

# Oral Health In Norfolk

31st October 2022

# Introduction

Oral health is widely considered to be an important aspect of our general health and wellbeing.

Poor oral health can have a significant impact on quality of life, such as eating, speaking and comfort and can also have an impact on a child's ability to learn at school. Poor oral health is also largely preventable.

Like many health outcomes, there are also inequalities relating to the impact of poor oral health. Some groups are more vulnerable to poor oral health than the general population.

This document reviews the oral health of people living in Norfolk and Waveney using the most up to date data available.

Wherever possible data has been provided for Norfolk and Waveney. However, some sources of information are available for Norfolk only.

The information on access and activity is provided for NHS dentistry only. Information on activity carried out under private dentistry is not available.

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# Key points

## Oral Health in Children

- Oral health for children is generally better in Norfolk than for England but it is not as good as some other areas in the East of England. Children in Norfolk experience better outcomes in terms of hospital tooth extractions, hospital admissions for dental caries, and decayed, missing, filled teeth. However, this masks inequalities. In some of the most deprived communities more than a third of five-year-olds are estimated to experience tooth decay.
- During the pandemic the number of children seen by a dentist declined (in line with England) and is now slowly picking up again. However, the difference between Norfolk and Waveney and England in terms of the percentage of children seen by a dentist in the previous 12 months deteriorated between 2019 and 2022.

## Oral Health in Adults

- Across Norfolk and Waveney, the percentage of adults seen by a dentist declined over the period of the pandemic, in line with England, although the decline in Norfolk and Waveney was slightly quicker. Rates have started to increase since a low in March 2022 (a year later than that seen for children). The percentage of adults seen by a NHS dentist in the previous 24 months in Norfolk and Waveney is now the same as England at about 37% - after having experienced a higher proportion than England previously.
- Norfolk has a similar rate of oral cancer to England but the rate is increasing. Each year there are about 150 cases of oral cancer.

## Access to a dentist

- The number of dentists with NHS activity in Norfolk and Waveney has reduced since 2018/19. In 2020/21 Norfolk was ranked 147 out of 150 local authorities for successfully obtaining a dental appointment, the bottom 10% of the country.
- There is considerable geographic variation in dentist access rates, with Great Yarmouth and Waveney having higher access rates, while King's Lynn and Thetford have lower access rates. Generally, there are lower access rates in the more deprived communities and some lower access rates in more rural communities.
- Drive time access shows that the majority of Norfolk and Waveney can access a dental practice (either NHS or private) using a car in 20 minutes or less but there are gaps in access to services by public transport for those that do not own a car
- Analysis of A&E attendance rates for dental related conditions highlights those market town localities that have few (or no) dental practices offering NHS services. There are also generally higher rates for more deprived communities.

# Oral health in children

## Summary

Oral health for children is generally better in Norfolk than for England but it is not as good as some other areas in the East of England. Children in Norfolk experience better outcomes in terms of hospital tooth extractions, hospital admissions for dental caries, and decayed, missing, filled teeth.

However, this masks inequalities. In some of the most deprived communities more than a third of five-year-olds are estimated to experience tooth decay.

During the pandemic the number of children seen by a dentist declined (in line with England) and is now slowly picking up again. However, the difference between Norfolk and Waveney and England in terms of the percentage of children seen by a dentist in the previous 12 months deteriorated between 2019 and 2022.

Norfolk has considerably lower rates of admissions to hospital for the 0 to 5s in relation to tooth decay.

## Tooth Decay in Children

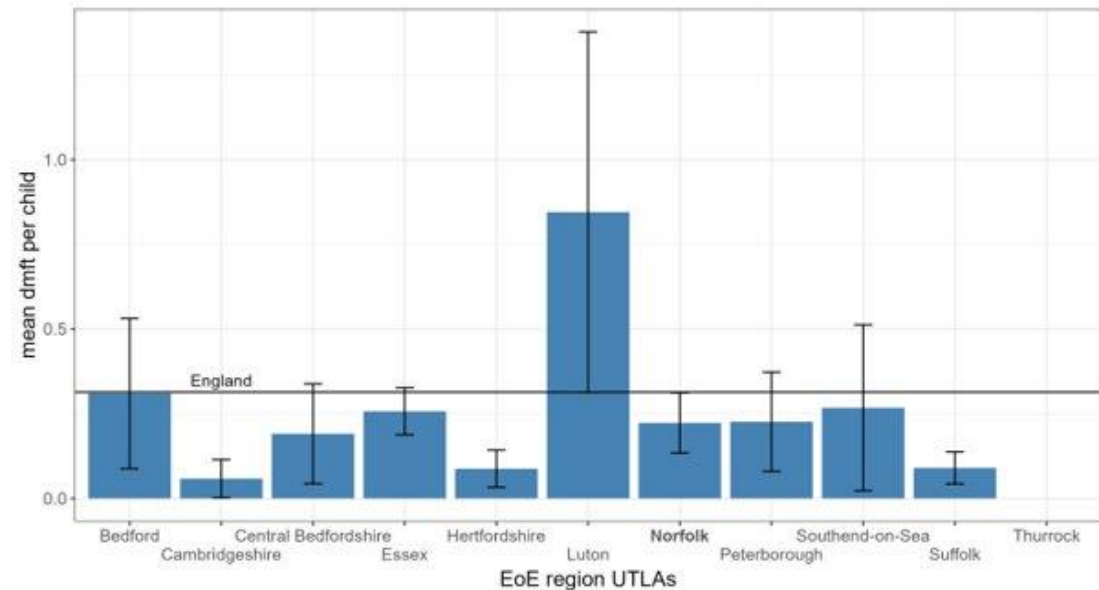
The National Dental Epidemiology Programme (NDEP) carries out surveys of children's teeth, across a sample children in each local authority, most recently for children at age three (2020) and age five (2019). In 2020 the sample size was reduced due to COVID restrictions.

In 2020 the survey found that the proportion of three year-olds in Norfolk with visible tooth decay (6.2%) is lower than the England average (10.7%). The average number of decayed, missing or filled teeth (dmft) in three year-olds was 0.22 teeth per child, which was also better than the England average (0.31).

% of **three year olds** with visible tooth decay

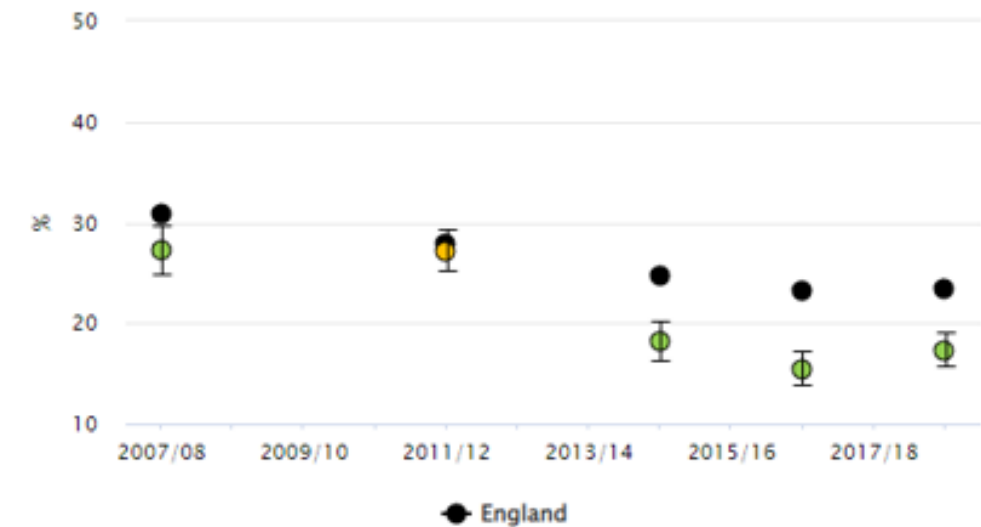


Average number of decayed missing or filled teeth (dmft) in **three year olds** 2019/20

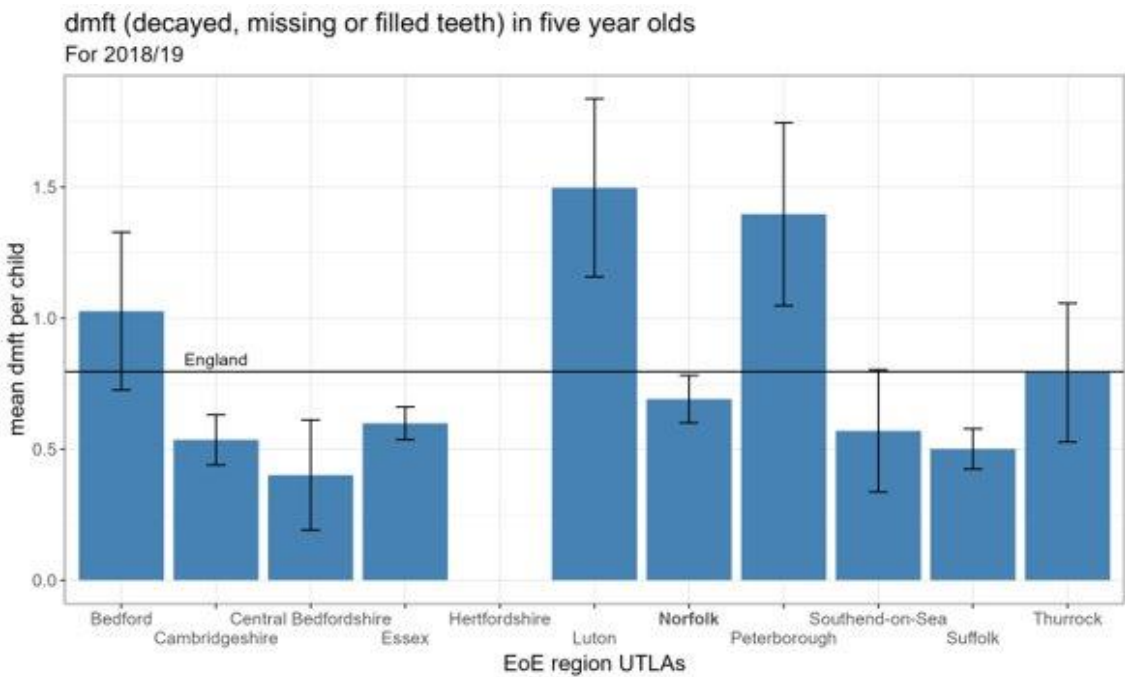


In 2019 the National Dental Epidemiology Programme found the proportion of five year-olds in Norfolk with visible tooth decay (17.3%) was lower than the England average (19.0%). The average number of decayed, missing or filled teeth (dmft) in five year-olds was 0.69 teeth per child, which was also better than the England average (0.80) but higher than the regional average (0.63).

% of five year olds with visible tooth decay



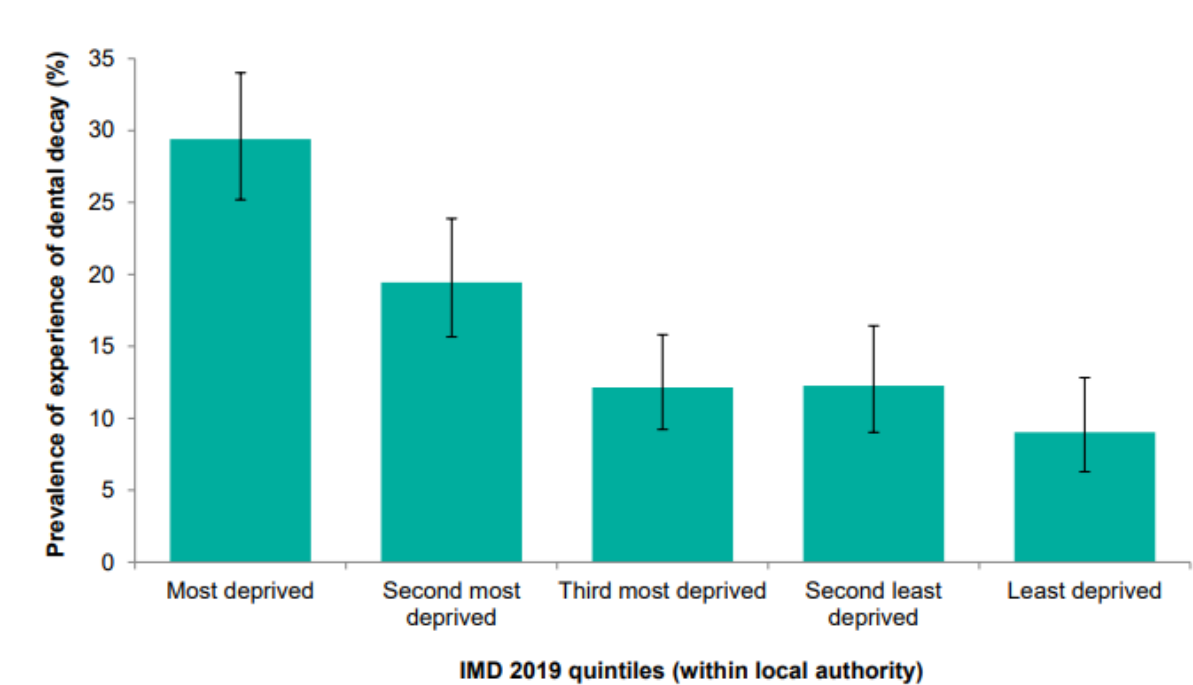
Average number of decayed missing or filled teeth (dmft) in five year olds 2018/19



## Variation by deprivation and geography

People living in more deprived areas often have poorer health outcomes than people living in more affluent areas. For Norfolk children, this is evident when looking at the prevalence of dental decay in 5-year-olds. Children living in the most deprived areas are up to three times more likely to have had dental decay than children living in the least deprived areas.

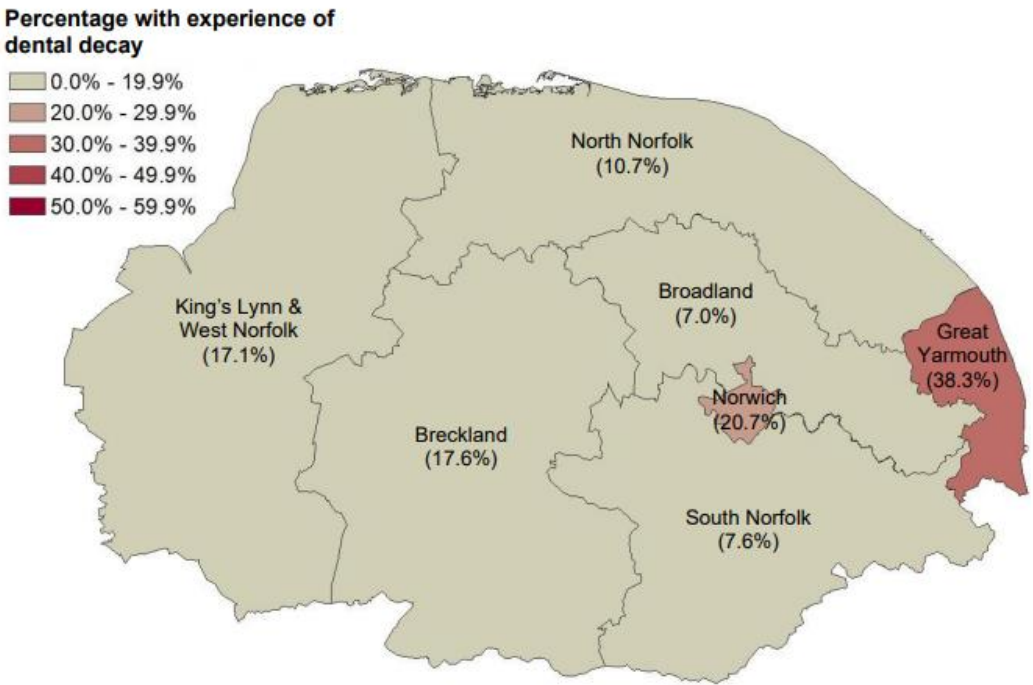
In 2019 the prevalence of tooth decay in England in five year olds was 23.4%. The most deprived communities of Norfolk experience higher rates of tooth decay than this. The districts in Norfolk with the highest percentage of children with tooth decay are Great Yarmouth and Norwich.



Error bars represent 95% confidence limits



Children from the most deprived areas experience more tooth decay

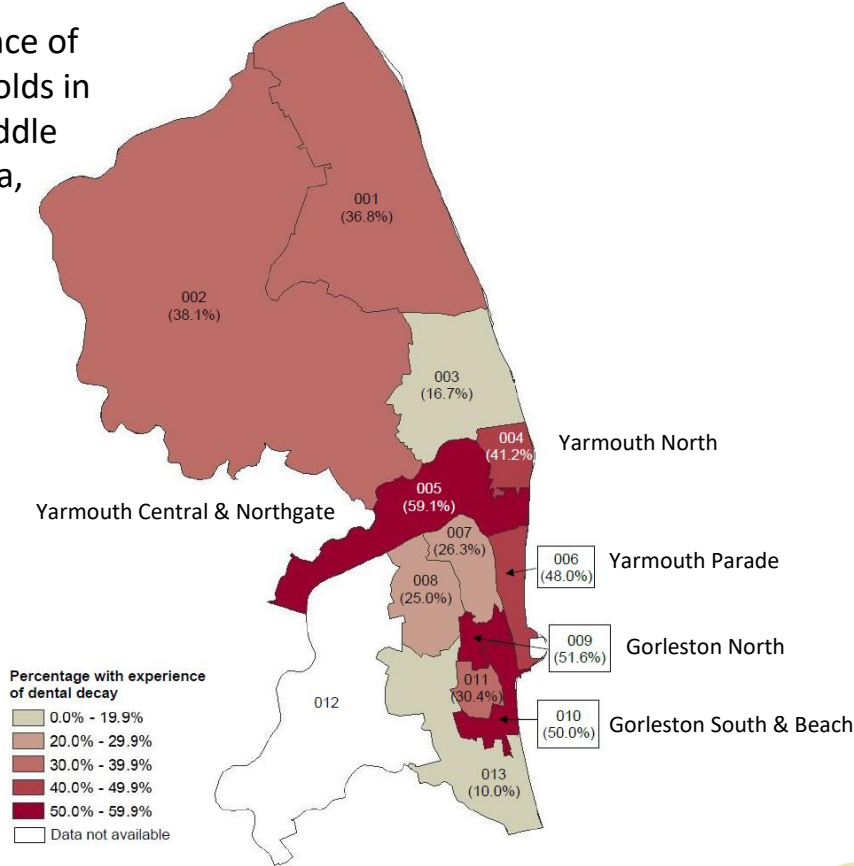


Children from Great Yarmouth and Norwich experience more tooth decay than other districts in Norfolk.

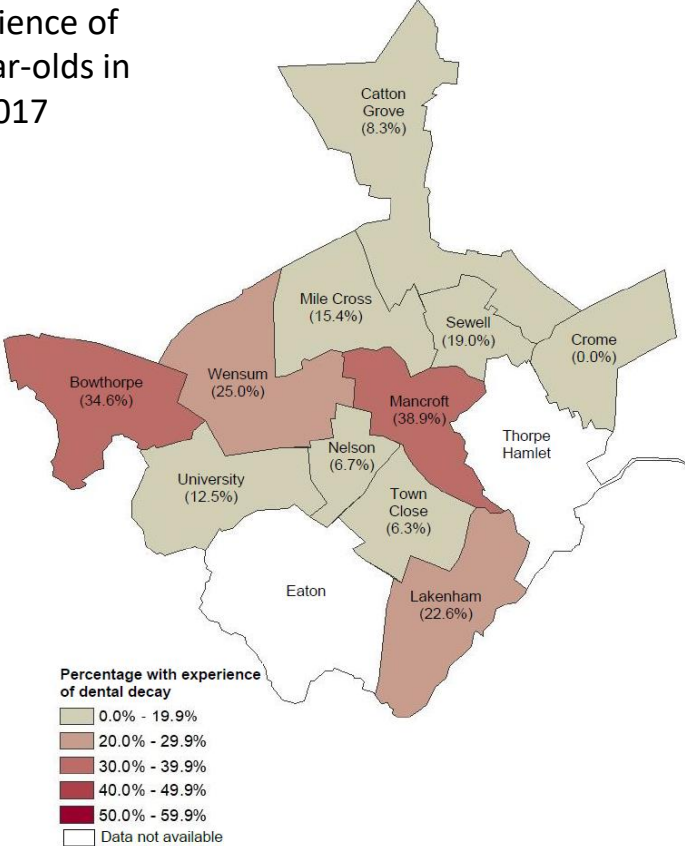


Within Great Yarmouth, the highest levels of experience of dental decay are clustered around the communities of Yarmouth Central & Northgate (59% with decay), Gorleston North (51%), Gorleston South & Beach (50%), Yarmouth Parade and Yarmouth North. Within Norwich the highest levels of experience of dental decay are clustered within the communities of Mancroft and Bowthorpe.

Prevalence of experience of tooth decay in 5-year-olds in Great Yarmouth by middle layer super output area, 2019

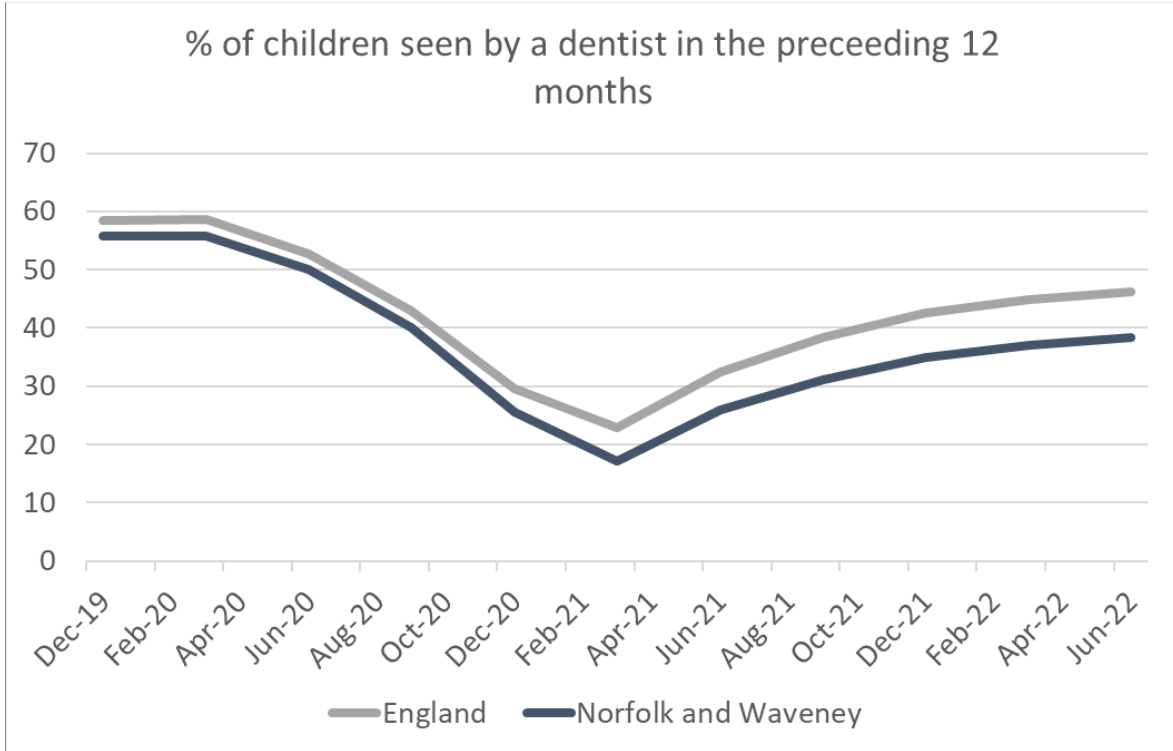


Prevalence of experience of tooth decay in 5-year-olds in Norwich by ward, 2017

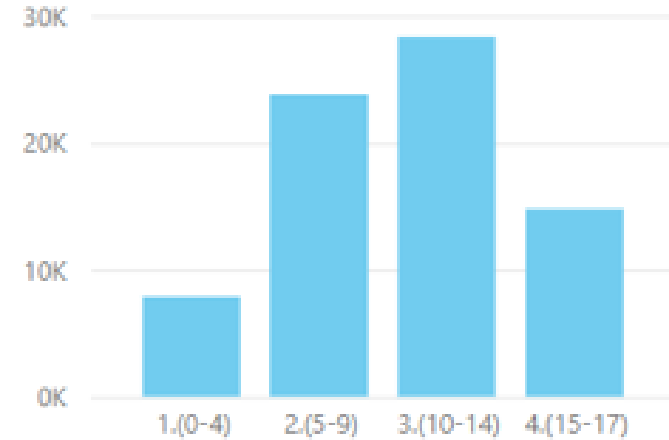


## Trends in NHS Dental access

Regular check-ups with dentists can help prevent the advancement of tooth decay and help educate children and parents with oral hygiene. Across Norfolk and Waveney the percentage of children aged 0-17 seen by a dentist declined over the period of the pandemic (in line with England) but has started to increase since a low in March 2021. About 38% of children in Norfolk and Waveney had been seen in the previous 12 months compared to 46% in England and the gap between Norfolk and Waveney and England was larger in 2022 than it was in 2019.



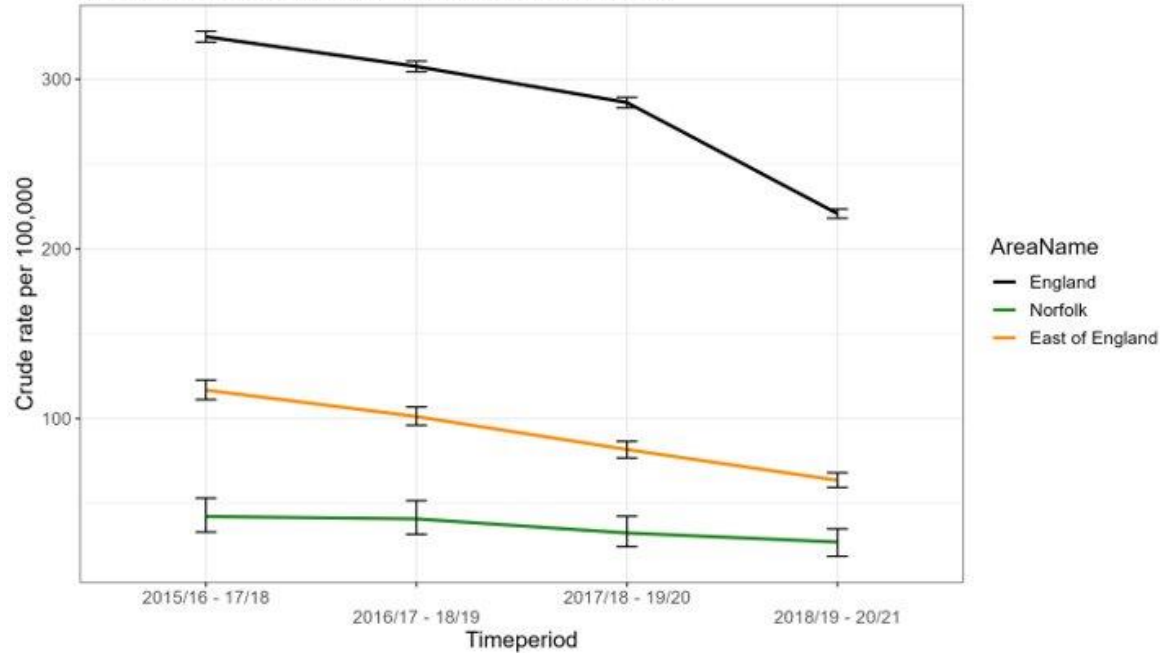
### Age distribution of children seen in the last 12 months



In June 2022 in Norfolk and Waveney about 38% of children had been seen in the last 12 months compared to about 46% across England as a whole. Of these the majority are aged 5 to 9 and 10 to 14

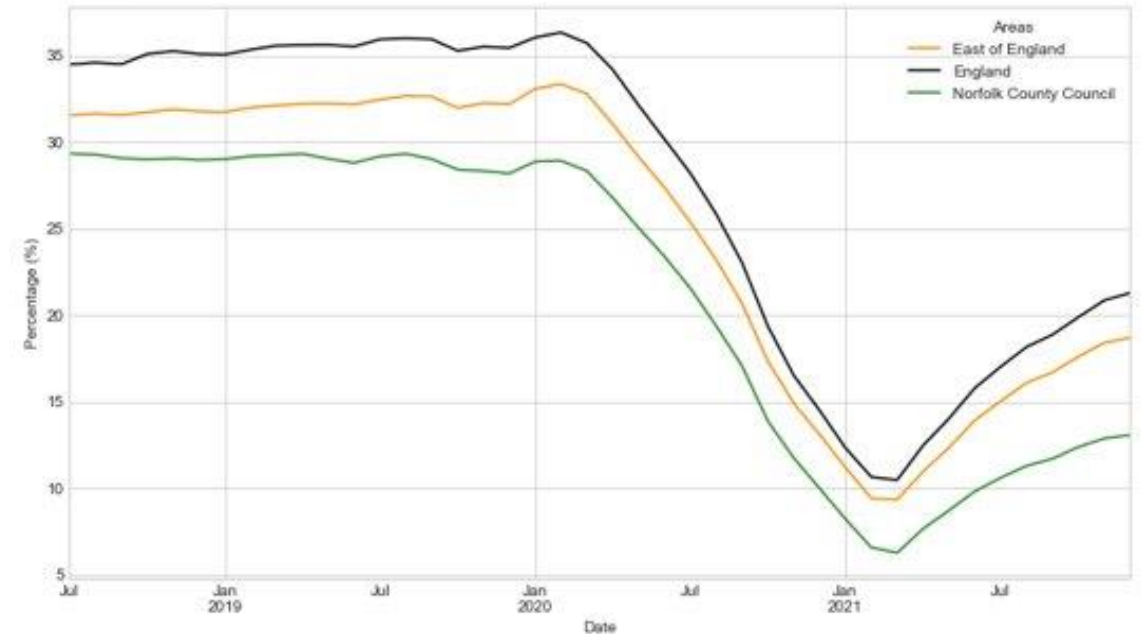
**Hospital admissions for tooth decay** in the youngest of the population may also be considered a measure of oral health, and a proxy measure of child health and diet, and possibly access to healthcare. National profiles shows that Norfolk still has considerably lower rates of admissions for the 0 to 5s, despite proportionally fewer Norfolk children seeing a dentist in the previous 12 months than the England average, although the gap has reduced over the pandemic.

Hospital admissions for dental caries (0-5 years)



Norfolk has considerably lower rates of admissions for the 0 to 5s compared to East of England and England

Trend of children aged 0 to 4 seen by NHS dentist in the last 12 months



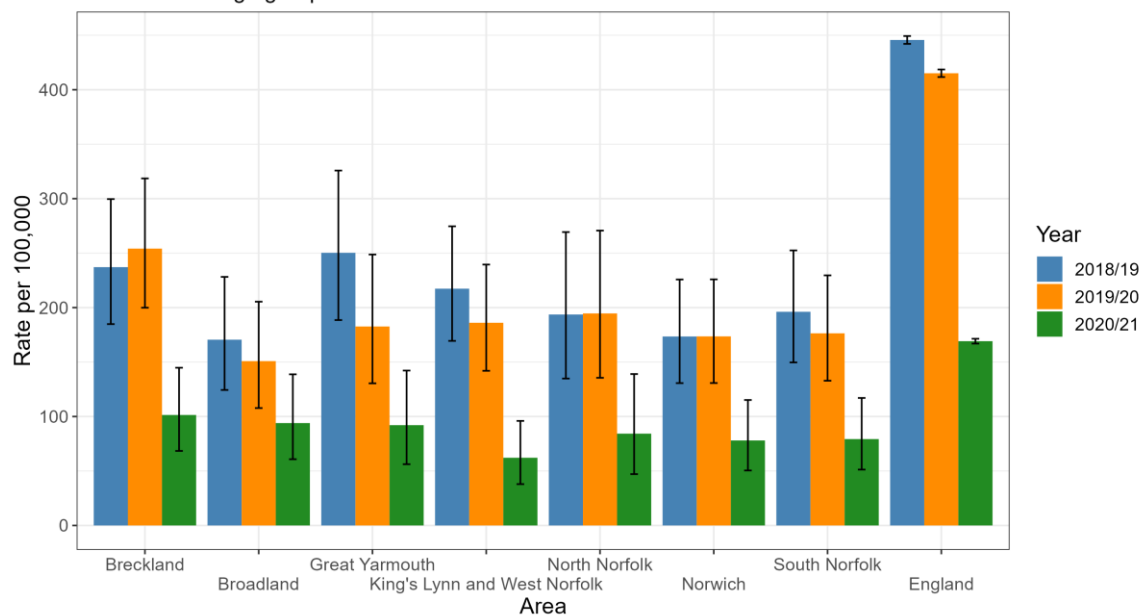
A lower % of children in Norfolk aged 0 to 4 have seen a NHS dentist compared to the East of England and England. The gap between Norfolk and England appears to be widening.

## Tooth Extractions

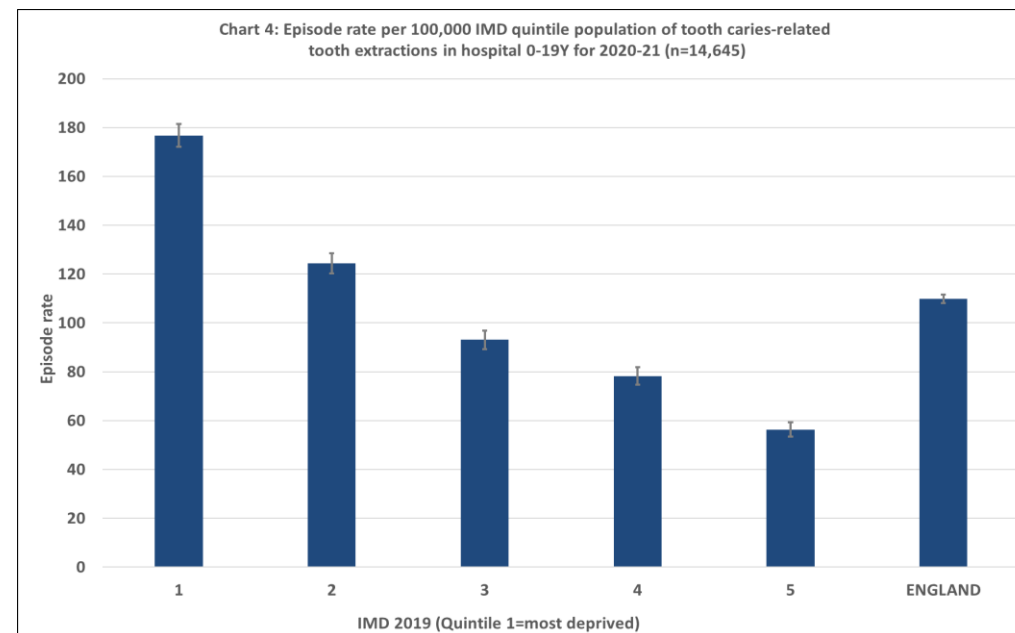
When we consider all ages up to 19, tooth extractions in hospital for one or more primary or permanent teeth are also lower in Norfolk compared to England. This is the case across all Norfolk districts. Norfolk districts continue to have consistently significantly lower rates than England, although all areas have seen rates drop during 2020/21 due to the pandemic.

However, across England tooth extraction rates are higher in the most deprived communities and this is likely to be the case in Norfolk. This might reflect poorer oral health in more deprived communities.

Finished Consultant Episodes for Tooth Extraction (all diagnosis)  
for the 0 to 19 age group



Tooth extraction rates across England for 0 to 19 by deprivation quintile



Norfolk districts have lower rates of tooth extractions for 0 to 19 year olds compared to England for the last few years.

Tooth extraction rates are higher in the most deprived communities. This probably reflects poorer oral health of children in these communities possibly linked to higher exposure to sugary foods and drinks. This distribution is likely to be reflected in Norfolk

# Oral health in adults

## Summary

Across Norfolk and Waveney, the percentage of adults seen by a dentist declined over the period of the pandemic, in line with England, although the decline in Norfolk and Waveney was slightly quicker.

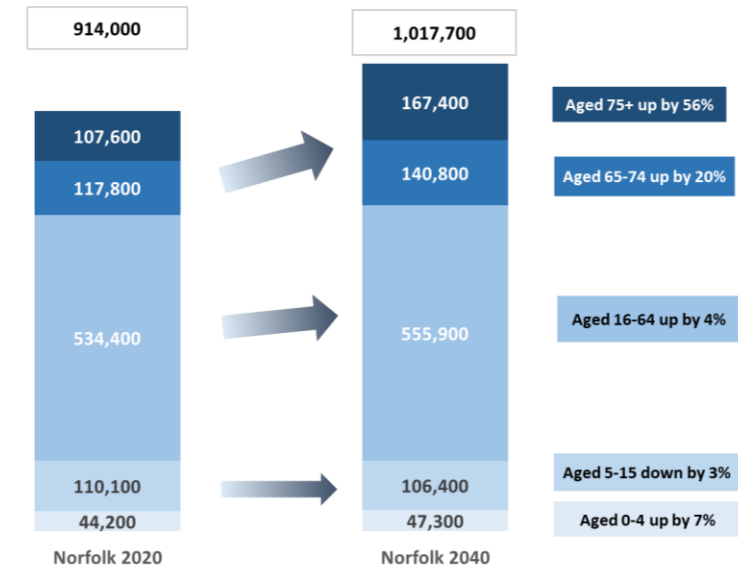
Rates have started to increase since a low in March 2022 (a year later than that seen for children). The percentage of adults seen by a NHS dentist in the previous 24 months in Norfolk and Waveney is now the same as England at about 37% - after having experienced a higher proportion than England previously.

Norfolk has a similar rate of oral cancer to England, but the rate is increasing. Each year there are about 150 cases of oral cancer.

## Vulnerable groups

Some groups are more vulnerable to poor oral health than the general population. These include: people with some long-term conditions, older people and care home residents. Norfolk has a relatively high number of older people so this need is likely to be higher in Norfolk than elsewhere. Other groups more likely to experience poor oral health include; looked after children, people with learning difficulties, the homeless, migrant workers, refugees, asylum seekers and those dental anxiety and dental phobia.

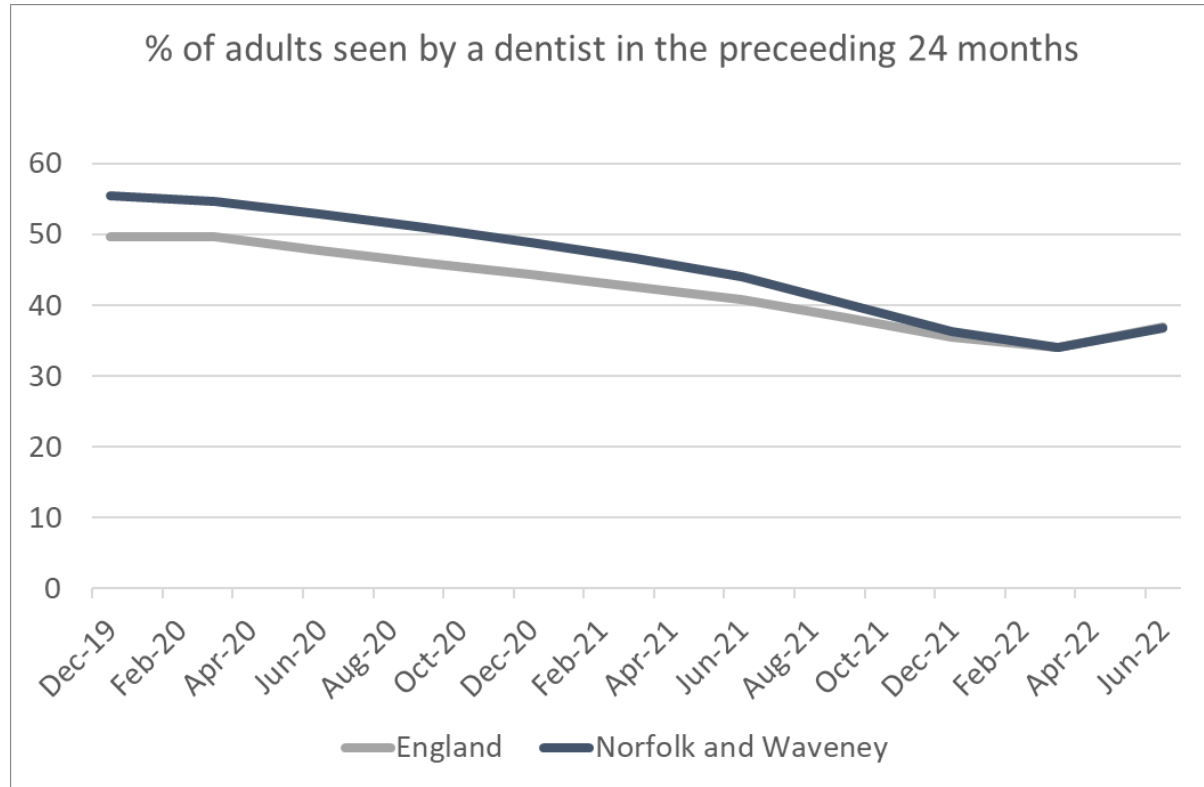
- More than half of older adults who live in care homes have tooth decay, compared to 40% of over 75s who do not live in care homes. Poor oral health can affect people's ability to eat, speak and socialise normally.
- Periodontal disease is most common in the age groups of 65 to 84
- Long-term conditions (including arthritis, Parkinson's disease and dementia) can make it harder to hold and use a toothbrush, and to go for dental treatment. Many medicines reduce the amount of saliva produced and leave people with a dry mouth.
- Looked after children are likely to have greater oral health needs. Looked after children are more likely to have dental problems and less likely to use dental services than their peers
- Children with learning disabilities are more likely to have teeth extracted than filled and have poorer gum health. Adults with learning disabilities are more likely to have poorer oral health than the general population. Adults with learning disabilities living in the community are more likely to have poorer oral health than their counterparts living in care.
- Homeless people are more likely to have greater need for oral healthcare than the general population. This is important as many people who are homeless tend not to seek out a dentist and being of no fixed abode or in temporary accommodation inhibits access.
- There are other potentially vulnerable groups such as migrant workers, refugees and asylum seekers, the medically compromised, as well as those with dental anxiety and dental phobia (affecting about 15% of adults).



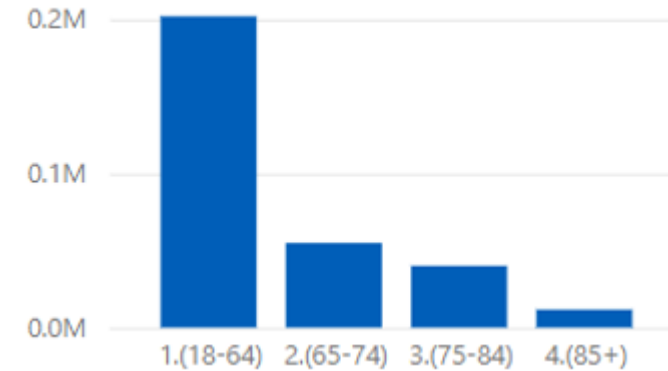
People aged 65 and over make up about 25% of the Norfolk population and 2018 based population projections suggest that this group is going to experience the largest increase over the next 20 years.



**Trends in NHS Dental access** Across Norfolk and Waveney the percentage of adults seen by a dentist declined over the period of the pandemic, in line with England. However, the decline in Norfolk and Waveney was slightly quicker. Rates have started to increase since a low in March 2022 (a year later than that seen for children). The percentage of adults seen by a NHS dentist in the previous 24 months in Norfolk and Waveney is now the same as England at about 37% - after having experienced a higher proportion than England previously.

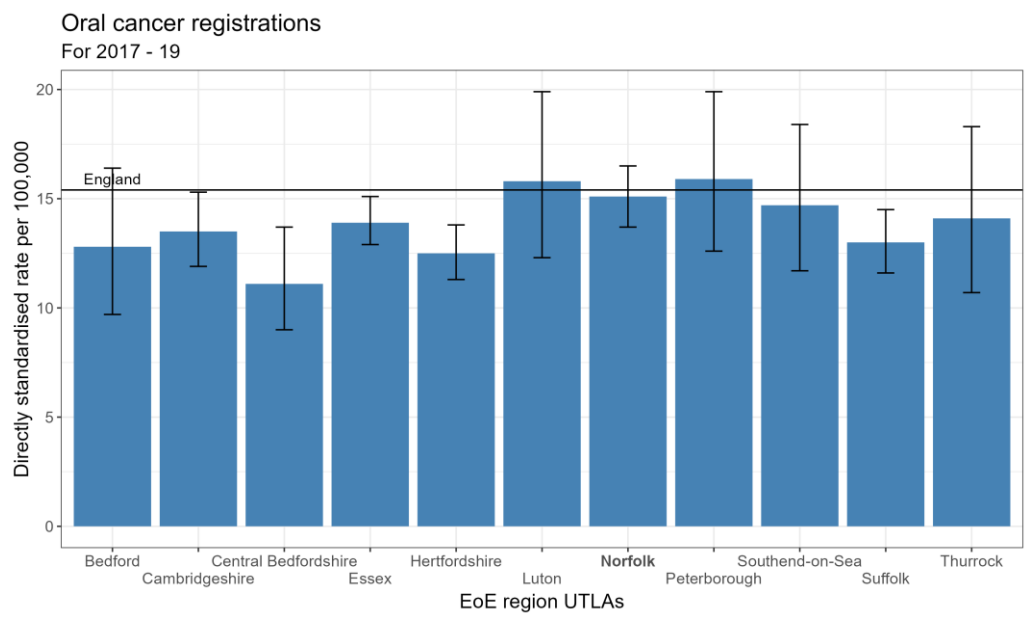
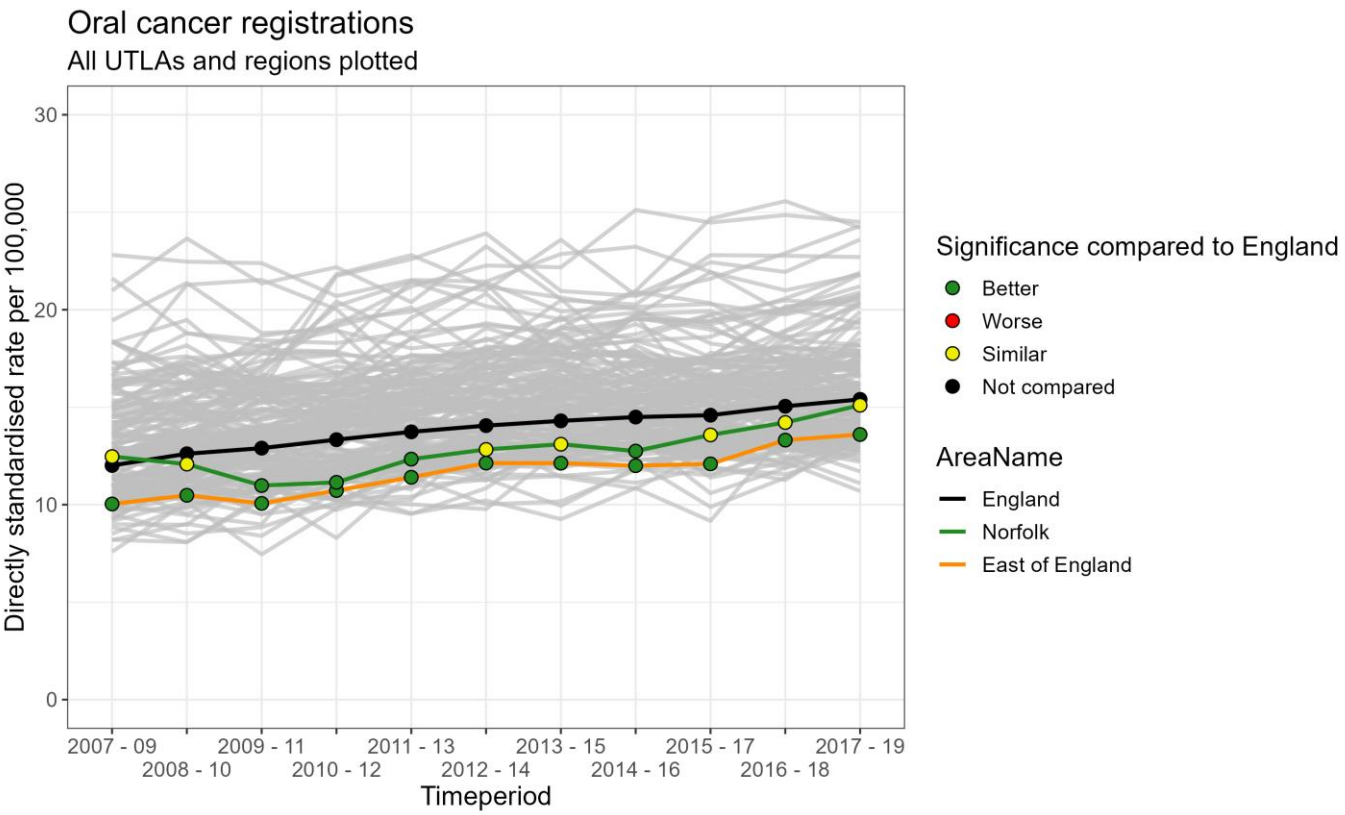


### Age distribution of adults seen in the last 24 months



In June 2022 in Norfolk and Waveney about 37% of adults had been seen in the last 24 months compared to about 37% across England as a whole.

**Trends in Oral Cancer** Many dentists routinely check for mouth and oropharyngeal cancer, so they are often the first people to spot the early signs of cancer. Each year in Norfolk there are about 150 cases of oral cancer. This is about 2% of all cancers each year. The biggest risk factors for oral cancers are smoking, alcohol and poor diet. Norfolk has a similar rate of oral cancer as England but rate is increasing.



Norfolk has one of the higher rates of oral cancer in the East of England but not significantly so.

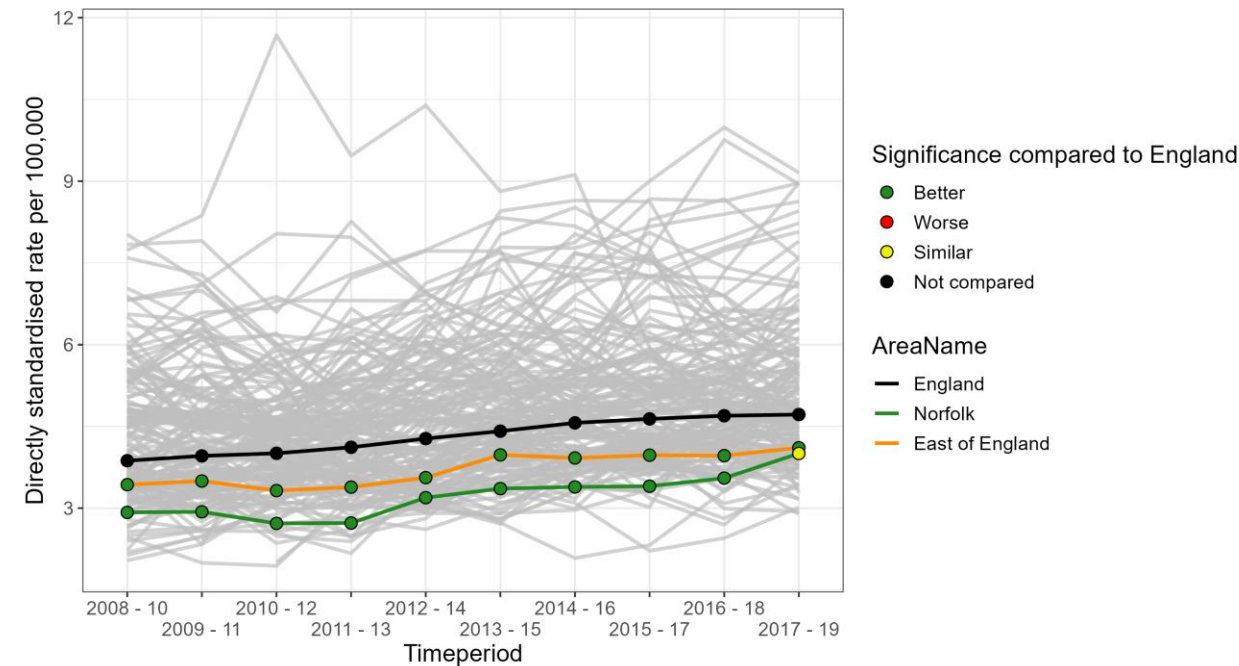
The trend in oral cancer is showing an increase in line with England as a whole. Norfolk has a similar rate to the England average.





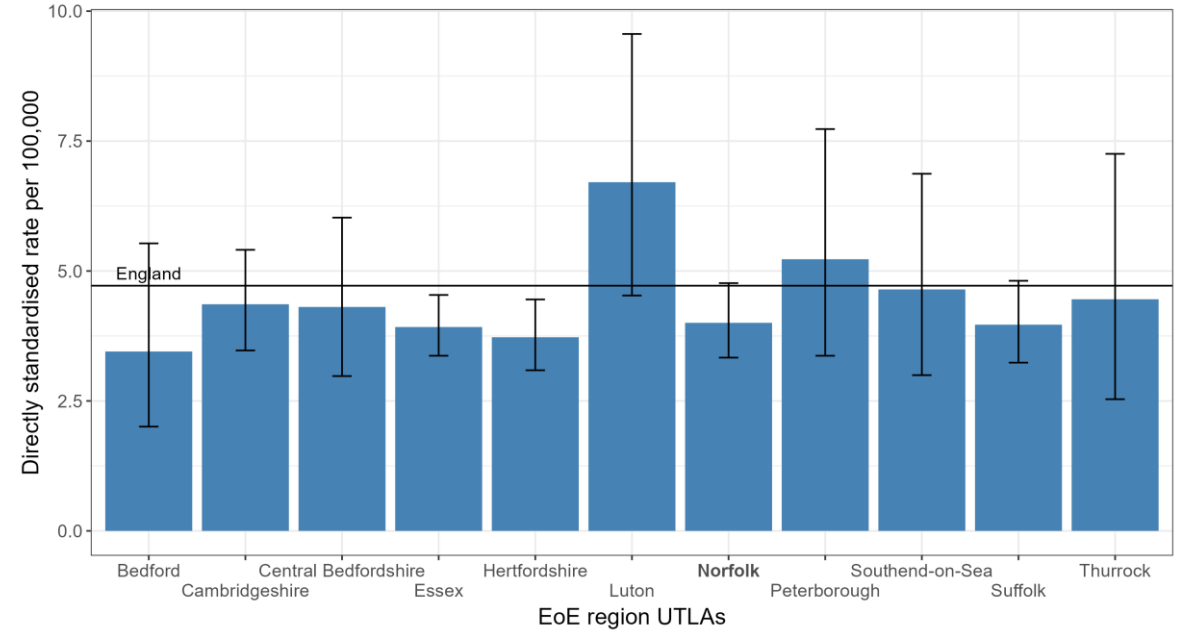
Survival rates from oral cancer are better if cancer is diagnosed at an early stage. Between 55% and 60% of people with oral cancer survive five years or more. There are about 40 deaths per year in Norfolk from oral cancer this is similar to the East of England during the most recent time period. This represents a decline in health outcomes, as Norfolk previously had lower mortality rates than the East of England average.

Mortality rate from oral cancer  
All UTLAs and regions plotted



The trend in deaths from oral cancer is showing an increase in line with England as a whole. Norfolk had a lower rate than the England average.

Mortality rate from oral cancer  
For 2017 - 19



Deaths from oral cancer in Norfolk are about the same as the East of England average.

# Access to dentists and A&E related dental activity

## Summary

The number of dentists with NHS activity in Norfolk and Waveney has reduced since 2018/19. In 2020/21 Norfolk was ranked 147 out of 150 local authorities for successfully obtaining a dental appointment, the bottom 10% of the country.

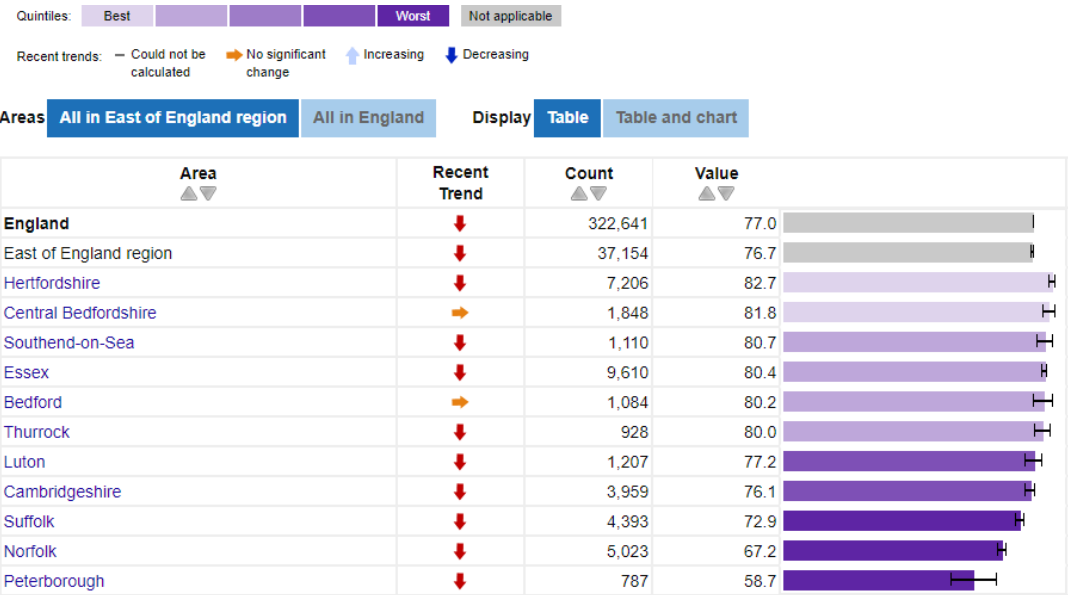
There is considerable geographic variation in dentist access rates, with Great Yarmouth and Waveney having higher access rates, while King's Lynn and Thetford have lower access rates. Generally, there are lower access rates in the more deprived communities and some lower access rates in more rural communities.

Drive time access shows that the majority of people living in Norfolk and Waveney can access a dental practice using a car in 20 minutes or less but there are gaps in access to services by public transport for those that do not own a car

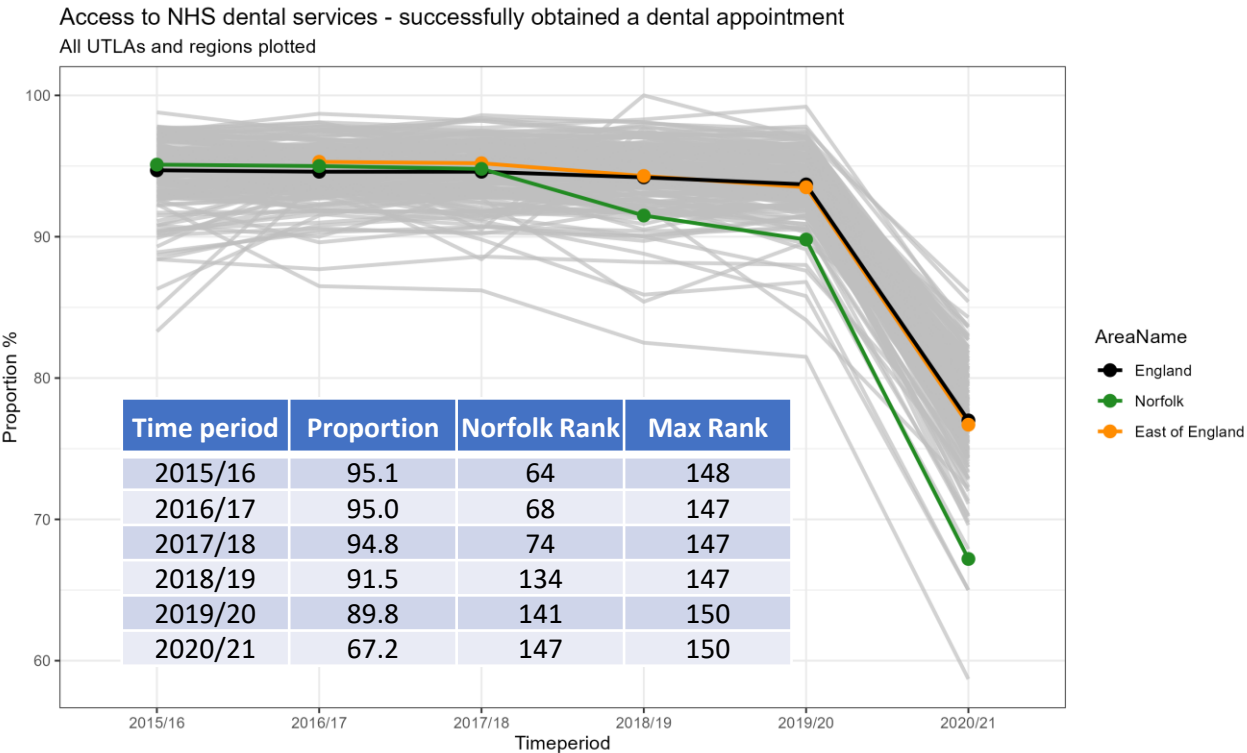
Analysis of A&E attendance rates for dental related conditions highlights those market town localities that have few (or no) dental practices offering NHS services. There are also generally higher rates for more deprived communities.

Access to NHS dental services is an issue for all areas across England, particularly over the most recent time period. However, it appears that this is especially the case for residents of Norfolk. In 2020/21 Norfolk was ranked in the bottom 5 out of 150 local authorities for successfully obtaining a dental appointment.

% of people being able to successfully obtain a dental appointment in the East of England in 2020/21



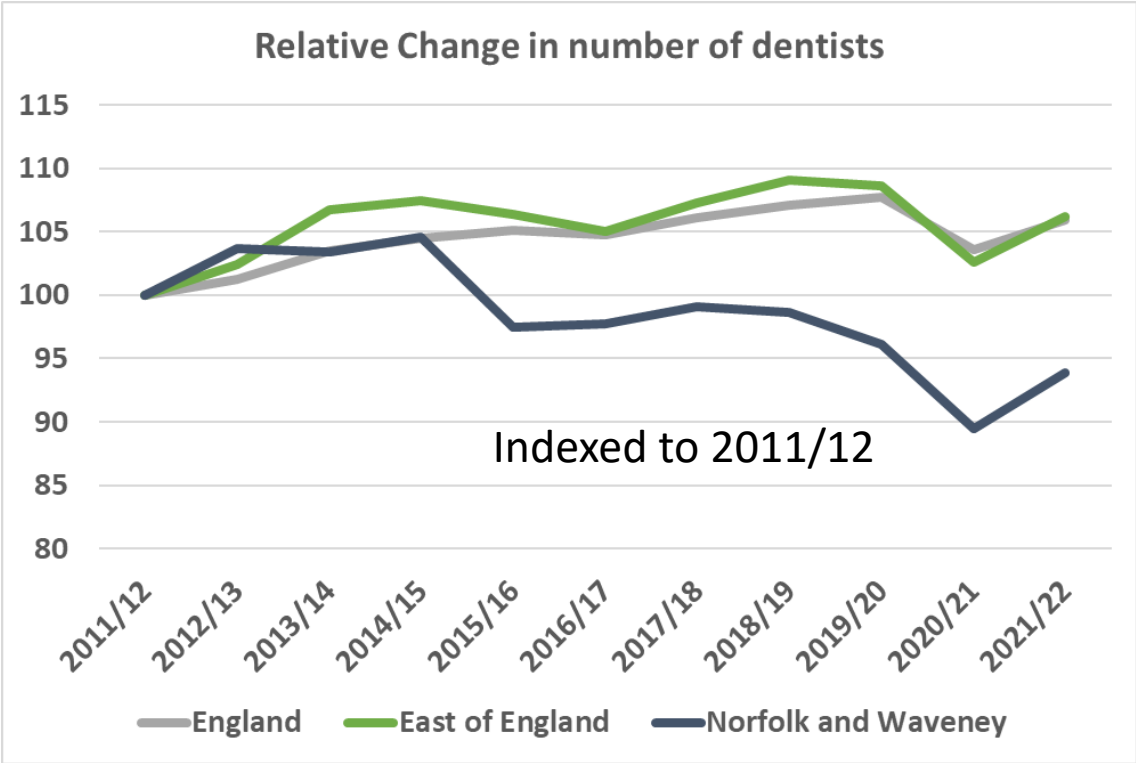
Source: GP Patient Survey (GPPS)



## Number of dentists with NHS activity across Norfolk and Waveney

The number of dentists with NHS activity has reduced since 2018/19 and the relative reduction is greater for Norfolk and Waveney than East of England or England. This accelerated between 2019/20 and 2020/21 but has recovered slightly in the most recent year.

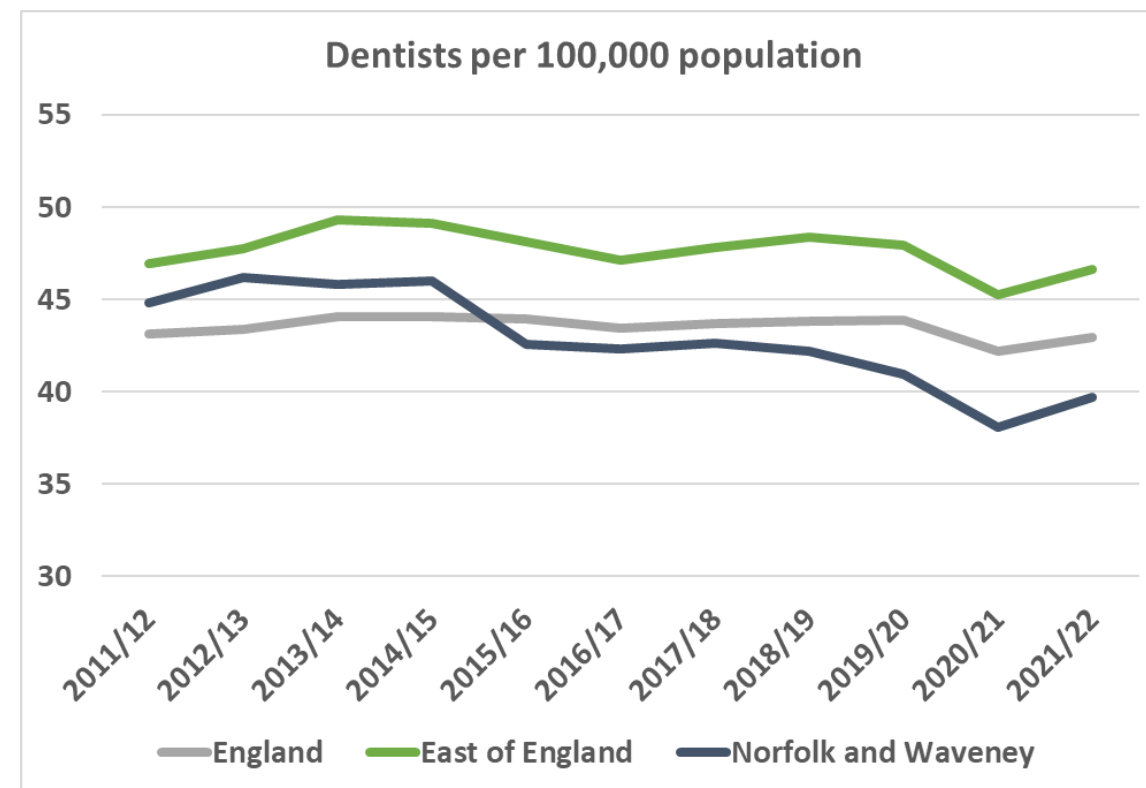
Year	England	East of England	Norfolk and Waveney
2011/12	22,920	2,880	437
2012/13	23,201	2,949	453
2013/14	23,723	3,073	452
2014/15	23,947	3,094	457
2015/16	24,089	3,063	426
2016/17	24,007	3,024	427
2017/18	24,308	3,088	433
2018/19	24,545	3,141	431
2019/20	24,684	3,129	420
2020/21	23,733	2,955	391
2021/22	24,272	3,058	410



Source: Table 2a: Number of dentists with NHS activity, for years ending 31 March, England - NHS England region geography and CCG <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-dental-statistics/2021-22-annual-report> (Annex 2a sub-national data)

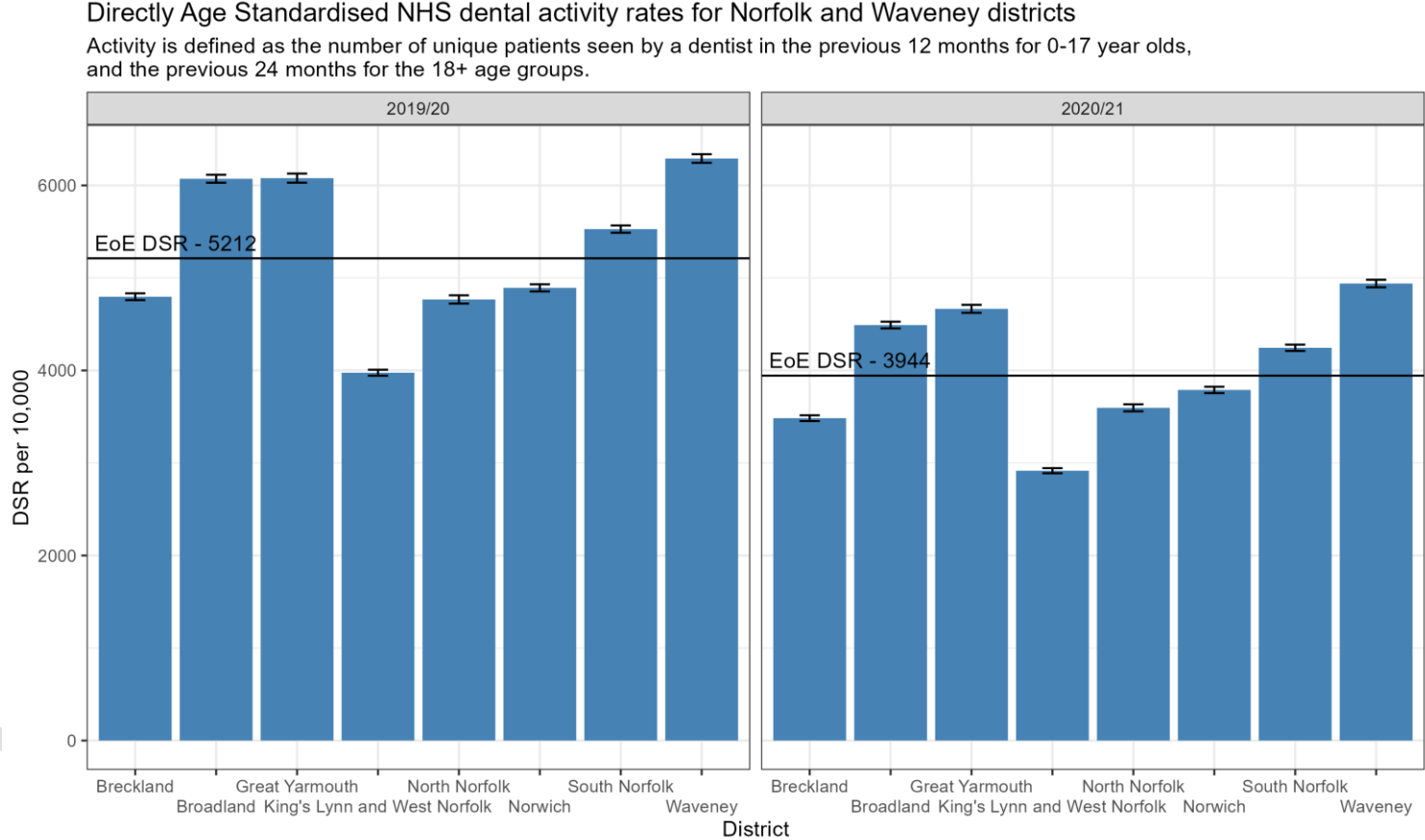
Over the last 10 years, the **number of dentists with NHS activity per 100,000 population** has declined in Norfolk and Waveney compared to England and the East of England. This decline accelerated between 2019/20 and 2020/21 but has shown a slight increase in the most recent year. This decline could have a greater impact in Norfolk due to higher levels of need (e.g. an older population).

Year	England	East of England	Norfolk and Waveney
2011/12	43.2	47.0	44.8
2012/13	43.4	47.7	46.2
2013/14	44.0	49.3	45.8
2014/15	44.1	49.1	46.0
2015/16	44.0	48.1	42.5
2016/17	43.4	47.1	42.3
2017/18	43.7	47.8	42.6
2018/19	43.8	48.4	42.2
2019/20	43.9	47.9	40.9
2020/21	42.2	45.3	38.1
2021/22	42.9	46.6	39.7



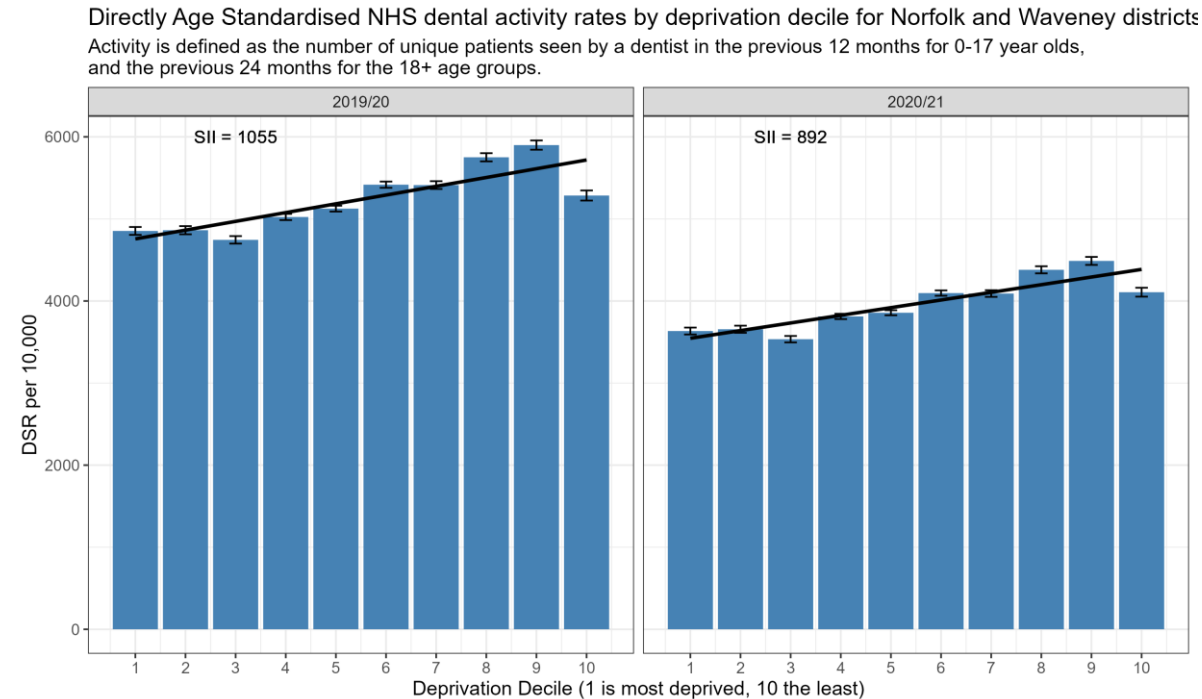
## Variation in NHS dentist activity for children and adults by deprivation and geography

Dental activity rates vary by location. Across both time periods, Broadland, Great Yarmouth, South Norfolk, and Waveney have higher activity rates than the East of England and other districts in Norfolk and Waveney. Breckland, King's Lynn and West Norfolk, North Norfolk, and Norwich have lower activity rates than the East of England average. Activity rates across all districts experienced about the same relative level of decline between 2019/20 and 2020/21



Activity rates are standardised for age and sex to take account of different population structures

NHS dental activity rates across Norfolk and Waveney are generally lower the more deprived the community. The lower activity rate for NHS dental activity in the least deprived area may reflect ability to access private dental treatment in more affluent areas. Activity rates across all deprivation deciles experienced about the same relative level of decline between 2019/20 and 2020/21

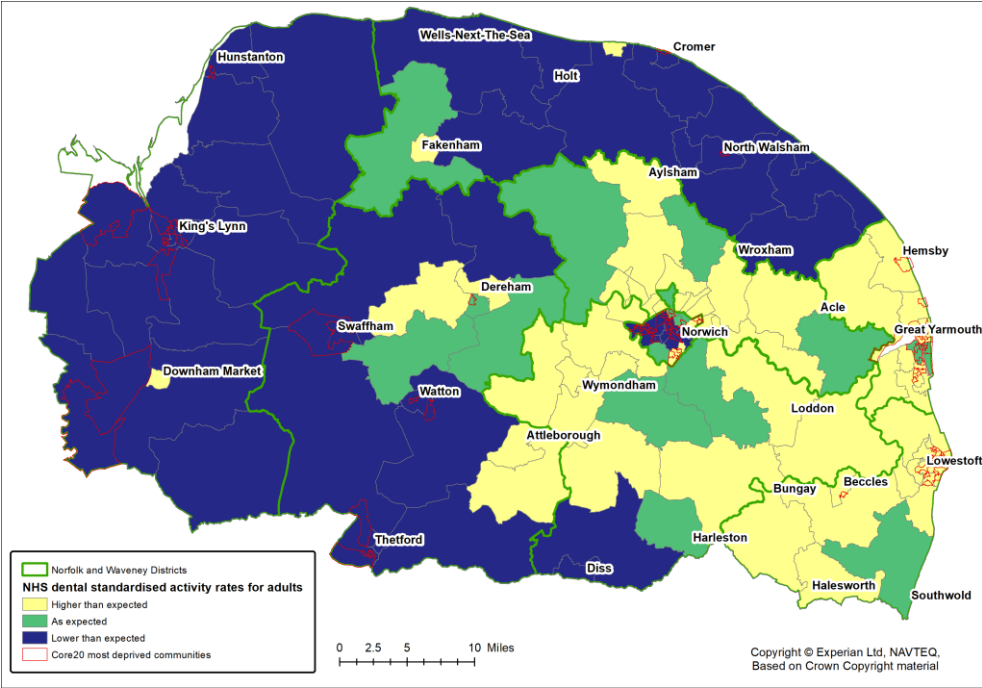
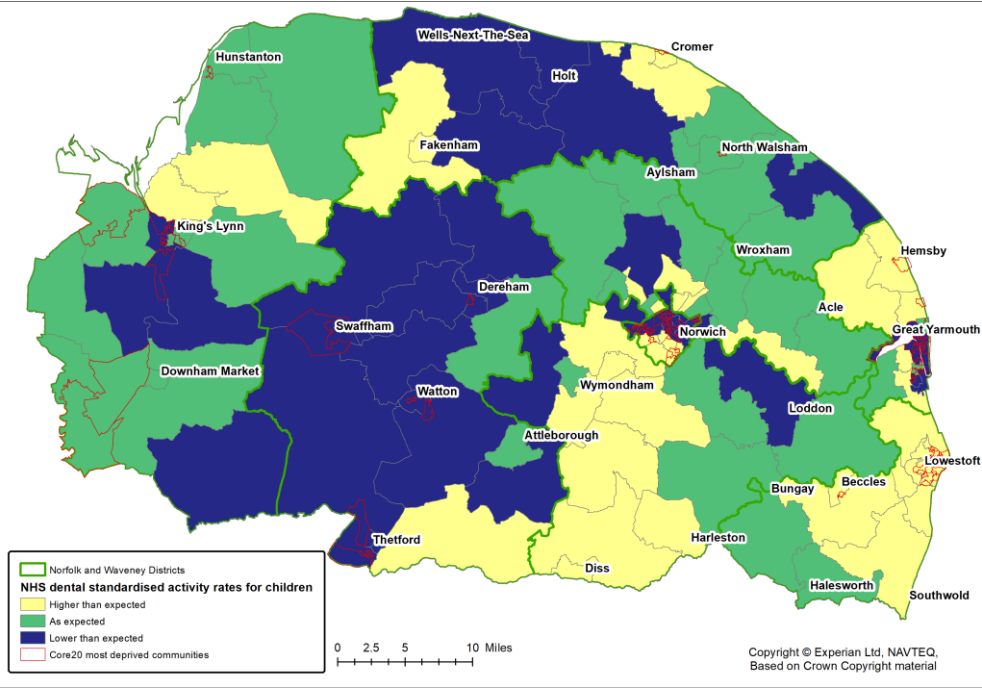


Dental activity rates by deprivation decile across Norfolk and Waveney 2020/21.



In Norfolk the communities with significantly lower than expected NHS dental activity rates for children are also some of the most deprived. Adults in most of the communities across King's Lynn and West Norfolk, North Norfolk, Norwich and to some extent, Breckland also have NHS dental activity rates lower than expected for their age profile.

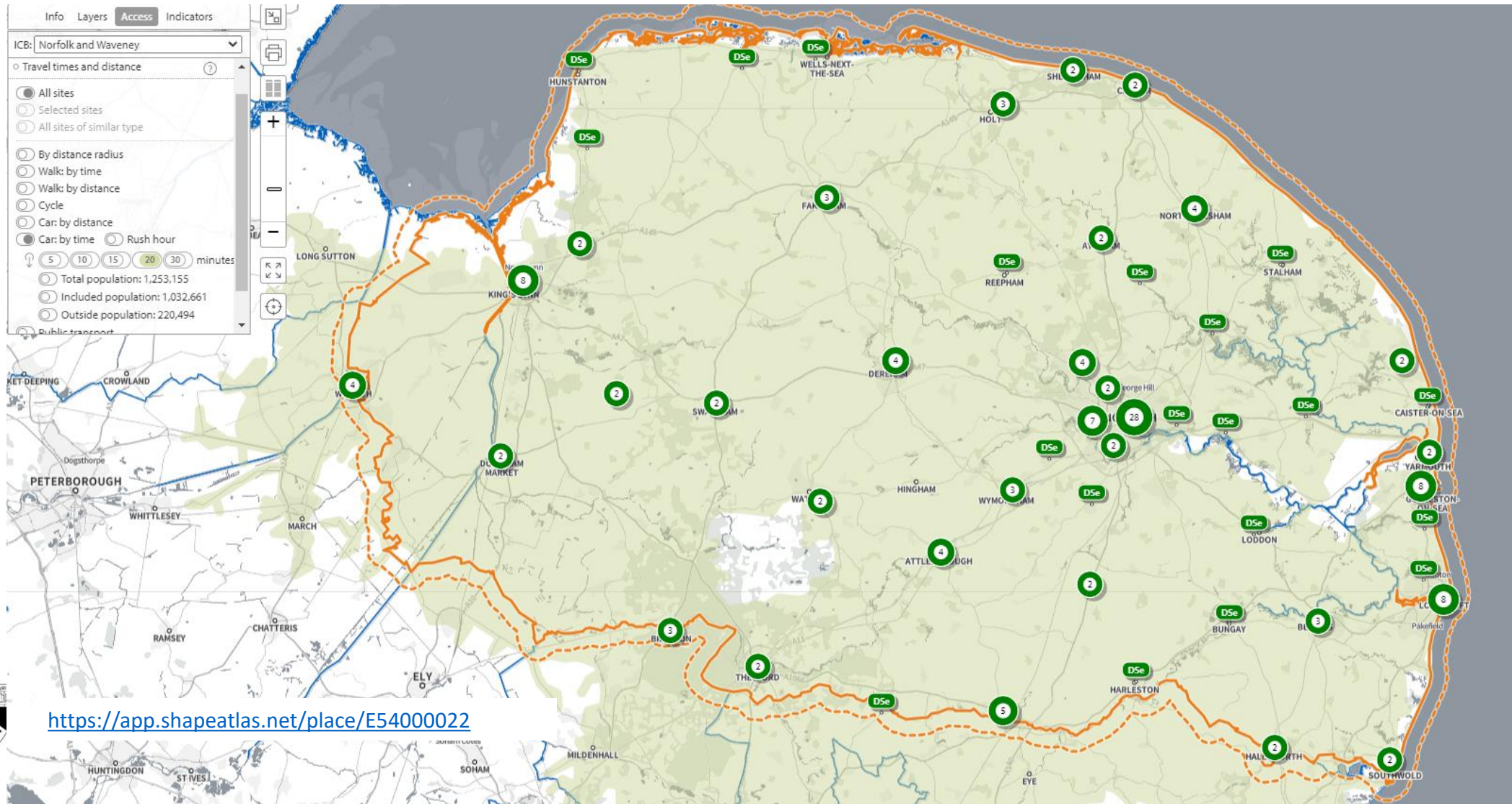
This is similar to findings from the local government association that show that more deprived communities and rural communities are less likely to access dentists.



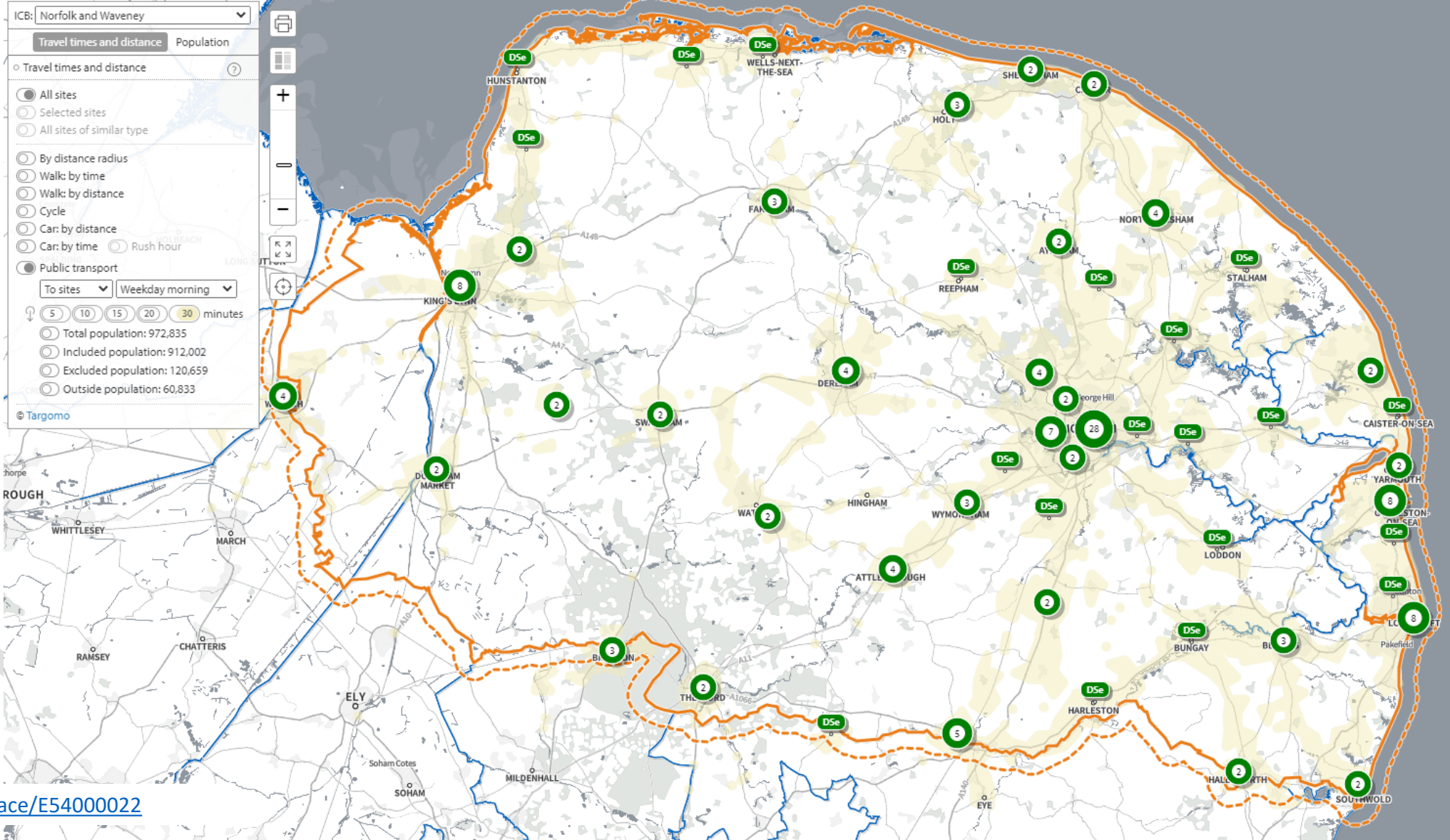


## Travel time access to Dentists

It is estimated that the majority of the Norfolk and Waveney population can access a dental practice (private or NHS) using a car within 20 minutes. For those who can't afford private care this depends on a) having access to a car and b) the practice offering NHS services.



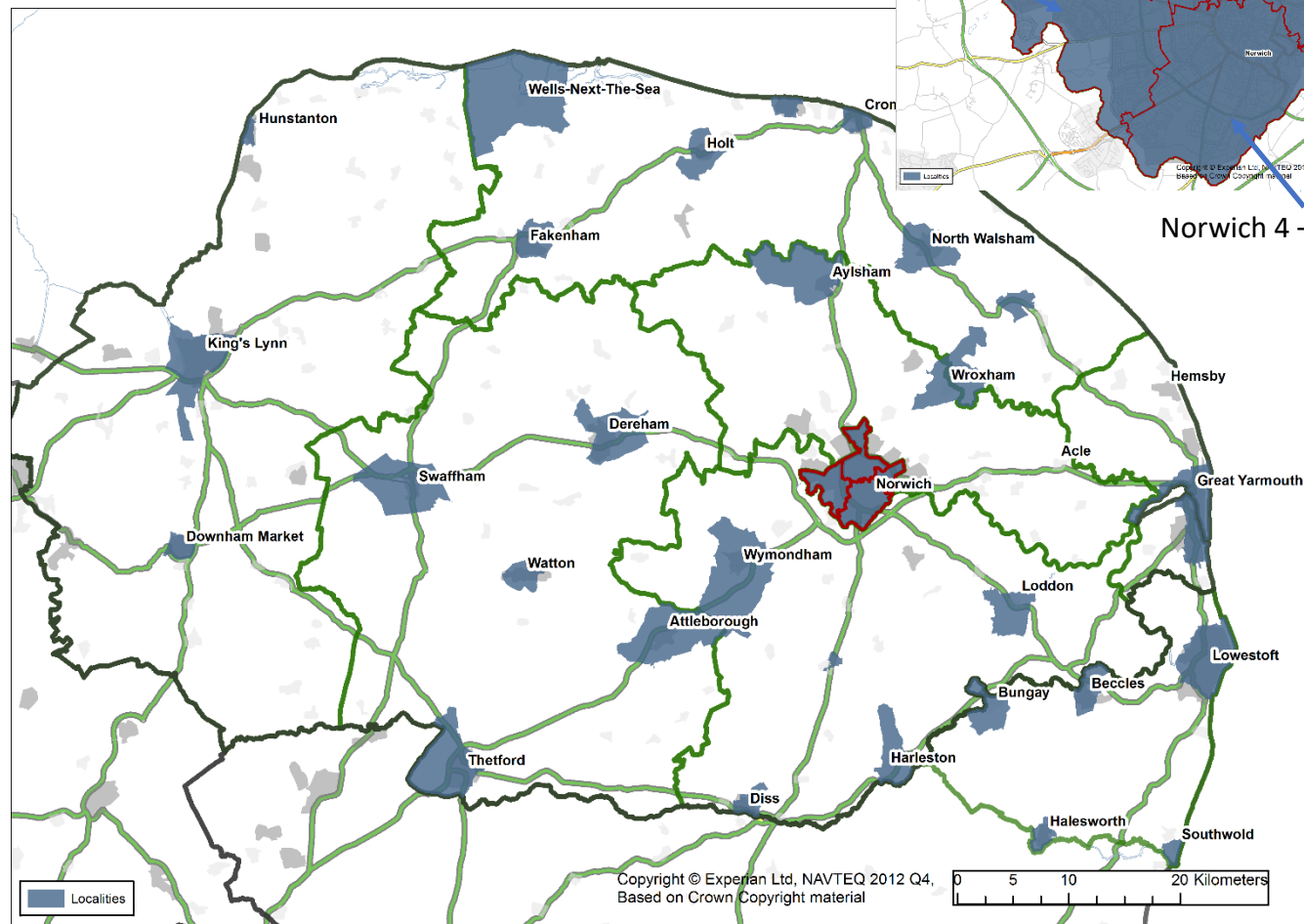
For those without access to a car and who rely on public transport, it is estimated that around 120,000 people cannot access a dental service by bus, rail, or tram service within 30 minutes. Areas in west Norfolk have worse access via public transport than around Norwich, Great Yarmouth and Waveney.





## Variation in activity rates by market town localities across Norfolk and Waveney

Market Town Locality	Population 2020
Attleborough	12,573
Aylsham	7,326
Cromer	7,762
Dereham	19,460
Diss	8,752
Downham Market	11,069
Fakenham	8,057
Gorleston	25,688
Great Yarmouth	28,966
Holt	4,334
Hunstanton	3,988
King's Lynn	41,690
Loddon	3,045
Long Stratton	2,097
North Walsham	12,932
Norwich 1 – Norwich North	36,229
Norwich 2 – Norwich East	17,461
Norwich 3 – Norwich West	38,646
Norwich 4 – Norwich South	49,841
Redenhall with Harleston	5,353
Sheringham	7,379
Stalham	3,142
Swaffham	8,333
Thetford	27,010
Watton	8,592
Wells-next-the-Sea	2,674
Wroxham and Hoveton	4,176
Wymondham	17,780
Other Norfolk	489,684
Beccles	10,468
Bungay	5,106
Halesworth	4,969
Lowestoft	62,903
Southwold	975
Other Waveney	34,201
<b>Norfolk</b>	<b>914,039</b>
<b>Norfolk and Waveney</b>	<b>1,032,661</b>



The localities listed make up about 49% of the total Norfolk and Waveney population

# Analysis of A&E attendance rates for dental related conditions together with location of dental practices offering NHS services highlights those market town localities that have few practices offering NHS services.

Market Town	2020 Population	IMD 2019	Average A&E attendances	A&E attendance rate per 100,000	Dental practice offering NHS and private	Private Only	NHS dentist practices per 100,000 residents	Child observed compared to expected NHS activity	Adult observed compared to expected NHS activity
Attleborough	12,573	13.3	12	91	3	1	24	91	123
Aylsham	7,326	12.6	7	89	2	0	27	95	111
Cromer	7,762	26.3	<5	N/A	2	0	26	115	83
Dereham	19,460	19.8	23	116	2	1	10	59	103
Diss	8,752	18.0	<5	N/A	3	1	34	137	88
Downham Market	11,069	19.6	21	185	1	1	9	107	108
Fakenham	8,057	18.8	13	161	3	0	37	121	106
Gorleston	25,688	34.3	85	329	5	0	19	87	110
Great Yarmouth	28,966	54.1	115	397	2	0	7	96	121
Holt	4,334	16.8	5	115	0	1	0	37	78
Hunstanton	3,988	30.9	12	301	1	0	25	80	83
King's Lynn	41,690	30.7	228	547	7	2	17	93	58
Loddon	3,045	14.1	5	164	1	0	33	76	123
Long Stratton	2,097	9.4	<5	N/A	1	1	48	117	107
North Walsham	12,932	19.8	11	85	3	1	23	94	93
Norwich 1 – North	36,229	33.5	53	145	1	2	3	88	98
Norwich 2 – East	17,461	33.1	21	117	4	0	23	77	100
Norwich 3 – West	38,646	27.7	57	146	5	1	13	93	78
Norwich 4 – South	49,841	21.1	39	78	13	4	26	122	87
Redenhall with Harleston	5,353	14.2	<5	N/A	1	0	19	151	103
Sheringham	7,379	15.0	<5	N/A	2	0	27	116	111
Stalham	3,142	24.6	<5	N/A	1	0	32	65	72
Swaffham	8,333	27.5	18	216	2	0	24	44	79
Thetford	27,010	23.9	<5	N/A	2	0	7	57	65
Watton	8,592	18.7	13	151	1	0	12	84	96
Wells-next-the-Sea	2,674	21.0	<5	N/A	1	0	37	79	82
Wroxham and Hoveton	4,176	20.3	<5	N/A	0	1	0	88	87
Wymondham	17,780	11.2	20	110	2	1	11	120	124
Other-Norfolk	489,684	16.5	555	113	31	6	6	101	101
Beccles	10,468	22.6	13	124	3	0	29	114	138
Bungay	5,106	21.0	7	127	1	0	20	118	115
Halesworth	4,969	18.4	6	121	1	1	20	110	105
Lowestoft	62,903	32.9	138	219	8	0	13	134	127
Southwold	975	18.1	<5	N/A	1	0	103	134	80
Other-Suffolk	34,201	16.8	37	108	1	0	3	127	123
Norfolk	914,039	21.1	1337	146	102	24	11	96	97
Norfolk and Waveney	1,032,661	21.7	1537	149	117	25	11	100	100

The NHS practices per 100,000 does not tell us the number of dentists available to see patients, just the number of practices.

For NHS activity we have calculated the expected activity for the market town locality based on the average Norfolk and Waveney activity for the age profile of the market town locality.

A number greater than 100 indicates NHS activity higher than expected. A number lower than 100 indicates NHS activity lower than expected

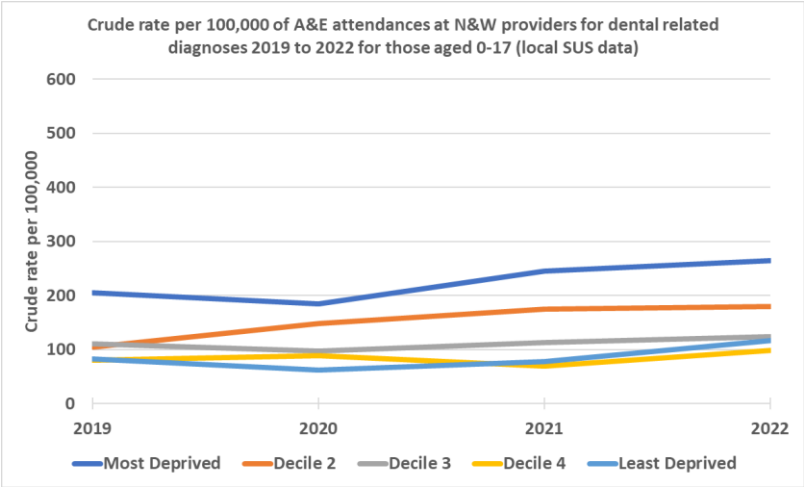
NHS activity rates are lower than expected in the market towns of King's Lynn, Thetford, Swaffham, Stalham, Holt, Norwich West

Green = less need or better outcomes

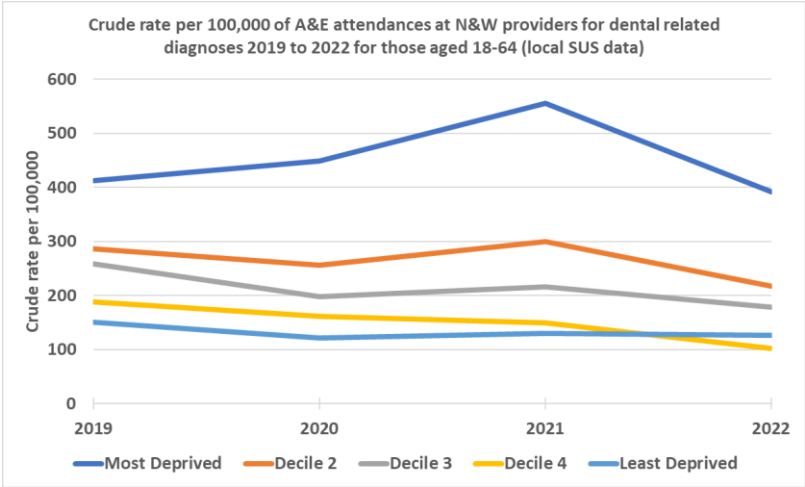
Red = more need or worse outcomes



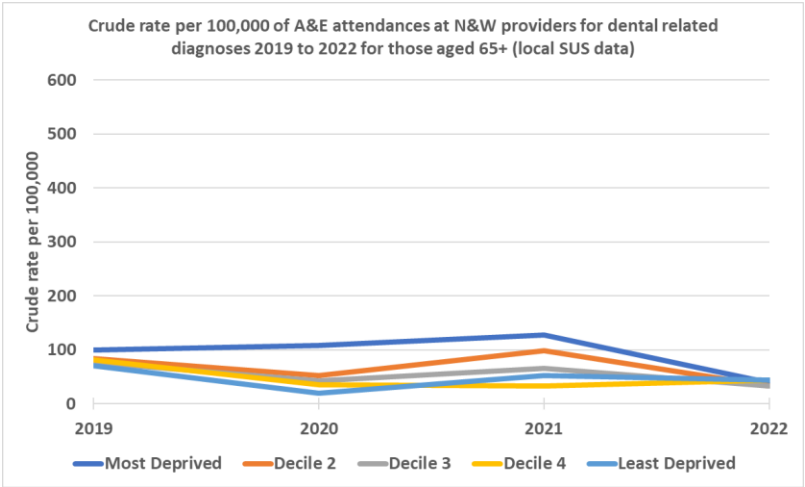
Lower dentist access rates may put increased pressure on A&E departments in the system. Looking at three year trends by deprivation quintile shows that rates of A&E attendances for dental conditions are higher in more deprived communities and increased faster in the more deprived communities across all age bands. The A&E attendance rate for dental conditions in the core 20 most deprived communities in 2022 was almost three times that of the least deprived communities.



Aged under 18



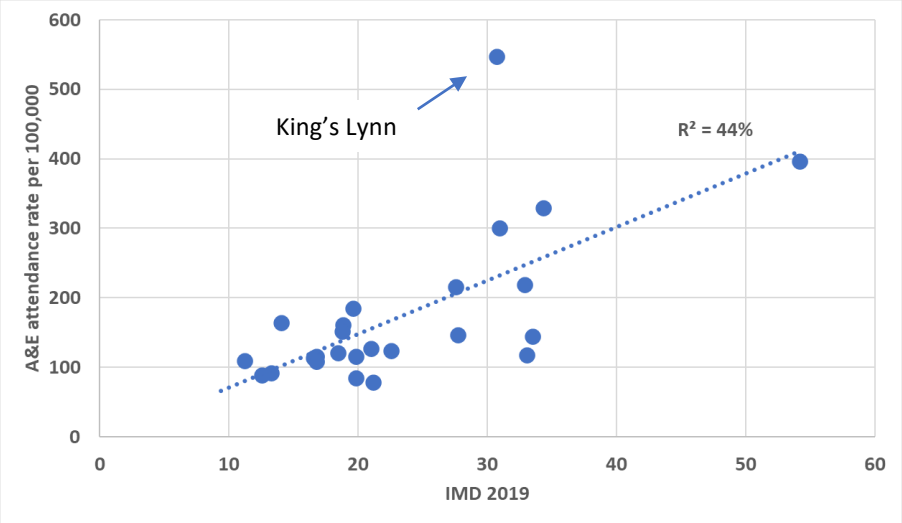
Aged 18-64



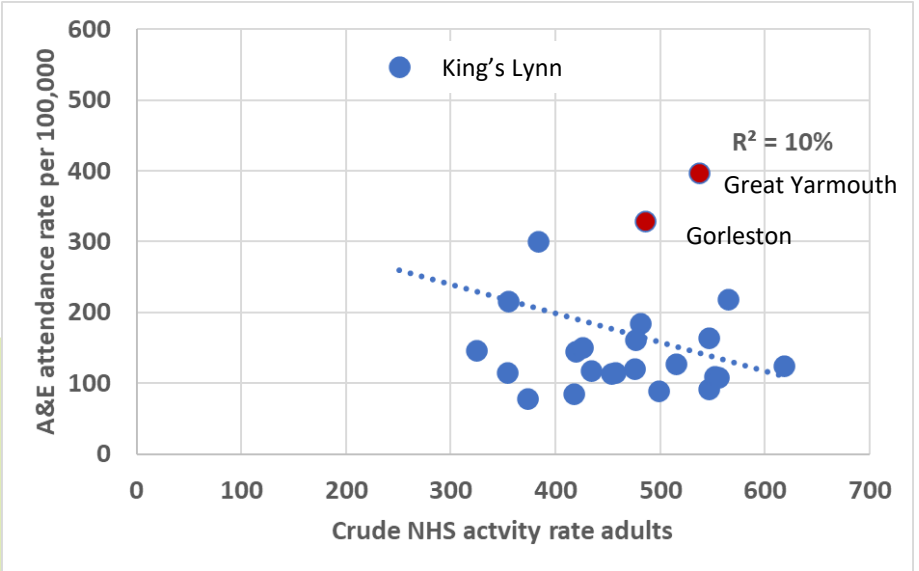
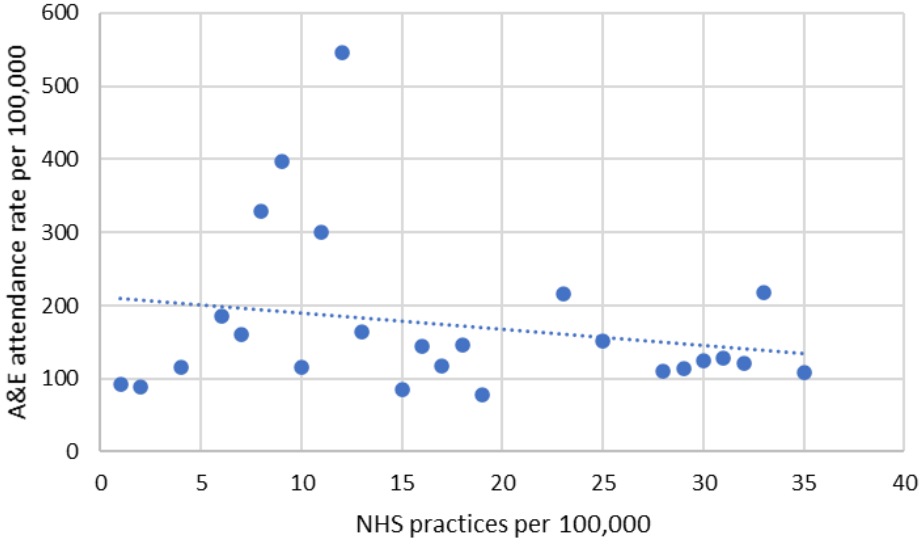
Aged 65+

Highest rates of A&E dental activity are seen in the working age (18-64) population.

Higher A&E attendance rates in market towns appear more likely to be associated with higher deprivation than number of NHS dental practices. However, there is also the issue of access to A&E and local population behaviour to consider. To some extent, for market towns across Norfolk and Waveney higher dentist access rates are associated with lower A&E attendance rates.



A&E attendances for market town localities across Norfolk and Waveney increase with deprivation (IMD 2019)



A&E attendance rates decrease as NHS access or activity rates increase

When people do attend A&E for dental related conditions, dental abscess is the most common diagnosis. This is estimated to cost over £100,000 per year

SNOMED primary diagnosis code	Primary diagnosis description	Average Attendances Per Year	Estimated average cost per year
299709002	Dental abscess (disorder)	1,146	£110,125
80967001	Dental caries (disorder)	452	£43,414
109678002	Extrusive luxation of tooth (disorder)	89	£8,525
109671008	Complete avulsion of tooth (disorder)	65	£6,274
42744004	Broken tooth without complication (disorder)	69	£6,640
58411009	Broken tooth with complication (disorder)	16	£1,576
Grand Total		<b>1,837</b>	<b>£176,554</b>

A&E attendance could be interpreted as a proxy measure for understanding variation in unmet demand for dental services

Analysis covers April 2019 to August 2022

Only includes A&E attendances for NHS Norfolk and Waveney residents at the following:

- Cromer Hospital
- James Paget University Hospital
- Norfolk and Norwich University Hospital
- The Queen Elizabeth Hospital King's Lynn

This may mean that some A&E attendances from South West Norfolk e.g. Thetford is missing as some of these attendances would go to the West Suffolk Hospital in Bury St. Edmunds

Average cost of A&E dental related attendance 2019/20 = £96

[https://www.england.nhs.uk/wp-content/uploads/2021/06/National\\_Schedule\\_of\\_NHS\\_Costs\\_FY1920.xlsx](https://www.england.nhs.uk/wp-content/uploads/2021/06/National_Schedule_of_NHS_Costs_FY1920.xlsx)

## Prevention of tooth decay – Fluoridation of water

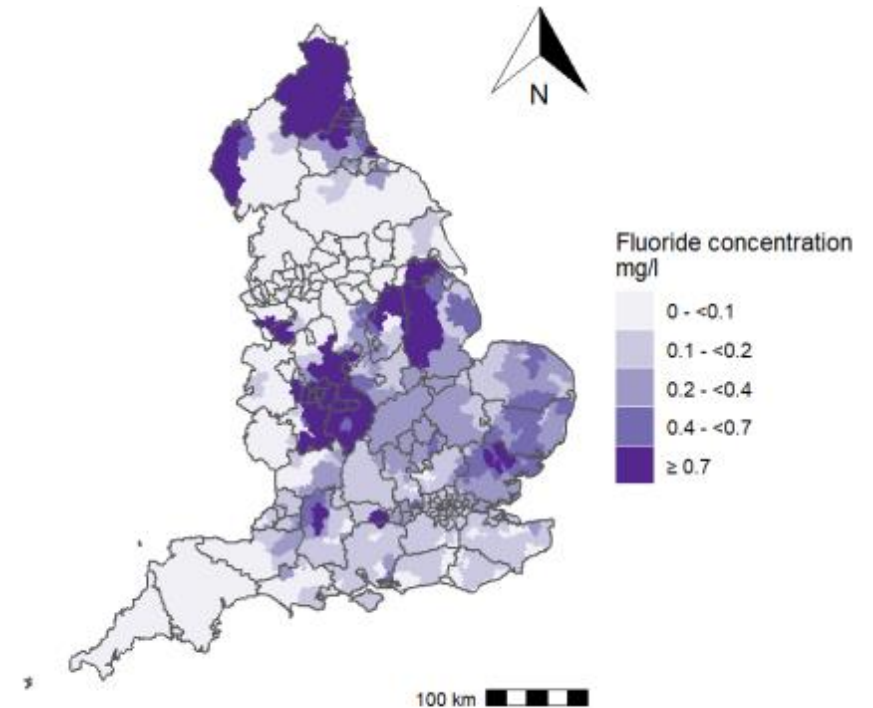
Tooth decay is largely preventable but major oral health inequalities remain. Preventative interventions include reducing the consumption of sugary food and drink, brushing teeth twice daily and taking a child to the dentist regularly. Fluoride is known to have preventative benefits and there are a range of fluoride related interventions that can be adopted to help reduce the risk of tooth decay - including supervised toothbrushing schemes for children and fluoride varnishing.

Water fluoridation is another intervention that does not require behaviour change and is considered a safe and effective public health measure for areas with concerning high levels of dental decay and naturally low levels of fluoride in the local water supply.

Fluoride occurs naturally in the environment and can be present in water and some foods in varying concentrations. Water fluoridation schemes in England aim to achieve the equivalent to one part fluoride per million of water (1 mg/l). In England, around 10% of the population receives public drinking water served by a fluoridation scheme.

There are no water fluoridation schemes in Norfolk and Waveney.

Across Norfolk and Waveney the areas with the lowest fluoride naturally occurring in the water are in King's Lynn and West Norfolk and some parts of Broadland / South Norfolk.



[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1060471/water-fluoridation-health-monitoring-report-2022.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1060471/water-fluoridation-health-monitoring-report-2022.pdf)



## Sources and other useful links

Location of NHS and private dentists

<https://digital.nhs.uk/data-and-information/publications/statistical/nhs-dental-statistics/2021-22-annual-report>

Oral health toolkit

<https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention>

OHID fingertips data

<https://fingertips.phe.org.uk>

NHS Digital dental statistics

<https://app.powerbi.com/view?r=eyJrIjoieYTRlMzJiYTEtMTgwMi00ZTdiLTgzMWUtZGM5Y2NmMTI5MGE4IiwidCI6IjUwZjYwNzFmLWJiZmUtNDAxYS04ODAzLTY3Mzc0OGU2MjllMmIsImMiOjh9>

Tooth extractions

<https://www.gov.uk/government/statistics/hospital-tooth-extractions-of-0-to-19-year-olds-2021>

Cancer related statistics

<https://www.cancerresearchuk.org/about-cancer/mouth-cancer/survival>

<https://www.cancerdata.nhs.uk/incidence-and-mortality>

Access Travel times <https://app.shapeatlas.net/>

Oral health in older people

<https://www.gov.uk/government/publications/oral-health-of-older-people-in-england-and-wales>

<https://www.nice.org.uk/about/nice-communities/social-care/quick-guides/improving-oral-health-for-adults-in-care-homes>

Population projections

<https://www.ons.gov.uk/releases/subnationalpopulationprojectionsforengland2018based>

Oral health in looked after children

<https://arc-swp.nihr.ac.uk/research/projects/dental-care-looked-after-children/>

<https://ijpds.org/article/view/324>

Fluoridation

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1060471/water-fluoridation-health-monitoring-report-2022.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1060471/water-fluoridation-health-monitoring-report-2022.pdf)



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County Council