North Tyneside
Joint strategic needs assessment
Oral health

February 2024

North Tyneside Council

1. Introduction

1.1. This document summarises the oral health needs of the population of North Tyneside. It identifies key oral health inequalities, populations affected and current actions to meet these needs. Unmet oral health needs are identified as well as a summary of current evidence for improving oral health for local consideration.

1.2. Tooth decay is the most common oral disease affecting children and young people in England but it largely preventable. Poor oral health can affect many areas of a young person's life including their ability to eat, speak, and socialise. These children will then carry their poor oral health into adulthood causing lifelong issues.

1.3. Tooth decay not only causes high health costs but also high financial costs. Public Health England report that tooth decay is the most common reason for hospital admission in 6–10-year-olds. The costs to the NHS of treating oral health conditions is around £3.6 billion per year.[1]

1.4. This JSNA focuses on non-specialist preventative measures which benefit the population. It does not focus on access to specialist dental services for both preventative and acute care. Although specialist services are essential for good oral health this is outside the scope of this JSNA.

1.5. Local authorities are statutorily required to provide or commission oral health promotion programmes to improve the health of the local population. They are also required to provide or commission oral health surveys.

What is Oral Health

1.6. Oral health is the state of the mouth, teeth and orofacial structures that enable individuals to perform essential functions such as eating breathing and speaking, and encompasses psychosocial dimensions such as self-confidence, well-being and the ability to socialise and work without pain, discomfort and embarrassment.[2] Oral diseases encompass a range of diseases and conditions that include dental caries, periodontal (gum) disease, tooth loss, oral cancer, oro-dental trauma, and birth defects such as cleft lip and palate.[2]

1.7. Dental caries (tooth decay) is the most common non communicable disease worldwide and in the UK. It's caused by a diet too high in sugary food and drinks alongside improper dental hygiene. Sugars are broken down by micro-organisms in the plaque on teeth which cause the production of acid which demineralises teeth over time. Tooth decay can result in pain and require dental treatment, in the most severe cases tooth removal.

1.8. Periodontal diseases are caused by inflammation of the tooth supporting tissues referred to as the gums triggered by dental plaque. The most common forms are gingivitis (reversable inflammation of the gums) and periodontitis (inflammation resulting in a loss of periodontal attachment). At its most severe periodontitis can result in tooth loss.

1.9. Dental trauma can occur anywhere at any time. Accidental damage is most common in children and young people and usually affects the front teeth. Dental trauma can be complex and require long term dental care.

1.10. Oral cancer refers to cancers of the tongue, lips, inside lining of the mouth/cheeks and the oropharynx (the portion of the throat at the back of the mouth). It is the sixth most common cancer in the UK – every year there are approximately 4,900 new cases reported.

Exact cause is unknown in some patients, but alcohol, tobacco, diet and Human papilloma virus (HPV) are known risk factors. Oral cancer disproportionately affects males and its incidence and mortality increase with age and deprivation.

1.11. The national Adult Dental Health Survey 2021 showed:

- 95% of all adults in England were dentate (had at least one tooth).
- The proportion of people with no natural teeth was higher in more deprived neighbourhoods.
- 10% of dentate adults in England reported feeling current teeth pain.
- 19% of dentate adults reported having been told they had gum disease.[3]

2. Key Issues

Data has been collated to identify the following key issues in North Tyneside:

- Lowest rates of tooth decay in 3- and 5-year-olds in the North East.
- In children experiencing tooth decay there are higher rates of severe decay as compared to regional neighbours.
- Tooth extraction rates in 0-19 year olds remains high as compared to many regional neighbours.
- Oral cancer incidence and mortality rates remain above the national average.
- There is insufficient capacity across North Tyneside community dentistry to meet demand.
- There is unmet need in relation to older adults. The true extent of unmet oral health needs in this community is not clear.

3. High Level Priorities

High level priorities are suggested below.

- Utilise the opportunities across North Tyneside to improve oral health by promoting good oral health through key stakeholders, such as children and young people service providers, and facilitate access to healthier food and drink alternatives such as tap water.

- Work closely with stakeholders to address inequalities associated with poor oral health such as older adults.
- Work closely with NHS England commissioners regarding access to dental services.
- Support any regional initiatives that aim to improve access to fluoride.

4. Those at Risk

4.1. Oral health inequalities remain a significant public health problem in England. Poor oral health disproportionally affects vulnerable and socially disadvantaged individuals and groups in society. There is clear and consistent evidence for social gradients in the prevalence of dental decay, tooth loss, oral cancer, self-rated oral health, oral hygiene, and service use.[4] Fluoridation plays a role in reducing dental inequalities with differences in dental decay less pronounced in fluoridated areas.[5] Differences in access to dental services may partly explain social inequalities in dental decay, whilst smoking plays a role in inequalities in periodontal disease.

4.2. Risk factors for developing dental disease, shown in

4.3. Table *1* include both modifiable behaviours and non-modifiable socioeconomic and cultural factors.[6] Many of the causes of poor oral health are the same ones that cause other disease- 'common risk factors'.

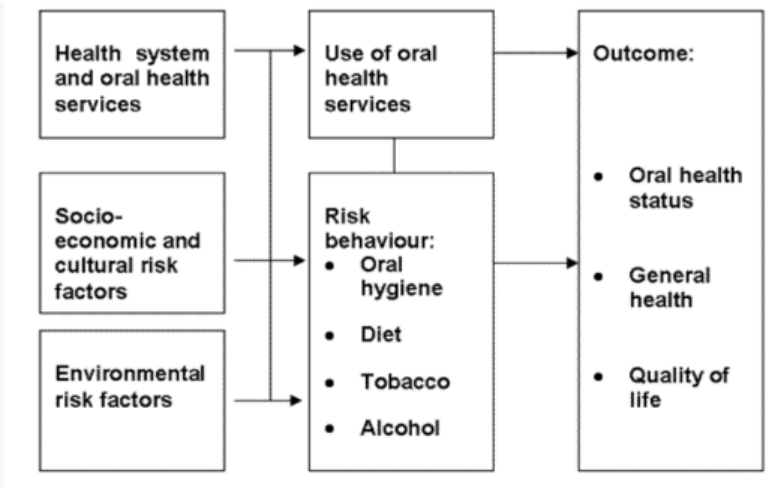
Table 1: Risk factors for poor oral health

Risk Behaviours	**Dental Hygiene**	Poor dental hygiene is the main cause of gum disease and is also implicated in dental decay.
	Fluoride exposure	Fluoride prevents tooth decay. People are usually exposed to fluoride from toothpastes and mouthwashes and potentially from their water.
	Diet	Diets high in sugar and fat and low in fibre and essential vitamins are associated with conditions such as oral cancers and dental decay as well as non-oral conditions.
	Tobacco	Tobacco use increases the risk of oral cancers.
	Alcohol	When drunk in large quantities alcohol increases the risk of oral cancers.

Socioeconomic and cultural factors	**Age**	Young children living in deprived areas have higher rates of dental decay. Co-morbidities, physical limitations and cognitive changes in older age can lead to poor oral health.
	Gender	Middle-aged males who smoke and drink more than the recommended safe levels are at greater risk of oral cancer.
	Socioeconomic status	Health inequality is a common feature in dental disease; high levels of dental disease tend to affect those in low income families and those living in socially deprived conditions.
	Diabetes	People with diabetes are more prone to gum disease and premature loss of teeth.
	Mental health	Adults living with dementia may experience difficulties in maintaining good oral health. Those living with bulimia may have problems with excessive tooth wearing due to the acidic pH of their mouth.
	Ethnicity	Asylum seekers and eastern European communities have poorer oral health compared to the general population.
	Learning disabilities	Surveys of the dental health of adults with learning disabilities show that poor oral hygiene and a high prevalence of gum disease are common.
	Refugees	Studies have indicated a high prevalence of oral disease and unmet oral healthcare needs in refugees, often exceeding the levels experienced by the most disadvantaged communities of the host country.

4.4. The Sheiham and Watt common risk factor approach, shown in Figure 1, is a framework used to summarise the different factors at play which are common to oral disease as well as other chronic diseases.[7]

Figure 1: The common risk factor approach by The Scottish Public Health Observatory, 2017



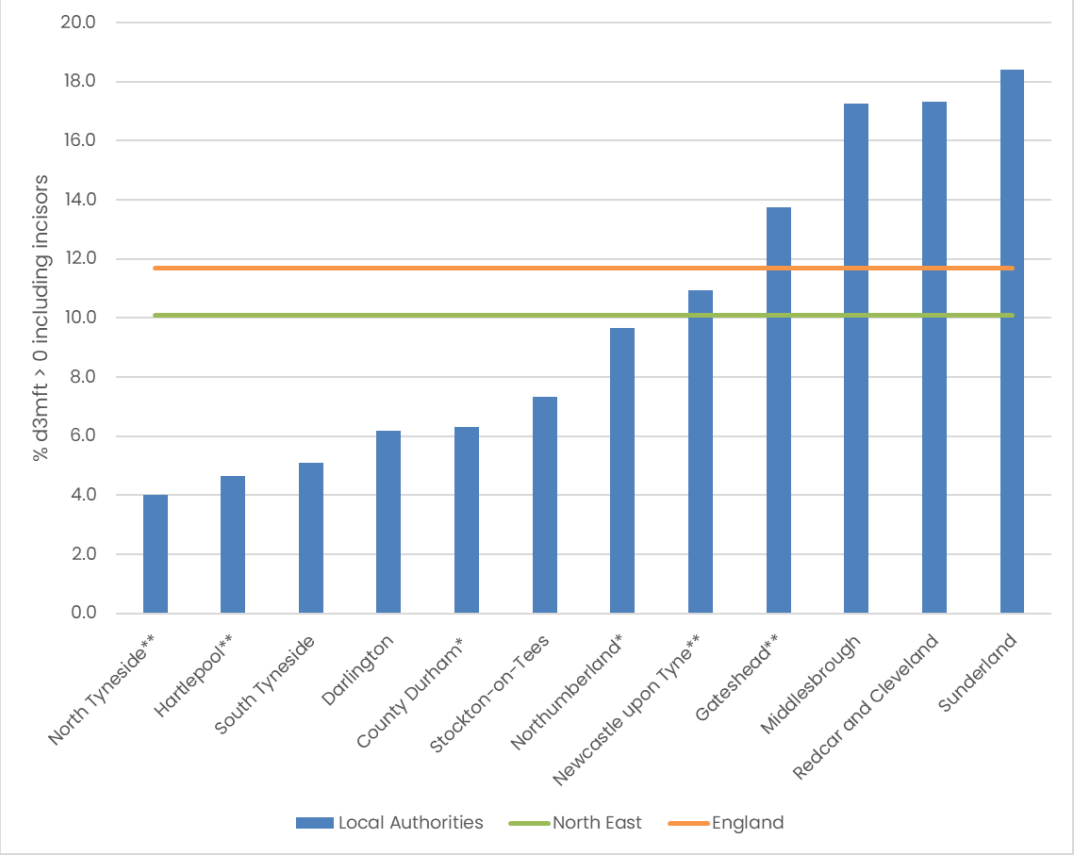
5. Level of Need

Oral health in children

Data from the 2020 dental survey for 3 years olds was impacted by COVID19, with small sample sizes for North Tyneside as well as other local authorities. Results are unlikely to truly reflect the oral health of 3-year-olds in the region and as such we have used the results of the 2013 3-year-old dental survey data.

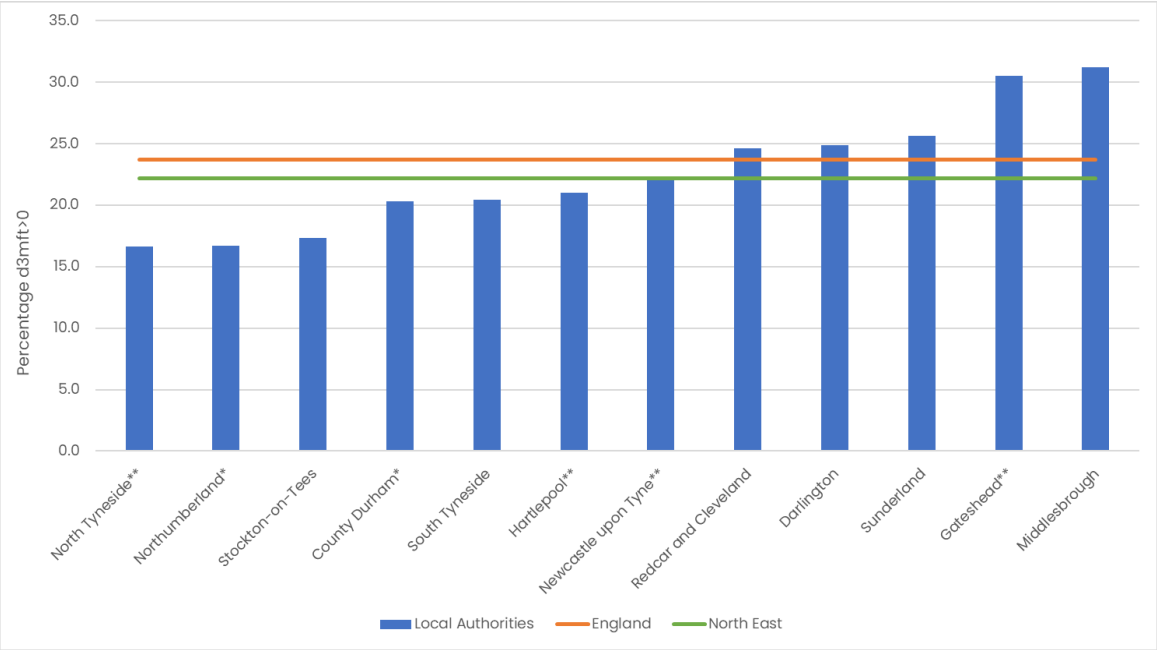
5.1. Percentage of decay in 3-year-olds 2020**:** There is significant variation in decay rates across the North East. North Tyneside's rate of decay in 3-year-olds was the lowest in the region with rates far below both regional and national average.[8]

Figure 2 Percentage of 3-year-olds with any decay experience (% d3mft>0 incl Incisors) 2013, National Dental Epidemiology Programme for England



5.2. Percentage of decay in 5-year-olds 2022: North Tyneside has the lowest average decay levels in 5 years olds in the North East at 16.6%. This is below both the regional and national average.[8]

Figure 3 Percentage of 5-year-olds with any decay experience (% d3mft > 0) 2022, National Dental Epidemiology Programme for England

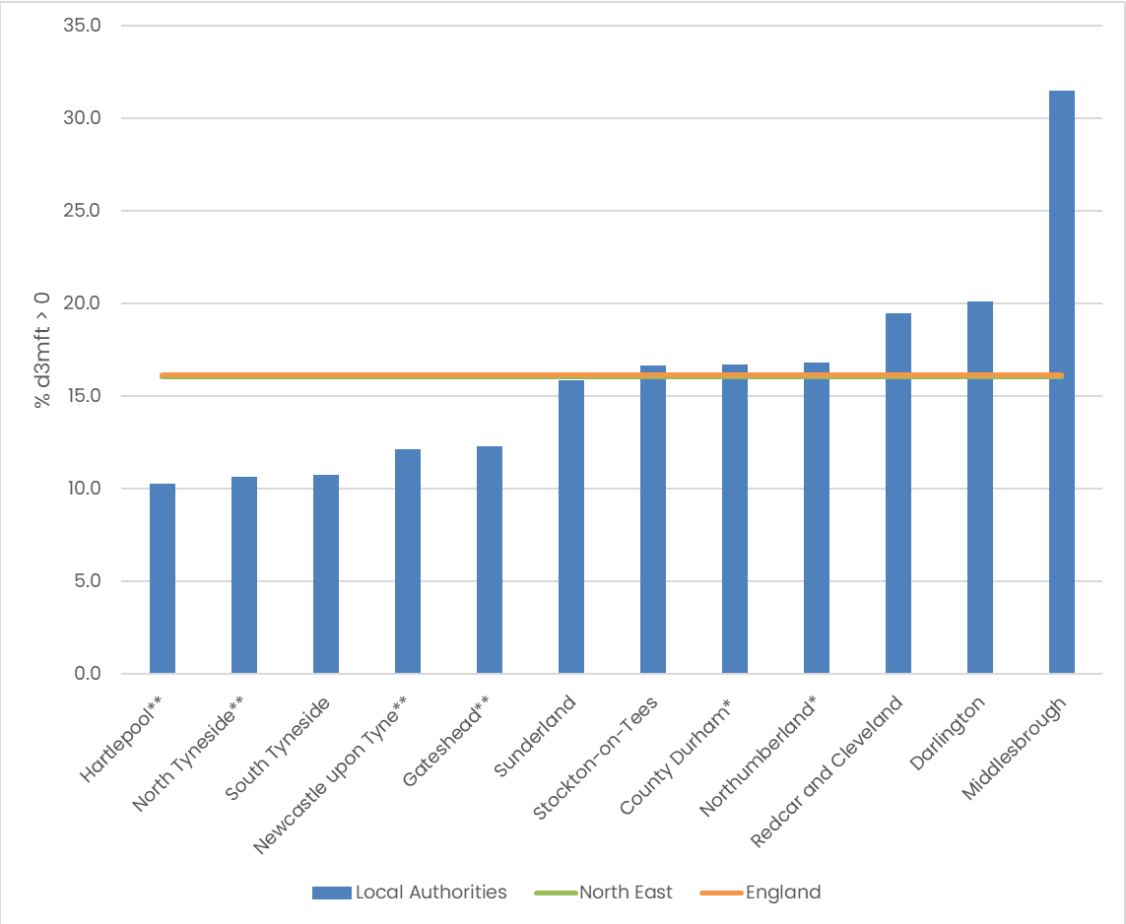


*partly fluoridated **fully fluoridated

For most local authorities decay increases substantially between 3 and 5 years old. This is due to the time it takes for the decay process to progress to the stage of requiring tooth extraction, usually around 18 months. This highlights the importance of preventative work to reverse the early effects of dental decay.

5.3. Percentage of decay in children in Year 6 2023: North Tyneside has one of the lowest levels of tooth decay in Year 6 children in the North East as shown below.[9] This is below both regional and national average.

Figure 4: Percentage of Year 6 children with any decay experience (% d3mft>0) 2023, National Dental Epidemiology Programme for England

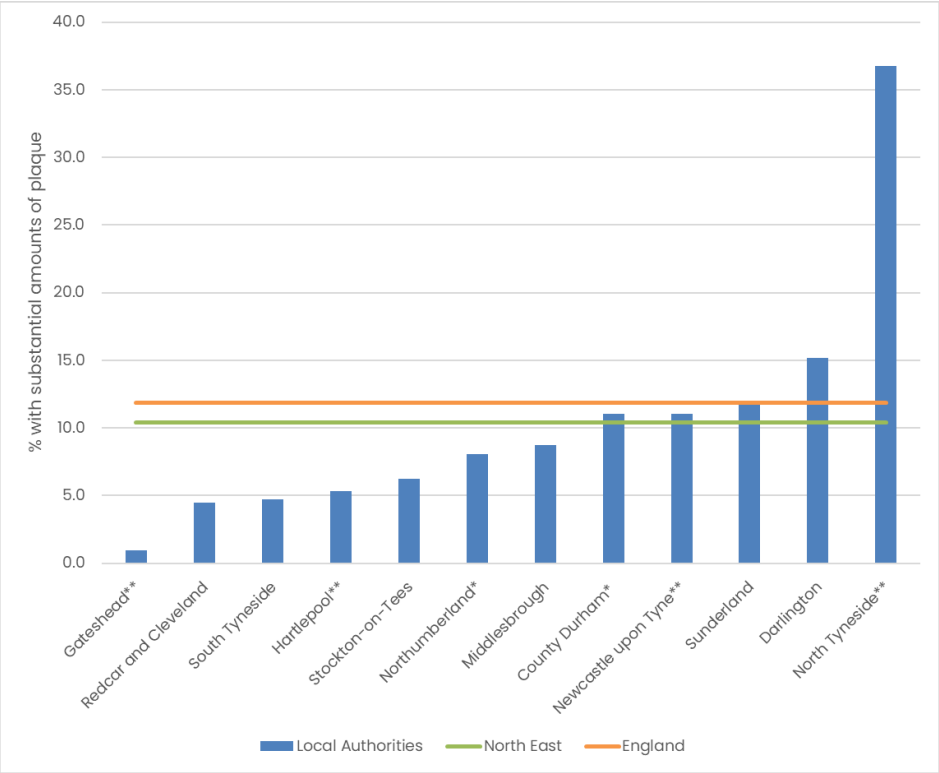


*partly fluoridated **fully fluoridated

[Oral health survey of Year 6 children, OHID]

For those experiencing tooth decay in North Tyneside they are more likely to suffer advanced decay as compared to regional neighbours. The percentage of children with advanced decay and substantial amounts of plaque detected were some of the highest in the region and above national average as shown in Figure 5.

Figure 5 Percentage of Year 6 children with substantial amounts of plaque 2023, National Dental Epidemiology Programme for England



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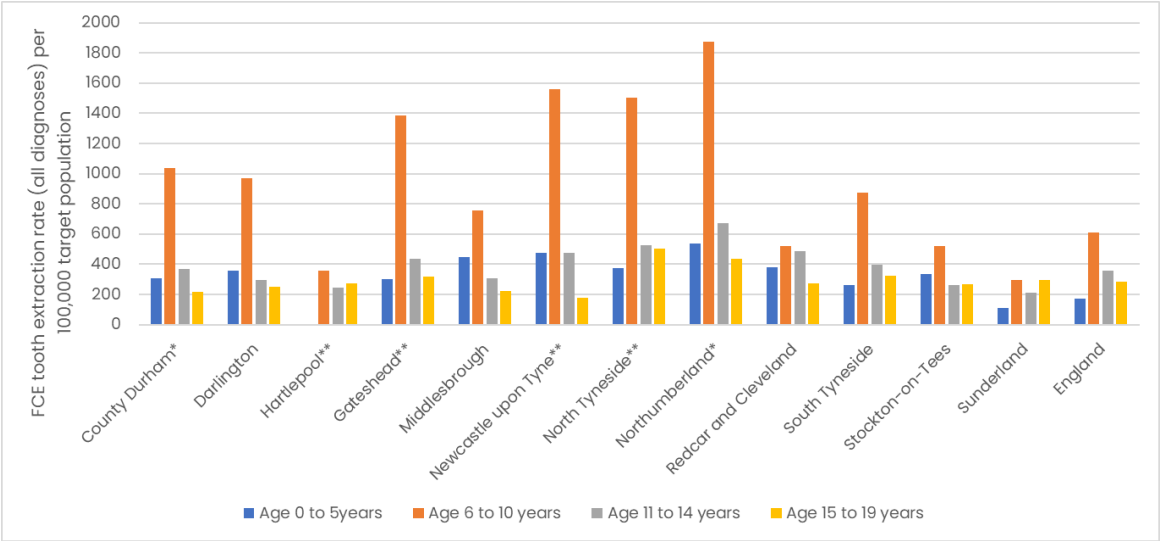
Oral health survey of Year 6 children, OHID

5.4. Tooth extractions in hospital for 0-to 19-year-olds: Tooth extractions are usually the result of severe decay. The rate of tooth extraction in 0–19-year-olds per 100,000 population is higher in North Tyneside as compared to the national average of 751.9 per 100,000 in 0–19-year-olds locally as compared to 360.4 per 100,000 nationally.[10] North Tyneside's rate for 0–19-year-olds per 100,000 population is the second highest in the North East. The highest tooth extraction rates in North Tyneside are for 6–10-year-olds.[10] This is the same trend that is seen nationally.

Figure 6 Tooth extractions in hospital 0–19-year-olds 2023, OHID



*partly fluoridated **fully fluoridated

Child and Maternal Health - OHID (phe.org.uk)

Oral health in adults

5.5. The adult oral health survey 2021 reports that 66% of English adults self-reported very good or good oral health, 7% reported bad or very bad oral health.[3]

5.6. A recent survey of English adults attending dental practices showed that 27% of participants had untreated tooth decay.[11] This was more prevalent in participants aged 25-34 years old, those living in more deprived areas and those who had not attended a dentist in ≥2 years.[11] Unfortunately the sample size from North Tyneside was too small for local analysis.

5.7. In 2020 Public Health England reported on oral cancer incidence, survival and mortality in England. The North East average is above the national for both incidence and mortality.[12] North Tyneside is above the national average but below the regional average for both incidence, at 15.06 per 100,000, and mortality, at 4.38 per 100,000.[12]

Table 2 Standardised incidence and mortality of C00-C14 by statistical region, upper-tier local authority area and lower-tier local authority area, 2012 to 2016. Public Health England

Area	Standardised incidence per 100,000	Standardised mortality per 100,000
England	14.55	4.54
North East Region	16.88	5.45
County Durham	15.83	5.38
Darlington	14.93	7.10
Gateshead	15.96	4.06
Hartlepool	14.56	6.86
Middlesbrough	16.87	4.35
Newcastle	21.05	6.08
North Tyneside	15.06	4.38
Northumberland	15.30	4.74
Redcar and Cleveland	14.48	4.59
Sunderland	18.57	6.44
South Tyneside	22.50	5.83
Stockton-on-Tees	18.43	7.35

Oral cancer in England, Public Health England

Oral health in older adults

5.8. 42,897 of North Tyneside residents were recorded as ≥65 years old in the last census.[13] The oral health of older people in England has improved since the 1960's with more adults keeping their teeth into old age. However, many will have dental restorations such as fillings which require ongoing oral care.

5.9. North Tyneside has a larger population in residential homes than the national average.[14] In 2015 Public Health England published a review of oral health surveys of older people predominantly based on older people living in residential and nursing care homes in England.[15] The survey found:

- Untreated tooth decay is higher in the household resident elderly population than in the general adult population. Older adults living in

care homes have an even higher decay prevalence, with most dentate residents having active decay.
- Care home managers experience much more difficulty in accessing dental care for their residents than older adults living in their own homes.
- Approximately half of residents in care homes would find it difficult or impossible to receive urgent treatment in a general dental practice due to medical or psychological complications.
- Little is known about access to services for the increasing numbers and proportions of older people receiving 'care in your home' services.
- Multimorbidity and polypharmacy makes the oral health care of older adults more challenging.[15]

5.10. A 2016 survey of mildly dependant older people showed that 10.3% of North Tyneside's sample reported oral health impacts fairly or very often, as compared to the national average of 17.7%.[16] However 39.7% of the sample were edentulous (lacking teeth) as compared to the national average of 27.0%, and 36.2% reported not having seen dentist within the last 2 years, above the national average of 34%.16

Dental access in North Tyneside

5.11. Although primary care dental services are not provided through the local authority public health team it is important to acknowledge their impact on local population oral health.

5.12. NHS England provides data on local authority NHS dental access, local data is shown in Table 3. Dental activity has not returned to pre-pandemic levels nationally. North Tyneside level of activity is just below the regional in both adults and children.[17,18]

Table 3 : Dental access in the North East, NHS England. 2020-2023. Adult patients seen in the previous 24 months and child patients seen in the previous 12 months as a percentage of the population.

Local Authority	2020 % adults seen	2023 % adults seen	2020 % children seen	2023 % children seen
North East Region	56.2	46.3	61.1	56.4
County Durham	50.5	41.0	54.0	48.8
Darlington	56.6	45.9	64.0	55.0
Gateshead	57.8	54.7	64.9	63.7
Hartlepool	51.6	43.4	54.2	51.4
Middlesbrough	63.4	40.7	67.8	50.7
Newcastle	57.4	46.9	65.0	57.1
North Tyneside	55.0	44.1	60.1	55.6
Northumberland	54.8	45.7	63.1	55.9
Redcar and Cleveland	61.1	65.8	61.9	74.3
Sunderland	59.3	42.2	61.6	42.8
South Tyneside	63.8	60.8	62.9	64.1
Stockton-on-Tees	54.8	49.7	63.6	58.3

NHS Dental Statistics for England, 2022-23, Annual Report - NHS Digital

5.13. Healthwatch North Tyneside conducted community engagement to elicit local community and professional views on dentistry access. Key findings were: findings a dentist is difficult, getting appointments was difficult, there was a mismatch between patient and professional definitions of 'urgent', cost was a barrier, there is a lack of understanding on NHS dentistry organisation.[19] A number of recommendations are made in the report.

Oral health risk factors in North Tyneside

5.14. Toothbrushing: In 2009 data 75% of adults cleaned their teeth at least twice a day and a further 23% once a day, the majority used a high fluoride level toothpaste.3 Despite the majority reporting regular toothbrushing 66% of adults had plaque on at least one tooth.3

The 2013 Children's Dental Health Survey reported that 77% of 12-year-olds and 81% of 15-year-olds brushed their teeth at least twice a day in England.[20] Rates were higher in females and those eligible for free school meals.[20] Parental reporting of tooth brushing in 5 and 8 year olds showed slightly higher rates of brushing at least twice a day.[15] Rates had improved as compared to 2003, however relatively modestly.

5.15. Smoking: Smoking prevalence has been falling in adults over recent years nationally. This same trend has been seen in North Tyneside.

5.16. Alcohol: North Tyneside has the fourth highest admissions episodes for alcohol-related conditions in adults across England at 819 per 100,000 population.[21] The national average is 494 per 100,000.21 Within the 10 local authorities with the highest alcohol related admissions are within the North East.21

5.17. Diabetes: The estimated prevalence of diabetes in North Tyneside in adults is 8%.[22] This is higher than the national average of 7.3% but the same as the regional average. Prevalence has been rising year on year nationally and North Tyneside shows the same trend.

5.18. Breastfeeding: in 2020/21 62.8% of North Tyneside babies' first feed was breastmilk, this is below the national average of 71.7%.8 An important marker of breastfeeding success if the number breastfeeding at 6-8

weeks after birth, North Tyneside's numbers have improved over time and are the second highest in the region, however they still lag behind the national average.8

6. Unmet Needs

6.1. Oral health inequalities remain a significant public health problem in England. Poor oral health disproportionally affects vulnerable and socially disadvantaged individuals and groups in society. Fluoride exposure, smoking and variation in dental access all play a role alongside other contributing factors.

6.2. There is insufficient capacity across North Tyneside community dentistry to meet demand. This same pattern is seen regionally and nationally, North Tyneside's levels of dental activity have not returned to that of pre pandemic.

6.3. The older population are vulnerable to unmet oral care needs due to the interplay of many factors including increased risk of poor oral health due to comorbidities and medications, physical limitations making daily oral care and travel for routine and emergency dental treatment challenging, and cognitive decline making oral care prioritisation unlikely. It is likely we do not understand the true need of this community given the increasing number of older adults living alone in our communities.

7. Projected Need and Demand

7.1. The population in North Tyneside is ageing, the median age in North Tyneside increased to 43 years between 2011 and 2021.[23] The number of people aged 65 to 74 years rose by 32.5% in this time period.[23]

7.2. Currently 21.8% of the population is aged between 0-19 years.[23] Based on 2018 modelling it's projected that there will be less young people than present in North Tyneside in 2030, with 0-19 year olds predicted to make up 20.7% of the 2030 population.[24] This reflects an increased need for oral health services in older age.

8. Community Assets and Services

Local clinical dental service providers:

8.1. There are community dentists throughout North Tyneside offering both NHS and private dental services for children and adults. This includes both preventative and acute treatments.

8.2. Northumbria Healthcare Community Dental Services provide treatment for patients with complex needs, dental treatment under general anaesthetic, inhalation sedation, orthodontics and home visits for elderly patients or those with additional needs. They also provide dental screening in special schools and lead on the national dental survey.

8.3. Newcastle Dental Hospital is the major centre of specialist dental services for the northern region. They treat patients referred for a wide range of services: children's dentistry, community dental service, dental emergency clinic, dental radiology, dental sedation, oral and maxillofacial surgery, oral medicine, orthodontics, restorative dentistry.

8.4. North Tyneside General Hospital Oral and Maxillofacial Surgery department provides oral surgery. The hospital delivers general mouth care to patients as appropriate.

Preventative services promoting good oral health

8.5. A range of services within North Tyneside play a part in promoting good oral health behaviours and reducing risk factors for poor oral health. The influence of these services commence at the very start of life.

- 0-19 team
- Stop smoking service
- North Tyneside alcohol recovery partnership
- Active North Tyneside
- Primary care
- Voluntary organisations

8.6. North Tyneside care homes provide oral care to their residents. The staff are trained with Mouth Care Matters resources. Staff are responsible for conducting initial oral health assessments and creating an oral health plan. They assist with day-to-day oral care and ensure residents are engaged in regular dental checks. All residents should be registered with a dentist and staff aware of how to access emergency care.

9. Evidence for Interventions

9.1. The evidence base for interventions that promote good oral health is summarised below.[25,26] Some interventions are impactful at certain points of the life course for instance breastfeeding in infants. Other factors such as diet and toothbrushing are influential throughout the life course.

9.2. Promoting and supporting exclusive **breastfeeding** around the first 6 months of a baby's life and encouraging continuing breastfeeding whilst weaning.[25] The WHO recommend continuing breastfeeding whilst weaning for up to two years of age or beyond.[27]

9.3. Encouraging a **diet** low in sugar and high in non-starchy vegetables and fruit throughout the life course.[25]

9.4. Adults and children should **brush their teeth** twice a day with a fluoride containing toothpaste (recommended strength of fluoride varies with age).[25] Assistance should be provided for those who may require help with toothbrushing.

9.5. Supporting individuals to be **smokefree**.[25]

9.6. Advised **alcohol** intake should be inline with the CMO guidance and support for those who are drinking beyond this recommendation.[25] North Tyneside Alcohol JSNA has further details on best practice.

9.7. Ensuring good **diabetic** glycaemic control in individuals. NICE diabetes contains details on best practice policies.[28]

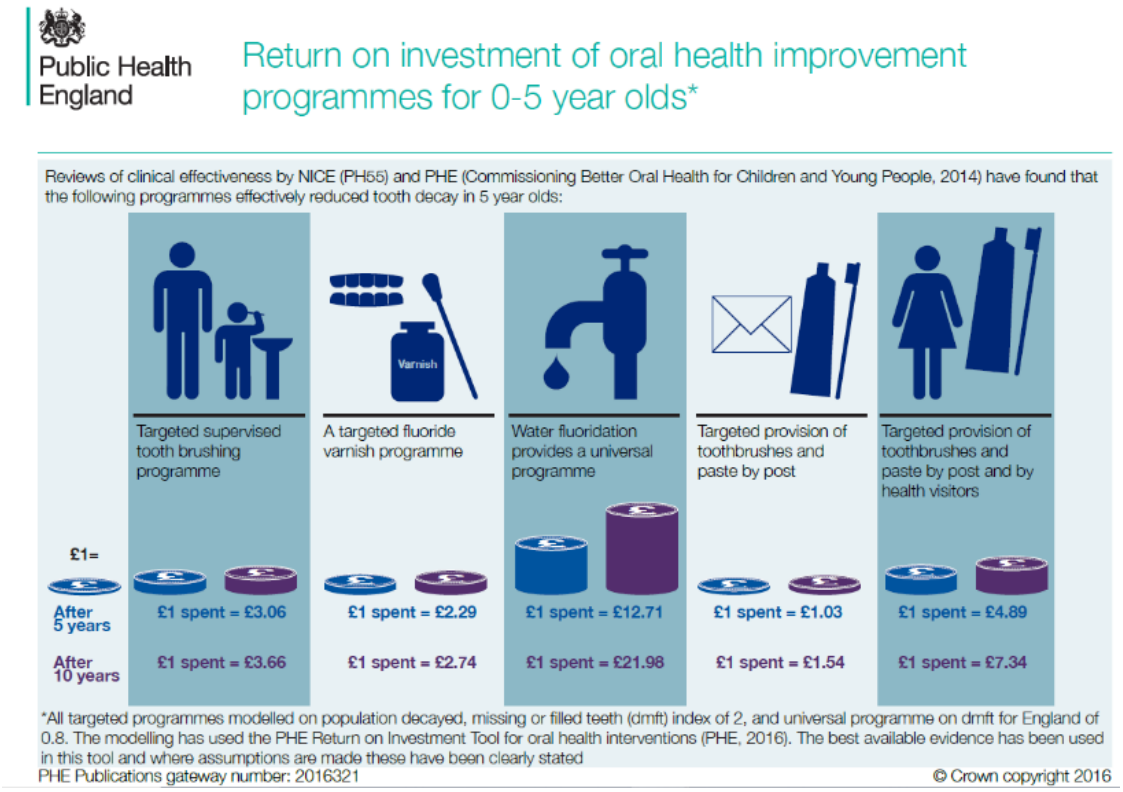
9.8. **Fluoride** occurs naturally and can be present in water in varying concentrations. In some areas with low natural fluoride, fluoride is added to public drinking water to improve dental health.[25] 1 in 10 people in England currently have fluoride added to their drinking water.[29] The drinking water in North Tyneside has fluoride added.

In 2022 OHID published a report on the health impacts of fluoridation. The report summarised that dental health was improved in fluoridated areas and that this benefitted those in the most deprived areas most.[29]

9.9. NICE recommends that individuals living in **care homes** should have their mouth need assessed on admission, their mouth needs recorded in their personal plan, and should be supported to clean their teeth twice a day or perform daily denture care.[30]

9.10. Reviews of clinical effectiveness by NICE and PHE have found that the programmes shown in Figure 14 effectively reduce tooth decay in 5-year-olds and have a good return on investment.[31] Water fluoridation has the best return on investment by far, closely followed by targeted provision of toothbrushes and toothpaste by post and by health visitors.[31]

Figure 7 : Return on investment of oral health improvement programmes for 0-5 year olds, Public Health England, 2016



10. Views

11. Additional Needs Assessment Required

Tobacco
Alcohol
Obesity
Breastfeeding

12. Key Contact

Key Contact	Dr Aishah Coyte
Job Title	Public Health Registrar
E-mail	aishah.coyte@northtyneside.gov.uk

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