY settings stretches beyond HEP capacity and wider environmental conditions need to be addressed

- The work involved for a setting in undertaking an award is significant. In fact, the work required for EY settings for silver and gold awards is about double that required in schools. The workload puts many settings off due to capacity issues. HEP is in contact with about 48 settings and there are over 300 settings when childminders are included, so HEP is not able to reach all settings.
- There appears to be a significant amount of oral health activity in Barnet but the level of dental decay doesn't appear to be shifting. HEP expressed the view that perhaps all the activity is stemming the flow and preventing the worsening of oral health, giving the wide availability of sugar in people's diets and the wider environmental determinants of poor oral health.

Oral health training needs identified for EY staff, who are key in sharing appropriate messages with parents.

- In HEPs experience EY staff feel as if they understand the latest evidence-based oral health messages. However, when they come to the HEP training, they are often a little surprised by some things. For example, messages like 'spit don't rinse' so there is a continuing need to upskill EY staff.
- HEP also have some experience of parents raising the issue of children needing milk to fall asleep and then not being able to brush their teeth in the evening. This was noted as an example of the difference between knowledge of evidence based oral health messages and then the gap between actually being able to do them.
- HEP also have heard concerns raised by parents of not being able to get appointments with NHS dentists for their children and some families not even being aware that dental treatment is free for children. Also reported some local experiences where setting chose to do promotional work around 'dental check by 1' and then local dentists refuse to see very young infants who only had two or three teeth.

Opportunity to renew oral health promotion partnership working arrangements

- HEP are keen to work in partnership with all of those involved in the local oral health landscape. They want to establish a close working relationship with Solutions4Health oral health promotion team so that EY can continue to select oral health as a focus area for HEYL awards.

4.5.2 Views and experiences from Regional Dental Public Health Consultants

We met with Regional Dental Public Health Consultants Dr Rakhee Patel and Dr Huda Yusuf over the summer of 2022 to understand the data, evidence and their experience in terms of the oral health needs of children and young people in Barnet. Some of these discussions included colleagues from Solutions4Health and were specifically focused on sharing the best evidence-based oral health promotion interventions. The key points raised in relation to local needs were as follows:

Enhanced samples of Dental Epidemiology survey recommended to understand COVID-19 impact

- An enhanced sample of some Barnet wards was commissioned as part of the 2019 5-year-old Dental Epidemiology Survey and these data were shared. In line with local authorities' statutory responsibilities to commission oral health surveys to facilitate the assessment and monitoring of oral health needs and the planning and evaluation of oral health promotion programmes, it would be useful to commission further enhanced sampling in Barnet to understand the impact of COVID-19 locally.

Commissioning gap for older people identified

- Barnet has the most care homes of any London borough but does not currently provide an oral health promotion service for older people or those within care homes. Given the demography of the borough this was noted as a possible service provision gap.

Risks in changing oral health promotion provider and new service not yet following latest evidence

- The change of providers for oral health promotion services in the borough from CLCH to Solutions4Health is a risk that requires careful handling to ensure that there is a smooth transition and progress is not lost.
- There is evidence of ineffectiveness for one-off dental health education activities, for example presentations to children and parents, and these are discouraged. There is good evidence for oral health training for the wider professional workforce (e.g., health, education and social care). This should be encouraged, particularly with social care and education colleagues who can be forgotten.
- It was strongly recommended that the oral health promotion materials for use with other professionals followed DBOH 2021 toolkit published by OHID. Regional Dental Public Health Consultants offered to quality assure teaching materials.

Overall oral health programme should be integrated across many public health agendas and involve leading and co-ordinating local partners

- Most effective oral health programmes result from integrating action on oral health across many public health agendas (for example Water Only Schools, School Superzones, across childhood obesity work) and focusing on many levels of action on the social determinants (upstream, midstream and downstream).

- The most robust evidence to base the commissioning of services is the PHE document: ***Local authorities improving oral health: commissioning better oral health for children and young people an evidence informed toolkit for local authorities***[18]***.***
- It would be helpful to consider co-producing an Oral Health Action Plan with the community and system partners following on from the CYP Oral Health Needs Assessment.

5. Discussion and recommendations

5.1 Discussion

1. Oral health is a key marker of general health in children and while tooth decay is preventable, it remains an important public health issue due to its impact on children's ability to sleep, eat, speak, play, with wider social and NHS costs. In addition, the experience of tooth decay is socially patterned with significant oral health inequalities.

2. The oral health survey of five-year-olds in 2019 showed that just under a quarter in Barnet (24.8%) had tooth decay. Although this does not differ significantly from the proportions reported in London and England, due to Barnet being the second largest borough in London, as noted by Community Dentistry colleagues, in absolute terms this is impacting on a significant number of children in the borough.

3. The 2019 data confirms that the oral health of young children in Barnet varies between different wards. For example, the rates of tooth decay reported in some of the most deprived wards in the borough are between 35% to 40% in Burnt Oak, Childs Hill and West Hendon. This is supported by London-wide evidence of statistically significant differences in the experience of dental decay by deprivation: 34% of 5-year-olds in the ten percent of most deprived neighbourhoods have experience of dental decay, compared with the 10% of 5-year-olds in the ten percent of least deprived neighbourhoods.

4. Further evidence from across London also demonstrates statistically significant differences by ethnic group: 40% of 5-year-old children identified as coming from Other Ethnic Background and 37% of Asian/Asian British had experience of dental decay. This was statistically significantly higher than the prevalence of experience of decay in other ethnic groups: 24.3% of those who did not provide their ethnic background; 23.8% of Black/Black British; 22.6% of Mixed Ethnic Background; and 22.6% of those of White ethnicity.

5. Although the data is not yet available, we anticipate that the COVID-19 pandemic will have worsened the prevalence of tooth decay, as has been seen in national data with increased prevalence of childhood obesity, and that pre-existing oral health inequalities are likely to have been exacerbated.

6. Prior to the COVID-19 pandemic, the percentage of Looked After Children having dental checks was approximately 80%. This reduced to 31% in 2020/21 but recovered to 69% in 2021/22 assisted by the Healthy Smiles pilot.

7. There is good evidence that oral health is socially determined by a range of factors that operate at the different levels. These are upstream, midstream and downstream influences on oral health. The combination of these factors determines the oral health of children and explains the oral health inequalities that are seen.

8. There is a range of national guidance from PHE, OHID and NICE that advises that the most effective way to improve oral health and reduce oral health inequalities is to develop oral health programmes that meets local need and seek to integrate action on oral health at all levels: upstream, midstream and downstream, using both universal and targeted interventions.

9. In terms of commissioning specific interventions: one-off dental health education by the dental workforce targeting the general population is discouraged due to evidence of ineffectiveness.

10. Upstream interventions that are recommended are fluoridation of public water supplies (though this is impractical for Barnet alone to consider); influencing local and national government policies; and healthy food and drink policies in childhood settings. Midstream recommended interventions are targeted peer support groups/peer oral health workers; oral health training for the wider professional workforce (e.g., health, education, social care); and supervised tooth brushing in targeted childhood settings. Downstream recommended interventions are integration of oral health into targeted home visits by health/social care workers; targeted community-based fluoride varnish programmes; and targeted provision of toothbrushes and toothpaste (i.e., postal or through health visitors).

11. There is also evidence to support the cost-effectiveness of several of the mid and downstream interventions: universal water fluoridation; and the following targeted interventions: provision of toothbrushes and paste by post and by health visitors; supervised toothbrushing programmes; fluoride varnish programme and provision of toothbrushes and paste by post.

12. Evidence from the CDS highlights that some dental professionals specifically advocate for targeted fluoride varnishing programmes and targeted supervised toothbrushing programmes. In response to acute cost-of-living pressures they also advocate for targeted distribution of toothbrushes and toothpaste as a priority. They caution that supervised toothbrushing programmes require an experienced provider, significant quality assurance and sustained investment to deliver results. They urge that children with SEN in Barnet are considered a vulnerable group in terms of their oral health promotion needs, as well as children living in poverty.

13. Table 5 compares the oral health promotion interventions happening within Barnet with the interventions recommended by PHE.

Table 5. Comparison of PHE recommended and discouraged oral health promotion interventions for children with current activity in Barnet.

Name of intervention	***Overall PHE recommendation***	***Is this intervention happening in Barnet?***
One-off dental health education by dental workforce targeting the general population	Discouraged	This is not specifically commissioned but some 'one-off' interventions have been delivered.
Oral health training for the wider professional workforce (e.g., health, education, social care)	Recommended	This is commissioned although may be some unmet needs in relation to education and social care workforces. Solutions4Health will have oral health champions within the health visiting and school nursing services, but it is less clear whether oral health training within education covers just PSHE leads or the wider workforce. There is also evidence from LAC nurses that the training of social care staff could be strengthened, particularly in staff based in care homes and that foster carers could be more systematically trained.
Integration of oral health into targeted home visits	Recommended	Solutions4Health are required to have an oral health champion in the school nursing and health

by health/social care workers		visiting team. Further work could be done to ensure integration of oral health into targeted home visits of both social care and health care workers.
Targeted community-based fluoride varnish programmes	Recommended	No. This could be considered if more resources were available. The CDS advocates for this intervention.
Targeted provision of toothbrushes and tooth paste (i.e.. postal or through health visitors)	Recommended	Not specified in the service specification but some distribution of toothbrushes and toothpaste by Health Visitors at face-to-face 1 year and 2.5 year reviews and to Children's Centres is happening. Current cost-of-living pressures also mean this could be increasingly of value to families. There is also an opportunity to provide toothbrushes and toothpaste to LAC nurses (as happened with the previous provider) and possibly as part of BACE Holidays.
Supervised tooth brushing in targeted childhood settings	Recommended	Initial Barnet Young Brushers pilot has begun in 60 EY settings however compliance with evidence-based models has not been quality assured. 32 of the settings are in deprived wards. Support and quality assurance of these settings should be prioritised to reduce health inequalities. The CDS and Regional Dental Public Health Consultants advocate for quality assured versions of this intervention.
Healthy food and drink policies in childhood settings	Recommended	Yes, the Public Health team, work collaboratively with system partners (including HEP) on whole systems approaches. This includes several relevant programmes such as Sugar Smart Schools, Water Only Schools, Schools Food Support Plan and School Superzones. Healthy food and drink policies are a requirement for the Bronze Award in both HSL and HEYL programmes.
Targeted peer (lay) support groups/peer oral health workers	Recommended	No. This could be considered if more resources were available.
Influencing local and national government policies	Recommended	Yes, the Public Health team works to integrate oral health promotion into local government policies wherever possible.

14. As the new oral health promotion providers Solutions4Health are establishing their service within Barnet there is an opportunity to maximise its impact by ensuring that they focus their efforts on evidence-based interventions. For example, for the universal Oral Health Programme to focus on oral health training for the wider professional workforce (health, education and social care); that this training adheres to the 'gold standard' DBOH, 2021 toolkit and that they move away from 'one-off' educational activities. There is also a need to consider how leadership on oral health is embedded within social care and education workforces in addition to the oral health champions within health visiting and school nursing teams. The provision of toothbrushes and toothpaste via health visitor checks and to children's centres needs to be reviewed and provision of resources for the LAC nursing teams considered. For the targeted supervised toothbrushing pilot it is important that the EY settings are within the wards of greatest deprivation and that PHE guidance to quality assure the programme is followed.

15. The focus group discussion identified that children are very sensitive to their environmental conditions in relation to sugar so work to ensure healthy food and drink in childhood settings is important. The discussion also highlighted the risks in relying on families alone to prevent tooth decay through individual toothbrushing behaviour at home: knowledge is not enough; supportive environments are required. Parents also reported difficulties in seeing NHS dentists. Taken together with the evidence about the limited proportion of Barnet children accessing NHS dental services (ranging from 53% (pre-pandemic) to 21% (during the pandemic) of 0-19 year olds) and the evidence from the LDC about the limited number of UDAs that has not kept pace with population growth and extreme pressures on the dental workforce, it is highly unlikely that all eligible children will receive twice yearly fluoride varnishing from their dentists. This evidence suggests that the oral health of children in areas of deprivation could benefit from interventions like community-based fluoride varnish programmes and supervised tooth brushing in childhood settings.

16. Stakeholders, including the LDC and HEP, confirmed there is a need to renew partnership working after COVID-19 pandemic and to develop new working relationships with Solutions4Health as the new oral health promotion service. LDC committee members reflected in particularly that they have not always been aware of the oral health promotion activities occurring and they could share intelligence from dentists who are experiencing high demand to help target health promotion activity to areas of need.

17. There is a wide range of work happening across Barnet local authority to support healthy food and drink policies in childhood settings and to influence local government policy. There is an opportunity to further maximise the impact of this work by co-ordinating and informing all partners with a role in improving children's oral health across the borough.

18. LAC are a known vulnerable group in relation to their oral health. The designated LAC nurses identified that there are oral health training needs for both foster carers and social care staff, particularly those based in care homes. They also no longer receive toothbrushes and toothpaste to distribute to LAC and identified that the provision of plaque disclosing tablets would improve consultations with older children. They identified that although Healthy Smiles pilot has helped with accessing dental treatment only half of Barnet's Looked After Children, those who are placed in care placements within London boroughs, are able to use the service.

19. Regional Dental Public Health Consultants advised: that the latest commissioning evidence and toolkits should be followed to maximise the impact of the oral health programme as Solutions4Health embed as Barnet's new provider; and that integrating action on oral health within many public health

agendas and developing local partnerships to co-produce an oral health action plan was advisable. They also noted a possible service provision gap around older people and that a further enhanced dental epidemiology survey sample would be helpful to understand the impact of the COVID-19 pandemic.

5.2 Recommendations

Recommendations have been developed to be pragmatic and based on what is within Barnet local authority's sphere of influence. They have been considered from two vantage points: those that could be delivered within existing resources and commissioned services, and those that would require additional resources. Each recommendation serves to meet needs that have been identified within the discussion.

5.2.1 Recommendations within existing resources

5.2.1.1 Enhance partnership working, further embed oral health across existing programmes and co-produce an action plan

Identified Needs	Recommended actions	Partners
Oral health partnership arrangements need to be renewed	1. Develop a Barnet Oral Health Partnership, to develop and oversee the implementation of a co-produced Barnet Oral Health Action Plan to leverage and co-ordinate assets across the Borough.	- Public Health Team - Family Services - Local Dental Committee - Whittington Health Community Dentistry Service - Solutions4Health Oral Health Programme
Oral health programme needs to be integrated across public health agendas and the spectrum of local authority work	2. Develop Oral Health Strategic Lead role within the Barnet Public Health team to embed action on oral health across the spectrum of local authority work and primary care networks, particularly that of the Public Health Team, their policies and commissioned services and ensure these programmes are monitored	- Public Health Team - Family Services - Local Dental Committee - Whittington Health Community Dentistry Service - Solutions4Health Oral Health Programme - Education Services i.e. Barnet Education and Learning Service - Primary Care Networks

Multilevel action on the social determinants of oral health in children is required	3. Ensure that the Barnet Oral Health Action Plan takes a whole system approach; spans the spectrum from upstream, midstream to downstream interventions; and considers what can be done in relation to the cost-of-living and child poverty.	- Public Health Team - Family Services - Whittington Health Community Dentistry Service - Solutions4Health Oral Health Programme
Improve co-ordination of oral health promotion activities occurring in the borough; better target activity based on deprivation and intelligence on high levels of demand for NHS dental treatment	4. Through the Barnet Oral Health Partnership improve communication between partners and use insight from deprivation data, GDPs and HEP to target oral health promotion efforts and link with wider health promoting strategies.	- Public Health Team - Family Services - Local Dental Committee - Health Education Partnership - Solutions4Health Oral Health Programme

5.2.1.2 Focusing existing commissioned Oral Health Programme on evidence-based interventions

Identified Needs	Recommended actions	Partners
Some of the current Oral Health Programme has included 'one off' dental health education activities, for example presentations to children and parents, which is discouraged by national guidance.	5. Focus commissioned Oral Health Programme on recommended interventions such as oral health training for the wider professional workforce (e.g., health, education and social care). This could include identifying oral health champions in each setting and adopting a train-the-trainer model.	- Family Services - Solutions4Health Oral Health Promoters - Public Health Team

Training materials being used by Solutions4Health for training the wider professional workforce do not yet adhere to the DBOH 2021 toolkit	6. Ensure training materials adhere to DBOH guidelines as the new service is being established 7. Understand the competency framework the provider is putting in place to ensure that workforce have appropriate communication skills to effectively train professionals.	- Solutions4Health - Family Services - Regional Dental Public Health Advisor - Public Health Team
Oral health training needs identified for EY and social care staff	8. Plan, co-ordinate and communicate an oral health workforce training plan across Health, Education and Social Care workforces that operate in the borough. Ensure consistency between statutory requirements of workforces (e.g. EYFS) and the training plan. Ensure the plan builds on existing training provision.	- Family Services, including Social Workers - Designated LAC Nurses and Designated LAC Doctors - Education Services i.e. Barnet Education and Learning Service - Education Staff - Health Education Partnership
The Oral Health Programme is embedded within the wider Healthy Child Programme. This is best practice and affords opportunities to enhance the integration of oral health within other aspects of the Healthy Child Programme.	9. Maximise the opportunity by investigating mechanisms to integrate oral health into targeted home visits for example by Solutions4Health health visitors. Ensure that there are oral health champions within the Solutions4Health health visiting and school nursing services and that oral health	- Family Services - Public Health Team - Solutions4Health - Health Education Partnership

	interventions are integrated within comprehensive setting-based approaches such as HELY and HSL awards and Making Every Contact Count (MECC) training.	
The effectiveness of supervised toothbrushing programmes is sensitive to changes in delivery and to be effective it is important that the programme models closely the existing evidence based methodology.	10. Quality assure the existing targeted Barnet Young Brushers supervised toothbrushing to ensure that the settings are in wards of deprivation (e.g. target top 10-20% deprived areas) and that an evidence-based methodology is being followed.	- Solutions4Health - Public Health Team - Organisational Insight and Intelligence Team - Early Years Service Manager - Regional Dental Public Health Consultant
Oral health training for foster carers is optional, offered annually and unlikely to reach all foster carers	11. Link in with London-wide work underway to develop a mandatory Oral Health module to be integrated within standard Foster Carer training package. 12. Develop both 'in-person' and 'online' training to maximise reach of training.	- Regional Dental Public Health Consultant - LAC Health Teams - Solutions4Health Oral Health Promoters - Family Services - Early Years Service Manager
Provision of toothbrushes and toothpaste needs to be reviewed	13. Clarify the status of the provision of toothbrushes and toothpaste via Health Visitors and confirm this following evidence-based guidelines. 14. Examine other opportunities to deliver toothbrushing packs in response to cost-of-living crisis	- LAC Health Team - Solutions4Health Oral Health Promoters - Family Services - Public Health Team

	including BACE Holidays. 15. Consider providing LAC nursing team with toothbrushes, toothpaste and disclosing tablets.	

5.2.2 Recommendations with additional resources

5.2.2.1 Commissioning additional actions and interventions to meet unmet needs and close inequalities

Identified Needs	Recommended actions	Partners
Detailed information regarding variation in oral health across Barnet dates from before COVID-19 pandemic so up-to-date data is required to understand impact on oral health inequalities	16. Commission enhanced sampling of future Dental Epidemiology Surveys to understand variation across Barnet wards.	- Public Health Team. - Regional Dental Public Health Consultants - Dental Epidemiology Survey Providers (Whittington Health Trust)
There are downstream evidence-based interventions that are recommended and likely to reduce oral health inequalities that are not currently commissioned	17. Consider commissioning additional evidence-based programmes. These could include a targeted community-based fluoride varnish programme and targeted peer support groups/peer oral health workers.	- Public Health - North Central London ICB
The Healthy Smiles pilot for LAC only covers children who are in placements in London. This does not cover ~50% of Barnet's LAC.	18. Develop working group as a sub-group of Barnet Oral Health Partnership to develop dental treatment arrangements for the LAC that are placed outside of London.	- Local Dental Committee - Designated LAC Nurse or Named LAC Nurse - Public Health Team - Regional Dental Public Health Consultants

5.2.2.2 Understand oral health needs for vulnerable children and across the whole life course

Identified Needs	Recommended actions	Partners
SEN children are a vulnerable group in terms of oral health[47] and we need to consider their specific needs in terms of oral health promotion, prevention and access to treatment.	19. Consider conducting a further phase of the Oral Health Needs Assessment process to understand the needs for children and young people with SEN.	- Public Health Team - Family Services - Community Dentistry Service
Barnet has a significant population of vulnerable older people but does not commission oral health promotion services for older people	20. Consider conducting a further phase of the Oral Health Needs Assessment process to understand the needs for adults and older adults across the borough.	- Public Health Team - Adult Social Care - Regional Dental Public Health Consultants

5.3 Future Research

The recently completed Migrant Needs Assessment has identified that dental issues are prevalent in asylum seekers and knowledge and access to dental care is very limited. In terms of children specifically, care for UASC is under the LAC health team. As a further phase of this work, more research is needed to consider how to improve awareness of dental care services locally within the forced migrant populations. Work is also needed to consider how to support the provision of dental care and hygiene support at accommodation sites i.e., contingency hotel.

5.4 References

[1] Public Health England. National Dental Epidemiology Programme for England: oral health survey of 5-year-olds 2019 A report on the variations in prevalence and severity of dental decay [Internet]. 2020 Mar. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873492/NDEP_for_England_OH_Survey_5yr_2019_v1.0.pdf

[2] Stevens, A., Raftery, J., Mant, J. and Simpson, S. (2018). *Health Care Needs Assessment*. CRC Press. doi:10.1201/9781315365442.

[3] Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Medical Research Methodology. 2013 Sep 18;13(1):1–8. https://doi.org/10.1186/1471-2288-13-117.

[4] Public Health England: Inequalities in oral health in England [Internet]. 2021 Mar. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/970380/Inequalities_in_oral_health_in_England.pdf

[5] Levine, R. Childhood caries and hospital admissions in England: a reflection on preventive strategies. *Br Dent J* **230**, 611–616 (2021). https://doi.org/10.1038/s41415-021-2945-8. Available from: Childhood caries and hospital admissions in England: a reflection on preventive strategies | British Dental Journal (nature.com)

[6] Hospital Admitted Patient Care Activity, 2021-22 [Internet]. NHS Digital. Available from: https://digital.nhs.uk/data-and-information/publications/statistical/hospital-admitted-patient-care-activity/2021-22

[7] Lead dental surgeon warns "now is not the time to scrap the sugar tax", as almost 30,000 children and young people are admitted to hospital for tooth decay [Internet]. Royal College of Surgeons. [cited 2022 Nov 22]. Available from: https://www.rcseng.ac.uk/news-and-events/media-centre/press-releases/faculty-of-dental-surgery-comments-on-hospital-admissions-data/

[8] Summary Report - Episodes - NHS Digital Source: Hospital Episode Statistics (HES), NHS Digital. NHS Digital is the trading name of the Health and Social Care Information Centre. December 2021.

[9] Dentistry Market Report - 5th Edition [Internet]. LaingBuisson. Available from: Dentistry Market Report - 5th Edition - LaingBuisson

[10] Public Health England. Health matters: child dental health [Internet]. GOV.UK. 2017. Available from: https://www.gov.uk/government/publications/health-matters-child-dental-health/health-matters-child-dental-health

[11] Watt RG, Heilmann A, Listl S, Peres MA. London Charter on Oral Health Inequalities. Journal of Dental Research [Internet]. 2015 Dec 23 [cited 2020 Jan 3];95(3):245–7. Available from: https://journals.sagepub.com/doi/abs/10.1177/0022034515622198?rss=1

[12] Sanders AE, Slade GD, Turrell G, John Spencer A, Marcenes W. The shape of the socioeconomic-oral health gradient: implications for theoretical explanations. Community Dentistry and Oral Epidemiology. 2006 Aug;34(4):310–9.

[13] Peres MA, Macpherson LMD, Weyant RJ, Daly B, Venturelli R, Mathur MR, et al. Oral diseases: a global public health challenge. The Lancet [Internet]. 2019 Jul;394(10194):249–60. Available from: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31146-8/fulltext

[14] Healthcare, Wellbeing and Workforce Team, PHE London. The impact of COVID-19 on London's children and young people. 2021 June. Available from: CYP COVID wider impacts 23 May 21.pdf

[15] Public Health Outcomes Framework - PHE [Internet]. fingertips.phe.org.uk. Available from: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#gid/1000044

[16] Local authorities improving oral health: commissioning better oral health for children and young people An evidence-informed toolkit for local authorities [Internet]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/321503/CBOHMaindocumentJUNE2014.pdf

[17] Public Health England. Delivering better oral health: an evidence-based toolkit for prevention [Internet]. GOV.UK. 2017. Available from: https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention

[18]Improving oral health: community water fluoridation toolkit [Internet]. GOV.UK. Available from: https://www.gov.uk/government/publications/improving-oral-health-community-water-fluoridation-toolkit

[19] Improving oral health: A toolkit to support commissioning of supervised toothbrushing programmes in early years and school settings [Internet]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/574835/PHE_supervised_toothbrushing_toolkit.pdf
[20] Overview | Oral health: local authorities and partners | Guidance | NICE [Internet]. Nice.org.uk. NICE; 2014. Available from: https://www.nice.org.uk/guidance/ph55
[21] Overview | Oral health promotion in the community | Quality standards | NICE [Internet]. www.nice.org.uk. Available from: https://www.nice.org.uk/guidance/qs139
[22] Department for Education. Early years foundation stage statutory framework (EYFS) [Internet]. GOV.UK. 2021. Available from: https://www.gov.uk/government/publications/early-years-foundation-stage-framework--2
[23] Department for Education. Relationships Education, Relationships and Sex Education (RSE) and Health Education [Internet]. 2019. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1090195/Relationships_Education_RSE_and_Health_Education.pdf
[24] Dental Check by One [Internet]. Bspd.co.uk. 2019. Available from: https://www.bspd.co.uk/Patients/Dental-Check-by-One
[25] York Health Economics Consortium A rapid review of evidence on the cost-effectiveness of interventions to improve the oral health of children aged 0-5 years [Internet]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/560972/Rapid_review_ROI_oral_health_5_year_old.pdf
[26] The London Vision [Internet]. [cited 2022 Nov 22]. Available from: https://www.healthylondon.org/wp-content/uploads/2019/09/London-Vision-short-summary-1.pdf
[27] London Health Inequalities Strategy | LGOV [Internet]. www.london.gov.uk. [cited 2022 Nov 22]. Available from: https://www.london.gov.uk/programmes-strategies/health-and-wellbeing/health-inequalities/london-health-inequalities-strategy#:~:text=The%20Mayor%27s%20Health%20Inequalities%20Strategy
[28] Every Child A Healthy Weight. Ten Ambitions For London | LGOV [Internet]. www.london.gov.uk. [cited 2022 Nov 22]. Available from: https://www.london.gov.uk/sites/default/files/every_child_a_healthy_weight.pdf
[29] Healthy Schools London | Healthy Schools [Internet]. www.london.gov.uk. Available from: https://www.london.gov.uk/what-we-do/health/healthy-schools-london/awards/home
[30] Healthy Early Years London resources | LGOV [Internet]. www.london.gov.uk. [cited 2022 Nov 22]. Available from: https://www.london.gov.uk/programmes-strategies/health-and-wellbeing/healthy-early-years-london/healthy-early-years-london-resources
[31] Census 2021 results [Internet]. Census 2021. Available from: https://census.gov.uk/census-2021-result
[32] Early years and childcare statistics [Internet]. GOV.UK. Available from: https://www.gov.uk/government/collections/early-years-and-childcare-statistics
[33] Ethnic group population projections – London Datastore [Internet]. Available from: https://data.london.gov.uk/dataset/ethnic-group-population-projections
[34] Department for Education. Schools, Pupils and Their characteristics, Academic Year 2019/20 [Internet]. explore-education-statistics.service.gov.uk. 2021. Available from: https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics
[35] Households below average income: an analysis of the income distribution FYE 1995 to FYE 2021 [Internet]. GOV.UK. Available from: https://www.gov.uk/government/statistics/households-below-average-income-for-financial-years-ending-1995-to-2021/households-below-average-income-an-analysis-of-the-income-distribution-fye-1995-to-fye-2021#children-in-low-income-households
[36] In at the deep end • Resolution Foundation [Internet]. Available from: https://www.resolutionfoundation.org/publications/in-at-the-deep-end/
[37] Public Health England. The relation between dental caries and obesity in children: an evidence summary [Internet]. 2015 Oct. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/466334/Caries_obesity_Evidence_SummaryOCT2015FINAL.pdf
[38] Public Health England. Child obesity and socioeconomic status data factsheet [Internet]. PHE Gateway; 2014. Available from: http://www.noo.org.uk/NOO_about_obesity/inequalities.

[39] Public Health CYP Profile: National Child Measurement Programme

[40] NHS Digital. National Child Measurement Programme, England 2020/21 School Year [Internet]. NHS Digital. 2021. Available from: https://digital.nhs.uk/data-and-information/publications/statistical/national-child-measurement-programme/2020-21-school-year

[41] Public Health England Barnet Oral Health Profile: Published November 2020 v1.2 provided by Regional Dental Public Health Consultant Advisor.

[42] Public Health England. Oral health [Internet]. GOV.UK. 2019. Available from: https://www.gov.uk/government/collections/oral-health Hospital Episode Statistics: Extractions data, 0-19 year olds, 2018-2019 to 2020-2021 (https://www.gov.uk/government/collections/oral-health)

[43] NHSBSA Information Services eDEN System Report provided by Regional Dental Public Health Consultant Advisor.

[44] NHSBSA Information Services eDEN System Report provided by Barnet Local Dental Committee.

[45] Healthy futures Supporting and promoting the health needs of looked after children Case studies [Internet]. Available from: https://www.local.gov.uk/sites/default/files/documents/healthy-futures-supportin-9cf.pdf

[46] Health in All Policies a manual for local government [Internet]. Available from: https://www.local.gov.uk/sites/default/files/documents/health-all-policies-hiap--8df.pdf

[47] Oral care and people with learning disabilities [Internet]. GOV.UK. Available from: https://www.gov.uk/government/publications/oral-care-and-people-with-learning-disabilities/oral-care-and-people-with-learning-disabilities#oral-health-of-people-with-learning-disabilities

Appendix 1: Glossary of terms

BACE - Barnet Active Creative Engaging

CDS - Community Dental Service

CQC - Care Quality Commission

CYP OHNA – Children and Young People's Oral Health Needs Assessment

DBOH - Delivering Better Oral Health

DHSC - Department for Health and Social Care

EY - Early Years

FSM - Free School Meals

GDP - General Dental Practice

GP - General Practice

HEP - Health Education Partnership

HOSC - Health Overview and Scrutiny Committee

IDACI - Income Deprivation Affecting Children Index

IHA - Initial Health Assessment

IMD - Index of Multiple Deprivation

IRO - Independent Reviewing Officer

LAC - Looked After Children

LDC - Local Dental Committee

LSOA - Lower Super Output Area

MECC - Making Every Contact Count

NCL - North Central London

NCMP - National Child Measurement Programme

NICE - National Institute for Health and Care Excellence

NDEP - National Dental Epidemiology Programme

NHS BSA - NHS Business Services Authority

NHSE - NHS England

OHID - Office for Health Improvement and Disparities

ONS - Office of National Statistics

PHE - Public Health England

RHA - Review Health Assessment

ROI - Return On Investment

SEN - Special Educational Needs

UASC - Unaccompanied Asylum-Seeking Children

UDA - Units of Dental Activity

Appendix 2: GDPs in Barnet with an NHS Contract in 2022

	Full name or company name	Treatment Postcode	Ward
1	Apex Dental Care	NW7 3JR	Mill Hill
2	Approach Dentistry	NW4 2HS	Hendon
3	Barnet Smiles Dental Care Limited	EN5 2LP	Underhill
4	Colindale Dental Practice	NW9 5EP	Colindale South
5	Dental Arts Studio - Hendon	NW4 3UX	West Hendon
6	Devalia, Devalia Partnership	EN4 8AE	East Barnet
7	Dr N Radia and Dr K Rughani	EN5 5TD	High Barnet
8	East Finchley Smiles	N2 9ED	East Finchley
9	East Village Dental	N3 2SB	Finchley Church End
10	Edge Dental Care	HA8 8SS	Edgwarebury
11	Elite Dental Care	N3 1QN	West Finchley
12	Excel Dental Care	NW2 2JL	Childs Hill
13	Gurminder Gill	NW11 9AL	Golders Green
14	Hampden Clinics Limited	N14 5JN	Brunswick Park
15	Harwinder Kalsi	NW4 4NL	West Hendon
16	High Barnet Dental Care	EN5 5UR	High Barnet
17	Kevin Silver	N2 8AX	East Finchley
18	Kunal Shah	NW4 2BP	Hendon
19	Margaret Andi, Mill Hill Dental Practice	NW7 3RE	Mill Hill
20	MISS FA RAMJOHN	NW9 7AA	West Hendon
21	MISS N PATEL	NW7 3LJ	Mill Hill
22	MISS SV SMALL	HA8 8LX	Edgware
23	Mona Lisa Smiles	EN5 1PX	Barnet Vale
24	MR A JARVID	NW11 8LH	Childs Hill
25	MR A MARCUS	N20 9HE	Whetstone
26	MR A MEHRI	N12 0BT	West Finchley
27	MR AK FANG	N3 1XY	West Finchley
28	MR CA HAWKES	EN4 8HX	East Barnet
29	MR CM GAUNT	N12 8PR	Woodhouse
30	MR CP BALCOMBE	NW7 3RJ	Mill Hill
31	MR I DAVIS	NW11 7HB	Golders Green
32	MR JS BLISS	NW11 0QN	Golders Green
33	Mr K Esmail and M K Velji	EN4 8RN	East Barnet
34	MR K SHAH	NW9 6SH	Colindale South
35	MR LH BAUM	N12 8JT	West Finchley
36	MR MP BASS	NW11 8EN	Childs Hill
37	MR MS KHAN	N12 9BD	Woodhouse
38	MR N AGRAWAL	N3 1DP	Finchley Church End
39	MR R PATEL	N20 9HS	Whetstone
40	MR RF PRAIS	N2 0EF	Garden Suburb
41	MR S DARVISH-KOJOURI	HA8 9BP	Burnt Oak
42	MR SA TAVACKOLLI FARD	NW9 6HS	Colindale South
43	Mr V Patel	HA8 0AS	Burnt Oak
44	MR VK SETHI	EN5 1LJ	Barnet Vale

45	MRS A LEE	N11 3DA	Friern Barnet
46	Mrs S Hossein Pour Tehrani, Mr P Negahban	NW11 7RX	Childs Hill
47	N12 Dental Care	N12 8LG	West Finchley
48	Nether Street Dental Practice	N3 1QG	West Finchley
49	Nilesh Patel	N3 2SB	Finchley Church End
50	Oris Dental Centre	NW9 5UN	Colindale North
51	Precious Smile Dental Care	N12 9AB	Woodhouse
52	Promenade Dental Practice	HA8 7JZ	Edgware
53	Sudhir Thakerar & Partners	NW11 7RJ	Childs Hill
54	The Garden Dental Practice	NW11 7RX	Childs Hill
55	Whitecross Dental Care Limited	N3 2NA	West Finchley
56	Wood Street Dental Surgery	EN5 4BW	High Barnet