Darlington Oral Health Plan 2017-2022

DARLINGTON

A MOST INGENIOUS TOWN

DARLINGTON BOROUGH COUNCIL

Contents

Vision

The vision is for the population in Darlington to have good oral health. This will be achieved by integrating oral health in other relevant plans and reducing oral health inequalities. Our focus is on children, young people and older people in residential care homes.

Aim

To improve oral health and reduce inequalities of children, young people and older people in residential and nursing care homes in Darlington by identifying priority actions, developing recommendations and key plans.

Objectives

- Review routinely available epidemiological evidence on dental disease in children and that in older people residing in care in Darlington.
- Support the 0-19 Healthy Children provider to integrate oral health in prevention and early intervention programmes
- Support commissioners in the local authority to incorporate oral health in contracts with care homes.
- To enable and support a Making Every Contact Count (MECC) approach for health and social care staff to make use of opportunities to provide advice on oral health and signposting to dental services when necessary.

1. Key Messages

- Tooth decay is a predominantly preventable disease. A healthy diet and good oral hygiene are the best preventative measures in tackling dental decay.
- There is a significant association between tooth decay and socioeconomic deprivation[1].
- Oral health interventions that support and encourage the use of fluoride have been found to be among the most cost-effective in reducing dental decay.
- The evidence for community water fluoridation sits towards the top of the hierarchy of evidence in terms of quality, design and rigour. The evidence includes a large proportion of systematic and other substantive reviews. The common finding is that levels of tooth decay are lower in fluoridated areas and, for reviews which looked at general health effects, that there is no credible scientific evidence that water fluoridation is harmful to health.
- By the time they start school, more than a third of children have several decayed teeth[2].
- Children who are Looked After (LAC) are entitled to a specific assessment of their oral health and have an action plan to address any deficits and promote their dental health as part of the statutory health assessments for children in care.
- There has been no measurable improvement in prevalence of tooth decay experience in five-year-old children in Darlington over the past few years, a trend not always observed in the region or nationally (proportion % of 5 year old free from dental decay[3]).
- Darlington has a mortality rate of oral cancers (age standardised per 100,000) that is significantly higher than the national, regional and other local authorities in the North East[4]. This is most likely linked to late diagnosis as well as lifestyle behaviours and poverty.
- There is evidence that some older people living in residential and nursing care homes have untreated oral disease and more poorly fitted dentures[5].
- There is strong evidence linking poor oral health and malnutrition to aspiration pneumonia in frail older people[6].
- An ageing population, especially the most vulnerable with dementia residing in care homes poses significant challenges to oral health care provision.
- Local authorities have a statutory requirement to assess their local population's oral health needs and commission oral health improvement programmes to meet that need[7].

1. PHE 2015 (d): Public Health England (PHE). North Yorkshire and Humber oral health needs assessment 2015. Published: September 2015. PHE publications gateway number: 2015317. Available through: www.gov.uk/government/uploads/system/uploads/attachment_data/file/463063/North_Yorks___Humber_oral_health_needs_assessment.pdf
2. Public Health England (PHE). Dental Health Profile in Darlington. July 2017. http://www.nwph.net/dentalhealth/5yearoldprofiles/North%20East/2015/Darlington%20LA%20Dental%20Profile%205yr%202015.pdf
3. Dental epidemiology surveys (NHS Dental Epidemiology Programme for England, Oral Health Survey of 5 year old children 2007/08; 2011/12 & 2014/15).
4. Public Health Profiles: Oral cancer registrations 2013-2015. Public Health England: Available online at https://fingertips.phe.org.uk/search/oral%20health#page/3/gid/1/pat/6/par/E12000001/ati/102/are/E06000047/iid/1206/age/1/sex/4 (accessed 30 October 2017)
5. Moore, D and Davies G.M (2016) A summary of knowledge about the oral health of older people in England and Wales. Community Dental Health, Volume 33, pages 262-266
6. van der Maarel-Wierink CD, Vanobbergen JNO, Bronkhorst EM et al. Risk factors for aspiration pneumonia in frail older people: a systematic literature review. Journal of the American Medical Directors Association, 2011; 12: 344-354.
7. The NHS Bodies and Local Authorities (Partnership Arrangements, Care Trusts, Public Health and Local Healthwatch) Regulations 2012 [Internet]. 2012. Available from: http://www.legislation.gov.uk/uksi/2012/3094/pdfs/uksi_20123094_en.pdf

2. Introduction

Oral disease is an important public health issue because of its impact on the individual and society, the cost of treatment and because it is largely preventable. Poor oral health shares common risk factors with a number of chronic diseases. Socioeconomic deprivation and high levels of sugar consumption are risk factors for both dental decay and obesity. This oral health plan has been developed in parallel to a children and young people healthy weight plan and local action on sugar.

In the last four decades the dental health of adults in England has improved. However, this overall improvement masks huge inequalities in the population. High risk and vulnerable groups include the socioeconomically deprived; institutionalised adults such as those in residential care or prison as well as those with disabilities and mental illness. Such groups still suffer from poor oral health and have variable access to dental care.

The plan focuses on a system wide approach and on an integrated partnership delivery to embed oral health improvement in different programmes and at a strategic level to achieve sustainable improvements. This plan identifies priority actions that are supported by a strong evidence base as described in the Public Health England/ Department of Health guidance "Delivering better oral health: an evidence-based toolkit for prevention"[8], and the National Institute for Health and Care Excellence (NICE) Public Health guidance (PH55) "Oral health: local authorities and partners"[9].

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Health and Partnership Portfolio Lead

8. PHE/DH (2017). Delivering better oral health: an evidence-based toolkit for prevention https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/605266/Delivering_better_oral_health.pdf
9. NICE (2014). Oral health: local authorities and partners . https://www.nice.org.uk/guidance/ph55

3. Oral Health in Children

Oral health is essential to general health and quality of life. Dental decay is one of the most common non-communicable childhood diseases, and it is largely preventable. A healthy diet and good oral hygiene are the best preventative measures in tackling dental decay.

Poor oral health can have detrimental consequences on children and young people's physical and psychological wellbeing. The effects of dental diseases on children and young people include school absence, pain, difficulties eating, and impaired nutrition and growth which all have a detrimental impact on a child's quality of life and overall health and wellbeing[10].

Nationally (England), in 2015-2016, extraction of teeth because of tooth decay was the most common reason for hospital admission for children aged 5 to 9 years-old and the sixth most common procedure in hospital for children aged 4 years and under[11]. Usually a general anaesthetic is required for extraction of multiple teeth.

Oral health interventions that support and encourage the use of fluoride have been found to be among the most cost-effective in reducing dental decay.

Examples of such interventions include the use of fluoride toothpaste, the provision of toothbrushes or the use of fluoride varnish.

PHE estimates that after 5 years, the Return on Investment (ROI) for targeted supervised tooth brushing is £3.06 for every £1 spent. After 10 years, this increases to £3.66 for every £1 spent. After 5 years, targeted supervised tooth brushing can result in an extra 2,666 school days gained per 5,000 children[12].

Groups who are at a high risk of dental disease include children and young people from low socio economic groups; Children and young people with special needs, including children and young people with learning difficulties; looked after children and young people; the Gypsy, Roma and traveller population and young offenders[13].

10. https://publichealthmatters.blog.gov.uk/2017/06/19/health-matters-tackling-child-dental-health-issues-at-a-local-level
11. Royal College of Surgeons (2015). Children hospitalised unnecessarily from tooth decay, experts warn – Royal College of Surgeons. https://www.rcseng.ac.uk/news-and-events/media-centre/press-releases/children-hospitalised-unnecessarily-from-tooth-decay
12. PHE, 2016. Improving the oral health of children: cost effective commissioning. https://www.gov.uk/government/publications/improving-the-oral-health-of-children-cost-effective-commissioning
13. https://www.gov.uk/government/publications/health-matters-child-dental-health/health-matters-child-dental-health

Health behaviours have been found to account for a modest proportion of the variance in the differences in oral health by socioeconomic position[14]. Focusing solely on individual behaviour change has only short term benefits for oral health. It is therefore essential to focus on the wider determinants of health and on a partnership delivery to achieve sustainable improvements in population oral health[15].

Following the implementation of the Health and Social Care Act 2012, responsibilities for oral health improvement and oral health promotion lie with the Local Authority.

As part of their statutory duties, local authorities have commissioning responsibilities to provide oral health promotion programmes, undertake oral health surveillance and surveys and fund running costs of water fluoridation schemes where these exist. In areas, where there are no schemes of water fluoridation, a local authority should consider the implementation of water fluoridation.

14. Sanders AE, Spencer AJ, Slade GD. Evaluating the role of dental behaviour in oral health inequalities. Community Dental Oral Epidemiology. 2006 Feb;34(1):71-9
15. FDI World Dental Federation. The challenge of oral disease. A call for action. 2nd edition. 2015

4. Oral Health for Older People in

The plan includes oral health for older people in care homes in order to reflect national guidance taking into account the complex oral healthcare needs of older people living in care homes in Darlington. This is timely for the following reasons:

Older people are retaining their natural dentation for longer. Restorations such as multi-unit bridges and implants pose huge challenges for the frail elderly in residential care settings, especially those who cannot self-care and have to rely on others to maintain good oral hygiene and additional dental care for unrestored teeth.

Improved living conditions as well as medical care mean that older people are surviving multiple chronic illnesses and most likely will be on multiple medications. This has implications for oral health care provision as that may create more demand on specialist services as well as the need to take into account the side effects of certain medications when providing dental treatment (e.g. anticoagulant and antiplatelet medications). Additionally, the side effects of certain medications may also compromise oral health; for example causing dry mouth, (e.g. antidepressants and Alzheimer disease medications) or oral candidiasis (e.g. some inhalers for asthma)[16].

Similar to demographic trends observed in other North East local authority areas, Darlington has an increasingly ageing population. Predictions indicate that the 65+ population will increase by 38% by 2035 (from 21,100 in 2017 to 29,100 in 2035)[17].

The percentage increase in the total population aged 65 and over living in a care home with or without nursing in Darlington between 2017 and 2035 is 76.5% (n= 893 in 2017 to n=1,577). This is higher than the percent increase at a regional level (71.6%) but slightly less than that projected nationally in England during the same period (i.e. 78%)[18].

Nursing and residential care homes are expected to provide accommodation to an increasing and significant proportion of over 80 years old frail older people, especially those with dementia, multiple morbidities and highly restricted mobility.

16. Department of Health (2005) Meeting the challenges of oral health for older people: a strategic review. Gerodontology. 22, Supp 1, 3-48.
17. Projecting Older People Population Information (POPPI). Oxford Brookes University: Available at www.poppi.org.uk
18. Ibid (POPPI)

Residential Care

In Darlington, the percentage increase in people aged 65 and over predicted to have dementia between 2017 and 20135 is 68.7% (n= 1459 in 2017 increasing to n=2,461 in 2035[19]. Dementia makes providing oral healthcare quite challenging.

The challenges include the difficulties in communication; lack of capacity to consent and difficulties in maintaining cooperation to allow dental treatment or even tooth brushing. Other challenges include misplacing dentures.

There is evidence that older people living in residential and nursing care homes have more untreated oral disease and more poorly fitted dentures than peers who live elsewhere. A high proportion of older people living in care homes are often dependant on others for their diet, personal care and access to dental treatment. The diet in care homes usually comprises frequent use of sugars[20].

There are no "off-the-shelf" routine data to inform the epidemiological dental needs of the +65 or the vulnerable elderly living in residential and care homes.

19. Ibid (POPPI)
20. https://www.nice.org.uk/improving-oral-health-for-adults-in-care-homes

Appendix 1

Epidemiological Assessment of Need in Children and Young People

A commonly used indicator of tooth decay, the "dmft index", is obtained by calculating the average number of decayed (d), missing due to decay (m) and filled due to decay (f) teeth (t) in a population. In five-year-old children, this score will be for the first (primary) teeth and is recorded as dmft. In 12-year-old children it reports the adult teeth in upper case (DMFT). The average (mean) dmft/DMFT is a measure of the severity of tooth decay experience.

This measure can be used to assess individual oral health or that of a community. A child who has 5 teeth affected by dental disease will have a dmft of 5. A population of 100 children where 50 of them have one tooth affected by dental disease will have a population dmft of 0.5. However, the nature of the index means that a small number of children with a high level of dental disease can result in a misleading level within a community. It is often better to describe oral health need in a community by the proportion of children in a population free from dental disease[21].

The prevalence and severity of oral disease at age five can be used as a proxy indicator for the impact of early year's services and programmes to improve parenting, weaning and feeding of very young children[22].

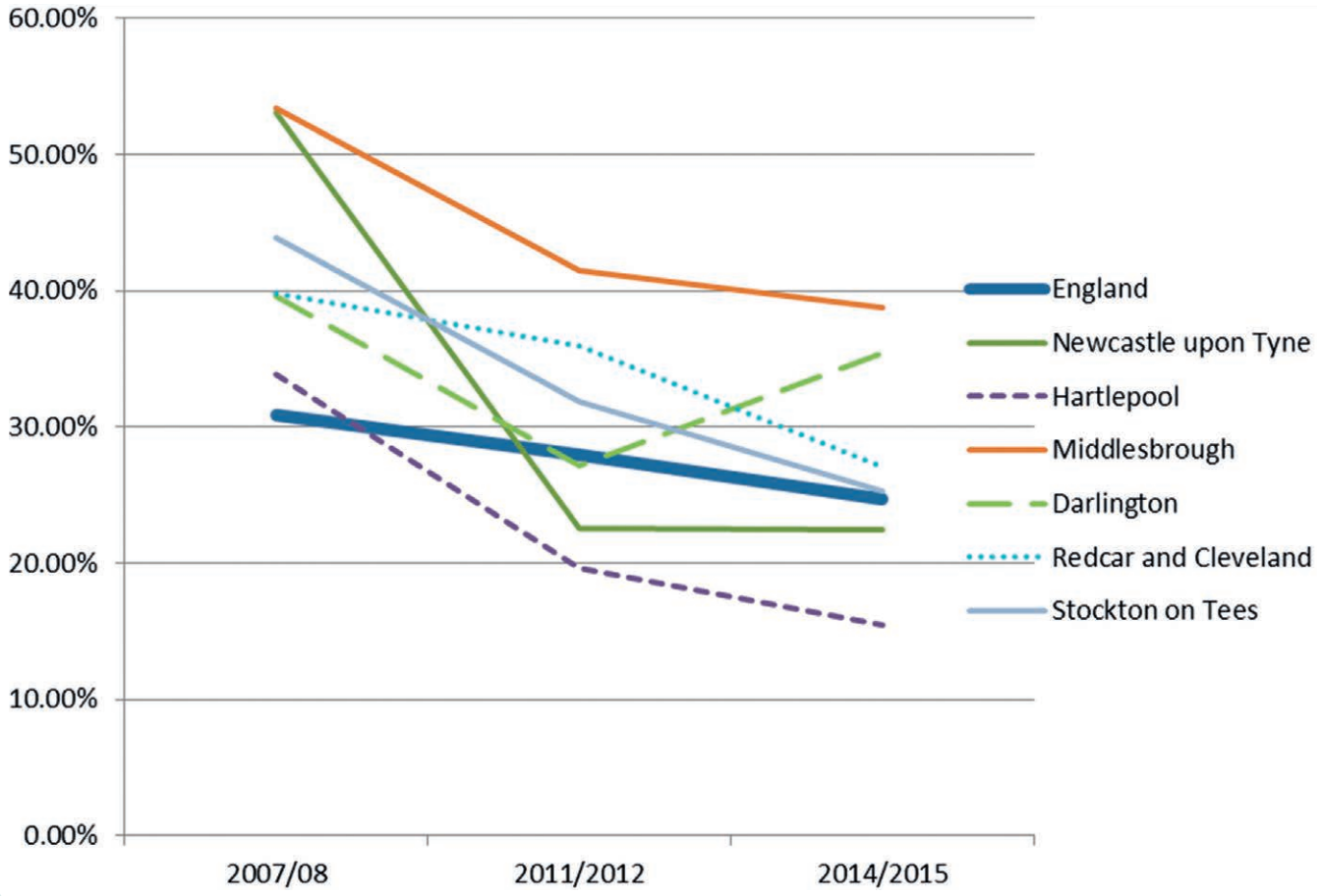
According to the 2015 national dental epidemiological survey of 5 year olds , the proportion of five-year-old children in Darlington who were free from visually obvious dental decay (d3mft = 0) was 64.6% . This was worse than that reported in the North East of England of 72% and that in England of 75.2%.

By the time they start school, more than a third of children in Darlington Borough have several decayed teeth. In 2015, 35.4% of 5 year olds in Darlington experienced dental decay with one or more teeth that were decayed to dentinal level, extracted or filled because of caries (% d3mft > 0). This prevalence is significantly higher than the regional and national prevalence of 28% and 24.7% respectively.

Although the overall trend for tooth decay in 5 year olds is one of reduction nationally, regionally and in most local areas, this has not been the case for this age group in Darlington. Not only did oral health PHO indicators for 5 year olds in Darlington lag behind those of children their age nationally and regionally, but data from PHE show a worsening trend for Darlington with a larger proportion of 5 year old experiencing dental decay in 2015 (% d3mft > 0 =35.4%) compared to 2012/13 (% d3mft > 0= 29.4%). The comparable trend in England has been one of improvement.

21. Source: Landes D. Five year old Dental Health Survey 2011/12 Locality supplement for Darlington Borough Council
22. PHE, 2015. http://fingertips.phe.org.uk/search/dental#page/6/gid/1/pat/6/par/E12000001/ati/102/are/E06000005/iid/92504/age/34/sex/4

Figure 1: Trend in percentage of 5 year olds with obvious decay experience in Darlington and other Tees Valley Local authorities (% d3mft >0)[23]



The proportion reduction in the prevalence of dental caries in 5 year olds in Darlington (2008 2015) was smaller than that observed in England and the smallest observed among most Tees Valley local authorities (see table 1). Darlington was the only LA in the Tees Valley that experienced an increase in the prevalence of dental caries among 5 year olds between 2012 and 2015.

Table 1: Proportion of five year old children with dental decay in Darlington and other Tees Valley local authorities and percentage change between 2012-2015 and 2008 to 2015 (data source: NHS Dental Epidemiology Programme for England, Oral Health Surveys of 5 year old children 2007/08; 2011/12 & 2014/15) [24]

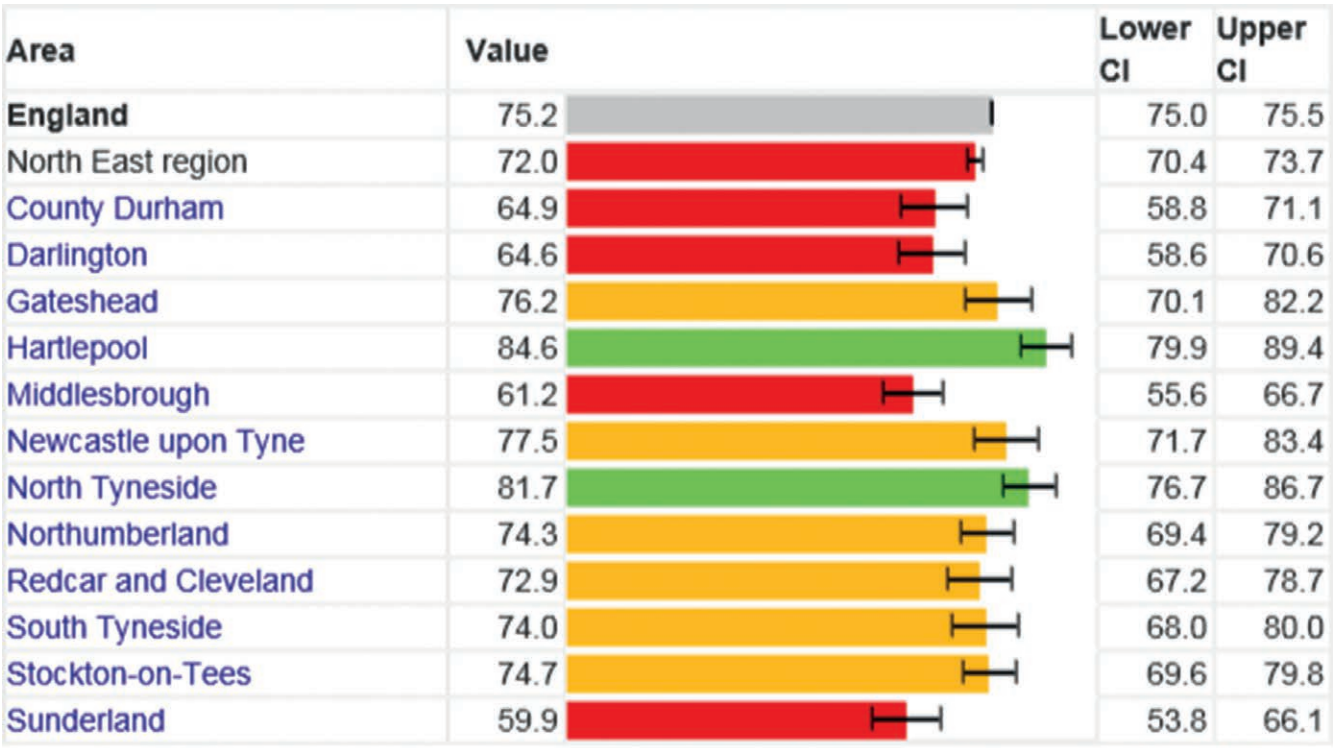
	2008/09	2011/2012	2014/2015	reduction in caries prevalence between 2012- 2015	reduction in caries prevalence between 2008- 2015
England	30.90%	27.90%	24.70%	3.20%	6.20%
Hartlepool	33.80%	19.60%	15.40%	4.20%	18.40%
Middlesbrough	53.40%	41.50%	38.80%	2.70%	14.60%
Darlington	39.60%	27.20%	35.40%	-8.20%	4.20%
Redcar and Cleveland	39.80%	35.90%	27.10%	8.80%	12.70%
Stockton-on-Tees	43.90%	31.90%	25.30%	6.60%	18.60%

23. Dental epidemiology surveys (NHS Dental Epidemiology Programme for England, Oral Health Survey of 5 year old children 2007/08; 2011/12 & 2014/15). (Acknowledgement: source of graph: Dr. Frederike Garb, Oral health needs assessment in Northumberland

24. www.nwph.net/dentalhealth

Variation is evident in the North East (see Figure 2). In 2015, the proportion of five year-old children in Darlington who were free from visually obvious dental decay (d3mft = 0) was better than that reported in Middlesbrough (61.2%) but worse than those reported in other Tees Valley local authorities (74.7% in Stockton on Tees and 72.9% in Redcar and Cleveland) and much worse than that reported in Hartlepool (84.6%). In the latter, exposure to fluoride in naturally fluoridated water is a key factor for the reported lower levels of dental decay.

Figure 2: Proportion of five year old children free from dental decay 2014/15 (PHOF indicator 4.02)[25]



Area	Value	Lower CI	Upper CI
England	75.2	75.0	75.5
North East region	72.0	70.4	73.7
County Durham	64.9	58.8	71.1
Darlington	64.6	58.6	70.6
Gateshead	76.2	70.1	82.2
Hartlepool	84.6	79.9	89.4
Middlesbrough	61.2	55.6	66.7
Newcastle upon Tyne	77.5	71.7	83.4
North Tyneside	81.7	76.7	86.7
Northumberland	74.3	69.4	79.2
Redcar and Cleveland	72.9	67.2	78.7
South Tyneside	74.0	68.0	80.0
Stockton-on-Tees	74.7	69.6	79.8
Sunderland	59.9	53.8	66.1

Source: Dental Public Health Epidemiology Programme for England: oral health survey of five-year-old children 2015

Figure 3: Proportion of five year old children free from dental decay (2014/15) - CIPFA nearest neighbours

4.02 - Proportion of five year old children free from dental decay 2014/15 Proportion - %

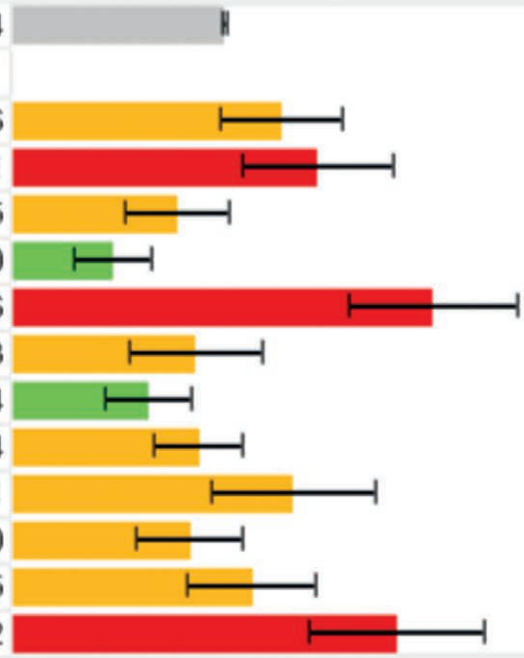
Area	Neighbour Rank	Count	Value	95% Lower CI	95% Upper CI
England	-	84,100	75.2	75.0	75.5
North Tyneside	14	196	81.7	76.7	86.7
Dudley	4	1,362	81.5	79.6	83.3
Medway	13	227	81.3	76.8	85.7
Telford and Wrekin	15	131	77.0	70.5	83.6
Stockton-on-Tees	3	184	74.7	69.6	79.8
Bury	5	187	73.3	67.6	79.0
Derby	6	198	72.4	67.2	77.6
Rotherham	7	1,284	71.1	69.1	73.2
Calderdale	2	221	70.7	65.6	75.8
St. Helens	1	112	70.3	63.2	77.4
Barnsley	8	1,161	69.8	67.6	72.0
Doncaster	9	156	69.0	63.2	74.9
Tameside	12	305	68.6	63.7	73.6
Darlington	-	149	64.6	58.6	70.6
Wakefield	11	134	63.5	56.6	70.3
Bolton	10	163	59.5	53.4	65.5

Source: Dental Public Health Epidemiology Programme for England: oral health survey of five-year-old children 2015

25. http://fingertips.phe.org.uk/search/dental#page/3/gid/1/pat/6/par/E12000001/ati/101/are/E06000005/iid/92500/age/32/sex/4

Figure 4: Trend in percentage of 5 year olds with obvious decay experience in Darlington and other Tees Valley Local authorities (% d3mft >0)[26]

Area	Value	Lower CI	Upper CI
England	0.84	0.83	0.85
North East region	-	-	-
County Durham	1.06	0.82	1.31
Darlington	1.21	0.90	1.51
Gateshead	0.65	0.45	0.86
Hartlepool	0.40	0.24	0.56
Middlesbrough	1.66	1.32	2.00
Newcastle upon Tyne	0.73	0.46	0.99
North Tyneside	0.54	0.36	0.71
Northumberland	0.74	0.56	0.92
Redcar and Cleveland	1.11	0.78	1.44
South Tyneside	0.70	0.49	0.92
Stockton-on-Tees	0.95	0.69	1.21
Sunderland	1.52	1.17	1.87



Source: Dental Public Health Epidemiology Programme for England: oral health survey of five-year-old children 2015

The overall prevalence rates of dental decay in children aged 5 years old reported in Darlington mask inequalities.

The results from the Department of Health in England surveys of the oral health of 5 year old children in state schools in Darlington which were analysed by Dental Public Health in PHE in 2013 showed wide variations in mean DMFT (tooth decay) between children aged 5 years olds living in Darlington wards.

Table 2 gives examples of the average DMFT in various wards in Darlington and the proportion of children with tooth decay.

According to the table, the average dmft in 5 year olds in 2013 in electoral wards in Darlington varied between 0.1 and 2.7. This example is used to demonstrate the socioeconomic patterning of dental decay.

One has to note that these data need to be interpreted with caution because of the small numbers of children seen in each ward and the requirement for positive consent (opt in) may have introduced bias into the data and there have been changes in the boundaries of electoral wards since the original analysis.

26. https://fingertips.phe.org.uk/profile/oral-health/data#page/3/gid/1938133053/pat/6/par/E12000001/ati/101/are/E06000005/iid/92504/age/34/sex/4

Table 2: dmft for 5 year old children in selected electoral wards in Darlington Borough Council (source: PHE, 2013)[27]

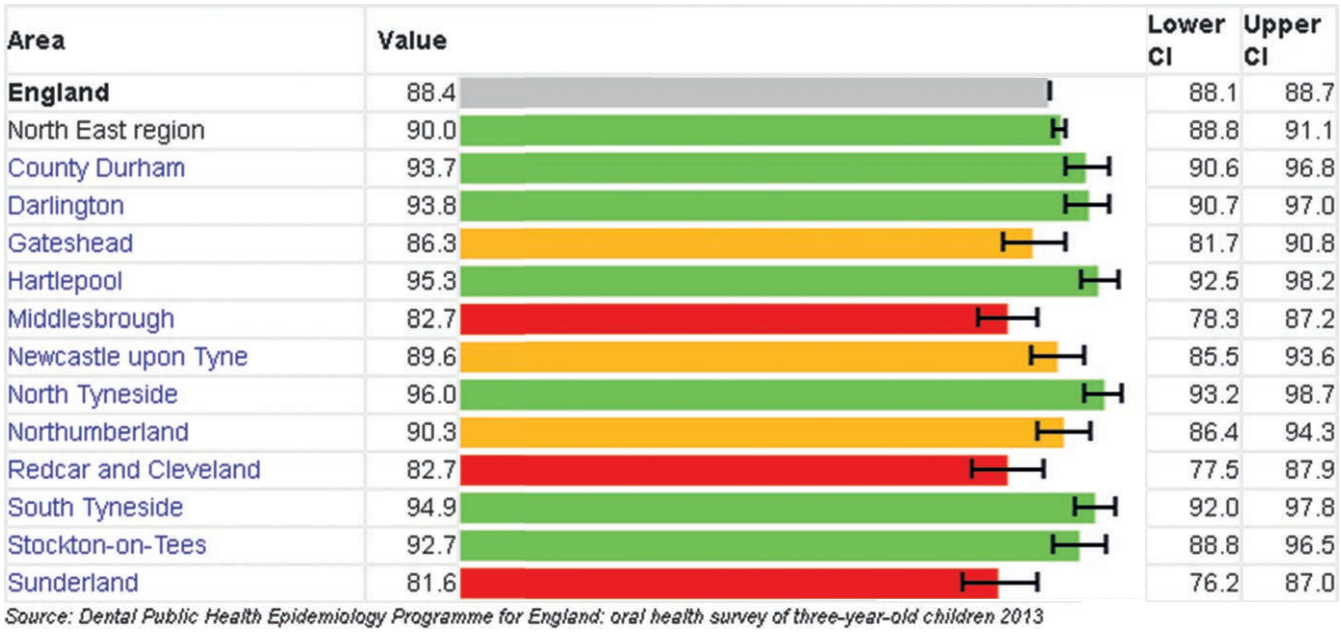
Ward name	Children examined	Children selected	Proportion seen	dmft
Cockerton East Ward	38	56	68%	1.7
Cockerton West Ward	25	49	51%	1.9
Eastbourne Ward	53	84	63%	2.2
Harrowgate Hill Ward	50	72	69%	0.5
Haughton West Ward	49	69	71%	1.1
Heighington and Coniscliffe Ward	26	35	74%	0.4
Middleton St. George Ward	32	41	78%	0.6
Northgate Ward	32	57	56%	2.7
North Road Ward	36	69	52%	1.5
Park West Ward	26	36	72%	0.1
Pierremont Ward	26	40	65%	0.8

The percentage of children aged 5 years in Darlington with Sepsis present in 2015 (% Abscess/Sepsis) was 2.1% in Darlington compared to 1.4% in England and 2.2% in the North East[28].

The best oral health indicators seen in children and young people in Darlington are those for three year olds. The proportion of 3-year-old children with no obvious dental decay in 2012-2013 in Darlington was higher than that in England and the north east region and all other Tees Valley LAs, except Hartlepool for reasons mentioned above[29].

In England overall, among the surveyed 3- year olds, 12% had experienced dental decay. The children that had decay on average had 3.07 teeth decayed, missing or filled. The average number of decayed, missing or filled teeth (d3mft) across the whole sample population was 0.36 (PHE 2014)[30]

Figure 5: Proportion of 3-year-old children with no obvious dental decay 2012-2013 (data source: Dental Public Health Epidemiology Programme for England: oral health survey of three-year-old children 2013)[31]



Source: Dental Public Health Epidemiology Programme for England: oral health survey of three-year-old children 2013

27. Source: Landes D. Five year old Dental Health Survey 2011/12 Locality supplement for Darlington Borough Council (in wards where less than 15 children were examined the data has been suppressed, wards are white).
28. http://www.nwph.net/dentalhealth/5yearProfiles.aspx
29. https://fingertips.phe.org.uk/profile/oral-health/data#page/3/gid/1938133053/pat/6/par/E12000001/ati/101/are/E06000005/iid/92500/age/32/sex/4
30. https://fingertips.phe.org.uk/profile/oral-health/data#page/3/gid/1938133053/pat/6/par/E12000001/ati/101/are/E06000005/iid/92500/age/32/sex/4
31. https://fingertips.phe.org.uk/profile/oral-health/data#page/3/gid/1938133053/pat/6/par/E12000001/ati/101/are/E06000005/iid/92500/age/32/sex/4

The prevalence of tooth decay in 12 year olds in Darlington is 46.8%, significantly higher than the national average. For those 12 year old children with tooth decay, on average, each child had 1.19 teeth affected, significantly higher than the national figure.

Figure 6: Proportion of twelve year olds free from dental decay 2008/09

Area	Value	Lower CI	Upper CI
England	66.4	66.1	66.7
Dudley	72.7	67.6	77.9
Medway	67.8	62.0	73.6
Derby	61.9	57.9	66.0
Telford and Wrekin	61.8	55.7	67.8
Bolton	61.3	56.0	66.6
Wakefield	59.9	54.5	65.3
Tameside	58.6	52.2	64.9
St. Helens	58.1	55.3	60.8
Bury	57.5	51.6	63.3
Barnsley	57.0	51.9	62.1
North Tyneside	56.5	50.6	62.4
Calderdale	55.7	49.6	61.8
Rotherham	55.4	49.5	61.4
Stockton-on-Tees	55.4	49.8	61.0
Darlington	53.2	44.1	62.4
Doncaster	46.0	40.8	51.3

Source: Dental Public Health Epidemiology Programme for England: oral health survey of twelve-year-old children 2009

Figure 7: Average number of decayed, missing or filled teeth (dmft) in twelve year olds DMFT in twelve year olds 2009 CIPFA

Area	Value	Lower CI	Upper CI
England	0.74	0.73	0.75
North East region	-	-	-
County Durham	1.03	0.85	1.21
Darlington	1.19	0.87	1.50
Gateshead	0.64	0.58	0.70
Hartlepool	0.55	0.43	0.67
Middlesbrough	1.10	0.91	1.29
Newcastle upon Tyne	0.82	0.72	0.92
North Tyneside	0.95	0.77	1.12
Northumberland	1.20	0.98	1.42
Redcar and Cleveland	1.17	0.89	1.45
South Tyneside	0.87	0.78	0.96
Stockton-on-Tees	0.96	0.81	1.11
Sunderland	1.10	1.02	1.17

Source: Dental Public Health Epidemiology Programme for England: oral health survey of twelve-year-old children 2009

Appendix 2

Findings on Oral Health from the Healthy Lifestyle Survey in Darlington (Primary and Secondary Schools)

The Primary Healthy Lifestyle Survey 2016/17 took place December 2016 to January 2017 with 15 primary schools in Darlington submitting survey responses. 1,343 number of pupils in year 5 and 6 completed at least part of the survey. Four questions in this survey relate to oral health.

The key findings include

- 38.85% of respondents in years 5 and 6 reported consuming fizzy drinks daily
- Half of respondents eat sweets and chocolate daily
- 544 primary school respondents reported having had a tooth filling and 371 have had teeth removed

- 21% of respondents (n=1,195) reported visiting the dentist once a year, 39% reported visiting the dentist twice a year and 2.7% more than twice a year. 4% of respondents reported never visiting the dentist and 7% of respondents reported visiting a dentist only when they had toothache.
- A little over a third of respondents reported having experienced extraction of a tooth or teeth
- Out of the 1,195 primary school children who answered the question on how often they clean their teeth, 76.15% answered twice a day and a minority of 7% reported brushing their teeth weekly, sometimes or never.

Among secondary school respondents, 1960 of the 4057 pupils answered this question **How often do you go to the dentist?**

The findings show that 48% go to the dentist twice a year. 127 pupils (3%) have never visited the dentist. Also 1922 of 4057 pupils have had a tooth filling (47%), 581 have had a fluoride varnish (14%) and 1570 have had a tooth/teeth taken out (38%). 1356 pupils (33%) have had none of these.

Appendix 3

Epidemiological Assessment of Oral Health Need for Older People in Care Homes in Darlington

- There are no "off-the-shelf" routine data to inform the epidemiological dental needs of the +65 or the vulnerable elderly living in residential and care homes.
- More older people are retaining their natural teeth for longer and hence a larger number of older people in the North East will have a high number of heavily restored teeth
- Proportion of the population aged 65 and older in the North East who were edentulous and surveyed as part of the Adult Dental Health Survey 2009[32].

Table 3: Proportion of the population aged 65 and older in the North East who were edentulous (i.e. without teeth)

Age Band	% edentulous (i.e. without teeth)
65-74	19.7
75-84	44.4
85+	56.3

Oral Cancer

Oral cancer is an umbrella term that includes any cancer of the lip, tongue and rest of the oral cavity, but excludes cancers of the major salivary glands.[33] Oral cancer is not very common in the UK. However, over the last decade in the UK, oral cancer incidence rates have increased by 39%. The incidence is directly proportional to patient age, with half of new diagnoses annually being made in people aged over 65 years of age.

The lifetime risk of developing oral cancer also varies by sex with the risk in men in the UK being double that for women (1 in 75 for men, and 1 in 150 for women).[34] In Darlington the age standardised incidence of oral cancer is not significantly different from the national average (see Figure 9).

Oral cancer registration is viewed as a direct measure of smoking-related harm because a high proportion of these registrations are due to smoking.[35] Hence, interventions that result in a reduction in the prevalence of smoking would reduce the incidence of oral cancer.

32. Adult Dental Health Survey data, 2009. 2011, Health and Social Care Information Centre.
33. BDA 2010: Editors: Speight P, Warnakulasuriya, Ogden G. Early Detection and prevention of oral Cancer: A Management strategy for dental practice. BDA Occasional Paper. November 2010. ISBN 978-1-907923-00-5. (available online through: https://www.bda.org/dentists/policy-campaigns/public-health-science/public-health/Documents/early_detection_of_oral_cancer.pdf
34. Cancer Research UK website. Available online at http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/oral-cancer/incidence#heading-One
35. PHE. Public Health Profiles. https://fingertips.phe.org.uk/search/oral%20health#page/6/gid/1/pat/6/par/E12000001/ati/102/are/E06000047/iid/1206/age/1/sex/4

The main risk factors associated with the development of oral cancers, are smoking or exposure to the smoke, drinking alcohol which together account for 75% of cases. Research also suggests that lower socio-economic status is a significant risk factor for oral cancer independent of lifestyle behaviours. People in more deprived areas are more likely to have oral cancer and more likely to have poorer outcomes. This is mainly related to irregular attendance at the dentist and hence delayed diagnosis.

Over the last decade in the UK (between 2003-2005 and 2012-2014), oral cancer mortality rates have increased by 20% for males and 19% for females).[36] Five year survival rates are 56%.[37] However, survival rates for oral cancers have been rising over the last two decades. According to figures published by Cancer Research UK, around 40% of those diagnosed with oropharyngeal cancers, 90% of those diagnosed with Lip cancer and 50% of those diagnosed with oral cavity cancer will survive for 5 years or more following diagnosis.[38] Mortality rates from oral cancer in the UK are projected to rise by 38% between 2014 and 2035.

Survival rates are generally closely linked to the stage of the cancer at the time of diagnosis, with higher 5 year survival rates observed at the early stages of diagnosis (stage 0,1 and 2) and lower survival rates observed in late stages (stage 3 and 4) of diagnosis. As seen in Figure 9, Darlington has a mortality rate of oral cancers (age standardised per 100,000) that is significantly higher than the national, regional and other local authorities in the North East. This is most likely linked to late diagnosis.

Figure 8: Oral cancer registrations- standardised rate per 100,000 population 2013-2015 (CIPFA)[39]

Area	Value	Lower CI	Upper CI
England	14.5	14.3	14.7
St. Helens	18.5	15.0	22.5
Tameside	18.0	14.8	21.6
Telford and Wrekin	17.9	14.2	22.2
Stockton-on-Tees	17.8	14.5	21.6
Bolton	17.8	14.9	21.0
Wakefield	17.1	14.6	19.9
Bury	17.0	13.7	20.8
Calderdale	16.5	13.4	20.1
Dudley	16.1	13.6	18.9
Darlington	15.6	11.5	20.6
North Tyneside	14.5	11.6	17.8
Rotherham	14.4	11.9	17.3
Doncaster	14.4	12.0	17.1
Derby	14.2	11.5	17.4
Medway	13.6	11.0	16.6
Barnsley	13.0	10.5	16.0

Source: PHE - National Cancer Registration and Analysis Service retrieved from the Cancer Analysis System (CAS)

36. Cancer Research Campaign. Cancer Statistics: Oral - UK. London: CRC, 2000.
37. PHE Health profiles. https://fingertips.phe.org.uk/search/oral%20health#page/6/gid/1/pat/6/par/E12000001/ati/102/are/E06000047/iid/92953/age/1/sex/4
38. http://www.cancerresearchuk.org/about-cancer/type/mouth-cancer/treatment/statistics-and-outlook-for-mouth-cancers
39. Public Health Profiles: Oral cancer registrations 2013-2015. Public Health England: Available online at https://fingertips.phe.org.uk/search/oral%20health#page/3/gid/1/pat/6/par/E12000001/ati/102/are/E06000047/iid/1206/age/1/sex/4 (accessed 30 October 2017)

Figure 9: Oral cancer mortality-directly age standardised per 100,000 population (CIPFA) 2014-16

Area	Value	Lower CI	Upper CI
England	4.6	4.5	4.7
Darlington	8.5	5.6	12.4
Stockton-on-Tees	7.2	5.1	9.9
St. Helens	6.7	4.6	9.3
Telford and Wrekin	6.0	3.9	8.8
Dudley	5.6	4.2	7.3
Wakefield	5.5	4.1	7.2
Bolton	5.2	3.6	7.1
Tameside	5.0	3.4	7.0
Medway	4.6	3.2	6.5
Doncaster	4.6	3.2	6.2
Barnsley	4.3	2.9	6.2
Rotherham	4.3	3.0	6.1
Derby	4.3	2.8	6.2
North Tyneside	4.3	2.8	6.3
Bury	4.1	2.5	6.3
Calderdale	4.0	2.5	5.9

Source: ONS mortality data

Appendix 4

Attendance at NHS Dentists

At a national level in England, the number of children seen by NHS dentist to the period until 31st December 2016 was 6.7 million (that equates to 57.8% of the children population). The parallel figure for adults is 22.2 million of adults nationally seen in the 24 months until 31st of December 2016 (i.e. 51.4% of the adult population in England).

These data reflect the number of patients who are seen 'regularly' but do not include children or adults seen privately which for children in Darlington is thought to be low.

Table 4: Patients seen by an NHS dentist as a percentage of the population, by local authority, in the period ending December 2016[40]

Local Authority	% of child (0-17) population seen in previous 12 months	% of adult (18+) population seen in previous 24 months
South Tyneside	81	83
Middlesbrough	71	68
Stockton-on-Tees	67	58
Newcastle upon Tyne	66	58
Darlington	65	61
Northumberland	63	56
North Tyneside	62	56
Redcar and Cleveland	61	61
Sunderland	56	53
County Durham	54	53
Hartlepool	54	60

40. NHS Digital (2017). NHS Dental Statistics for England - 2016-17, Second Quarterly Report, United Kingdom. Available from: http://www.content.digital.nhs.uk/catalogue/PUB23340

Appendix 5

Oral Health Action plan for Darlington

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
1. Build healthy public policy						
1a	Develop an evidence based plan of action to improve oral health in Darlington and reduce health inequalities	An oral health action plan endorsed by executive committees in Darlington Borough Council and shared with Health and Well Being Board partners	Improvement of oral health, reduction of dental decay in children and young people in Darlington and integration of oral health in contracts with commissioners	Launch/share plan in April 2018	Public Health Team	Within existing Resource
1b	Integrate and streamline recommendations in the oral health plan with those in the healthy weight action plan for children and young people.	A key focus on sugar reduction as part of an integrated oral health and healthy weight action plan for children and young people in the Borough.	1) Decline in tooth decay levels among five-year-olds 2) Reduction in exposure to sugar in children diet Improved offer of information, advice and support to families, parents, carers with respect to reducing sugar in children's diets. 3) Improved access to information to support professionals in contributing to reducing sugar in children's diets (to measure impact of interventions to reduce exposure to sugar, tackle overweight and obesity and improve oral health).	Long term outcome Information prepared in June 2018	Public Health Team Early Years Practitioners including Health and Early Help, Early Years and Education Providers including: • 0-19 service • Early Years settings • School catering	Within existing Resource

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
2. Create supportive environments						
2a	Maximise the opportunities in the Healthy Child Programme for the Health Visitors and School Nurses to deliver evidence based interventions to promote oral and dental health at every contact. Support parents to access primary dental care services for routine preventive care and advice for their children. Promote and provide healthy eating through application of existing guidelines and interventions particularly those around sugar reduction.	A resource guide has been developed alongside the oral health plan. It summarises evidence based messages and signpost to services and resources for oral health promotion in early year settings.	Reductions in children tooth decay levels Increased numbers of children accessing NHS dental services	June 2018 Review 2019	0-19 Health Child Service (HDFT) And Early Years partners	Within the existing envelope of funding
2b	Ensure oral health to be part of care plans for older people in care homes and uptake of oral health training by care staff.	A resource including a list of key evidence based messages around oral health promotion for older people in care home	Oral health assessments and mouth care plans for older residents of care homes included as part of contractual responsibilities	May 2018	Commissioners and contract team in adult and social care Care home managers Health Education England	Within the existing envelope of funding

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
3. Strengthen community action						
3a	Use social marketing methods to promote oral health messages within a range of settings. Promote Smile Week	Develop a range of messages including for dissemination through social media that promote key elements of Oral and Dental Health promotion with communications team	Increased knowledge of parents/carers regarding the appropriate evidence based oral health messages	Work with minimum three community settings	Public Health Communications Team	

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
4. Develop Personal Skills						
4a	Use the PHE guidance "Delivering better oral health" Early Years settings including advice about oral health in routine contacts and information around health, wellbeing, sugary snacks and drinks, diet, nutrition and parenting.	Key messages based on the PHE guidance Delivering better oral health delivered by early years staff during all contacts, interventions and in information provided in early years settings activities around health, wellbeing, diet, nutrition and parenting	Early Years staff more aware and confident in providing oral health and dental health messages. Improved awareness in parents and families about oral health and dental health. Improved oral health for vulnerable groups Increase in access to primary NHS dental services	May 2018	Public Health England Early Years Settings Early Help Team Public Health Team 0-19 service	Within existing Resource

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
4b	Provide advice on breastfeeding and infant feeding practices in line with PHE guidance, Delivering better oral health	Midwifery Booking and Post natal information and support by Midwifery and all mandated visits by the Health Visitor as part of the HCP in Darlington	Positive Feedback from parents regarding breastfeeding and infant feeding.	Review June 2018	Public Health Team Midwifery Service CDDFT CCG Commissioners 0-19 service CDDFT Midwifery Services	Within existing Resource
4c	HLS self reported behaviour surveys specific questions regarding knowledge, attitudes and behaviours around dental and oral health to be included in the Healthy Lifestyle Survey for Darlington		Trend information available to inform planning services	December 2018 Review December 2019	Education and Public Health	
4d	Ensure that care home staff access available training on oral health for older people in care homes.	Identify high quality training that is available nationally, regionally and locally. Include requirement for training in Oral Health for older people as part of contractual responsibilities for Care Homes in Darlington.	Increased knowledge and improved practice in care staff in care homes. Increased numbers of Care Staff with evidence of training in Oral Health Promotion relevant to their clients. Oral and dental health included in Care Plans for residents	February 2019	Public Health Team NHS England Local Authority Commissioners CCG commissioners Care Home providers	Within existing Resource

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
5. Re-orient health care services toward prevention of illness and promotion of health						
5a	Work with dentists and other professional groups who are in contact with individuals from those communities most at risk from oral cancers to increase awareness about the risk factors.	Increased screening, delivery and sign posting of brief advice regarding smoking and alcohol.	Increased uptake of routine dental services in 'at risk' groups and communities. Reduction in high risk behaviours such as smoking and harmful alcohol consumption. Earlier detection and treatment or oral cancers. Long term, improved survival rate in those diagnosed and treated for oral cancer in Darlington	Review December 2019	Public Health Team PHE NHS England Health Education England Local Dental Committee CCG commissioners CDDFT Cancer Services. Primary Care	Within existing Resource

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
5b	Integrate advice about oral health as part of routine information that is provided about diet, nutrition and parenting as part of health and wellbeing interventions and information that is provided to families and parents by all Early Years staff.	Identify key performance Indicator(s) to be included in the current 0-19 contract and service specifications around the provision of oral and dental health promotion as part of routine contacts during 0-5 years Integrated into Early Years settings assessments particularly new child assessments.	Changes in practice in all early years practitioners and settings Increased awareness of key messages and advice for families and parents around oral and dental health. Measurable improvement in coverage and exposure to this information and advice in parents. Evidence of a sustained reduction in the measure of tooth decay in 5 year old children Reduction in most severe tooth decay/Sepsis due to dental decay in children under 5 years.	June 2018	Public Health Team NHS England 0-19 service Early Years Providers DBC Head of Education (30 hours statutory provision)	Within existing Resource

No	Key Area of Action	Desired Outputs	Expected Outcomes	Milestones	Responsibilities	Funding Position
5c	Increase knowledge about oral health among front line professionals working with vulnerable C&YP and frail older people in care homes in Darlington	Frontline health and social care staff working with vulnerable children and young people as well as frail old people in care homes give consistent and evidence based advice on the importance of oral health.	Increased uptake of training in health and social care professionals Increased number of dental health checks in those children that are Looked After as part of the statutory Health Assessments. Improved oral health for vulnerable groups in future oral health epidemiological survey. Increase in numbers of older people residents are living in care homes who are receive domiciliary dental checks including for those with partial or complete dentures.	June 2018 and June 2019	Health Education England Public Health team, DBC Commissioners PHE Social care Care Home providers Local Dental Committee	Within existing Resource

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Darlington Oral Health Plan 2017-2022

DARLINGTON BOROUGH COUNCIL