Rapid Oral Health Needs Assessment Yorkshire & the Humber May 2022

Understanding oral health inequalities in Yorkshire and the Humber and the evidence base

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Contents

1. Executive Summary

The purpose of this rapid oral health needs assessment is to help understand the oral health inequalities across Yorkshire and the Humber (Y&tH) and the evidence base in order to inform principles underpinning strategy and work programme development; address inequalities; and meet population need and demand. It also supports a multi-stakeholder approach to the commissioning of prevention programmes to improve oral health and reduce oral health inequalities.

Poor oral health is largely preventable and is essential for good general health throughout the life course, enabling individuals to eat, speak, and socialise without pain or embarrassment.

I. Limitations of the Rapid Oral Health Needs Assessment

It is important to acknowledge the limitations when considering the findings including:

- Availability, accessibility, robustness, and the timeframe to collate relevant datasets.
- The focus of this rapid oral health needs assessment has been on identifying oral health inequalities, with recommendations based on principle. There will be a need for further investigation of the data to develop an understanding of where prioritisation is needed, aligned with services and care pathways.
- Limitations of available evidence on oral health inequalities related to:
    - Protected characteristics with mixed or inconclusive evidence related to pregnancy/ maternity and religion, and limited data available for oral health inequalities related to ethnicity but evidence related to oral cancer, caries, and tooth loss.
    - Vulnerable groups – prisoners, Gypsy Roma and Traveller communities, looked after children and bariatric patients.
- This rapid oral health needs assessment does not provide a comprehensive overview of the totality of commissioned dental services in Y&tH e.g. dental services commissioned by Health and Justice in secure settings, nor identify any gaps in service provision, but it does provide recommendations in relation to prioritisation of care pathway work to inform future commissioning and service model design.

II. Key findings from Yorkshire and the Humber

- Inequalities in oral health exist with those in the most deprived areas experiencing poorer oral health across all age groups.
- 3-year-olds in Y&tH have the greatest experience of tooth decay nationally (Y&H – 15%; England 12%).
- By the age of 5-years in Yorkshire and the Humber, 29% have experience of tooth decay, the second highest prevalence nationally (England 23%) (Range Ryedale – 11% to Sheffield – 41%).
- For those children with experience of tooth decay, by the time they reach 5 years of age they will on average have 4 teeth that are either decayed, extracted, or filled (Range: Craven 2 – Bradford 4.3 teeth).
- Tooth decay can cause problems with eating, sleeping, communication and socialising, and can result in missed days from school for hospital extractions and time off work for carers.

- Tooth decay is still the most common reason for hospital admissions in the 6-10-year-old age group and 2-3% of children in Local Authorities across South Yorkshire had teeth extracted under general anaesthetic in 2019, the highest levels seen nationally.
- There is evidence of oral health inequalities associated with disability in terms of caries, dental access, tooth loss, traumatic dental injuries, oral health behaviours and quality of life.
- Y&tH has an ageing population. Over the next two decades the population of older adults (65+ years) is expected to increase by 33% and for those aged 85+ years is expected to increase by 66%. 42% of mildly dependant older adults had a functional dentition (21 or more teeth) with an expectation of retaining their teeth for life.
- Incidence of oral cancer is significantly higher in Y&tH when compared with England.
- There are limited contractual levers from which to re-distribute resource to promote oral health prevention and support dentists in treating high needs patients.
- A health equity audit should be used to determine equity of access to dental services, including urgent care services, and evaluate the outcomes from initiatives to improve access across Y&tH, the findings of which should inform future commissioning decisions.

***Top priorities**:*

Particular consideration should be given to those that have both the greatest dental need and experience challenges in accessing routine and urgent dental care. This includes individuals and communities that are deprived, vulnerable children known to the social care system, individuals with severe physical and/or learning disabilities, those with poor mental health, older adults, homeless, asylum seekers, refugees and migrants. Data and evidence surrounding oral health inequalities is variable and complex, but we know that they also exist in relation to oral cancer as well as in vulnerable groups with long-standing medical conditions, substance misuse, prisoners/prison leavers and Gypsy, Roma and Traveller communities.

As a priority, a Community Dental Service (CDS) service review should encompass the entire special care dentistry and paediatric pathway and consider benefits of a Referral Management System (RMS). A service review of prison dental services in Yorkshire and the Humber is being undertaken separately. Considering the complex needs of the older and ageing population, care pathways for housebound or those living in residential and nursing settings should be reviewed. The review of current dental services for people with no fixed abode in Y&tH can be used to inform robust care pathway design, commissioned models and support implementation.

Available Healthwatch reports were used to inform the rapid needs assessment. It is important that commissioned dental services including service design and development work consider the views, beliefs, and experiences of the public and patients living in Y&tH to improve patient safety, experience, and health outcomes. Building on work to date, NHSEI should continue to work in partnership with key stakeholders, including Healthwatch, to maximise opportunities to ensure patient centred services improve access, reduce inequalities in communities and make better use of resources.

2. Introduction

The purpose of this rapid oral health needs assessment is to support commissioning teams with prioritisation and targeting of oral health care provision, to reduce inequalities of access to NHS dental care across Y&tH. It also supports a multi-stakeholder approach to the commissioning of prevention programmes to improve oral health and reduce oral health inequalities and meet population need.

The rapid needs assessment uses a combination of national, regional and local datasets and resources to outline population demographics and explore oral health inequalities and inequities that exist across the region. This has involved analysing datasets such as national epidemiological surveys and anonymised NHS Business Service Authority (BSA) contractual data to inform population demographics, oral health needs and dental access and identify areas of high need.

Data from Health Education England (HEE) has also been used to inform workforce capacity. The needs assessment concentrates on the following domains for the region of Y&tH:

- An overview of the population
- Description of the oral health of adults and children using national epidemiological surveys
- Oral health inequalities
- An overview of access to oral healthcare services
- Patient and public experiences
- An overview of oral health improvement programmes/activities provided in the region

Responsibilities in relation to oral health
Since 1st April 2013, when the Health and Social Care Act 2012 came into force, the responsibility for oral health has been split between two organisations:

NHS England:

- Has the statutory duty to commission the totality of NHS dental services with ICSs taking on commissioning responsibilities from 2023

Local authority:

Statutory responsibilities:

- Commission or provide oral health improvement programmes to improve health (Statutory instrument 3094)
- Commission or provide oral health surveys and to participate in any oral health survey commissioned by the secretary of state (Statutory instrument 3094)
- Power to make proposals regarding water fluoridation schemes and duty to conduct public consultations in relation to these (Statutory instrument 301)

Whilst correct at the time of writing readers would be encouraged to explore proposed changes as outlined in the Health and Care Bill 2021-22.

The Challenges

Recent local oral health needs assessments have highlighted key oral health challenges experienced in the region which are outlined below (PHE, 2018).

Despite improvements in oral health in England over the last forty years, many people continue to suffer the pain and discomfort associated with oral diseases, which are largely preventable. A healthy mouth and smile mean that people can eat, speak and socialise without pain or discomfort. Oral health is an integral part of health and wellbeing and many of the key risk factors are associated with other common chronic diseases and conditions.

The distribution and severity of oral diseases varies between Local Authorities and regions. Unacceptable inequalities exist with more vulnerable, disadvantaged and socially excluded

groups experiencing more oral health problems. As with health inequalities, oral health inequalities are not inevitable- they are a result of inequalities in income, education, employment and living conditions throughout life and can be reduced. Focusing on the wider determinants of health and individual behavioural change approaches are necessary to achieve sustainable improvements in oral health related behaviours. Social, environmental, economic or lifestyle factors place vulnerable groups at higher risk of poor oral health and make it difficult for them to access dental services.

The two main oral diseases are tooth decay (dental caries) and gum (periodontal) disease. Whereas tooth decay tends to be a problem in the general population, gum disease is more prevalent in the older population. Both diseases can lead to loss of teeth and both conditions are preventable.

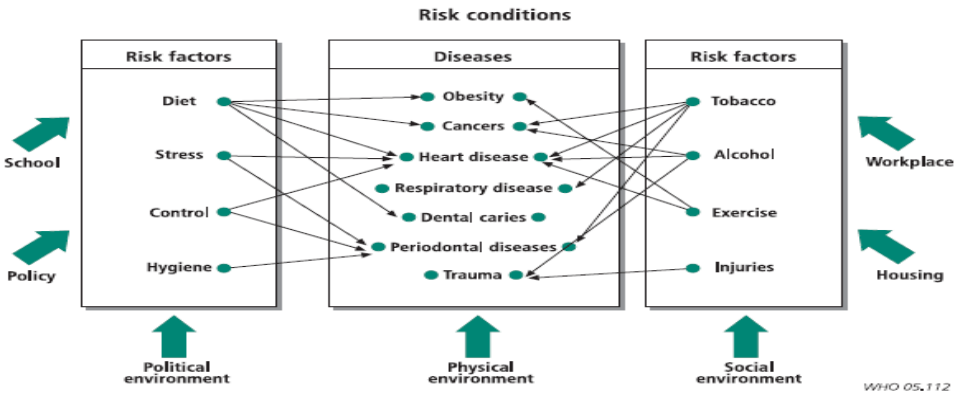
There are other oral conditions that are not as widespread but do have an impact, sometimes significantly, on the population. The more serious conditions are mouth cancer and congenital deformities, such as cleft lip and palate. Other oral health conditions include orthodontic problems e.g. crowded and misaligned teeth and tooth surface loss e.g. erosion due to dietary acids.

Tooth decay may be prevented by reducing the amount and frequency of consumption of sugary foods and drinks and optimising exposure to fluoride. Gum disease may be prevented by good oral hygiene and stopping smoking; and the risk of oral cancer may be reduced by: stopping smoking; drinking no alcohol or drinking alcohol within recommended safe limits; eating a healthy diet; reducing sun exposure (linked with lip cancer;) and immunisation with the HPV vaccine as mouth and oropharyngeal cancers have been linked to the human papilloma virus (HPV) transmitted through oral sex.

Oral diseases and conditions share common risk factors with other diseases such as diabetes, cardiovascular disease, cancer and obesity (figure 1). A common risk factor approach aims to control the shared risk factors thereby impacting on a multitude of conditions and diseases (Sheiham and Watt, 2000).

Oral health messages need to be incorporated through a common risk factor approach into all health promotional programmes and included in health assessments for vulnerable groups.

Figure 1: Common risk factors (Sheiham and Watt, 2000)



3. Aim and Objectives

Aim:

The aim is to support commissioning teams with prioritisation and targeting of oral health care provision to reduce inequalities to access to NHS dental care across Y&tH.

Objectives:

- Use readily available data sources to highlight predicted population demographics, prevalence of oral health disease and oral health inequalities and inequities across Yorkshire and the Humber.

- To utilise the initial findings to inform targeted work to explore how oral health inequalities and inequities can be addressed and inform future workstreams.

Integrated Care Systems (ICS)

Where possible Local Authority data has been aligned with the current geographical footprints of Integrated Care Systems (ICS) which are outlined in table 1 below.

Table 1: ICS footprint aligned with Yorkshire & the Humber Local Authorities

ICS	Local Authority
Humber Coast and Vale	East Riding
	Kingston upon Hull
	North East Lincolnshire
	North Lincolnshire
	York
	North Yorkshire Hambleton Harrogate Richmondshire Ryedale Scarborough Selby
West Yorkshire	Bradford
	Calderdale
	Craven
	Kirklees
	Leeds
	Wakefield
South Yorkshire	Barnsley
	Doncaster
	Rotherham
	Sheffield

Data relating specifically to Bassetlaw is not included due to the changes in ICS footprint i.e. *Bassetlaw will move into Nottingham and Nottinghamshire ICS.'* (DHSC. 2021).

4. Population demographics for Yorkshire & the Humber

Across Y&tH the Local Authorities vary in terms of their size and population demographics, with some areas having a differential proportion of children, working age adults and older adults (Table 2) and the distribution of that population within the geography (Figure 2).

There are large areas of sparsely populated rurality predominantly in Humber Coast & Vale together with the densely populated areas of West Yorkshire and South Yorkshire. Each

present their own challenges for the planning and delivery of dental services, including location and distribution of services and recruitment and retention of dental team members.

Table 3 summarises the predicted trends in population demographics at Local Authority and ICS level across Yorkshire & the Humber between 2020-2040 (see also Appendix – population Tables A-E). Over the next two decades, the all age population of Yorkshire and the Humber is expected to increase by 6%. Similar increases are expected in all Local Authorities except for Hull, North East Lincolnshire, York, Hambleton, Richmondshire and Harrogate which are expected to remain relatively static. By comparison, the populations of Wakefield, Ryedale, Selby and all Local Authorities in South Yorkshire are expected to increase at a rate greater than that of Yorkshire and the Humber. In most Local Authorities the falling birth rate is reflected in the predicted reduction in the child population, with the exception of Rotherham, Sheffield, Barnsley, Leeds, Wakefield, Ryedale and Selby.

Of most significance is the predicted 33% increase in the population of older adults (65+ years), across Y&tH (range Leeds, 24% to Richmondshire, 45%) and 66% increase in the population of 85+ age group (range Hull 43% to Selby 102%) which is consistent across all Local Authorities. This highlights the need to develop dental services that meet the dental needs of this ageing population in terms of managing patients with co-morbidities and polypharmacy, training for the dental team and estates (refer to section on adult oral health).

There are also more local anticipated changes in population numbers that will need to be considered in planning of dental services, for example the planned expansion of the military garrison at Catterick, and the influx of young families this will bring to the area. Time will tell whether the reports of relocation from urban to rural / seaside areas, including North Yorkshire, in the wake of the COVID-19 pandemic lead to a persistent increase in the population of these areas and demand for services. Challenges exist in the mechanisms that are available to enable the commissioning of dental services that align with population growth.

Table 2: Population of Y&tH by local authority and ICS by age group, 2020.

LA / ICS	All ages	0-19	20-64	65+	85+
H & NY	**2,329,333**	**500,332**	**1,295,509**	**533,492**	**69,595**
East Riding of Yorks	343,201	69,377	183,193	90,631	11,178
Kingston upon Hull,	259,126	63,837	155,852	39,437	4,603
North East Lincs	159,364	37,536	88,570	33,258	4,589
North Lincolnshire	172,748	38,890	96,564	37,294	4,656
York	211,012	44,545	127,593	38,874	5,604
North Yorkshire**	620,610	128,624	337,028	154,958	20,615
Hambleton	91,932	17,947	49,397	24,588	3,130
Harrogate	161,545	35,849	87,239	38,457	5,796
Richmondshire	53,732	11,288	30,754	11,690	1,391
Ryedale	55,629	10,782	29,612	15,235	2,035
Scarborough	108,737	21,282	57,251	30,204	3,829
Selby	91,697	20,375	52,456	18,866	2,169
West Yorkshire	**2,402,573**	**603,037**	**1,391,842**	**407,694**	**51,851**
Bradford	542,128	156,146	304,168	81,814	10,788
Calderdale	211,439	50,086	121,130	40,223	4,773

Craven	57,338	11,101	30,319	15,918	2,265
Kirklees	441,290	110,150	252,146	78,994	9,741
Leeds	798,786	194,280	480,722	123,784	16,280
Wakefield	351,592	81,274	203,357	66,961	8,004
South Yorkshire	**1,415,054**	**328,263**	**830,705**	**256,086**	**32,561**
Barnsley	248,071	56,154	143,257	48,660	5,750
Doncaster	312,785	73,197	179,264	60,324	7,427
Rotherham	264,984	62,673	149,923	52,388	6,223
Sheffield	589,214	136,239	358,261	94,714	13,161
Y&tH	**5,526,350**	**13,330,355**	**32,755,764**	**1,042,314**	**133,392**
ENGLAND	56,550,138	1,303,008	3,181,028	10,464,019	1,406,410

Source: ONS, 2020. [Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)]

** includes Craven and Harrogate

Figure 2: Population density of Yorkshire and the Humber (2019)

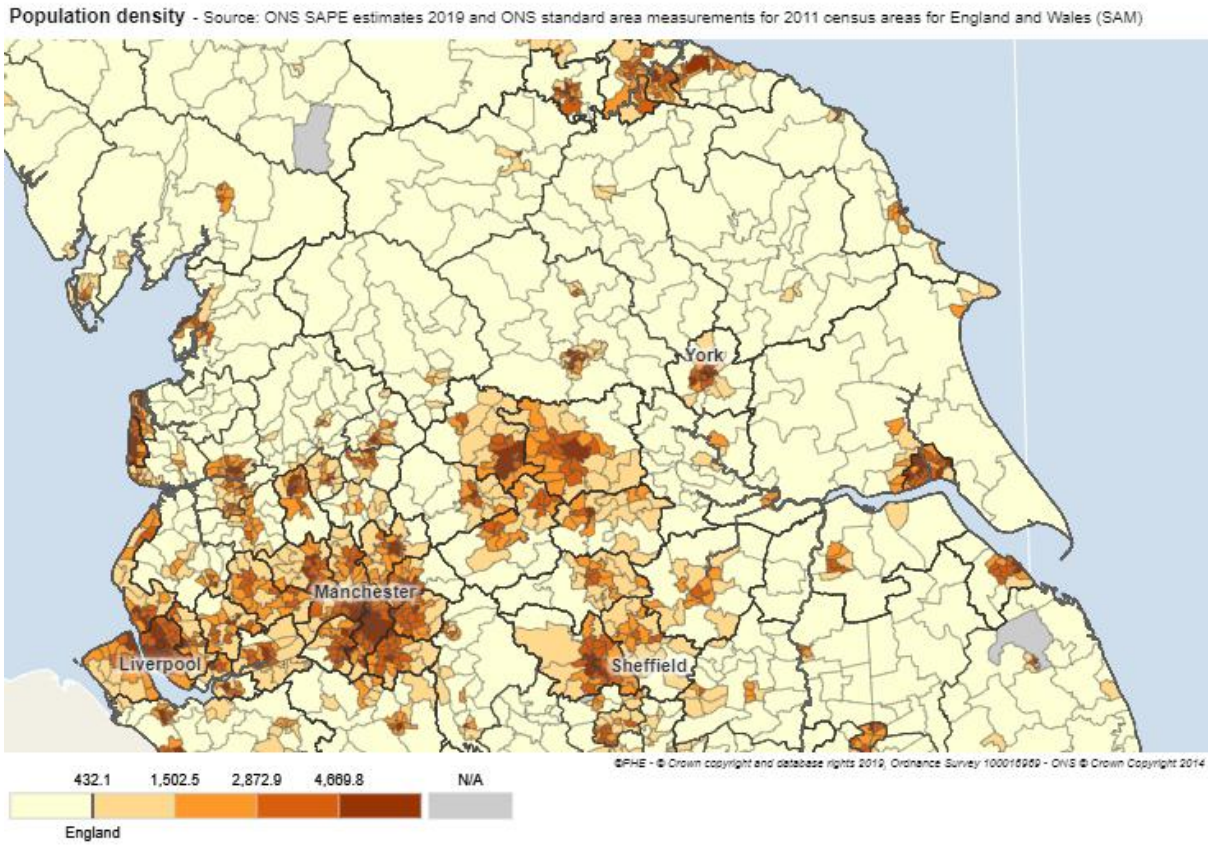


Table 3: Predicted change in population for Y&tH by local authority and ICS (2020-2040)

LA / ICS	% change 2020-2040				
	0-19 years	**20-64 years**	**65+ years**	**85+ years**	**All ages**
Humber Coast & Vale	**-7%**	**-5%**	**36%**	**74%**	**3%**
East Riding of Yorks	-6%	-6%	35%	84%	5%
Kingston upon Hull	-5%	-4%	25%	43%	0%
North East Lincolnshire	-12%	-9%	33%	65%	-1%
North Lincolnshire	-10%	-5%	35%	76%	3%
York	-6%	-3%	28%	65%	2%
North Yorkshire**	-6%	-7%	39%	81%	5%
Hambleton	*-12%*	*-10%*	*35%*	*80%*	*2%*
Harrogate	-12%	*-11%*	*40%*	*76%*	*1%*
Richmondshire	*-12%*	*-15%*	*45%*	*98%*	*-1%*
Ryedale	*1%*	*0%*	*39%*	*81%*	*11%*
Scarborough	*-8%*	*-8%*	*36%*	*72%*	*4%*
Selby	*9%*	*5%*	*43%*	*102%*	*14%*
West Yorkshire	**-1%**	**1%**	**34%**	**63%**	**6%**
Bradford	-6%	0%	37%	57%	4%
Calderdale	-8%	-4%	36%	72%	3%
Craven	-7%	*-6%*	*37%*	*78%*	*6%*
Kirklees	-5%	-1%	34%	75%	4%
Leeds	3%	1%	24%	48%	5%
Wakefield	13%	11%	40%	77%	17%
South Yorkshire	**1%**	**4%**	**32%**	**60%**	**8%**
Barnsley	1%	3%	42%	76%	10%
Doncaster	-5%	2%	35%	65%	7%
Rotherham	2%	3%	28%	70%	7%
Sheffield	5%	6%	27%	44%	9%
Y&tH	**-2%**	**0%**	**33%**	**66%**	**6%**

Deprivation

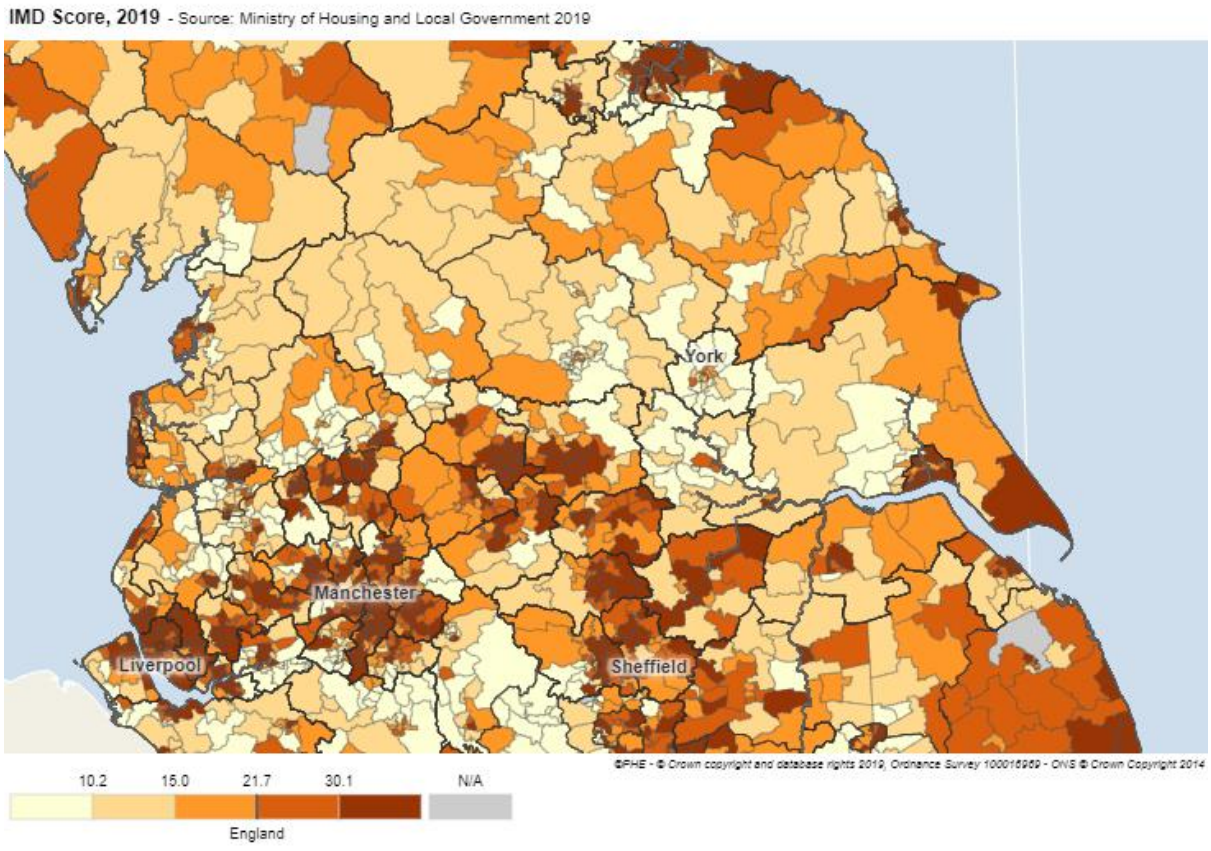
The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England and is part of a suite of outputs that form the Indices of Deprivation (IoD). It follows an established methodological framework in broadly defining deprivation to encompass a wide range of an individual's living conditions.

People may be considered to be living in poverty if they lack the financial resources to meet their needs, whereas people can be regarded as deprived if they lack any kind of resources, not just income.

The 2019 index is based on 39 separate indicators organised across seven distinct domains of deprivation, which are combined and weighted to calculate the Index of Multiple Deprivation 2019. This provides an overall measure of multiple deprivation experienced by people living in an area and is calculated for every Lower-layer Super Output Area (LSOA). These are then ranked according to their level of deprivation relative to that of other areas. High ranking LSOAs or neighbourhoods can be referred to as the 'most deprived'. However, there is no definitive threshold above which an area is described as 'deprived'. The Indices of Deprivation measure deprivation on a relative rather than an absolute scale, so a neighbourhood ranked 100th is more deprived then a neighbourhood ranked 200th, but this does not mean it is twice as deprived.

Deprivation is one measure of the diversity of the population of Yorkshire and the Humber (Figure 3). More deprived areas are found in highly populated urban areas and along the North Sea coast. Deprivation is strongly correlated with poor oral health, particularly tooth decay (all ages) and oral cancer in adults.

Figure 3: Deprivation in Yorkshire and the Humber (IMD, 2019)



Ethnicity

The Equality Act 2010 protects against race discrimination and this refers to discrimination because of colour, nationality, national origin and ethnicity. Ethnicity and national identity are self-defined and therefore subjectively meaningful to an individual. Table 4 provides an overview of the evidence for oral health inequalities by ethnicity in the UK. Table 5 outlines ethnicity variations by local authority from ONS 2011 Census data.

Table 4 Evidence for oral health inequalities by ethnicity: summary table (PHE. 2020)

Outcome	**Evidence for inequalities in relation to ethnicity**
Tooth decay	Children: Some evidence for higher levels of tooth decay among Asian and Eastern European White groups compared to other White children, but some inconsistencies. Limited data available. Adults: Some evidence for lower decay levels among Asian and Black ethnic groups, compared to White groups.
Periodontal disease	Inconclusive; limited data available.
Tooth loss	Yes; some evidence that tooth loss and edentulousness rates are higher among Whites than among ethnic minority groups, possibly with the exception of Black ethnic groups. Limited data available.
Oral cancer	Yes; some evidence that South Asian women have higher risk of oral and pharyngeal cancers than White women; evidence for men inconclusive.
Odontogenic infections	No data
Traumatic dental injuries	No; but based on limited data.
Self-rated oral health	Inconclusive; limited data available. Some evidence for poorer self-rated oral health among Pakistani/Bangladeshi compared to White groups.
OHRQoL	Some inconsistent evidence for poorer OHRQoL among Black ethnic groups than among Whites, partly explained by differences in socioeconomic position. Limited data available.
OH related behaviours	Inconclusive; limited data available.
Service use	Yes; but some inconsistencies.

Table 5 Ethnicity variations by local authority in Yorkshire & the Humber (source ONS census 2011)

Local authority/ICS	**White**	**Mixed/multiple ethnic group**	**Asian/ Asian British**	**Black/African/ Caribbean/Black British**	**Other ethnic group**
H & NY					
East Riding Yorks	98.02%	0.52%	1.03%	0.24%	0.18%
Hull,	93.68%	1.11%	2.93%	1.34%	0.93%
North East Lincs	97.20%	0.56%	1.56%	0.31%	0.36%
North Lincolnshire	96.08%	0.56%	2.77%	0.31%	0.28%
York	93.59%	1.01%	4.16%	0.68%	0.56%
North Yorkshire*	97.32%	0.61%	1.37%	0.49%	0.21%
Hambleton					
Harrogate					
Richmondshire					
Ryedale					
Scarborough					
Selby					
West Yorkshire					
Bradford	68.87%	1.90%	25.56%	2.03%	1.64%

Calderdale	90.24%	1.11%	7.88%	0.51%	0.26%
*Craven**					
Kirklees	80.04%	1.72%	15.52%	2.01%	0.72%
Leeds	85.33%	2.09%	7.88%	3.49%	1.21%
Wakefield	95.45%	0.66%	2.67%	0.89%	0.34%
South Yorkshire					
Barnsley	97.76%	0.59%	0.84%	0.59%	0.23%
Doncaster	95.20%	0.86%	2.66%	0.85%	0.42%
Rotherham	93.83%	0.69%	4.06%	0.88%	0.54%
Sheffield	84.07%	1.73%	8.47%	3.60%	2.14%

***Data for North Yorkshire was not available at lower tier local authority level and Craven will be included with data relating to North Yorkshire**

Population key points

Ethnicity is an important factor to consider in relation to oral health inequalities but the impacts upon oral health are further complicated due to variability in findings from research highlighting the need for further investigation. There are ethnically diverse populations across Yorkshire and the Humber and local knowledge will be important to identify any oral health inequalities within communities.

Overall Key points

- The distribution, diversity and changing age profile of the population of Yorkshire and the Humber present challenges for the planning and delivery of dental services, including location and distribution of services, training of dental teams and the estates from which these services are delivered. The appropriate estate for the premises will vary depending upon the type of contract and service required.
- Yorkshire and the Humber has an ageing population. Over the next two decades the population of older adults (65+ years) is expected to increase by 33% and for those aged 85+ years is expected to increase by 66%.
- Dental management of this ageing largely dentate population will be impacted by their significant co-morbidities (two or more disease conditions) and polypharmacy (taking multiple types of medication) which will require increased collaborative work across primary care and the wider health system.
- The prevalence of physical and learning disabilities, including mental health, varies depending upon the condition and this is explored in more detail in the oral health inequalities section. Some individuals may experience multiple oral health inequalities, for example if they are in the older population, deprived and also have a physical and/or learning disability.

6. Oral Health of Children

There has been a significant decline in tooth decay and improvements in oral health over the past 40 years. However, a substantial proportion of children experience high levels of oral disease. This chapter describes the prevalence and severity of the most common oral diseases in children using national and local oral health survey data.

A commonly used indicator of tooth decay and treatment experience, the dmft index, is obtained by calculating the average number of decayed (d), missing due to decay (m) and filled due to decay (f) primary teeth (t) in a population. In five-year-old children, this score will be for the primary teeth and is recorded in lower case. In 12-year-old children it reports on the adult or permanent teeth in upper case (DMFT). As tooth decay in children is highly

polarised towards lower socio-economic groups, another useful indicator, dmft>0, demonstrates the proportion of children with obvious tooth decay experience. A further indicator of use is the proportion of decayed teeth that have been treated by restoration or filling, the Care Index. This indicates the degree to which diseased teeth have been treated.

Office of National Statistics surveys of the oral health of children have been undertaken on a ten-yearly cycle since 1973. The last national children's survey in 2013 demonstrated a continuing decline in decay experience in the permanent teeth of 12 and 15-year-old children. Changes to the consent process for the 2013 survey do not allow backward comparison of decay experience in 5 and 8-year-olds. However, these surveys only provide information at a supra-regional level.

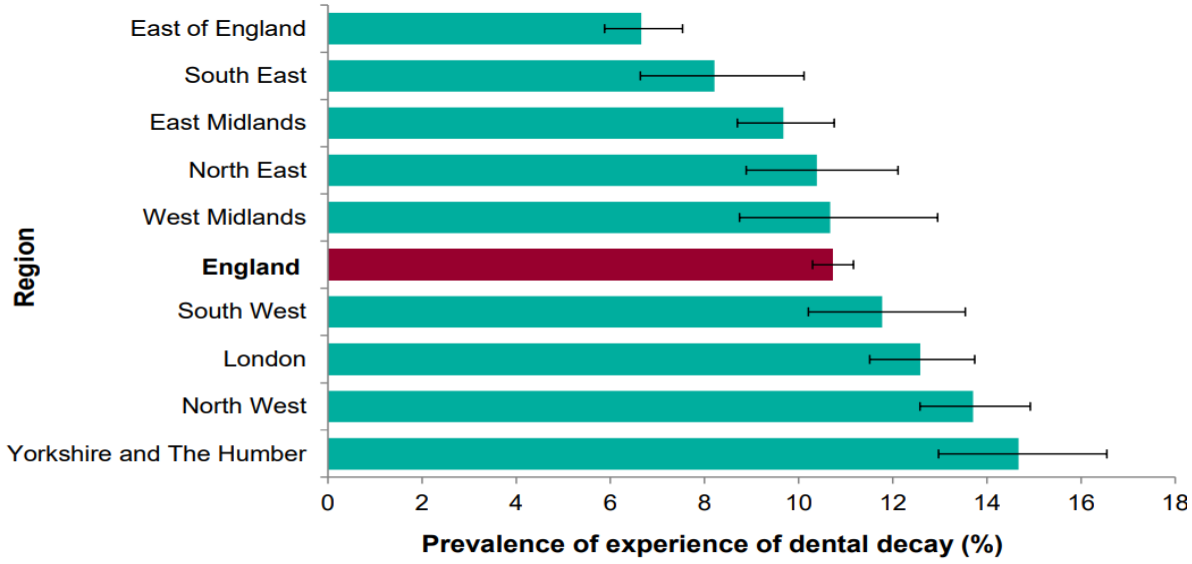
The national dental epidemiological programme surveys provide more detailed information at a local level and have provided information biannually on the oral health of five-year-old schoolchildren and other age groups in the intervening years since 1985.

Oral health of 3-year-old children

The second national survey of 3-year-old pre-school children, attending nurseries, both private and state funded, nursery classes attached to schools and play groups was carried out in 2020. Although most three-year-old children were free from visually obvious tooth decay, the proportion of children experiencing tooth decay in Yorkshire and the Humber was 14.7% which is higher than the national figure of 10.7% (Figure 4) and the worst region in the country (Figure 4). When data are examined at local authority level, the prevalence of tooth decay was lowest in Sheffield (0.9%) and the highest in North Lincolnshire (26.2%) (Figure 5 & Table 6).

In the Doncaster, Kirklees and York local authority areas cessation of the survey due to the COVID-19 pandemic meant that the field work teams were unable to visit any nurseries. Two LAs survey (East Riding of Yorkshire and Kingston upon Hull) did not commission the survey. Therefore, the results should be interpreted with caution.

Figure 4 The prevalence of experience of dental decay in 3-year-old children by region, 2020



Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

Figure 5: Prevalence of 3-year-old children in 2020 with any experience of dental decay by local authority in Y&tH

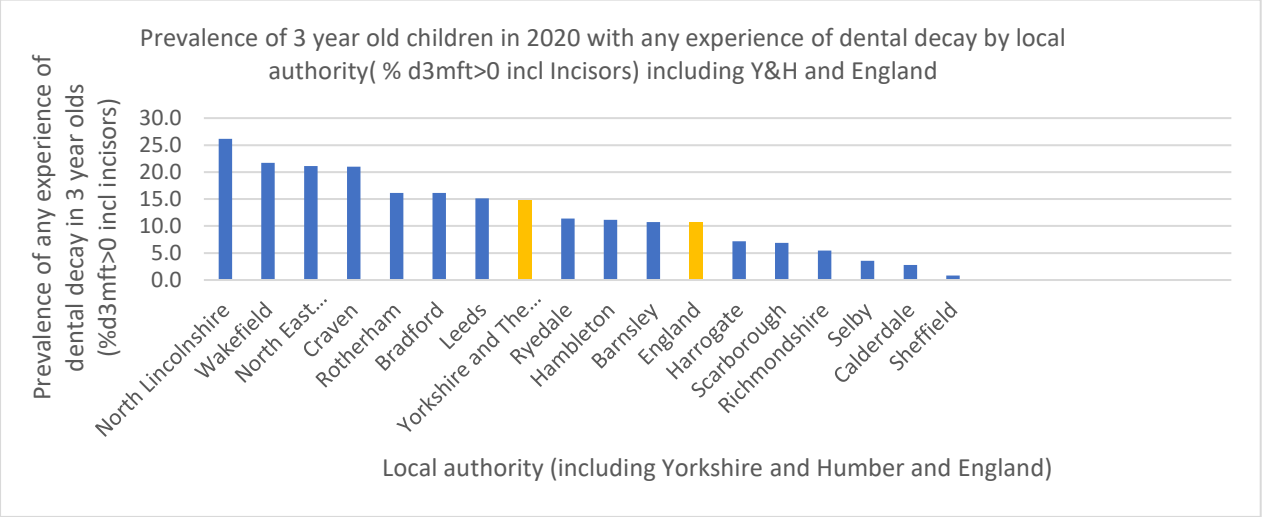


Table 6: Oral health experience of 3-year-olds in Yorkshire and the Humber, 2020

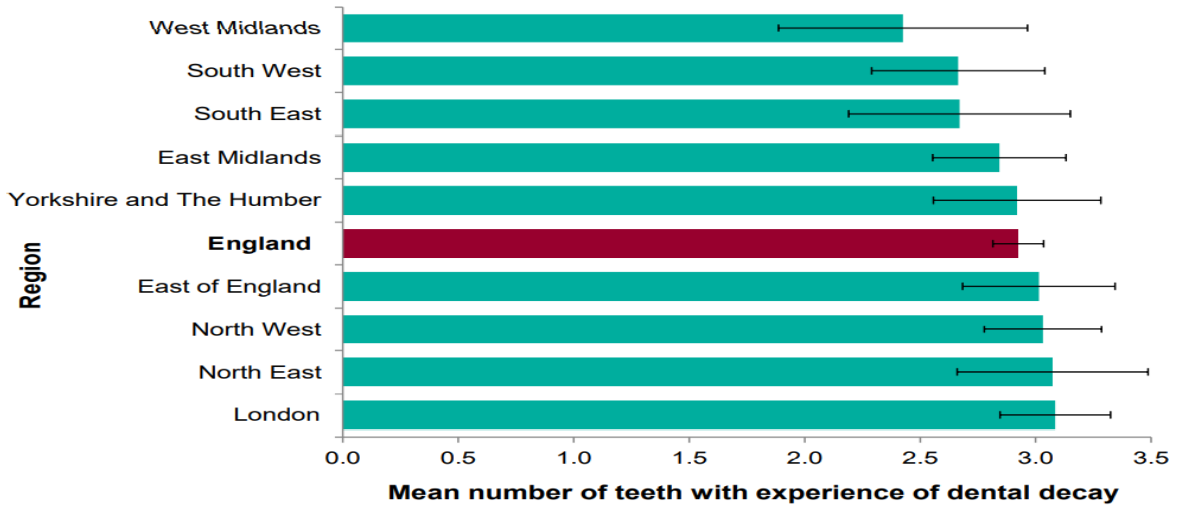
Upper-Tier LA Name/ICS	% $d_3$mft>0 including Incisors	Mean $d_3$mft inc Incisors ($d_3$mft>0 inc Incisors)	% with incisor caries	Care Index % inc Incisors (ft/$d_3$mft including Incisors)	% with pufa
H & NY					
East Riding of Yorkshire*					
Kingston upon Hull*					
North East Lincolnshire	21.1	3.2†	4.1	5.1	0.0
North Lincolnshire	26.2	4.1	7.7	0.0	0.7
York***					
North Yorkshire**	9.8	1.8	0.8	14.3	1.5
Hambleton	*11.1*	*1.7†*	*0.0*	*0.0*	*7.4*
Harrogate	*7.2*	*††*	*1.6*	*14.9*	*0.0*
Richmondshire	*5.5*	*††*	*0.0*	*30.8*	*3.9*
Ryedale	*11.4*	*1.2†*	*0.0*	*25.3*	*0.0*
Scarborough	*6.9*	*2.3†*	*1.2*	*7.2*	*0.0*
Selby	*3.5*		*0.0*	*33.3*	*0.0*
West Yorkshire					
Bradford	16.1	3.4†	6.1	2.0	0.0
Craven	*21.0*	*1.8†*	*3.1*	*9.6*	*0.0*
Calderdale	2.8	††	0.0	0.0	0.0
Kirklees***					
Leeds	15.1	2.7	3.9	7.4	0.0
Wakefield	21.7	††	4.8	49.9	0.0
South Yorkshire					
Barnsley	10.8	††	5.4	0.0	0.0
Doncaster***					
Rotherham	16.2	2.4	4.7	4.3	0.0
Sheffield	0.9	††	0.0	0.0	0.4
Y&tH~	14.7	2.9	3.9	4.6	0.5
England	**10.7**	**2.9**	**3.4**	**4.4**	**0.4**

*Did not participate in survey
**Includes Craven
***LAs did not visit any nurseries due to Covid-19
†Based on fewer than 30 volunteers with decay experience
††Insufficient numbers for estimate
~Excludes Doncaster; East Riding of Yorkshire; Kingston Upon Hull; Kirklees; York
PUFA – presence of pain, ulceration, fistulae or abscess – a measure of sepsis

As the majority of children had no experience of dental decay it is important to look at the severity of disease in those who do experience dental decay. Among these children, the mean number of teeth with experience of dental decay was 2.9. At a regional level there was little variation in experience of dental decay among 3-year-old children with any decay experience (Figure 6). The median number of teeth with experience of dental decay among these children was 2 teeth. Although the mean number of teeth affected in Yorkshire and the Humber is similar to England, there is some variation between participating Local Authorities across Yorkshire and the Humber (Figure 7).
The presence of decay in 3-year-olds is of significance as:

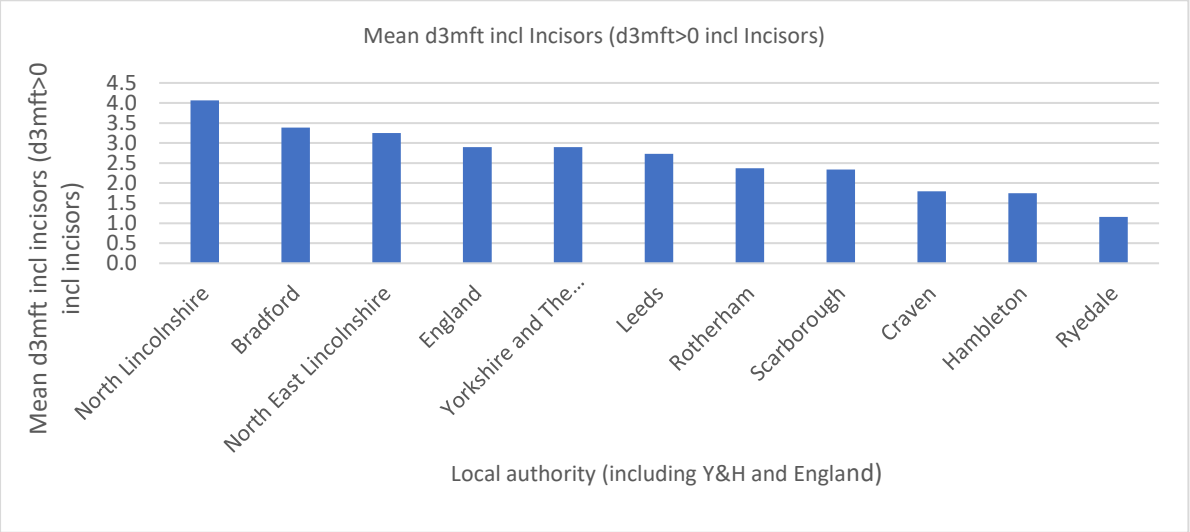
- It is a predictor of decay in later life.
- Prevalence is correlated with deprivation.
- It supports the need for early intervention including DCby1 and oral health promotion interventions at individual and community level.

Figure 6: Mean number of teeth with experience of dental decay in 3-year-olds with any decay experience in England by region, 2020



Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

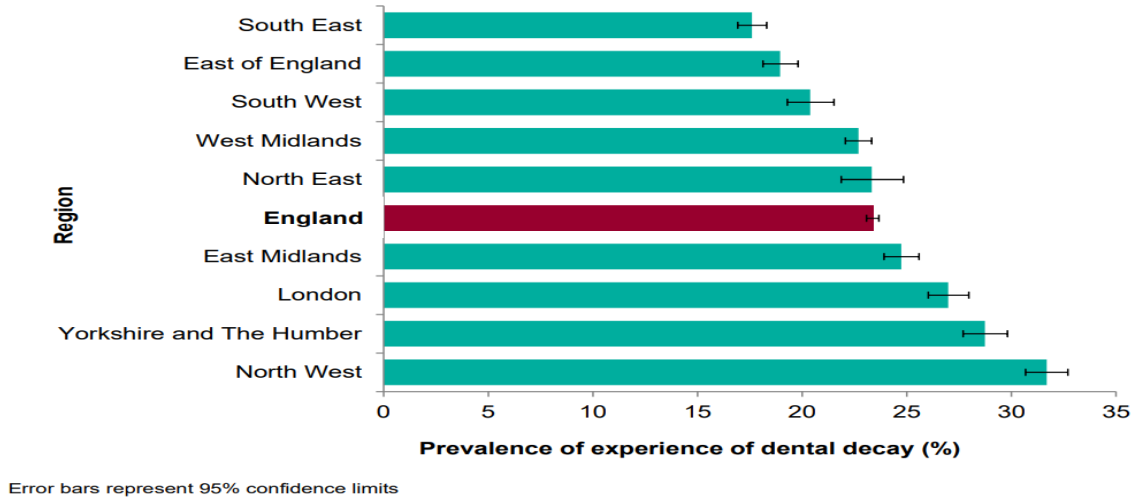
Figure 7: Average number of teeth affected by decay among those with any decay experience in 3-year-olds in Yorkshire and the Humber, 2020.



Oral health of 5-year-old children

In 2019 the prevalence of tooth decay (% dmft>0) in five-year-old children in Y&tH was the second highest in the country with 29% of children examined experiencing tooth decay (England-23%) (Figure 8 & Table 7). Within the region eleven Local Authorities have a disease prevalence which is greater than England and eight have a prevalence greater than Y&tH (Figure 9).

Figure 8: Prevalence of experience of dental decay in 5-year-olds in England by region, 2019.



Error bars represent 95% confidence limits

Figure 9: Proportion of 5-year-old children with experience of dental decay by local authority,2019

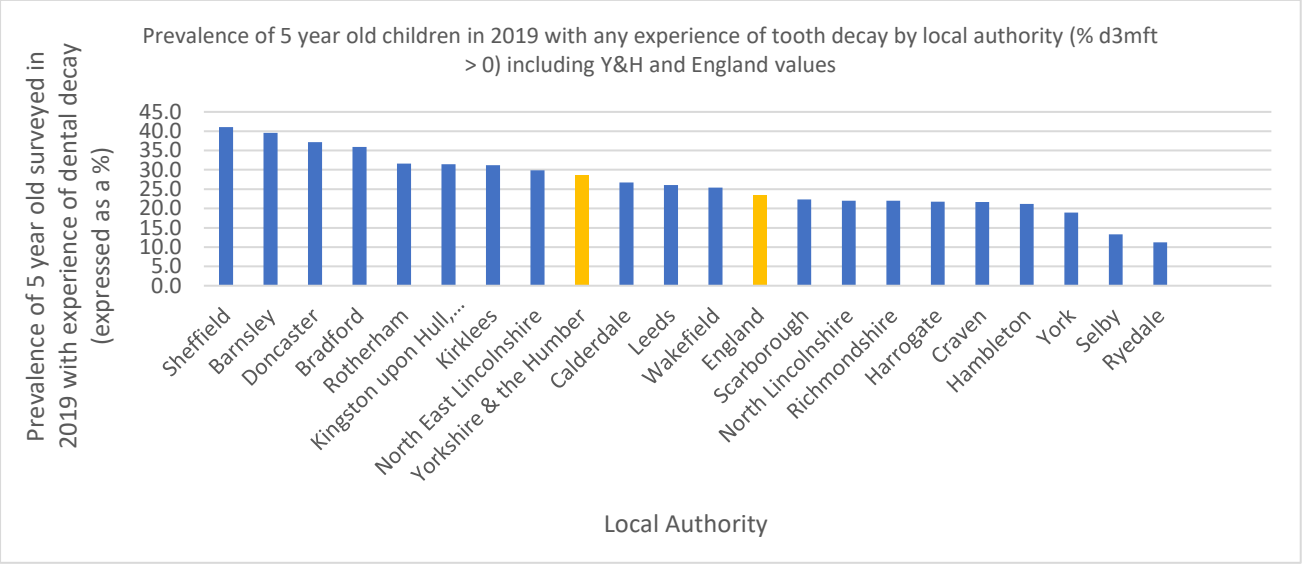


Table 7: Oral health experience of 5-year-olds in Yorkshire and the Humber, 2019

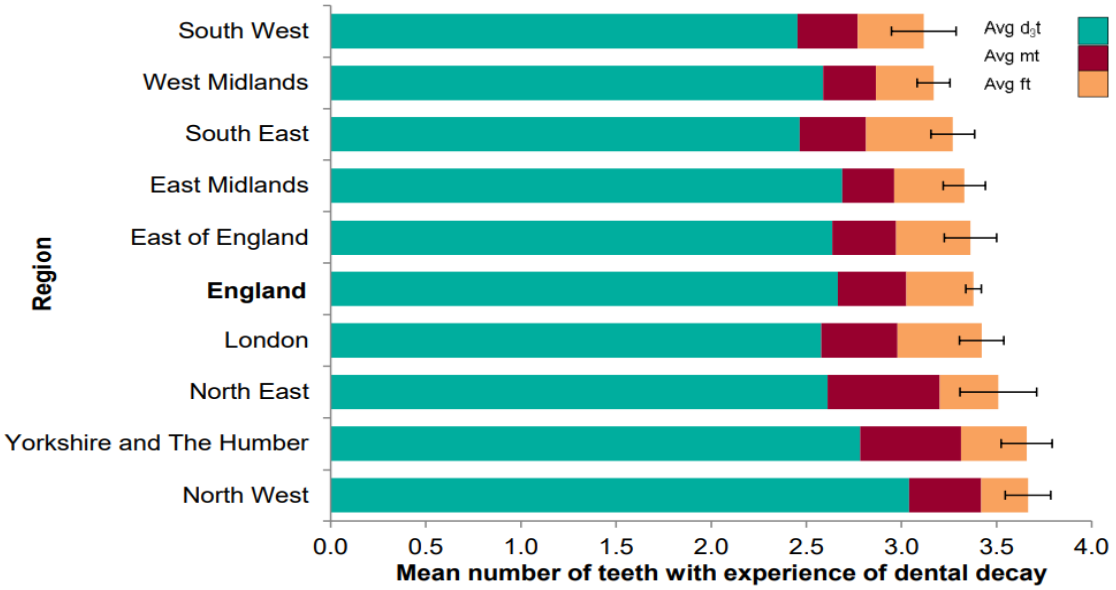
Local Authority / ICS	% $d_3$mft > 0	Mean $d_3$mft ($d_3$mft > 0)	% with sepsis	% with incisor caries	Care Index % (ft/$d_3$mft)
H & NY					
East Riding of Yorks*					
Kingston upon Hull	31.4	3.6	1.7	7.7	6.5
North East Lincs	29.8	3.9	5.4	5.1	6.0
North Lincolnshire	22.0	3.5	1.7	5.7	9.1
York	18.9	3.1	0.7	6.6	10.9
North Yorkshire**	20.0	2.8	0.5	3.6	10.0
Hambleton	*21.2*	*2.7*	*0.6*	*5.4*	*4.1*
Harrogate	*21.8*	*2.9*	*0.2*	*4.6*	*4.5*
Richmondshire	*22.0*	*3.1*	*0.0*	*5.3*	*11.9*
Ryedale	*11.3*	*2.9†*	*0.0*	*3.0*	*19.8*
Scarborough	*22.4*	*2.8*	*0.4*	*2.2*	*13.2*
Selby	*13.3*	*2.8†*	*2.2*	*3.3*	*15.3*
West Yorkshire					
Bradford	36.0	4.3	2.1	9.6	8.3
Calderdale	26.7	4.1	0.3	7.9	8.0
Craven	*21.7*	*2.0*	*0.0*	*0.4*	*10.2*
Kirklees	31.2	4.1	2.0	9.7	9.8
Leeds	26.0	3.8	0.5	6.7	12.7
Wakefield	25.4	3.5	1.4	7.1	6.0

South Yorkshire					
Barnsley	39.6	4.1	1.9	11.3	8.9
Doncaster	37.2	3.7	3.0	9.3	11.1
Rotherham	31.6	3.5	1.2	9.7	7.4
Sheffield	41.0	4.0	1.2	15.4	7.2
Yorkshire and the Humber	**28.7**	**3.8**	**1.4**	**7.6**	**9.2**
England	**23.4**	**3.4**	**1.0**	**5.2**	**10.3**

*Did not participate
**Includes Craven
†Based on fewer than 30 volunteers

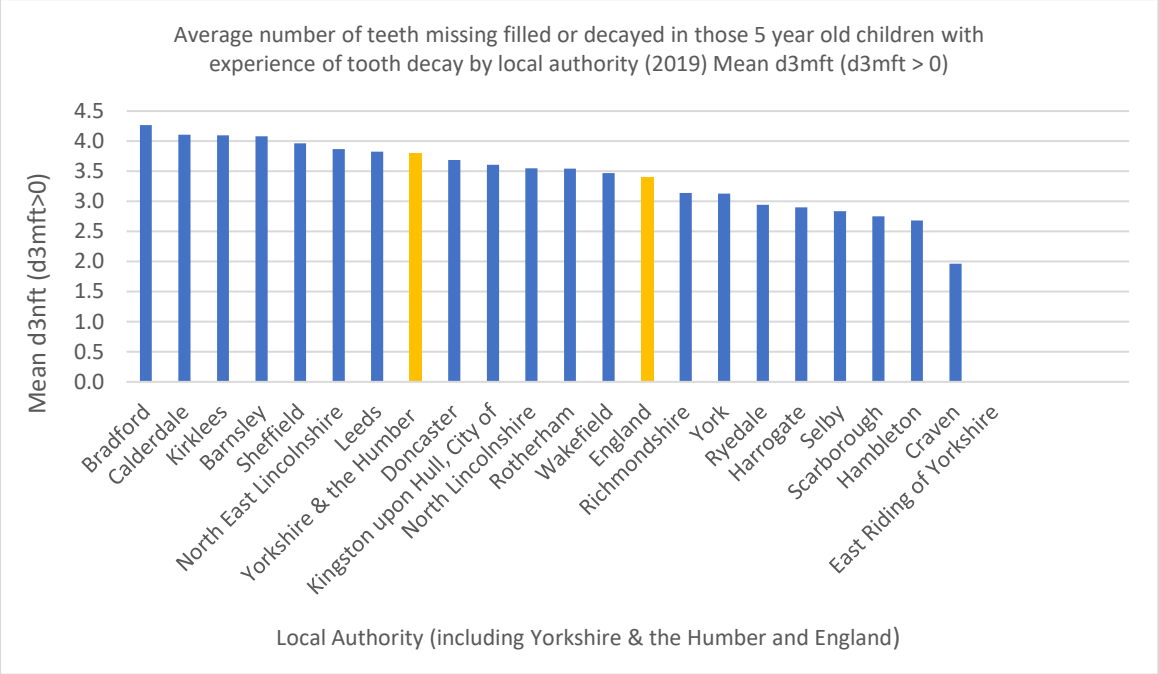
A measure of the severity of disease is the number of teeth affected by decay amongst those children with experience of the disease (mean dmft if dmft>0). Again, across England, Y&tH has the second highest mean (3.8 teeth) and is higher than the England mean of 3.4 teeth (Table 7 and Figure 10). There is also variation between Local Authorities across the region with seven greater than the Y&tH mean (Figure 11). The major component of the dmft index was visually obvious, untreated decay into dentine, indicating that much of the disease in 5-year-olds remains untreated (Figure 10).

Figure 10: Mean number of teeth with experience of dental decay among 5-year-olds with any decay experience in England by region, 2019.



Error bars represent 95% confidence limits

Figure 11: Average number of teeth affected by decay among those with any decay experience in 5-year-olds in Yorkshire and the Humber, 2019.



The care index gives an indication of the restorative activity of dentists in each area. It is the proportion of teeth with experience of dental decay that have been treated by filling (ft/dmft). Caution should be taken in making assumptions about the extent or the quality of clinical care available when using this index. The proportion of decayed teeth that were filled was 10.3% across England as a whole. This varied between regions, in Y&tH it was 9.2% and between Local Authorities from 4.1% in Hambleton to 19.8% in Ryedale (Table 7).

Of the five-year-olds examined in Y&tH 1.4% had evidence of sepsis (infection) associated with their teeth on the day of examination (England 1%). Again, there was a range across the local authority areas from 0% in Ryedale to 5.4% in North East Lincolnshire. Children with sepsis may be experiencing pain, have trouble eating and sleeping, and lead to time off school (and work for carers). Many of these teeth are liable to require extraction, and in children of this age a significant proportion of those will require a general anaesthetic.
The presence of decay in 5-year-olds is of significance as:

- It is a predictor of decay in later life.
- Prevalence is strongly correlated with deprivation.
- It supports the need for early intervention and oral health promotion interventions at individual and community level.

Oral health of 12-year-old children

Data on the oral health of 12-year-old children was last collected in 2008/09. It is acknowledged that the data for 12-year-olds is now more than 10 years old and is therefore not reported here, however the forward plan for the national dental epidemiology programme includes 12-year-olds for 2022/23.

The presence of disease in children of this age is of significant concern as this is disease in their adult dentition and a burden that the individual will carry for the rest of their lives.

Reflection

Commissioning strategies need to focus on both prevention and treatment to have the biggest impact on oral health inequalities. All organisations should explore ways to improve data collection. It is essential that epidemiological surveys continue to be commissioned to enable identification of oral health inequalities. Local Authorities could explore commissioning models to maximise sustainability.

Hospital dental extractions

Tooth decay is still the most common reason for hospital admissions in the 6-10-year old age group (PHE, 2021) Hospital tooth extractions of 0 to 19 year olds - GOV.UK (www.gov.uk).

Across England during 2019/20 there has been a 5.9% reduction in the number of episodes of caries-related tooth extractions in hospital for 0 to 19-year olds compared to the previous year, despite a 0.3% increase in the estimated population of this age group. The reduction is mainly due to the significant drop in the number of admissions for tooth extractions in March 2020. This is consistent with the reduction for all admissions to hospital during this month because of the SARS-CoV-2 outbreak.

PHE and NHS Digital publish data on extraction of teeth due to tooth decay and for other reasons. Both data sets are based on Hospital Episode Statistics (HES) data which records inpatient and day-case care from NHS hospitals across England. Data are based on Finished Consultant Episodes (FCE) for surgical and non-surgical extraction of one or more teeth and although no assumption can be made about the method of anaesthesia it is likely that in most of the cases care has been provided with general anaesthesia. The main reason for extraction of teeth being dental caries.

It is possible that different coding protocols are applied in some sites. There may also be an underestimate of the number of episodes in other instances, for example if the service provider is not the hospital trust where the extractions take place and are not included in hospital data recording. Both could explain some of the variation from expected numbers. Commissioners have worked closely with trusts to emphasise the importance of data entry onto SUS/SLAM.

Y&tH has the highest proportion of children aged 0-19 admitted for extractions, accounting for 0.7% of the 0-19 population (Figure 12). Over time there has been some variation between regions in the number of FCEs delivered, in Y&tH this has remained relatively stable (Figure 13). Similarly, there has been little variation within local authority geographies (Table F see appendix).

Figure 12: The number of FCEs for extractions of teeth aged 0-19 by region in 2019/20.

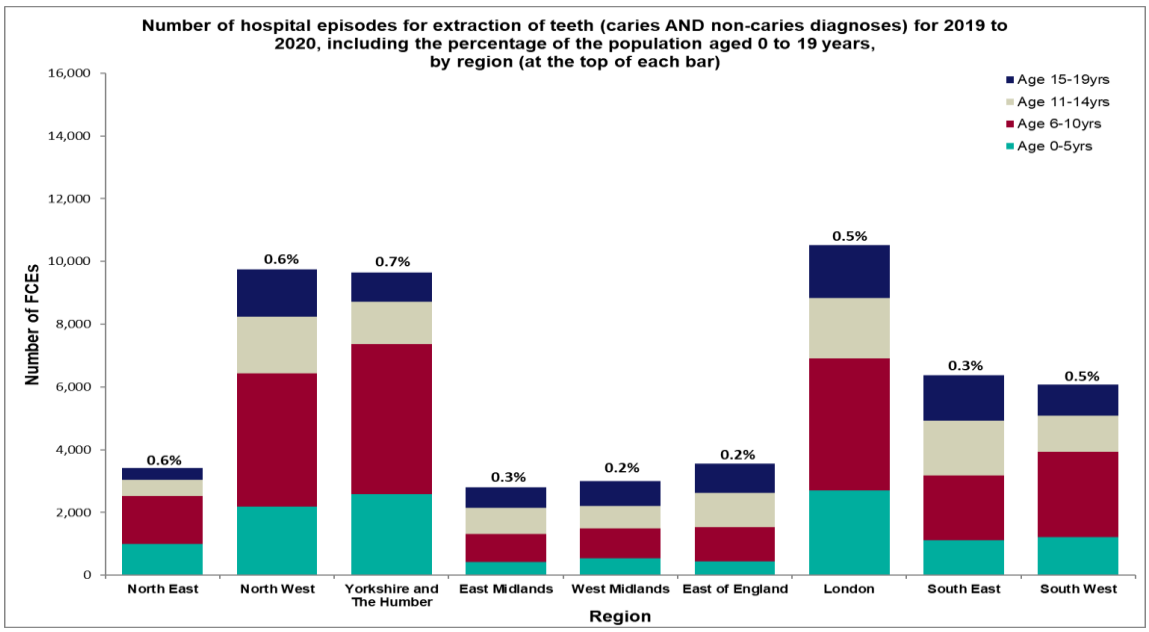


Figure 13: Number of FCEs for extractions in 0-19 years 20215/16 to 2019/20.

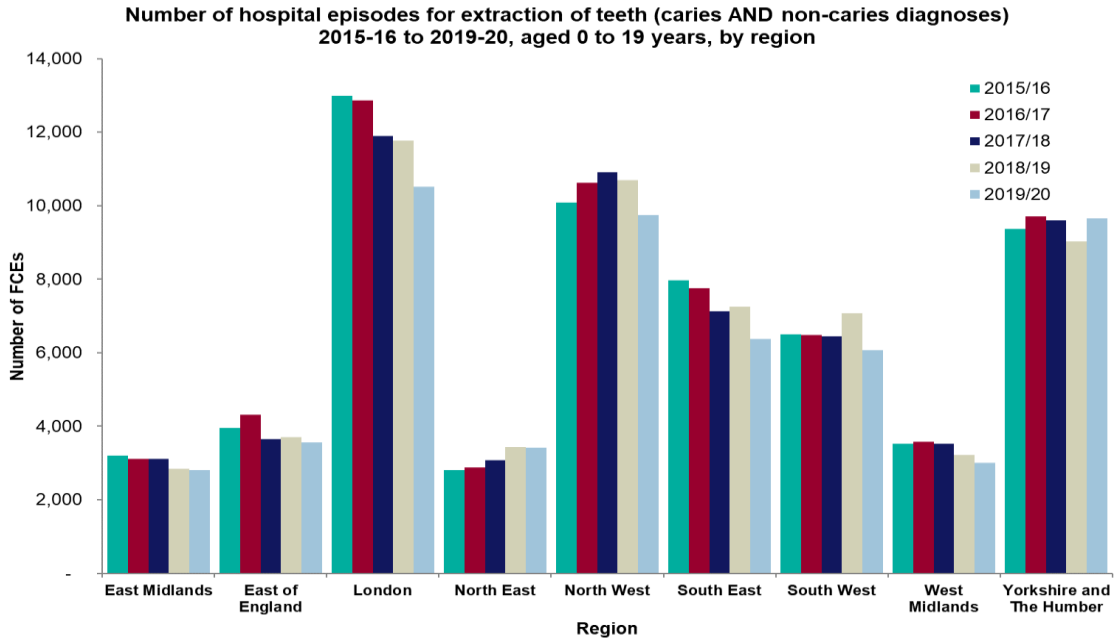
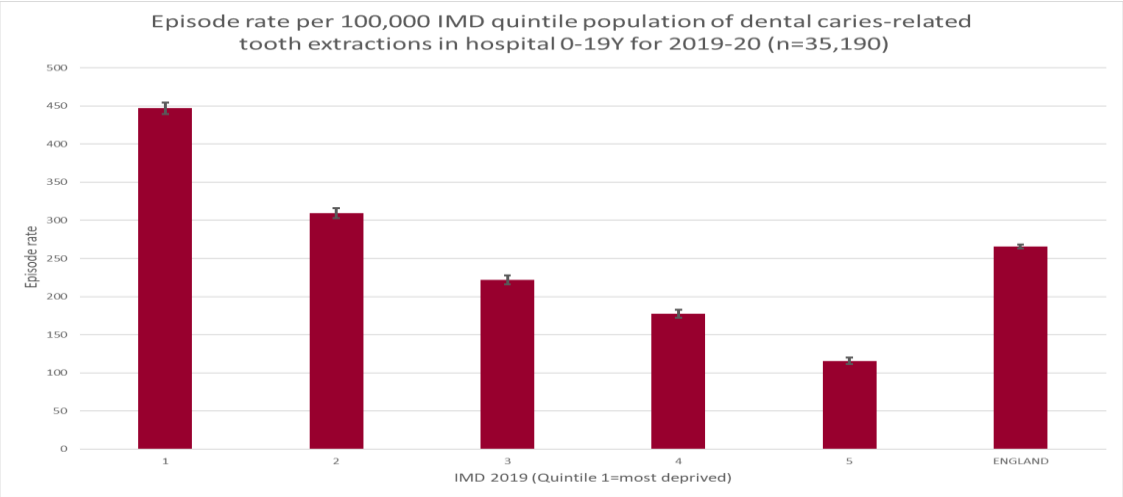


Figure 14: Rate of FCE for caries related extractions in 0-19-year olds by IMD quintile



Children from deprived backgrounds are more likely to access these services (Figure 14), a reflection of the inequality of distribution of dental caries in the population.

At local authority level the proportion of 0-19-year olds having GA for extraction is highest in South Yorkshire, NE Lincolnshire and then Bradford and Wakefield. Similar pattern is seen for the proportion of 0-19, 0-5- and 6-10-years having GA for extraction with tooth decay as the primary diagnosis (Table F appendix). Note - caution in interpreting this data as activity from Hull and East Riding is not captured in HES data.

Tooth decay is the most common oral disease in children and is largely preventable. DGA carries a risk and significant morbidity. The average cost for tooth extraction in hospital estimated to be around £836 per patient.

To reduce the number of FCEs for extracted teeth requires action in several areas:

- Engaging with primary and secondary care dental providers.
- Clear acceptance criteria.
- Triage of referrals and pre-assessments to avoid unnecessary or repeat GA.
- Training and support for primary dental care teams to manage young children with a focus on prevention and treatment of acute and chronic presentations of dental caries.
- Support for families both pre and post operatively to avoid repeat Gas.
- Commissioning and implementation of oral health improvement interventions with the local authority.

Recommended actions in Yorkshire and the Humber

- Paediatric MCN should explore reasons for the higher activity in South Yorkshire and parts of West Yorkshire and extraction of non-carious teeth and develop consistent referral guidelines and care pathways.
- Promote consistency in coding and recording of activity especially in East Yorkshire and Hull. All activity should be recorded through SUS which will ensure more robust comparisons and monitoring of dental care.
- Data should be collected on waiting times and numbers on waiting lists, and well as volume of care delivered to support contract monitoring and aid commissioning decisions.
- Service development should be in line with recommendations set out in national guidance.

- Vulnerable children living within deprived communities will have greater need, including those from chaotic families that are known to the social care system and need a key worker and/or oral health champion for additional support with oral health and accessing dental care. Infants and young children with experience of tooth decay are more likely to have poorer oral health throughout their lifetime. It is important they get the best start in life.
- At a strategic and operational level, using complimentary commissioning with safeguarding undertaken by dental practices and social care workers referring vulnerable children known to social care into dental practices, and aligning care homes with dental practices and oral health champions aligned with NICE guidance.

Summary

- Tooth decay is the most common oral disease in children and is largely preventable. DGA carries a risk and significant morbidity. Average cost for tooth extraction in hospital estimated to be around £836 per patient.
- Tooth decay is still the most common reason for hospital admissions in the 6-10-year-old age group.
- Estimated costs of hospital admissions for tooth extractions for children aged 0 to 19-years were £54.6 million for all extractions and £33 million for tooth decay-related extractions.
- Tooth decay can cause problems with eating and sleeping.
- Significant inequalities persist, with admission rates for tooth extraction in the most deprived communities nearly four times that of those living in the least deprived communities.
- Attempts to reduce the number of hospital episodes for extraction of teeth need to address several areas including: engagement of primary and secondary care providers; establishment of clear acceptance criteria and triage of referrals; enquiry into reasons for admission for extraction where dental caries is not present; provision of training and support for primary care teams in the management of dental caries among children in acute and chronic stages; commissioning and implementation of oral health improvement interventions with the local authority; and clear agreement about provision of support for families before and after hospital in an effort to avoid repeat episodes in the future

Key points – Child oral health

Despite improvements in the oral health of children in England, many children continue to suffer the pain and discomfort associated with oral diseases, which are largely preventable. A healthy mouth and smile enable children to eat, speak and socialise without pain or discomfort. Oral health is an integral part of health and wellbeing and many of the key risk factors are associated with other diseases which may eventually present in adulthood.

The distribution and severity of oral diseases varies between and within local authority areas throughout childhood and unacceptable inequalities exist with more vulnerable, disadvantaged and socially excluded groups experiencing significant oral health problems.

Tooth decay is almost entirely preventable. In young children it can be a predictor for poor oral health in adulthood.

Tooth decay is still the most common reason for hospital admissions in the 6-10-year-old age group. Estimated costs of hospital admissions for tooth extractions for children aged 0 to 19-years were £54.6 million for all extractions and £33 million for tooth decay-related extractions.

Significant inequalities persist, with admission rates for tooth extraction in the most deprived communities nearly four times that of those living in the most affluent communities.

7. Oral health of adults

Adult dental health survey (2009)

Decennial national UK adult oral health surveys show that oral health has improved significantly over the past 40 years. The 2009 national adult dental health survey is reported at Yorkshire and the Humber level (NHS Digital. 2011) (Adult Dental Health Survey 2009 - Summary report and thematic series - NHS Digital).

Number of teeth

In 2009, 6% of adults in England were found to have no natural teeth (edentulous) with this figure rising to 7% in Yorkshire and the Humber. The proportion of adults with no natural teeth fell from 37% in 1968 to 6% in 2009.

The presence of 21 or more natural teeth has been used as an additional marker of the health of the population's teeth. In the national 2009 survey 86% of adults in England had 21 or more teeth with 88% in Yorkshire and The Humber, this indicator displayed a clear social gradient with 92% having 21 or more teeth in managerial/professional occupation households and 86% intermediate and 79% from routine and manual occupation households.

The Steele review of NHS dentistry (NHS, 2009) described three distinct cohorts within the adult population. Older age groups (those past retirement age) with no teeth at all who will need denture care for many years, a young generation under the age of 30 years who have lower levels of decay than their parents and have low restorative needs and a 'heavy metal generation' group aged between 30 and 65 years who have experienced high levels of disease that has been treated by fillings and other restorations and who require ongoing maintenance as they age.

The fact that at least half of people aged 85 and over have retained some natural teeth has implications as many older people will have heavily restored (filled, crowned) teeth requiring

future maintenance alongside continued preventive care. This may become difficult as patients become frailer, with increasingly complex medical histories (co-morbidity and polypharmacy) and mobility issues can affect access to dental services for those requiring step free or wheelchair accessible services or in a small number of cases domiciliary care.

Between 1998 and 2009 the prevalence of active tooth decay in adults in England fell from 46% to 28%. There were reductions across all age groups, but the largest reduction was within the 25-34-year age band. The proportion with active tooth decay varied by age with the 25 to 34 years group having the highest prevalence, 36%, and those aged 65-74 years the lowest, 22%.

In 2009, 45% of adults with some natural teeth in England had mild gum disease, 9% had moderate gum disease and 1% had severe gum disease. Between 1998 and 2009 there was an overall reduction in the prevalence of moderate gum disease from 55% to 45%. However, for more severe forms of gum disease an overall increase from 6% to 9% was observed.

In Y&tH there was a greater proportion of adults with moderate and severe forms of gum diseases relative to the national average: 42% of adults had mild gum disease, 10% had moderate and 2% had severe disease.

Oral health survey of adults attending general dental practices, 2018

Adults (16+ years) attending general dental practices for any reason, were recruited to take part in the Oral health survey of adults attending general dental practices 2018 (PHE.2020), the first of its type. The survey consisted of a questionnaire on the impact of oral problems on individuals, use of dental services and barriers to receipt of care and a brief clinical examination conducted by trained local epidemiology teams under standardised conditions.

The survey involved 1,173 dental practices across England of which 25% were NHS practices, 10% were wholly private and 65% were mixed NHS and private practices. In Yorkshire and the Humber 709 individuals from 70 practices participated in both elements of the survey. Despite the survey being restricted to dental attendees, the demographics of participants were broadly similar to the general population of England although men and people aged under 45 years or over 84-years were under-represented.

Only 1% of adult dental attendees examined had none of their own teeth (Note: participants with no natural teeth may be underrepresented in this survey due to less frequent visits to the dentist). 15% wore dentures and 10% had bridges or implants replacing missing teeth and around half (47%) had crowned teeth.

Of those examined in Y&tH (Table G, Figures A and B in the appendix):

- 83% had ‘functional dentitions’ comprising 21 or more natural teeth (England 82%),
- 92% had at least one filling (England 90%).
- 75% were assessed as having a current need for dental treatment (England 71%).
- 6% had not seen a dentist in the last 2 years (England 8%).
- 25% had tooth decay (England 27%), having on average 1.9 decayed teeth (England 2.1).
- 45% had gingival (gum) bleeding (England 53%).
- 17% had experienced one or more impacts of poor oral health ‘fairly’ or ‘very often’ in the previous year (England 18%). Overall, 18% reported currently being in pain.

Poorer oral health disproportionately affected those at the older end of the age spectrum and those from more deprived areas:

- Around two-thirds of participants aged 85-years and older did not have a functional dentition.
- One in 3 participants living in the more deprived areas of England had untreated tooth decay compared to 1 in 5 in the less deprived areas.
- Reports of impacts from oral problems in the last year in participants living in more deprived areas were almost triple those of participants living in less deprived areas (28% versus 11%).

Overall, this survey of dental attendees in England paints a picture of a population where virtually all adults have at least some natural teeth but where impacts and signs of dental disease are prevalent. The survey highlights that the effects of poorer oral health disproportionately affect some parts of this population, most notably older people and those living in the more deprived areas.

What is not known from this survey is if this picture of complex oral health needs in adult dental attendees is markedly different from the general population. Participants in this survey could have better oral health than the general public, as for the most part these were people reporting to be regular dental attendees with the benefit of professional support for maintaining their oral health. On the other hand, these were people surveyed when attending a dental appointment where the prevalence of a dental problem could be higher as they were seeking professional care. Contemporary information about whether people go to the dentist for check-ups or only when there is a problem is lacking, but there were suggestions in the last decennial survey of adult oral health of an increasing pattern of seeking care only when there was a dental problem.

This survey may also under-represent a proportion of the general public for whom attending the dentist is financially challenging. Data is needed on the wider population to see if the findings from this survey hold true across the whole adult population in England. In addition, the number of Local Authorities who did not / were unable to commission this survey in Y&tH and variable willingness to participate by dental practices resulted in a limited sample size (Table G see appendix). Therefore, a degree of caution should be taken when using the data from this survey to inform need for future dental services and workforce planning for the general population. However, despite caveats, data does provide some insight into the regional prevalence of oral health disease and need for dental care.

Older adults

Good oral health is an essential component of active ageing. Social participation, communication and dietary diversity are all impacted when oral health is impaired. Significant gains in oral health have been made in the last 30 years and the majority of older people now retain some natural teeth. However, as in other sectors, for the benefits of improved oral health to be fully realised, structural barriers built into the existing dental and social care systems need to be removed. The aim is to create an equitable and responsive system that can deliver prevention and treatment for all, in proportion to their need.

Section 4 has already highlighted that the population of Y&tH is an ageing population.

The PHE review *What is known about the oral health of older people* (PHE, 2015) explored data from existing national, regional and local surveys of oral health in older people. This data was collated and combined with social, demographic and health data to provide a

summary of what we already know about the current and future oral health needs of older people in England and Wales.

The majority of the information relates to the minority of older people who live in residential and nursing care homes. It found that little was known about the increasing proportion of older people who are living independently at home or being cared for by friends, family or formal carers. Older people are more likely to have several factors that mean they are at increased risk of dental disease. Compounding this increased risk, they are more likely to have general health complications that make treatment planning more difficult and may require modification of services.

Summary of findings

Normative need:

- Older adults living in residential and nursing care homes are more likely to be edentulous, and less likely to have a functional dentition.
- Untreated tooth decay is higher in the household resident elderly population than in the general adult population and older adults living in care homes have higher decay prevalence still, where the majority of dentate residents have active decay.
- Signs of severe untreated decay appear to be more common in the oldest age groups across all settings and current pain also appears to be slightly higher than in the general adult population.
- Periodontal disease is most common in the age groups of 65 to 84.

Felt need, access, and quality of existing oral health care for older people:

- Older adults are less likely to rate their oral health as good and appear to have poorer oral health related quality of life than the general adult population.
- Care home managers experience much more difficulty in accessing dental care for their residents than household resident older adults do.
- For older adults living in care homes, dental services are patchy and often no regular or urgent dental care arrangements exist for provision of domiciliary care.
- 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, some of whom, depending upon referral criteria, may receive treatment via the Community Dental Service.
- Little is known about access to services for the increasing numbers and proportions of older people receiving ‘care in your home’ services.
- Oral health policies, oral health needs assessments, staff training on oral health care and a system to ensure oral hygiene support is received are all more common in residential and nursing care homes than in ‘care in your home’ services and hospitals with inpatient facilities.
- Oral health needs assessments and staff training focus mostly on presence of teeth and dentures, and oral hygiene or denture cleaning skills. Training on the recognition of urgent problems in residents and how to access urgent or emergency dental care was less common.

Mildly Dependant Older Adults (2016)

In response to the increasing proportion of older people in the population and the need to understand the oral health needs of community dwelling older people in the context of their particular health and social care needs, in 2015 the National Dental Epidemiology Programme for England (NDPHEP) undertook the first dental epidemiological survey of adults living in supported housing and which explored their oral health and dental service use Oral health survey of mildly dependent older people 2016 - GOV.UK (www.gov.uk).

The method was implemented as a pilot and as there is no directly comparable data to use which could help to show trends, information from the England data subset of the 2009 Adult Dental Health Survey (ADHS) (ONS.2011) (Adult Dental Health Survey 2009 - Summary report and thematic series - NHS Digital) was used to give broad comparators, but the results provide baseline data for this population.

There was general consistency in the findings across this survey and the ADHS. Across all variables reported Y&H was broadly similar to England, but there were some variations at local authority level.

The key findings are:

Oral health

- 9% of participants reported having oral pain on the day of the examination **(East Riding – 22.7%)**, while 8% were found to have an open pulp, ulceration, fistula or an abscess **(Y&H – 10.7%, East Riding – 26.4%, Rotherham – 27%)**.
- 7% reported having oral pain or discomfort often or very often in the previous year
- 9% reported having discomfort when eating often or very often.
- 27% were edentulous (no natural teeth) **(Doncaster – 53.8%, Wakefield – 50%)**.
- 1.2% had no natural teeth and no artificial replacements.
- 42% had a functional dentition as they had 21 or more of their own teeth.

Treatment need and service use

- 14.8% had full dentures in need of replacement **(Y&H – 14.8%, Doncaster – 25.9%, Sheffield – 25%, York – 21.7%).**
- 13% had partial dentures in need of replacement **(Y&H – 15.1%, Doncaster – 41.2%)**.
- 56.8% were considered to require further examination with or without further diagnostic tests.
- 28.8% required preventive advice (oral hygiene, diet, additional fluoride).
- 33.1% required removal of calculus.
- 13.9% required minor restorations (simple direct fillings) and 2.4% required major restorations (lab work and endodontics).
- 3.2% of participants were considered to be in urgent need for dental care **(Y&H – 1.9%)**.
- 59% were able to attend a general dental practice with no restrictions.
- 35% could only receive dental treatment in a downstairs surgery or one accessed by a lift.
- 5.1% needed dental care provided in their home **(Y&H – 3.2%, Calderdale – 12.5%, York – 14.7%)**.

Poorer oral health tended to be found among participants who:

- Were older
- Reported an increased length of time since the last dental visit
- Were restricted in their ability to attend a dental practice
- Were currently in receipt of various services in their home
- Had reduced cognitive recall
- Had lower levels of education

Some measures of oral health were found to be worse in the youngest age group which could be related to the changes in circumstances surrounding admission to supported

housing over time. Thus, people who are now moving into this type of accommodation are more likely to have poorer general health, and other social factors that impact on oral health, than was the case for cohorts of older people who chose supported housing in the past.

The results reveal wide variation at regional and local authority level but are consistent with other reports (both children and adults) and that poorer oral health and greater treatment need, including urgent care, were needed in the more deprived Local Authorities.

The report and full tables of results are available at: Oral health survey of mildly dependent older people 2016 - GOV.UK (www.gov.uk)

Older adults and oral health inequalities

Older people may also experience additional oral health inequalities related with protected characteristics, for example disability and poor mental health (see table 8).

Prevalence rates for conditions were predicted to be almost identical regardless of the location of the local authority or the ICS footprint.

Table 8 POPPI data relating to prevalence of protected characteristics and health inequalities for those aged 65 years and over

Inequality	% of 2020 population in Y&tH predicted to be affected	% of population Y&tH predicted to be affected between 2020-2040
Predicted to have depression	9%	9%
Learning Disabilities	2%	2%
Predicted to have impaired mobility	18-19%	19-20%

Key points for consideration

Prevention and treatment planning

- Older people with mild dependency who retain their teeth are liable to have heavily restored dentitions and an aspiration to retain them for life. The majority of treatment need is prevention and simple restorative care. NHSEI and Local Authorities should consider how to increase delivery of prevention for older people.
- The need for good quality treatment planning and particularly prosthetic (denture) care for this group, including training for the dental team, should be considered jointly by NHS England and Health Education England.

Access to care, including urgent care

- Only a small proportion of this population group requires access to domiciliary services. Of more importance is that dental services have accessible dental surgeries and solutions are found to support appropriate patient transportation to sites of care.
- Planning of urgent and unscheduled dental care services also need to take into account the needs to this group and those living in residential and care homes.

Sepsis

- High levels of sepsis in some areas are of concern, and in some areas reflect high levels found in the 5-year-old population. This high prevalence of sepsis could be a reflection of lack of access to urgent care and general services and/or access to accessible services.

Implications for commissioning services

In the past the majority of the conversation around the oral health of older people has focused on the necessity of providing domiciliary dental care to residents of care homes. Whilst this is an essential service, several factors mean that this siloed approach is not sufficient to meet the needs of an ageing population.

Older people are already more likely to be receiving care and support in their own homes rather than in residential and nursing care homes. 'Care in your home' services and informal care will become increasingly common in the future. As a result, the care home population will continue to become older and have higher care needs.

Household resident older people may not be able to easily access routine dental services due to functional limitations, transport difficulties and multiple long-term conditions. Coupled with this, as more people are keeping their teeth for longer the range of dental treatment required will be more complex than in the past and is more likely to demand the facilities of a dental surgery.

This changing demographic picture makes identifying and accessing those who need preventive services and treatment more complex, and a whole-systems approach is required.

The NHS's Five Year Forward View highlighted the need to increase integration of the health and social care systems to improve population health, and oral health is a key part of the NHS Enhanced Health in Care Homes Framework. Integration is particularly important for older people and those living with long-term conditions, and both dental prevention and treatment services and oral health improvement programmes must be part of this integration as it develops. As Integrated Care Systems assume responsibility for the commissioning of all dental services this will offer opportunities to integrate oral heath, both prevention and treatment services, into the wider health and social care landscape.

In order for future dental services to provide responsive and equitable care to older people, a variety of factors must be addressed:

- Dental services for older people must be more integrated within the wider health and social care landscape. This will need to be supported by developments in training in oral health for care home managers, domiciliary care providers and senior health and social care workers who can disseminate the training to others, together with information sharing and referral pathways.
- In order to develop holistic patient-centred services, varying levels of prevention and care need to be available as part of the same care pathway. This may mean a service providing domiciliary care for routine prevention and simple treatments, plus access to transport and multi-specialist centres for more complex treatments.
- Increasing integration with general medical and social services for older adults would mean that patients with progressive long-term conditions could receive a dental assessment and treatment plan when their long-term condition is diagnosed or medication or treatment liable to have an impact on oral health is prescribed. This would allow a proactive approach to ensure the patient is dentally healthy before their general health makes treatment provision difficult and would facilitate earlier access to dental staff with experience of providing dental care for older adults and knowledge of the complexities involved.

Recommendations for reducing oral health inequalities due to an increasing older population

Some older adults will also have physical disabilities and/or others may suffer from dementia resulting in challenges accessing dental care. It is essential that those who care for others are trained to provide mouthcare and dental services are commissioned to meet the needs of patients who are housebound.

Good oral health is important for quality of life, nutrition and hydration and is linked with general health. Poor oral health has been linked with aspiration pneumonia, poor diabetes control and heart disease.

Training

- Training of the primary care dental workforce to support delivery of care for the changing demographic of the Y&H population working closely with partners in HEE. Exploration of how oral health inequities can be addressed (for example through multi-disciplinary special care teams, led by MCNs enabling opportunities for foundation dentists to up-skill and work alongside specialists and those with level 2 specialist skills) with high needs groups and the predicted increase in older population.
- Understanding of the skills, work patterns and distribution of the dental work force with insight into their future aspirations and career plans to inform workforce planning, recruitment, and retention of dental professionals.
- Bespoke training for example in relation to dementia can facilitate patient care in GDS.

Specialist-led Care

- A care pathway approach aligned with special care dentistry where appropriate, with shared care between GDS and CDS and making best use of the skill set of the dental profession. Maximising the skill mix of the dental workforce, enables them to deliver oral health preventive messages including oral hygiene, diet advice and applying fluoride varnish.
- Quality assurance through audit led by LDNs

For consideration by Local Authorities

- Targeted prevention in line with Commissioning Better Oral Health for Vulnerable Older People.
- Dental services for older people must be more integrated within the wider health and social care landscape. This will need to be supported by developments in training in oral health promotion for health and social care teams, information sharing and referral pathways.
- When commissioning care for the older population (in home or in residential/ care homes) specifications should include staff training in oral health promotion, oral health assessments and care plans to support good oral health.
- Identifying and training oral health care champions within care homes.

Collaborative work across systems including NHSE and Local Authorities

- Partnership working across the healthcare sector with use of a common risk factor approach including MECC, signposting and brief interventions and opportunities for shared learning.

Summary – adult and older adult oral health

ONS population predictions estimate an increased older population across the Yorkshire & the Humber region. An ageing population across the whole region will put pressure upon dental services.

- Virtually all adults have at least some natural teeth.
- The effects of poorer oral health disproportionately affect the adult population, most notably older people and those living in the more deprived areas. This correlates with

disease distribution in the child population, in the main greater levels of disease are in those Local Authorities that are more deprived.

- More adults retaining teeth for longer will mean that a greater amount of resource will be needed to enable individuals to retain teeth which in some cases may require complex restorative care. The maintenance of a heavily restored dentition is also expensive, and often compounded by failing general health, polypharmacy causing a dry mouth, and the ability to self-care.
- Inequalities in oral health are complex and are explored in more detail in a later section.

8. Oral Cancer

Oral cancer, also known as mouth cancer (NHS, 2019), is an important public health issue in England. Oral cancer includes cancers of all sites of the oral cavity and pharynx and is the sixth most common cancer globally (Warnakulasuriya, 2009). In the UK oral cancer is the ninth most common cancer and accounts for just over 2% of all cancers diagnosed (Oral Health Foundation, 2019).
Known risk factors for oral cancer are linked to social determinants (Warnakulasuriya, 2009) and include smoking, other ways of using tobacco such as chewing, drinking alcohol and infection with the human papilloma virus (HPV) (NHS, 2019). Tobacco and alcohol act synergistically and multiply the risk of developing mouth cancer by up to 40%. Smokers are 7-10 times more likely to suffer from an oral cancer when compared to those who have never smoked and those who regularly use smokeless tobacco have 11.4 times the risk of a non-user (Johnstone et al., 2000). There is some evidence that a limited diet is also a risk factor for oral cancer with some evidence stating the protective role of fruits and vegetables, particularly citrus fruits in the prevention of the development of cancers of the digestive and upper respiratory tract (Foschi et.al., 2010). Awareness of these risk factors offers are opportunities to prevent oral cancer and to support early detection and treatment (Warnakulasuriya, 2009).
Where oral cancer is suspected on the basis of clinical examination or symptoms, the diagnosis is confirmed by biopsy (NHS. 2019). The degree of spread at initial presentation, described as stage, and the grade of a cancer are important indicators of prognosis (NHS, 2021).

Treatment can include surgery, radiotherapy, chemotherapy or a combination of these (NHS, 2019). It has a significant impact on the lives of those people affected because the disease and the aftermaths of treatment can be debilitating (problems speaking and swallowing) and facially disfiguring leading to a significant impact on the quality of life for those who survive. The average 5- year survival rate is 50%. Early diagnosis increases 5-year survival to 80% but small tumours are often undetected because of low awareness and their painless nature mean that people often only seek help when the cancer is advanced. Survival rates have changed little over recent decades, with the majority of cases presenting late in the disease process, this further reduces prognosis.

In 2020 PHE published a first report describing the incidence, survival and mortality rates for oral cancer in England, 2012 to 2016 (PHE, 2020). The report uses two categories for reporting based on International Classification of Diseases (ICD) version 10: lip, oral cavity and pharynx (C00-C14) and oral cavity (C00- C06). The latter grouping features cancers of sites likely to be visible in a dental examination. Note - the report excludes the very low incidence of malignant head and neck neoplasms of bone (C41) or soft tissue (C45-C49) which may occur in the mouth and in situ or benign neoplasms of uncertain behaviour. The latter may be under-recorded in the cancer registry but are important to note as these and pre-cancerous conditions contribute to dental referrals for investigation.

In England from 2012 to 2016 there were 35,830 new cases of oral cancer diagnosed and 10,908 deaths (PHE. 2020). Incidence and mortality rates for oral cancer have risen in recent years and there are stark inequalities between geographic areas and population groups. Those living in urban areas and in the North of England are more likely to be diagnosed with oral cancer and more likely to die from oral cancer than those living in rural areas and in the South (Figures C & D appendix).
Source: Oral cancer in England: a report on incidence, survival and mortality rates of oral cancer in England, 2012 to 2016 (publishing.service.gov.uk)

Incidence of C00-C14 in Y&tH was higher than for England overall. The majority of lower-tier local authority areas in which incidence was greater than for England were densely populated urban centres in the North, including Bradford, Hull and Leeds (C00-C06 - Bradford and Wakefield) (Table H appendix).
Mortality due to C00-C14 in Y&H was higher (NS) than the England rate. At lower-tier local authority level the areas in which mortality was less than the England rate were typically rural and those in which it was greater than for England were typically urban. Mortality was greater than the England rate in lower-tier local authority areas covering densely populated cities including Bradford and Hull (Table H appendix).
There was evident variation in incidence and mortality between income deprivation quintiles with rates increasing steadily as income deprivation increases (figures E and F see appendix). This mirrors the profile of dental caries (tooth decay) in young children, with the most deprived populations in England bearing proportionally more of the overall oral disease burden.

Oral cancer disproportionately affects males and its incidence and mortality increase with age and deprivation. The reasons for these increases are poorly understood but may be partially explained by trends in risk factors and latency period and stage at presentation.
The incidence of oral cancer is known to vary by ethnicity. In the 2011-16 data the 'Other' ethnic group had a particularly high incidence rate which is thought to be reporting bias in hospital data, with incident cases assigned to the 'Other' ethnic group in instances where a different broad ethnic group should have been used. The variation in incidence by ethnicity may reflect variation in exposure to distribution of risk factors and stage at presentation.
Both the incidence and mortality of C00-C14 and C00-C06 have risen steadily since 2001 and for both C00-C14 and C00-C06 incidence has risen at a greater rate than mortality; improvements in early presentation, diagnosis, recording, treatment or a combination of these factors could have been responsible. However, the majority of cases present late in the disease process, which reduces prognosis (PHE. 2020).

Summary

Regular attendance at a dental practice offers opportunities for making every contact count, offering brief interventions and signposting to tobacco control and alcohol services, and for screening of the oral mucosa.
Known risk factors for oral cancer include use of tobacco products, drinking alcohol and infection with the HPV. Awareness of these risk factors offers opportunities to prevent oral cancer and to support early detection and treatment.
Stark inequalities in incidence and mortality exist between geographical areas, age groups, genders, ethnicities, and levels of income deprivation. These are also likely to be due to differences in exposure to risk factors and stage at presentation.
Incidence of oral cancer is significantly higher in Yorkshire and the Humber when compared with England.
Incidence and mortality are greater in densely populated urban centres in the North, (incidence C00-C14 - Bradford, Hull and Leeds; C0-C6 - Bradford and Wakefield); mortality C00-C14 Bradford and Hull)

5-year survival remains poor however survival is greater for lesions of the oral cavity. Lower survival is associated with malignant neoplasms of pharyngeal sites which are less visible in a dental examination.

Recommendations

Prevention

- Training of the primary care workforce to identify early signs of oral cancer
- Screening of the oral mucosa at dental appointments and referral to specialist services via the 2-week-wait pathway where necessary.

Collaborative work across systems including NHS E and Local Authorities

- Oral health messages incorporated through a common risk factor approach into all health promotional programmes and included in health assessments for vulnerable groups
- Partnership working across the health and social care system, maximising the skills of the wider health and social care workforce can help to reduce risks by making every contact count. This should include offering brief interventions and signposting patients to stop smoking, drug and alcohol services and promoting uptake of HPV vaccination.
- Primary Care Network leadership to strengthen dissemination of key messages across the totality of primary care, including recognition of possible significance of persistent mouth ulcers.
- Raising awareness of the risk of other modes of tobacco use, not just smoking.

9. Oral Health inequalities

The PHE inequalities in Oral Health in England (PHE, 2021) document outlines the various dimensions of inequality. Key summaries and relevant sections of the document are outlined below and have been used to:

- Identify those groups and individuals where oral health inequalities exist
- Understand the impact of those inequalities upon oral health such as increased oral disease and/ or barriers accessing dental care

Barriers to dental service use have been found for those with protected characteristics and vulnerable groups at individual, organisational and policy level although availability of data is variable (Table 9).

Table 9: Scoping Review of oral health inequalities in the UK: overview of findings (PHE 2021)

	Caries	Odontogenic infections	Tooth loss	Oral cancer	Periodontal disease	Traumatic dental injuries	Self-rated oral health or pain	OHRQoL	Oral health related behaviours	Service use
SEP	++	n.d.	++	++	inc.	inc.	++	++	++	++
Area deprivation	++	+	++	++	inc.	–	+	++	+	++
Ethnicity	+	n.d.	+	+	inc.	–	inc.	+	inc.	inc.
Disability	+	n.d.	+	n.d.	inc.	+	–	+	+	+
Pregnancy/ maternity	n.d.	n.d.	inc.	n.d.	inc.	n.d.	inc.	n.d.	inc.	inc.
Religion	inc.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Homelessness	+	+	+	+	+	+	+	++	+	+
Prisoners	+	+	n.d.	n.d.	+	n.d.	+	++	inc.	+
Travellers	+	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	+	+
Looked-after children	+	n.d.	n.d.	n.d.	n.d.	+	+	n.d.	n.d.	+

++ Strong evidence for inequalities
+ Evidence for inequalities based on limited data
– No evidence for inequalities
inc. Mixed or inconclusive evidence
n.d. No data

Behavioural and biological influences (PHE. 2021)

These include oral health related behaviours such as diet, tobacco use, hygiene practices and alcohol use and the biological factors that are directly linked to oral diseases, namely inflammation, infection and immunity. These are heavily influenced by wider factors in society and the environment. For example, health behaviours such as smoking, sugar consumption and hygiene practices are all highly socially patterned.

1. **Socio-economic position (SEP) – individual or area-based level**

There is strong evidence of oral health inequalities relating to socio-economic factors and area deprivation with tooth decay (caries), tooth loss and oral cancer, oral health quality of life and dental service use (Table 9).

Deprivation in Yorkshire & the Humber

Deprivation has been discussed in detail previously in population demographics using data from Public Health England Local Health (2021). Figure 3 shows that variation in deprivation exists between Local Authorities, with the Index of Multiple Deprivation score and IMD (2019) decile rank (where 1 is the most deprived and 10 is the least deprived) for each local authority. Variation exists across the region with the most deprived Local Authorities being Kingston upon Hull, Bradford and North East Lincolnshire.

Key points

Poor oral health is strongly correlated with deprivation. Deprivation measures at smaller geographies can be used to support targeting of prevention and treatment services to reduce oral health inequalities.

2. **Protected characteristics**

Data relating to oral health inequalities for some protected characteristics in Yorkshire and the Humber was not readily available at the time of collating this rapid oral health needs

assessment. A recommendation would be that further work would be needed by stakeholders to explore what data exists and whether gaps could be addressed.

Whilst oral health inequalities vary between the groups, there is commonality in the types of challenges experienced by individuals with protected characteristics. Language or communication difficulties are common barriers with specific problems highlighted for groups such as those from minority ethnic groups, learning disabilities, refugees, migrants or those with hearing impairments (PHE. 2020).

Disability (including poor Mental Health)

Disability is defined as a 'physical or mental impairment that has a substantial and long-term negative effect on the ability to do normal daily activities. Disability is a protected characteristic and defined in the Equality Act 2010.

There is some evidence to show oral health inequalities related to disability and tooth decay, tooth loss, dental traumatic injuries, oral health quality of life, oral health related behaviours and service use (lower dental attendance). These groups may be more challenging to treat with some requiring specialist input.

Table 10 outlines the prevalence of some disabilities in the Y&tH region from data that was available.

Table 10: **PANSI data 2021 for data relating to the prevalence of protected characteristics and health inequalities for those aged those aged 18-64 years of age**

Inequality	**% of 2020 population in Y&tH predicted to be affected**
Common mental health disorder	19%
Downs Syndrome	0.06%
Severe Hearing Impairment	0-1%
Learning Disability	2.4%
Autistic Spectrum Disorders	1%
Impaired Mobility	5-6%

Children with learning and/or physical disabilities in residential schools

Oral health leads from Local Authorities were invited to provide data on residential schools for children with learning or physical disabilities (Table I appendix). Based on this data, there are just under 500 children with various disabilities living in residential schools across the region. Humber and North Yorkshire ICS area has around 170 children aged 8 to 19, West Yorkshire ICS area around 175 children aged 5 to 25 and South Yorkshire around 152 children aged 3 to 25 (further details can be found in the appendix table I).

Recommendations

Individuals with severe physical and/or learning disabilities will have a high need for oral health care and experience additional challenges accessing dental care. These groups may be more challenging to treat with some requiring specialist input and should be considered in commissioning plans.

Oral health assessment should be a key part of all health assessments, including for example children with cardiac conditions, dementia and severe mental illness (SMI) health checks.

Training

- Specialist training and level 2 training should align with identified and commissioning plans.
- Dental team training to support patients with a disability, for example in dementia or autistic spectrum disorders, can facilitate patient care in GDS.

Service

- Specialist led pathways that adopt a shared care approach integrating dental care across primary and secondary care should be developed and informed by MCNs with the skills to develop specialist and innovative care pathways.
- Dental services should be accessible for people with physical and learning disabilities, for example ensuring that new practices are in areas with disabled parking.
- Partnership working with health and social care to ensure signposting to oral health assessment and key oral health messages from health and social care interactions.

Ethnicity

Ethnicity is a protected characteristic and has previously been highlighted in section 4. There are areas across Yorkshire and the Humber with a population with varied ethnicity and local knowledge will be important to identify any oral health inequalities within communities.

3. **Vulnerable groups**

Evidence suggests that vulnerable groups such as homeless people, prisoners, Gypsy, Roma and Traveller communities, refugees and looked after children have poorer oral health and have considerable difficulty accessing care (Table 9). Homeless people have higher levels of untreated decay and periodontal disease and poorer oral health related quality of life than the general population.

Further detail in relation to people with longstanding medical conditions, migrants, asylum seekers, resettled refugees, unaccompanied asylum-seeking children (UASC) and Roma Community can be found in the appendix (including tables J and K).

Homeless

Evidence suggests that homeless people experience significant levels of health inequalities, including poorer dental health and higher levels of dental decay and periodontal disease than the general population. High incidences of smoking and alcohol consumption put homeless populations at a higher risk of developing oral cancer (Collins et al., 2007 and Coles et al., 2009). There is a high incidence of cancers of the mouth amongst homeless men (PHE, 2015 and Lamont et al., 1997). Challenges to maintaining good oral health in the homeless include poor diet (Csikar et al., 2019), poor oral hygiene compounded by costs of a toothbrush and toothpaste, erratic dental attendance and increased risks from dental trauma (Coles et al., 2009, Conte et al., 2006 and BDA 2003).

The highest prevalence of statutory homelessness across Yorkshire and the Humber can be found in larger cities like Leeds and Sheffield and in areas such as North-East Lincolnshire and Hull, followed by Doncaster and Craven. Source: *PHE fingertips Statutory homelessness (eligible people not in priority need) in Y&tH by District & UA 2017/2018*

Dental Services in secure settings

There are 13 prisons, 2 secure children's homes, and 1 secure hospital for adult males with mental health disorder in Yorkshire and the Humber (table L, appendix). The prisons house approximately 9923 prisoners, and there around 78 beds at the secure hospital, 34 children reside at the secure children's homes. the prisons population is gradually increasing and ageing, with increasingly complex healthcare and dental needs.

The physical, mental, social and oral health of people in prison is poorer than the general population (DOH, 2003 and Walsh et al., 2008). Periodontal disease and dental decay levels in the prison population are around 4 times higher than the general population (Harvey et al., 2005 and Heidari et al., 2014). People in prisons are more likely to have come from socially excluded or disadvantaged backgrounds and areas with high levels of unemployment (Mollen et al., 2007), and there is a direct relationship between deprivation and poor oral health. Studies have shown that oral health is poorer in a population of criminally convicted people before entering prison (Osborn et al., 2003). Therefore, the oral health needs on admission to prison are high, with significant levels of unmet dental treatment need.
The poor oral health has been attributed to lifestyle choices such as: drinking alcohol; smoking tobacco; using illicit substances (Heidari et al., 2014 and Heidari et al., 2007), and high sugar diets. Chaotic lifestyles, the lack of oral health literacy and not valuing oral health also have a role (Hediari et al., 2014). There is a higher incidence of learning difficulties and mental health problems in this population, potentially contributing to poorer maintenance of oral hygiene (DOH, 2003 and Heidari et al., 2014). Despite the increased need for treatment, evidence suggests that people in prison infrequently seek dental care (Jones et al., 2005). This may be exacerbated by limited service provision. The transient nature of the prison population, as a result of people having short sentences or being relocated to other facilities, also means courses of treatment are often disrupted or left incomplete (NAPDUK 2013).
Responsibility for dental services in secure settings lies with the NHSEI Health and Justice commissioning team (further details can be found in the appendix, including table L). As highlighted above those that leave secure settings are vulnerable with increased dental need. *Oral Health Inequalities related with individuals with long standing medical conditions*
Individuals with long standing medical conditions may experience a variety of direct and/ or indirect oral health inequalities, due to the medical conditions they are suffering from. Available prevalence data relating to conditions affecting adults and older adults in Y&tH can be found in the appendix accompanied by tables M and N)

Key points

Oral health inequalities are complex and, in some cases, poorly understood. Availability and quality of data also varies. Further work could be done at a regional level and local level to understand the impact of oral health inequalities within communities

Recommendations for reducing oral health inequalities in vulnerable groups at ICS level

Additional clinical needs and complexities around language and other barriers could impact on the length of dental appointments. Commissioners may wish to consider sessional primary care dentistry for some of these vulnerable groups.

Clarity is needed on the responsibility for translation and interpretation services for patients accessing NHS primary dental care so that dental practices are not disadvantaged by providing care for these patients. Patient/user group feedback should be sought to ensure these services are being offered and are fit for purpose.

Primary Care level

- An Inclusion health approach with incorporation of models beneficial to various vulnerable groups (including Severe Multiple Disadvantage), particularly those that encounter challenges accessing services.
- Stabilisation sessions and urgent care drop-in sessions for example with:
    - Migrants, asylum seekers, refugees, Gypsy, Roma and Traveller communities
    - Homeless

Collaborative work across systems including NHS E and Local Authorities:

Prevention
• Targeted prevention in line with Delivering better oral health (PHE, 2021) and bespoke to vulnerable groups for example following the model of oral healthcare for asylum seekers and refugees (PHE, 2021).
• Use of a common risk factor approach including MECC, signposting and brief interventions.

Systems approach
• Partnership working between dental practices and across the health and social care system through a community approach, improved data collection and integration of digital systems, with simplified processes to benefit the safeguarding and oral health of vulnerable children and adults.
• Whilst acknowledging differences in commissioning arrangements (e.g. for prisons), maximising the skills of the wider health and social care workforce can help to reduce those risks in vulnerable groups such as the homeless, by making every contact count including signposting patients to services.

Prevention

Local Authority Oral Health Promotion Schemes - Responsibilities in relation to oral health:

Since 1st April 2013, when the Health and Social Care Act 2012 came into force, the statutory responsibilities in relation to oral health and Local Authorities include:

- Commission or provide oral health improvement programmes to improve health (Statutory instrument 3094)
- Commission or provide oral health surveys and to participate in any oral health survey commissioned by the secretary of state (Statutory instrument 3094)
- Power to make proposals regarding water fluoridation schemes and duty to conduct public consultations in relation to these (Statutory instrument 301)

Two toolkits have been developed to aid Local Authorities with commissioning and/or provision to provide oral health improvement programmes, both of which outline evidence-based interventions for children and young people and vulnerable older people respectively:

- Local Authorities improving oral health: commissioning better oral health for children and young people- an evidence informed toolkit for Local Authorities (PHE, 2014)
- Commissioning better oral health for vulnerable older people- an evidence informed toolkit for Local Authorities (PHE, 2018)

Across Y&H there is a range of activity commissioned from supervised toothbrushing schemes, targeted fluoride varnish application schemes, toothbrush for life packs and water fluoridation to areas which have no commissioned activity. More detailed information should be explored with individual Local Authorities.

Awareness of current oral health promotion initiatives and partnership working between Local Authorities, NHS Commissioning teams and ICS groups could be used to address oral health inequalities.

Within Y&tH region, North Lincolnshire and North East Lincolnshire have established community water fluoridation schemes PHE (2020).

Access to NHS dentistry in Y&tH and the impact of the COVID-19 pandemic

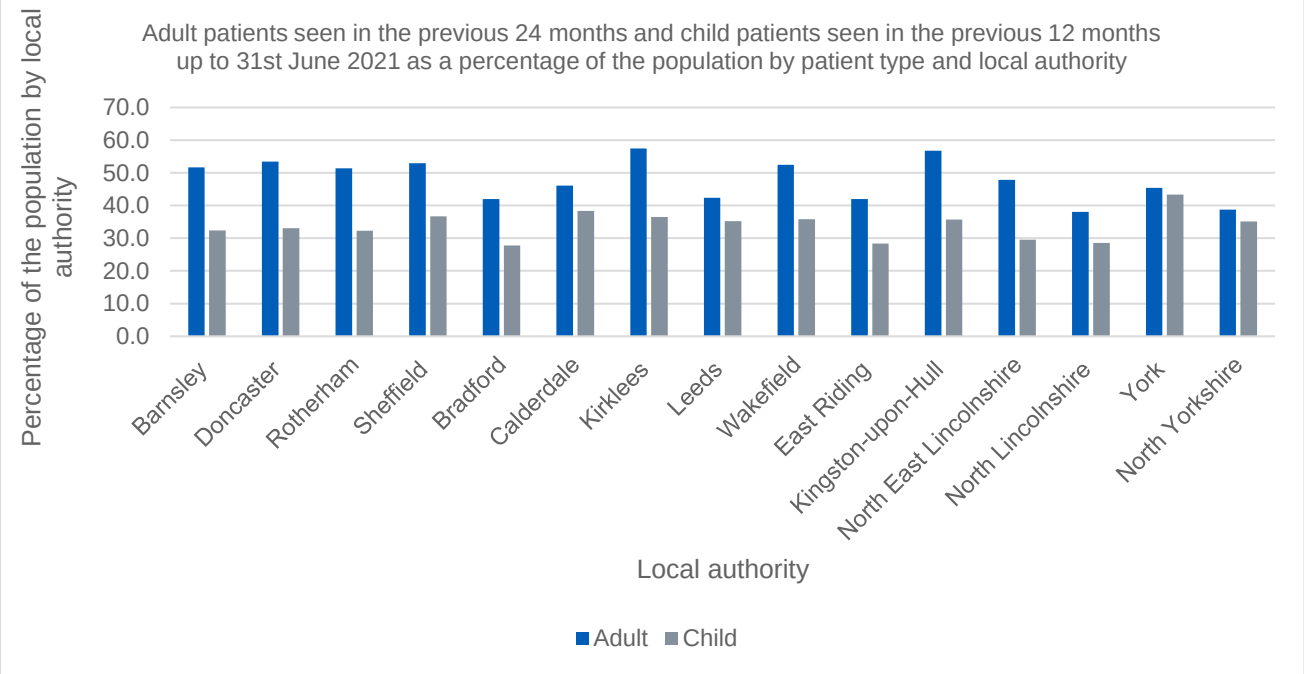
Data from NHS Digital reveals variation in access as a proportion of the population for adults and children by upper tier local authority (see table 11 and figure 15).

Table 11: Patients seen in the previous 24 months and child patients seen in the previous 12 months as a percentage of the population, by patient type and LA up to 30th June 2021.

Local Authority / ICS	Adult (18 years and older)	Child (0-17.99 years of age)
Humber Coast & Vale		
East Riding of Yorkshire	42.0	28.4
Kingston upon Hull, City of	56.7	35.7
North East Lincolnshire	47.9	29.5
North Lincolnshire	38.0	28.6
York	45.4	43.4
North Yorkshire**	38.7	35.2
Hambleton		
Harrogate		
Richmondshire		
Ryedale		
Scarborough		
Selby		
West Yorkshire		
Bradford	41.9	27.8
Calderdale	46.1	38.3
Craven		
Kirklees	57.5	36.5
Leeds	42.4	35.3
Wakefield	52.5	35.8
South Yorkshire		
Barnsley	51.7	32.4
Doncaster	53.4	33.1
Rotherham	51.4	32.3
Sheffield	53.0	36.7
Yorkshire and The Humber		

***** *Due to the nature that the data is aggregated Harrogate and Craven has been included in data pertaining to North Yorkshire.*

Figure 4: Adult patients seen in the previous 24 months and child patients (0-17.99 years of age) seen in the previous 12 months as a percentage of the population, by patient type and LA up to 30th June 2021.



Notes to accompany table 11 and figure 4
Patients seen includes orthodontic visits (which are likely to be quite small numbers) this is the same as for previous years.
Data is affected by the COVID-19 pandemic and the data reported in the publication including activity, patient numbers, finances and treatments, will be lower than expected during the time period of restrictions.
Further detail regarding provision of NHS dental treatment during the COVID-19 pandemic can be found in the following section.

Impact of COVID-19 on NHS dental access

The dental sector has faced challenges since March 2020 at the start of the pandemic due to the relatively high proportion of aerosol generating procedures (AGPs) undertaken. Initially dental practices were asked to close and urgent dental centres (UDCs) were established for patients in pain.

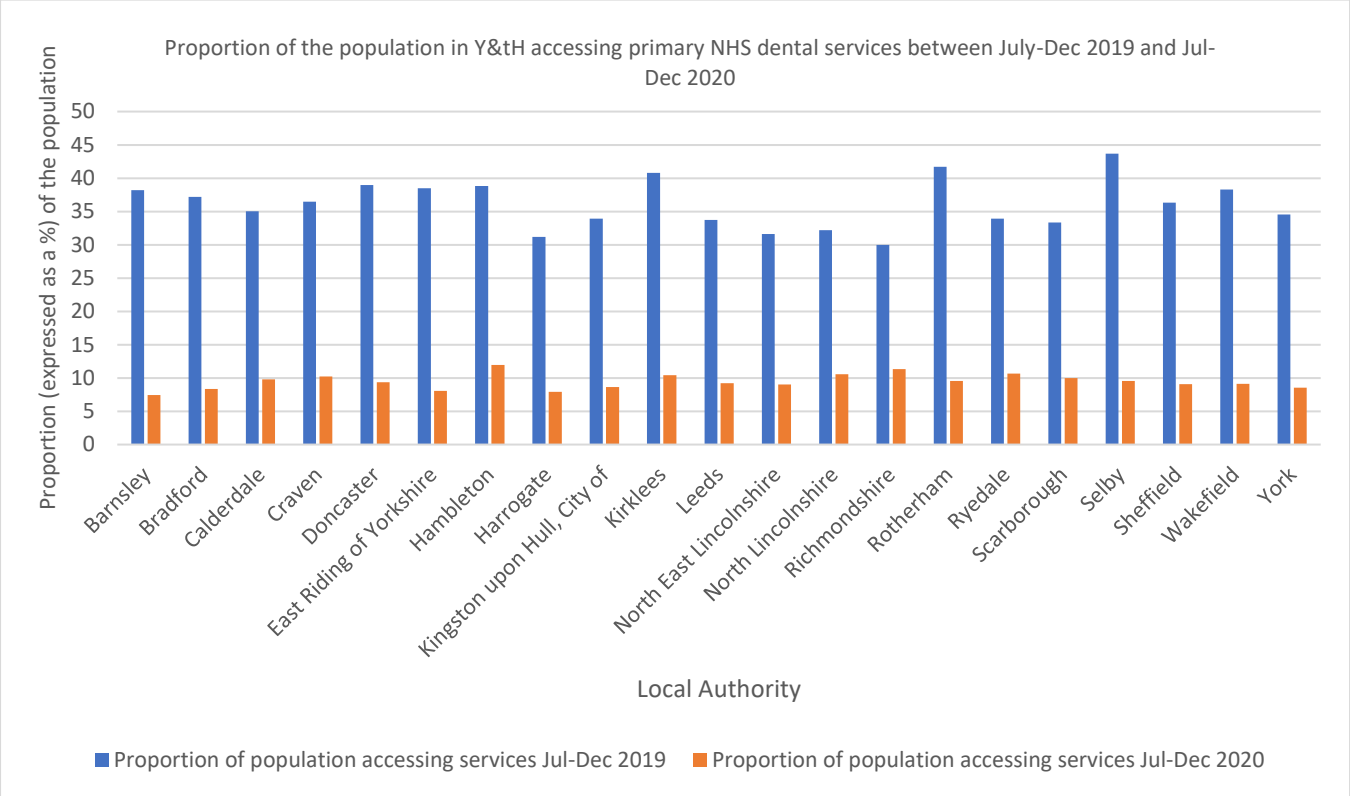
Practices reopened for the provision of face to face care in June 2020 and have steadily increased the activity that they can provide since then. The Chief Dental Officer asked dental primary dental care to prioritise patients according to their clinical need, due to reduced capacity. The starting point was a requirement to deliver at least 20% of normal activity volumes and this has gradually increased to a current minimum of 85% of pre-Covid activity until March 2022. Whilst restoration of NHS dental activity continues, it will be some time before dental services return to providing care at previous activity levels, with many dental practices still catching up on a backlog.

COVID-19 has had an impact upon individuals accessing health services including dentistry. A methodology identifying unique patients as a proxy measure for access was developed in the North East of England to explore the impact of the pandemic on NHS dental access.

In Yorkshire & the Humber there was a decrease by 81% (74% - England) in the proportion of children (aged 0-17 years) accessing NHS primary dental care and for adults (18 years and over) a decrease of 73% (68% - England)

Within Y&tH variations in the proportion of the population accessing primary NHS dental services were apparent between Local Authorities with the greatest decrease evident in Barnsley (a decrease by 80% when comparing Jul-Dec 2019 with Jul-Dec 2020) and the smallest decrease in Richmondshire (62% respectively) (please see figure 5 below).

Figure 5: **Proportion of the population (all ages) in Local Authorities in Y&tH (expressed as a percentage) accessing primary dental care between Jul-Dec 2019 and Jul-Dec 2020**



Within Y&tH, variations in the proportion of the population of children (aged 0-17 years of age) and adults accessing primary NHS dental services were apparent between Local Authorities (see table 12).

Table 12: Proportion of the population (0-17 and 18 years and over) in Local Authorities in Yorkshire & the Humber (expressed as a percentage) accessing primary dental care between Jul-Dec 2019 and Jul-Dec 2020

Local Authority / ICS	Proportion of 0-17 population accessing services Jul-Dec 2019	Proportion of 0-17 population accessing services Jul-Dec 2020	Proportion of adult population accessing services Jul-Dec 2019	Proportion of adult population accessing services Jul-Dec 2020
H & NY	50%	11%	31%	9%
York	53	8	35	8
Hull	48	9	30	9
North East Lincs	42	11	29	9
North Lincs	46	12	29	10
York	55	13	30	8
Hambleton	58	18	35	11
Harrogate	46	10	27	7
Richmondshire	52	22	25	9
Ryedale	50	16	30	10
Scarborough	45	13	31	9
Selby	57	10	40	10
West Yorkshire	51%	10%	32%	9%
Bradford	51	9	32	8
Calderdale	49	11	31	10
Craven	53	16	33	9
Kirklees	56	12	36	10
Leeds	49	11	30	9
Wakefield	50	9	35	9
South Yorkshire	50%	9%	35%	9%
Barnsley	50	7	35	8
Doncaster	48	9	37	10
Rotherham	52	9	39	10
Sheffield	50	10	33	9

The greatest percentage change in dental access for 0-17 year olds was evident in Barnsley (a decrease by 85% when comparing Jul-Dec 2019 with Jul-Dec 2020) and the smallest decrease in Richmondshire (57% respectively) see figure O appendix)

Within Y&tH, variations in the proportion of the adult population (aged 18 years of age and over) accessing primary NHS dental services were also apparent between Local Authorities with the greatest decrease evident in Barnsley (a decrease by 78% when comparing Jul-Dec 2019 with Jul-Dec 2020) and the smallest decrease in Richmondshire (63% respectively) (see figure P appendix)

When the access data was compared with local authority IMD deciles it was apparent that decreases in access impacted all areas despite their deprivation status. However, those that are in the most deprived areas and have the greatest burden of disease are more likely to experience poorer oral health through any reduction in dental access.
The same proportions (expressed as a percentage) accessing primary dental care for both 0-17 year olds and adults (aged 18 years and over) between Jul-Dec 2019 and Jul-Dec 2020

have been summarised above at ICS level in table 12 (and figure Q appendix) which show similar trends for all ICS foot-prints.

Key points

- The impact of the COVID-19 pandemic has resulted in reduced access to dental services for the population of Yorkshire and the Humber.
- Those areas that are most deprived will be impacted to a greater degree as they have greater oral health need and higher prevalence of dental disease.

Recommendations for all ICSs

Improving access
• Targeting resource to those with the greatest need and which experience the greatest challenges accessing care including those requiring urgent dental care.
• Encourage universal implementation and promotion of Dental Check by One (DCby1) and child friendly practices.
• Consideration of new or recommissioned practices in areas of deprivation with good public transport facilities links and disabled parking.
• Recognise that there will be a time lag in recovery of dental services to pre-pandemic levels of provision. Those in the most deprived areas with greatest need will have experience the greatest impact.

NHS Dental Care

Using the SHAPE mapping tool to provide a broad outline of the location of NHS dental practices, (and allowing for any time lag between uploading of site data onto the SHAPE tool) there are approximately 267 sites providing NHS dental care in Humber Coast and Vale ICS, West Yorkshire ICS 359 and South Yorkshire ICS 204 (figures 6,7 and 8 below). *In 2019-2020 there were 635 GDS contracts and 29 PDS contracts in Y&tH .*

Figure 6 HCV NHS dental sites

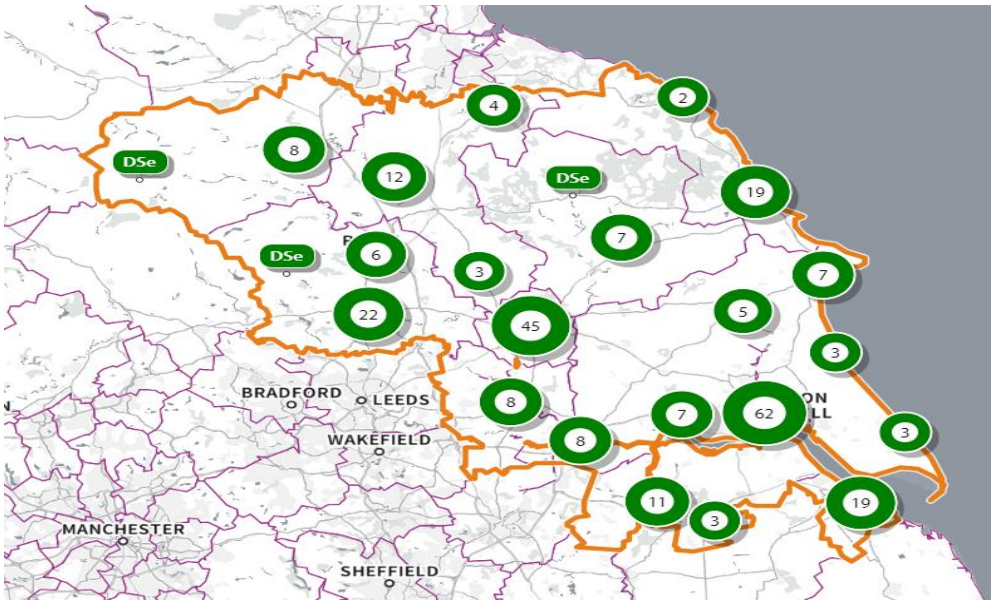


Figure 7 West Yorkshire ICS NHS dental sites

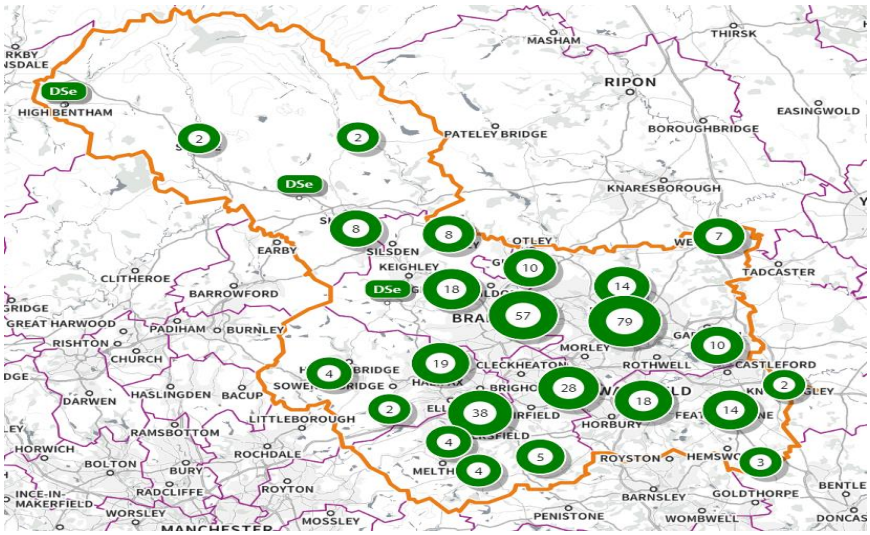
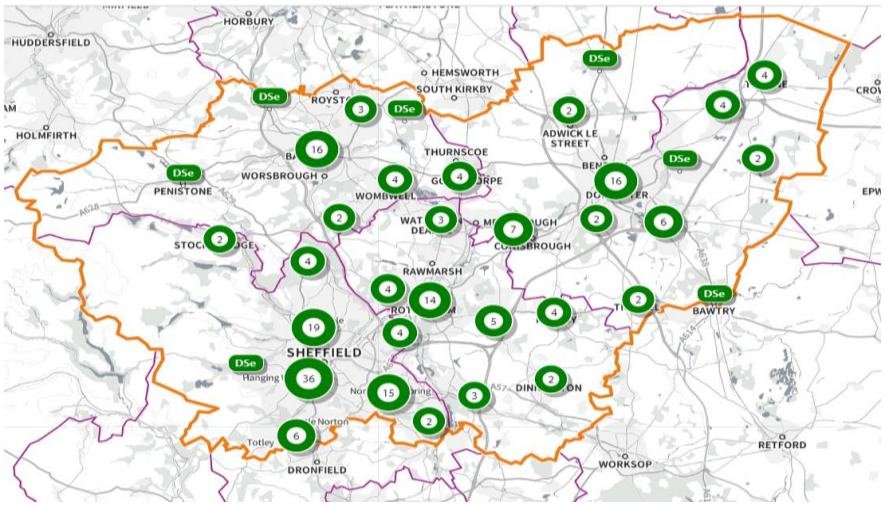


Figure 8 South Yorkshire ICS NHS dental sites



Urgent Dental Care (UDC)

Urgent dental care provision is part of mandatory NHS GDS and PDS contracts. It is important to understand the various dimensions of urgent dental care such as the demand for UDC, customer experience, any gaps between triaged need and the demand, and identifying geographical areas that have high need. The amount of dentistry commissioned will also impact upon demand for UDC, for example the availability of commissioned routine dental care dentistry will impact upon in-hours urgent care demand.

Challenges to the provision of urgent dental care include:

- Calls
    - Volume of calls – Demand
    - Finances
    - Accessing the service
        - Negotiating the NHS111 system and travel times
- Impacts of the COVID-19 pandemic
- Did not attend (DNA) rates
- Mismatch of supply and demand of urgent appointments slots (some areas over supply others insufficient supply to meet demands).

Recommendations

A health equity audit should be used to determine equity of access to dental services, including urgent care services, and evaluate the outcomes from initiatives to improve access across Y&tH, the findings of which should inform future commissioning decisions.

- Audit of triaged calls to NHS 111 and a review of algorithms to improve appropriate management of calls and patient experience.
- Review of call waiting times.
- Review of models of urgent dental care. Training of the dental workforce in the management of cases including encouraging definitive treatment, so patients do not need further appointments, appropriate prescribing of analgesic and antimicrobial medication, and promoting antimicrobial stewardship in line with national guidance.
- Re-alignment of commissioned capacity to meet triaged need which is evidence based.
- Identify those areas where triaged demand is highest to align with appointment schedules
- Audit of DNA appointments to understand the reasons why and to improve efficiencies

Spending on NHS dental care

The amount of NHS primary care treatment per head of region population in 2018/19 varies such that in North East and Yorkshire there are 0.82 courses of treatment per head of regional population (0.71 England) and 1.66 UDAs per head of regional (1.48 UDAs) (National Audit Office. 2020).

Workforce

Primary care workforce

A pilot study in 2020 by HEE Y&H collected detailed data from the primary care dental workforce across the region. The survey was a pilot with a response of 50% (5 out of 10 questionnaires distributed). Whilst the response rate is too low to draw any meaningful conclusions (5 out of a possible 635 GDS contract holders) from the responses it demonstrates a method which could be adopted to explore the workforce patterns of the dental profession to inform future training needs and inform staff recruitment and retention.

Specialist workforce

Data was exported at NHS Trust level by HEE from Electronic Staff Records (ESR) to explore the distribution of dental specialists across the region. Exploration of the data revealed coding issues and further work will be needed to explore coding challenges.

The future workforce

Dental Foundation Training (DFT)

Most NHS dentists will have undergone foundation training in an approved general dental practice. There is inequity in geographic distribution of DFT placements in Y&H, with limited placements towards the coast.

Dental Core Training (DCT)

DCT offers dentists who have completed DFT the experience of working in a range of settings and variety of specialties including hospitals, community dental services.

The number of dentists in training posts in Yorkshire and the Humber remains relatively stable between 2019, and 2021. It is not known whether these dentists continue to practice in the NHS in Y&H.

Table 13 Number of trainees in DFT, JDFCT and DCT posts

Training scheme (numbers on scheme)	2019	2020	2021
Dental Foundation Training	90	88	84
JDFCT	24	24	24
Dental Core Training (DC1,2 and 3 posts)	68	68	63

Level 2 Training

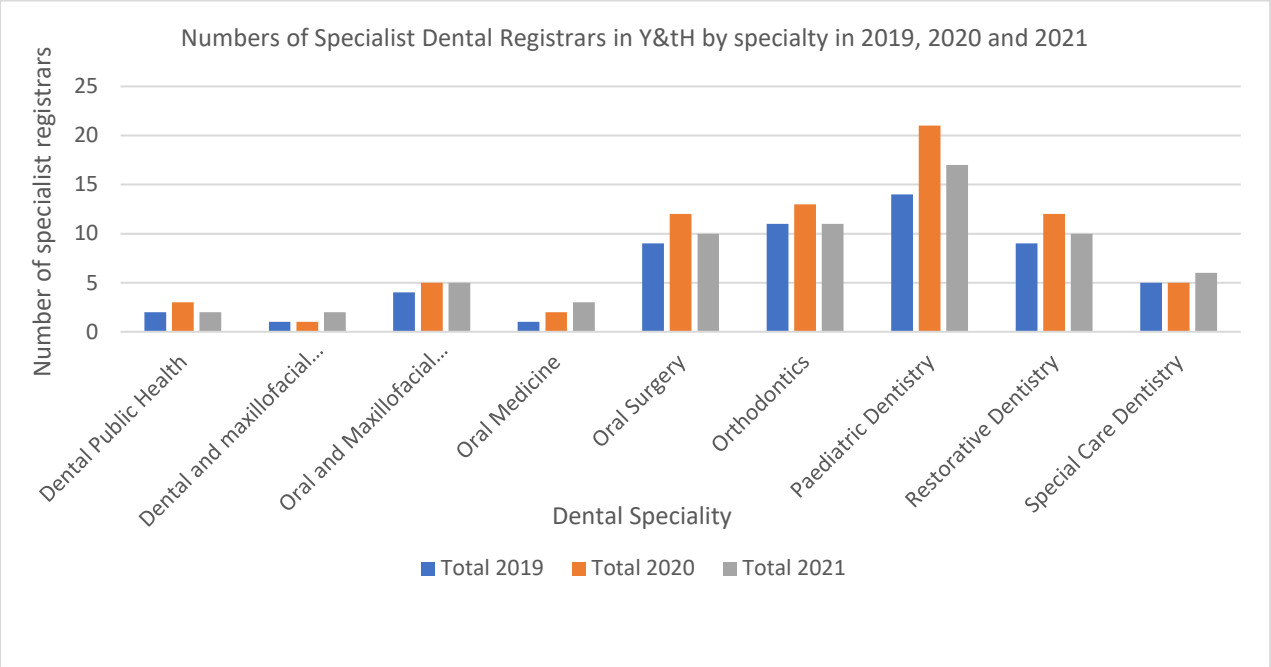
Level 2 (intermediate care) refers to care, which is delivered by dental practitioners, who have demonstrated a competency level beyond that of a dentist, who has satisfactorily completed Dental Foundation Training (or equivalent), but not at the level of a registered specialist (NHS England. 2018)

Those dentists that wish to undertake level 2 procedures must undergo an accreditation process. Commissioners work with MCNs (where established) to develop Local Accreditation Panels (LAPs). In addition to being able to demonstrate the ability to deliver Level 1 care, these performers will also be required to demonstrate additional training, and/or experience in the relevant specialty areas to satisfy LAPs that they have the relevant competencies to deliver quality care of Level 2 complexity. They will be accredited to carry out all the treatments described in the Commissioning guides at Level 2, or just some of the treatments and this will be made clear during the accreditation process (NHS England. 2018)

Specialist Training

Specialist training posts are available across the Yorkshire and the Humber region. Posts can be aligned with the NHS and/or academia and vary in length of time usually between 3 to 5 years in total. Some specialities comprise of small numbers nationally and this is reflected in the numbers being trained at a regional level and includes Dental Public Health, Dental Maxillo-Facial Radiology, Oral and Maxillo-Facial Pathology, Oral Medicine and Special Care Dentistry. The specialities with larger numbers of trainees include Orthodontics, Paediatric Dentistry, Restorative Dentistry and Oral Surgery (see figure 9 below). Fluctuations in numbers will vary annually as new trainees enter training some move to part-time training and others complete their training.

Figure 9 Numbers of Specialist dental registrars in Y&tH by specialty in 2019, 2020 and 2021



Specialist training is primarily delivered in dental schools and general hospitals which is reflected in the location of training sites across the region with most based in the teaching hospitals in Leeds or Sheffield. Some trainees will undergo training in the community dental services for paediatric and special care dentistry.

Specialist workforce

Data was exported at NHS Trust level by HEE from Electronic Staff Records (ESR) to explore the distribution of dental specialists across the region. Exploration of the data revealed coding issues and further work will be needed to explore coding challenges. The data identified that specialist dental services are provided at trust level across the region.

Dental Care Professionals

Dental care professionals comprise of dental therapists, dental hygienists, dental nurses, dental technicians and other roles and all are valued members of the dental team. There was no readily available data relating to numbers and details of training schemes but all of the professionals listed have to be registered with the GDC. Many have enhanced roles for example training for dental nurses in delivering fluoride varnish application and it is important to utilise skill mix to increase preventive dentistry and reduce oral health inequalities.

Recommendations

- Development of a Y&H workforce survey to inform future training needs, including additional training.
- Development of level 2 training and accreditation.
- Use of skill mix.
- Training for the dental team that supports innovative commissioning.
- Work to support recruitment and retention of dental team members in Y&H and particularly in areas that struggle to recruit and retain.
- Upskilling opportunities in primary care settings.

NHS dental services

All NHS dental services, such as those provided in general dental practice, the community dental service (CDS) and within secondary care (hospitals) are commissioned by NHS England and Improvement.

NHS Dentistry in England is delivered based on the General Dental Services (GDS) and Personal Dental Services (PDS) contracts (NHS England a. 2018 and NHS England b 2018). There can be challenges for providers of GDS services in fulfilling current annual NHS contractual obligations, particularly when they provide dental care in areas of deprivation, with high needs patients who will require greater clinical time and also in areas where it is difficult to recruit and retain dental professionals.

The Department of Health and Social Care (and later jointly with NHS England from 2013) have been testing alternatives or amendments to the current activity-based contracts and agreements since 2010 with the programme looking at both clinical and remuneration models. The programme offers opportunities to further improve oral health, reduce health inequalities and address issues with dentists' morale, workforce retention, and patient access (NHS 2022).

The remuneration system for prototypes offers a blended capitation and activity model which is closer to, and builds on, the 2006 contract and regulations. This combines a continuing capitation payment for prevention and a modification of the current UDA system for some, or all, 'restorative treatment'. The prototyping has been achieved through introducing a variation to the current GDS contract or PDS agreement, covering contract metrics (NHS 2022).

Alternative approaches to commissioning

An NHSE hosted multiagency stakeholder event in December 2018 made several recommendations for the future commissioning of dental care for the population of Y&H including increasing access to prevention with a focus on 0-19 years and adults, especially older/vulnerable groups. Acknowledging the constraints of the current contracting mechanism, the epidemiological evidence of poor oral health in Y&H and challenges to access to dental care for the whole population, including recruitment and retention of the dental team, NHSEI Y&H took a decision in 2019 to implement a flexible approach to the commissioning of primary care dental services across Y&H.

The GDS and PDS frameworks have two main components: mandatory services and additional services (which may include dental public health or other services). A Flexible Commissioning (or Transformational Commissioning) approach is permissible under the additional services element by either 'substituting' a percentage of the existing contract value from UDAs into the planned commissioned activity (delivered within existing contract value) or in 'addition' to the contract value within limits.

Y&H FC programme was originally intended to be implemented in two phases. Phase 1 would be practice based across Y&H and funded by substitution of contact value, whilst phase 2 would take a more targeted approach that could involve out-reach and would be funded in addition to the contract value. To date only phase 1 has been implemented involving approximately a quarter of practices across Y&H and is currently undergoing evaluation.

Table 14 - Summary of FC programme

Prevention	
Evidence informed pathways based on Delivering better oral health (DBOH) (PHE, 2014) and informed by learning from In Practice Prevention (Y&H) and Starting Well (Hull & Wakefield)	
Whole population	• All children – DBOH recommended prevention • All adults - DBOH lifestyle advice and signposting to local Health & Wellbeing Services
	Implementation of Dental Check by One (DCby1)
	MECC
Targeted groups	Children 0-18 • Caries • Referred for GA extractions Older Adults • Dementia • Dry Mouth • ONJ Risk • Diabetes • High needs / Phased treatment approach
Access	
Open to new patients (all ages) on NHS webpages (formerly NHS Choices) - 3-month window to implement	
Acceptance of referrals from CDS and 0-19 workforce	
'Was Not Brought' / Safeguarding	
Dental team & use of skill mix	
Appointment of a practice Oral Health Champion	
Training for DCPs & whole dental team in association with HEE Y&H	
DCP led pathways – skill mix	
Audit and evaluation	
Completion of NHS BSA bespoke audit and reporting tool (SNAP tool)	

Services

Further work will be required to explore services, the following could be considered:

- Outcomes are poorer in those with oral health inequalities. Where there are planned commissioning approaches, service re-design should take into account service reviews, ensuring that oral health inequalities are addressed.
- An initial focus should be upon a full review of services such as the CDS and those that provide domiciliary care provision (to nursing and residential care and to the house-bound), and special care and paediatric pathways that are aligned with reducing oral health inequalities across the Y&tH region. This will enable exploration of opportunities for pathway development and where shared care would be appropriate.
- Dental services are not equitably distributed and provide different levels of service provision.
- A health equity audit should be used to determine equity of access to dental services, including urgent care services, and evaluate the outcomes from initiatives to improve access across Y&tH, the findings of which should inform future commissioning decisions.
- Challenges accessing dental care is reported by patient groups from across the region, but need does not always align with demand. NHS dental care is free for

children and certain adults, but others will have to pay a fee, which can be a barrier for some.
- COVID-19 has impacted dental access for all in the region, those in deprived areas and those with additional needs/challenges will experience the greatest burden of oral disease.
- Services can support people through local initiatives, such as oral health teams, peer support workers and the wider workforce providing targeted oral health messages and facilitating access to NHS dental care.
- Innovative approaches in Y&H such as flexible commissioning for prevention and access programmes, have been introduced in an attempt to reduce oral health inequalities and to maximise delivery and spend of the dental budget. A review of the flexible commissioning model and existing time limited interventions can be used to inform further development or expansion of existing interventions.
- Supporting all contractors to deliver their activity to lead in no clawback is beneficial for patients and providers, and where contracts are returned to NHS England using this as an opportunity to address oral health inequities locally.

Service provision and gap analysis

There is a need for further work at ICS level to:
- Identify gaps in service provision
- Identify the distribution of the locations of flexible commissioning and access programme sites
- Map ICS Primary Dental Care (PDC) sites and DFT training sites against IMD and mapping of the distribution of dental practices in relation to deprivation
- Identify the areas of deprivation in each ICS
- Explore waiting times in:
    - Primary dental care (both in flexible commissioning and non-flexible commissioning sites)
    - CDS
    - OS/OMFS
    - Orthodontic

To have a greater understanding of the oral health need/care delivery challenges for each ICS area further work would be recommended in relation to:
- Urgent care (UDC)
    - UDC need – NHS 111 call volume and website volume – where and by how much?
    - UDC delivery – geographical spread – where and by how much?
    - Alignment between calls and provision
    - A&E contacts for urgent dental care
- Service delivery
    - What is being commissioned?
    - Where are the gaps?
    - What are the existing care pathways?
    - Exploration of contract delivery within localities

- Is it possible to supplement existing commissioned UDC services with a targeted FC UDC programme using NHS111 data and targeting a responsive UDC programme at need?
- Exploring the use of therapists to support epidemiological surveys.
- Exploring coding issues in relation to paediatric dental extractions under GA
- Exploring challenges that not all of this data is available, so do we need to think about systems to collect this on ICS footprints?

- Exploring challenges around communication in relation to signposting between systems and shared learning from good practice

Public and Patient Engagement

The summary below outlines the views, experiences and concerns raised via public and patient engagement from across the Y&tH. Data was not available for every local authority area, but it is acknowledged that there may be on-going workstreams by groups representing patients such as Healthwatch, third parties and by Local Authorities.

It is important to note that whilst there are important issues of concern there has also been positive feedback from patients accessing NHS dental care including experiences of being made to feel welcome, staff were helpful and they felt safe with reports that dentists were taking appropriate cross infection control measures to protect staff and patients.

Areas of concern are common across the region and relate primarily to access, availability, affordability and communication relating to NHS dental services. Reports acknowledge the challenges encountered during the COVID-19 pandemic but recommend different commissioning approaches to address the areas of concern.

Table 15 Summary of challenges highlighted by Y&tH Healthwatch in relation to dental access

LA/ICS	Source of data	Main areas of concern	Recommendations
H & NY			
York	Healthwatch	NHS Dental Services: • Access • Availability • Affordability • Communication services available	Addressing the concerns raised through reform of commissioning arrangements
North Yorkshire	Healthwatch	NHS Dental Services: • Access • Availability • Affordability • Communication services available	Address issues raised as concerns together with opportunities for more integrated holistic care and commissioning
West Yorkshire			
Wakefield	Healthwatch	NHS Dental Services: • Access (routine and emergency) • Communication of services available *(particularly during pandemic)*	Addressing concerns outlined including better access, improved communication and signposting and management of urgent care
Calderdale and Kirklees	Healthwatch Calderdale & Kirklees	NHS Dental Services: • Access including those with protected characteristics • Communication of services	Importance of oral health prevention Contractual reform which improves access particularly for those with protected characteristics and complex dental needs Improved communication of availability of NHS dental services
WY & Harrogate*	Healthwatch	NHS Dental Services: • Access • Communication of services available *(particularly during the pandemic)*	Addressing the concerns raised
South Yorkshire			
Sheffield	Healthwatch	NHS Dental Services: • Access	Addressing the concerns raised

		• Communication of services available *(particularly during the pandemic)*	

*N.B. *Reports have been aligned with closest ICS geographical footprint. Please note West Yorkshire and Harrogate Healthwatch report has been aligned with West Yorkshire ICS, though Harrogate is aligned with Humber Coast and Vale*

Recommendations

Public and patient engagement is important and necessary to complement other data sources to understand the oral health needs and any inequities in oral health service provision and would be recommended as an on-going process.

It will be important as part of the on-going process to explore patient needs and challenges that they experience in accessing oral health care to inform future procurements and commissioning of NHS dental services.

Recommendations aligned with life course approach

Infancy and Early Years
Infants and young children with experience of tooth decay are more likely to have poorer oral health throughout their lifetime. Tooth decay causes pain, affects eating and leads to time off school for children and time off work for carers. It is important they get the best start in life by:

- Universal implementation and promotion of the of Dental Check by One (DCby1) and for further reviews at least once a year thereafter.
- Maximising the skill mix of the dental workforce to deliver oral health preventive messages including oral hygiene, diet advice and applying fluoride varnish.
- Using evidence based oral health improvement programmes including distribution of toothbrushing packs, supervised tooth brushing schemes, and training the wider early years workforce to deliver oral health prevention to those at high risk and facilitate access to NHS dental care.

Childhood and Adolescence

- Oral health improvement programmes are essential to support families in developing good oral health practices, but provision varies across the region and there is a need to address inequities to programmes.

Working age and adults

- Partnership working across the health and social care system, maximising the skills of the wider health and social care workforce can help to reduce those risks by making every contact count including signposting patients to services dedicated to mental health, diabetes, stop smoking, drug and alcohol and in achieving and maintaining a healthy weight.

Older People

- Good oral health is important for quality of life, nutrition and hydration and is linked with general health. Poor oral health has been linked with aspiration pneumonia, poor diabetes control and heart disease.

- An ageing population across the whole region will put pressure upon dental services. Prevention is key. As people retain teeth for longer, the maintenance of a heavily restored dentition is complicated and expensive, and often compounded by failing general health, polypharmacy causing a dry mouth, and the ability to self-care. It is essential that those who care for others are trained to provide mouthcare and dental services meet the needs of patients who are housebound.
- Dental services for older people must be more integrated within the wider health and social care landscape. This will need to be supported by developments in training, information sharing and referral pathways.
- In order to develop holistic patient-centred services, varying levels of prevention and care need to be available as part of the same care pathway. This may mean a service providing domiciliary care for routine prevention and simple treatments, plus access to public transport and multi-specialist centres for more complex treatments.

Increasing integration with general medical and social services for older adults would mean that patients with progressive long-term conditions could receive a dental assessment and treatment plan when their long-term condition is diagnosed. This would allow a proactive approach to ensure the patient is dentally healthy before their general health makes treatment provision difficult and would facilitate earlier access to dental staff with experience of providing dental care for older adults and knowledge of the complexities involved.

Top priorities and recommendations for reducing oral health inequalities in all ICS footprints:

Particular consideration could be given to those that have both the greatest dental need and experience challenges in accessing routine and urgent dental care including individuals and communities that are deprived and vulnerable children known to the social care system, individuals with severe physical and/or learning disabilities, poor mental health, older adults, homeless, asylum seekers, refugees and migrants. Data and evidence surrounding oral health inequalities is variable and complex, but we know that they also exist in relation to oral cancer and also in vulnerable groups with long-standing medical conditions, substance misuse, prisoners/prison leavers and Gypsy, Roma and Traveller communities.

As a priority, a Community Dental Service (CDS), service review should encompass the entire special care dentistry and paediatric pathway and consider benefits of a Referral Management System (RMS). A service review of prison dental services in Yorkshire and the Humber is being undertaken separately. Considering the complex needs of the older and ageing population, care pathways for housebound or those living in residential and nursing settings should be reviewed. The review of current dental services for people with no fixed abode in Y&tH can be used to inform robust care pathway design, commissioned models and support implementation.

Available Healthwatch reports were used to inform the rapid needs assessment. It is important that commissioned dental services including service design and development work consider the views, beliefs, and experiences of the public and patients living in Y&tH to improve patient safety, experience, and health outcomes. Building on work to date, NHSEI should continue to work in partnership with key stakeholders, including Healthwatch to maximise opportunities to ensure patient centred services improve access, reduce inequalities in communities and make better use of resources.

Recommendations for reducing oral health inequalities - all ICS footprints

Common Risk Factor Approach
Oral health messages need to be incorporated through a common risk factor approach into all health promotional programmes and included in health assessments for vulnerable groups, including MECC, brief interventions and signposting.

Prevention
Targeted prevention particularly aimed at reducing tooth decay, gum disease and preventing oral cancer in line with evidence based national guidance and toolkits. Screening of the oral mucosa for oral cancer/pre-cancer at dental appointments with referral to specialist services where necessary.

Improving access
Targeting resource to those with the greatest need and which experience the greatest challenges accessing care including those requiring urgent dental care.

Acknowledging the impact of COVID-19 on dental access to all, however, those in the most deprived areas with greatest need will experience the greatest impact.

A health equity audit approach should be used to determine equity of access to dental services and evaluate the outcomes from initiatives to improve access across Y&tH, the findings of which should inform future commissioning decisions.

Encourage development of child friendly practices and universal implementation and promotion of *Dental Check by One* (DCby1) with as a minimum, annual reviews thereafter.

Consideration of new or recommissioned practices in areas of deprivation supported by good public transport facilities and disabled parking.

Training
Maximising deployment of skill mix within the dental workforce, enables them to deliver oral health preventive messages including oral hygiene, diet advice and apply fluoride varnish aided by audit and learning from Starting Well, In Practice Prevention and flexible commissioning schemes.

For children in deprived areas training the wider early years workforce to deliver oral health prevention to those at high risk and facilitate access to NHS dental care. Encouraging Starting Well - whole family approach core elements.

Bespoke training for example training or support to individuals with autistic spectrum disorders can facilitate patient care for those with disabilities in General Dental Services (GDS).

Alignment of training:

- With the recommendations from Health Education England's *Advancing Dental Care Review.*
- Centres for training dental professionals should be prioritised to areas with the greatest oral health need and gaps in service provision to support reduction in oral health inequalities. Commissioning arrangements that enable trainees to gain experience in settings with the greatest oral health inequalities will be important.
- Numbers in dental training and specialist training posts should align with high needs groups that require special care and with medium to long term commissioning plans.

Understanding of the skills, work patterns and distribution of the dental work force with insight into their future aspirations and career plans to inform workforce planning, recruitment, and retention of dental professionals

Reducing oral health inequalities in older people

Training
Training of the primary care dental workforce to support delivery of care for the changing demographic of the Y&tH population acknowledging the predicted increase in the older population. This would involve partnership working across the health and social care system to facilitate a reduction in oral health inequities in the population. This could involve development of multi-disciplinary special care teams, led by MCNs, offering opportunities for dental professionals to up-skill (e.g. foundation training, PLVE and Level 2 training), by working alongside specialists and those with level 2 specialist skills with high needs groups and identification and training of oral health care champions within care homes. Bespoke training in dementia friendly training can facilitate patient care of older adults in GDS.

Service and care pathways
In order to develop holistic patient-centred services for the older population, varying levels of prevention and care need to be available as part of the same care pathway. This may mean a service providing domiciliary care for bed bound patients including routine prevention and simple treatments, plus access to transport (including public transport) and multi-specialist centres for more complex treatments. Treatment may include a mix of mandatory and additional services and could be supported by oral health champions in practices and care homes. Increasing integration through the sharing of information and appropriate referral pathways could enable alignment between general medical and social services for older adults with dental services. This would mean that patients with progressive long-term conditions could receive a dental assessment and treatment plan when their long-term condition is diagnosed. This would allow a proactive approach to ensure the patient is dentally healthy before their general health makes treatment provision difficult and would facilitate earlier access to dental staff with experience of providing dental care for older adults and knowledge of the complexities involved.

Collaborative work across systems including NHSE and Local Authorities
Partnership working across the health and social care system, through a community approach maximising the skills of the wider health and social care workforce can help to reduce risks by making every contact count. Oral health improvement programmes are essential to support families in developing good oral health practices, but provision varies across the region and there is a need to address inequities in access to and content of programmes. Complementary commissioning is important between Local Authorities and NHS E&I. Where gaps are identified working with Primary Care Network (PCN) leadership will be important to support alignment of services and strengthen collaboration across the totality of primary care. Improved data collection and integration of digital systems, with simplified processes should be explored to benefit the safeguarding and oral health of vulnerable children and adults.

For consideration by Local Authorities (LAs)
Oral health improvement programmes should be evidence-based and quality assured, audited and evaluated. Water fluoridation is an evidence based and a cost-effective approach, and LAs are currently responsible for feasibility studies.
Commission oral health surveys to monitor the oral health of the whole population and participate in any oral health survey commissioned by the secretary of state.

Service provision and care pathways
Commissioning strategies will have the biggest impact on those at greatest risk of oral health inequities if the approach focusses on both prevention and treatment. Outcomes are poorer in those groups with identified oral health inequalities. Procurement of services and service re-design should be underpinned by service reviews, needs assessments, and informed by

national guidance and best practice. There is a need to understand and agree key actions to address oral health inequalities. National dental epidemiological programmes provide valuable data in relation to oral health inequalities and Local Authorities should work in partnership with NHSE to explore opportunities for joint approaches to commissioning and contracting models to support collection of local data as part of the national dental epidemiology programme and address the data gaps identified in this needs assessment.

An initial focus should be upon a full review of services such as the CDS including the special care and paediatric pathways and access to domiciliary care provision (nursing and residential homes or in their own home), aligned with reducing oral health inequalities. This will support further exploration of opportunities for specialist led pathway development informed by Managed Clinical Networks (MCNs), including progress toward shared care development, integrating dental care between GDS, CDS and secondary care. Quality assurance through audit, could be led by MCNs.

Dental services are not equitably distributed and provide different levels of service provision. Challenges accessing dental care is reported by patient groups from across the region, but need does not always align with demand. Dental services should be accessible for people with physical and learning disabilities for example ensuring that new practices are in areas with disabled parking.

An inclusion health approach with incorporation of models beneficial to various vulnerable groups particularly those that encounter challenges accessing services and have high need (for example individuals with Severe Multiple Disadvantage) through dedicated stabilisation and urgent care drop-in care sessions. These also provide an opportunity for training/up skilling of dental professionals and reducing inequalities with groups including migrants, asylum seekers, refugees, Gypsy, Roma and Traveller communities, and the homeless. Innovative approaches in Y&H such as flexible commissioning for prevention and access programmes, have been introduced in an attempt to reduce oral health inequalities and to maximise delivery and spend of the dental budget. A review of the flexible commissioning model and existing time limited interventions can be used to inform further development or expansion of existing interventions.

Supporting all contractors to maximise delivery of their contracted activity and minimise clawback is beneficial for patients, providers and commissioners. Where contracts are returned to NHS England this should be used as an opportunity to address oral health inequities locally. The voice of the patient and public should be a standard part of the development of specifications for dental services and commissioning approaches should continue to be informed by patient responses.

Recommendations at ICS level

The development of ICSs offers the opportunity for action planning with key partners across each ICS footprint with priority setting and exploration of opportunities to reduce oral health inequalities. Further work at ICS level will be needed in relation to systems to collate data on an ICS footprint to enable mapping and understanding of current service provision (including urgent dental care) with need, deprivation and existing time limited initiatives.

ICS – South Yorkshire – recommendations for additional focus:
Trends in tooth decay amongst 5 year olds, Deprivation, Vulnerable groups – Children in deprived areas and vulnerable children known to social care, the homeless, Gypsy, Roma and Traveller communities, and asylum seekers/resettled refugees

ICS – West Yorkshire recommendations for additional focus:
Deprivation, Ethnicity, Oral Cancer and Vulnerable groups – Children in deprived areas and vulnerable children known to social care, the homeless, Gypsy, Roma and Traveller communities and asylum seekers/resettled refugees.

ICS – Humber and North Yorkshire recommendations for additional focus:
Deprivation, Oral Cancer and Vulnerable groups – Children in deprived areas and vulnerable children known to social care, the homeless, Gypsy, Roma and Traveller communities and asylum seekers/resettled refugees.

Alignment with Core20PLUS5 – Y&tH

Model applied to Y&tH at ICS level

- **CORE** – all ICS - The most deprived 20% of the national population as identified by the national Index of Multiple Deprivation (IMD) – strong evidence base
- **PLUS**
    - All ICSs - those with greatest need and those experiencing challenges accessing dental care
        - Vulnerable children
        - Physical and learning disabilities
        - Older adults – significant predicted population increase across all ICS footprints
        - Asylum seekers, migrants and refugees
    - SY – Prevention to reduce dental decay levels in children and homeless in Doncaster and deprived areas with greater ethnic diversity e.g. Sheffield
    - WY - deprived areas with greater mixed ethnic diversity e.g. Bradford, homeless in Leeds and Craven
    - HCV – Homeless in North East Lincolnshire and Hull, LAC in Hull and North East Lincolnshire
- **5**
    - All ICS - Oral cancer diagnosis – importance of role of GDS
    - WY – Bradford, Leeds and Wakefield
    - HCV - Hull

Definitions and Abbreviations

Equality - *the state of being equal, especially in status, rights, or opportunities.*

Equity - *the quality of being fair and impartial.*

Equality vs Equity - *Equality has to do with giving everyone the exact same resources, whereas equity involves distributing resources based on the needs of the recipients.*

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Appendix
Population Demographics

Table A: Population of Y&tH by local authority and ICS for all ages between 2020-2040

Local Authority / ICS	ALL AGES					
	2020	2025	2030	2035	2040	% change 2020-2040
H & NY	**1,709,349**	**1,727,629**	**1,740,947**	**1,750,839**	**1,760,116**	**3%**
East Riding of Yorks	342,195	348,423	352,671	355,594	358,301	5%
Kingston upon Hull,	261,184	260,953	261,111	261,502	261,834	0%
North East Lincs	159,996	159,843	159,229	158,769	158,738	-1%
North Lincolnshire	173,143	175,145	176,052	176,806	177,729	3%
York	211,099	212,418	214,759	215,837	215,869	2%
North Yorkshire**	618,904	629,021	636,162	642,119	648,170	5%
Hambleton	*91,480*	*92,231*	*92,622*	*92,884*	*93,122*	*2%*
Harrogate	*160,644*	*161,267*	*161,270*	*161,612*	*162,450*	*1%*
Richmondshire	*53,189*	*52,957*	*52,717*	*52,544*	*52,597*	*-1%*
Ryedale	*55,846*	*57,978*	*59,608*	*60,825*	*61,851*	*11%*
Scarborough	*109,422*	*110,965*	*112,216*	*113,166*	*113,994*	*4%*
Selby	*91,149*	*95,452*	*98,693*	*101,300*	*103,631*	*14%*
West Yorkshire	**2,399,360**	**2,443,053**	**2,481,844**	**2,516,380**	**2,549,547**	**6%**
Bradford	540,909	547,333	551,918	556,691	562,645	4%
Calderdale	210,958	212,645	213,676	214,808	216,463	3%
Craven	*57,173*	*58,173*	*59,037*	*59,788*	*60,525*	*6%*
Kirklees	441,772	447,671	452,340	456,556	461,132	4%
Leeds	795,565	806,609	819,468	829,842	837,250	5%
Wakefield	352,983	370,623	385,405	398,696	411,532	17%
South Yorkshire	**1,419,395**	**1,452,639**	**1,483,081**	**1,511,302**	**1,537,806**	**8%**
Barnsley	248,707	256,164	262,376	268,202	274,052	10%
Doncaster	313,762	320,194	324,963	329,641	334,626	7%
Rotherham	267,215	272,899	277,482	282,030	287,078	7%
Sheffield	589,710	603,383	618,261	631,430	642,050	9%
Y&tH	**5,528,103**	**5,623,321**	**5,705,872**	**5,778,521**	**5,847,468**	**6%**

Source: ONS Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)

** includes Craven

Table B: Population of Y&tH by local authority and ICS for adults (0-19 years) between 2020-2040

Local Authority / ICS	0-19 years					
	2020	2025	2030	2035	2040	% change 2020-2040
H & NY	**372,837**	**373,420**	**361,832**	**349,132**	**346,546**	**-7%**
East Riding of Yorkshire	69,669	69,931	67,963	65,595	65,204	-6%
Kingston upon Hull,	63,754	64,164	62,405	60,464	60,251	-5%
North East Lincolnshire	37,744	37,475	35,714	33,946	33,391	-12%
North Lincolnshire	39,062	38,895	37,048	35,513	35,095	-10%
York	45,609	45,911	45,098	43,628	43,000	-6%
North Yorkshire**	128,064	127,984	124,227	120,288	119,919	-6%
Hambleton	*17,822*	*17,432*	*16,610*	*15,887*	*15,759*	*-12%*
Harrogate	35,378	34,784	33,085	31,642	31,270	-12%
Richmondshire	*11,261*	*10,907*	*10,378*	*9,957*	*9,911*	*-12%*
Ryedale	*10,795*	*11,183*	*11,115*	*10,898*	*10,944*	*1%*
Scarborough	*21,484*	*21,420*	*20,814*	*19,968*	*19,739*	*-8%*
Selby	*20,260*	*21,320*	*21,603*	*21,634*	*21,982*	*9%*
West Yorkshire	**604,813**	**615,692**	**608,985**	**598,067**	**601,915**	**0%**
Bradford	155,643	155,080	150,329	146,065	146,323	-6%
Calderdale	49,995	49,534	47,694	45,890	45,830	-8%
Craven	11,066	10,940	10,623	10,301	10,314	-7%
Kirklees	110,886	111,214	108,755	105,766	105,863	-5%
Leeds	195,854	202,355	202,779	200,486	202,019	3%
Wakefield	81,370	86,570	88,806	89,560	91,566	13%
South Yorkshire	**330,749**	**337,980**	**335,378**	**331,908**	**335,150**	**1%**
Barnsley	55,977	57,289	56,722	55,805	56,305	1%
Doncaster	72,894	73,574	71,475	69,573	69,533	-5%
Rotherham	62,995	64,373	63,857	63,241	64,051	2%
Sheffield	138,883	142,744	143,325	143,290	145,261	5%
Yorkshire & the Humber	**1,308,399**	**1,327,093**	**1,306,195**	**1,279,107**	**1,283,610**	**-2%**

Source: ONS Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)

** includes Craven

Table C: Population of Y&tH by local authority and ICS for adults (20-64 years) between 2020-2040

Local Authority / ICS	20-64 years					
	2020	2025	2030	2035	2040	% change 2020-2040
H & NY	**957,417**	**940,624**	**921,098**	**908,367**	**903,381**	**-6%**
East Riding of Yorkshire	181,892	179,414	175,172	171,869	170,562	-6%
Kingston upon Hull,	157,850	154,632	152,709	152,507	152,177	-4%
North East Lincolnshire	88,939	86,228	83,576	81,968	81,162	-9%
North Lincolnshire	96,789	95,434	93,774	92,374	92,250	-5%
York	126,225	124,473	123,754	123,261	122,418	-3%
North Yorkshire**	335,968	330,108	321,155	314,952	313,292	-7%
Hambleton	*49,203*	*48,029*	*46,079*	*44,713*	*44,286*	*-10%*
Harrogate	*86,768*	*84,127*	*80,971*	*78,576*	*77,401*	*-11%*
Richmondshire	*30,191*	*28,817*	*27,324*	*26,145*	*25,624*	*-15%*
Ryedale	*29,856*	*30,081*	*29,806*	*29,654*	*29,757*	*0%*
Scarborough	*57,671*	*56,393*	*54,612*	*53,539*	*53,120*	*-8%*
Selby	*52,034*	*52,998*	*53,321*	*53,763*	*54,625*	*5%*
West Yorkshire	**1,385,732**	**1,385,695**	**1,390,044**	**1,397,426**	**1,404,129**	**1%**
Bradford	303,303	302,681	303,342	304,220	303,667	0%
Calderdale	120,793	119,207	117,517	116,512	116,024	-4%
Craven	*30,246*	*29,665*	*29,042*	*28,563*	*28,479*	*-6%*
Kirklees	251,886	250,968	250,150	249,461	249,353	-1%
Leeds	475,285	473,003	475,316	479,239	480,770	1%
Wakefield	204,219	210,171	214,677	219,432	225,836	11%
South Yorkshire	830,781	836,593	843,806	850,924	861,897	**4%**
Barnsley	143,681	144,663	145,183	145,940	148,051	3%
Doncaster	180,161	180,160	180,138	181,043	183,106	2%
Rotherham	151,183	151,384	151,719	152,609	155,024	3%
Sheffield	355,757	360,387	366,766	371,332	375,716	6%
Yorkshire & the Humber	**3,173,930**	**3,162,912**	**3,154,947**	**3,156,717**	**3,169,407**	**0%**

Source: ONS Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)

** includes Craven

Table D: Population of Y&tH by local authority and ICS for older adults (65+years) between 2020-2040

Local Authority / ICS	65+ years					
	2020	2025	2030	2035	2040	% change 2020-2040
H & NY	**533,967**	**584,515**	**648,798**	**700,218**	**725,148**	**36%**
East Riding of Yorkshire	90,634	99,078	109,537	118,130	122,536	35%
Kingston upon Hull,	39,580	42,157	45,998	48,532	49,406	25%
North East Lincolnshire	33,313	36,139	39,939	42,856	44,185	33%
North Lincolnshire	37,292	40,816	45,230	48,919	50,385	35%
York	39,266	42,034	45,907	48,949	50,452	28%
North Yorkshire**	154,872	170,930	190,780	206,879	214,958	39%
Hambleton	*24,456*	*26,771*	*29,933*	*32,284*	*33,076*	*35%*
Harrogate	*38,499*	*42,356*	*47,214*	*51,394*	*53,779*	*40%*
Richmondshire	*11,738*	*13,233*	*15,015*	*16,442*	*17,062*	*45%*
Ryedale	*15,196*	*16,715*	*18,687*	*20,273*	*21,150*	*39%*
Scarborough	*30,268*	*33,152*	*36,790*	*39,659*	*41,135*	*36%*
Selby	*18,855*	*21,135*	*23,769*	*25,903*	*27,024*	*43%*
West Yorkshire	**408,815**	**441,665**	**482,815**	**520,887**	**543,503**	**33%**
Bradford	81,963	89,572	98,248	106,406	112,655	37%
Calderdale	40,171	43,904	48,465	52,406	54,609	36%
Craven	*15,862*	*17,567*	*19,373*	*20,924*	*21,732*	*37%*
Kirklees	79,000	85,489	93,436	101,329	105,916	34%
Leeds	124,425	131,251	141,372	150,118	154,461	24%
Wakefield	67,395	73,882	81,922	89,704	94,130	40%
South Yorkshire	**257,864**	**278,066**	**303,898**	**328,470**	**340,759**	**32%**
Barnsley	49,050	54,212	60,471	66,457	69,696	42%
Doncaster	60,707	66,460	73,350	79,025	81,987	35%
Rotherham	53,037	57,142	61,907	66,180	68,003	28%
Sheffield	95,069	100,252	108,170	116,808	121,074	27%
Yorkshire & the Humber	**1,045,774**	**1,133,317**	**1,244,730**	**1,342,697**	**1,394,451**	**33%**

Source: ONS Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)

** includes Craven

Table E: Population of Yorkshire & the Humber by local authority and ICS for older adults (85+years) between 2020-2040

Local Authority / ICS	85+ years					
	2020	2025	2030	2035	2040	% change 2020-2040
Humber Coast & Vale	**48,993**	**55,257**	**63,121**	**79,762**	**85,373**	**74%**
East Riding of Yorkshire	11,201	12,922	14,951	19,448	20,557	84%
Kingston upon Hull, City of	4,593	4,680	4,813	6,118	6,590	43%
North East Lincolnshire	4,518	4,969	5,525	6,884	7,442	65%
North Lincolnshire	4,607	5,119	5,956	7,447	8,122	76%
York	5,727	6,451	7,251	8,944	9,425	65%
North Yorkshire**	20,556	23,524	27,532	34,553	37,165	81%
Hambleton	*3,081*	*3,612*	*4,208*	*5,238*	*5,550*	*80%*
Harrogate	*5,894*	*6,812*	*7,772*	*9,602*	*10,358*	*76%*
Richmondshire	*1,423*	*1,720*	*2,028*	*2,568*	*2,814*	*98%*
Ryedale	*2,016*	*2,284*	*2,733*	*3,406*	*3,659*	*81%*
Scarborough	*3,767*	*4,137*	*4,768*	*6,037*	*6,472*	*72%*
Selby	*2,166*	*2,550*	*3,116*	*4,070*	*4,385*	*102%*
West Yorkshire	**52,056**	**57,036**	**63,508**	**79,289**	**84,822**	**63%**
Bradford	10,824	11,567	12,157	15,297	16,991	57%
Calderdale	4,762	5,181	6,035	7,682	8,183	72%
Craven	2,210	2,408	2,909	3,633	3,929	78%
Kirklees	9,671	10,998	12,622	15,912	16,885	75%
Leeds	16,433	17,693	18,942	23,266	24,364	48%
Wakefield	8,156	9,188	10,844	13,499	14,469	77%
South Yorkshire	**33,079**	**36,410**	**41,271**	**49,570**	**52,794**	**60%**
Barnsley	5,880	6,531	7,688	9,448	10,340	76%
Doncaster	7,473	8,094	9,116	11,323	12,361	65%
Rotherham	6,431	7,432	8,698	10,431	10,937	70%
Sheffield	13,295	14,353	15,769	18,368	19,156	44%
Yorkshire and the Humber	**134,127**	**148,702**	**167,898**	**208,621**	**222,988**	**66%**

Source: ONS Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland - Office for National Statistics (ons.gov.uk)

** includes Craven

Child oral health

Table F: Summary of FCE for all extractions and extractions with caries as the primary diagnosis for 0-19 years from 2017/18 to 2019/20.

Local Authority / Integrated Care System of residence	FCE's for extractions as a % of the total population (all diagnoses) (0-19 years)			FCE's for extractions as % of population with caries as the primary diagnosis (0-5 years)			FCE's for extractions as % of population with caries as the primary diagnosis (6-10 years)			FCE's for extractions as % of population with caries as the primary diagnosis (0-19 years)			Number of FCE's for extractions with caries as the primary diagnosis (0-19 years)		
	17/18	18/19	19/20	17/18	18/19	19/20	17/18	18/19	19/20	17/18	18/19	19/20	17/18	18/19	19/20
H & NY															
ER of Yorkshire	0.2%	0.2%	0.2%	*	*	*	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	95	115	110
Kingston upon Hull,	0.2%	0.3%	0.3%	*	*	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	105	150	125
North East Lincs	0.9%	1.0%	1.1%	0.9%	0.9%	0.9%	2.0%	2.1%	2.1%	0.9%	0.9%	1.0%	25	35	35
North Lincs	0.6%	0.8%	0.7%	0.5%	0.5%	0.6%	0.9%	1.5%	1.0%	0.4%	0.6%	0.5%	45	60	60
York	0.6%	0.5%	0.4%	0.5%	0.5%	0.4%	1.2%	0.9%	0.9%	0.5%	0.4%	0.3%	70	45	40
North Yorkshire															
Hambleton	*0.5%*	*0.6%*	*0.4%*	*0.5%*	*0.8%*	*0.3%*	*0.9%*	*0.8%*	*0.7%*	*0.4%*	*0.4%*	*0.3%*	*20*	*25*	*25*
Harrogate	*0.5%*	*0.5%*	*0.5%*	*0.4%*	*0.3%*	*0.3%*	*0.7%*	*0.6%*	*0.9%*	*0.3%*	*0.3%*	*0.4%*	*55*	*70*	*55*
Richmondshire	*0.5%*	*0.7%*	*0.6%*	*0.4%*	*0.4%*	*0.3%*	*0.9%*	*1.0%*	*1.0%*	*0.3%*	*0.5%*	*0.4%*	*20*	*15*	*20*
Ryedale	*0.4%*	*0.5%*	*0.4%*	*	*0.5%*	*	*0.5%*	*0.9%*	*0.7%*	*0.3%*	*0.5%*	*0.3%*	*15*	*10*	*10*
Scarborough	*0.5%*	*0.5%*	*0.6%*	*0.5%*	*0.4%*	*0.3%*	*0.8%*	*0.8%*	*1.1%*	*0.4%*	*0.4%*	*0.4%*	*25*	*25*	*25*
Selby	*0.5%*	*0.6%*	*0.5%*	*0.3%*	*0.6%*	*0.4%*	*0.8%*	*1.0%*	*0.8%*	*0.4%*	*0.5%*	*0.4%*	*30*	*25*	*30*
West Yorkshire															
Bradford	0.4%	0.4%	0.8%	0.5%	0.4%	1.0%	0.4%	0.5%	1.2%	0.3%	0.3%	0.7%	180	185	165
Calderdale	0.9%	0.7%	0.6%	0.9%	0.8%	0.5%	1.5%	0.9%	1.0%	0.7%	0.5%	0.5%	60	85	50
Craven	*0.3%*	*0.4%*	*0.4%*	*	*0.3%*	*0.3%*	*0.5%*	*0.5%*	*0.5%*	*0.2%*	*0.2%*	*0.3%*	*10*	*15*	*20*
Kirklees	0.6%	0.6%	0.5%	0.5%	0.5%	0.4%	0.9%	0.9%	0.8%	0.5%	0.4%	0.4%	120	140	120
Leeds	0.5%	0.5%	0.5%	0.4%	0.3%	0.4%	0.7%	0.6%	0.8%	0.3%	0.3%	0.4%	255	240	295
Wakefield	0.8%	0.9%	0.9%	0.8%	0.7%	0.8%	1.4%	1.7%	1.7%	0.7%	0.8%	0.8%	125	115	80

South Yorkshire															
Barnsley	1.2%	1.0%	1.0%	1.2%	0.8%	0.8%	2.0%	1.8%	1.9%	1.0%	0.9%	0.9%	100	85	65
Doncaster	1.5%	1.2%	1.3%	1.3%	1.1%	1.0%	3.0%	2.3%	2.8%	1.4%	1.1%	1.2%	125	110	100
Rotherham	1.6%	1.2%	1.4%	1.5%	1.1%	1.2%	2.7%	2.1%	2.5%	1.3%	1.0%	1.2%	150	125	120
Sheffield	1.4%	1.2%	1.2%	1.2%	1.0%	0.9%	2.2%	2.0%	2.1%	1.1%	1.0%	0.9%	395	300	340
ENGLAND**	**0.5%**	**0.4%**	**0.4%**	**0.3%**	**0.3%**	**0.3%**	**0.6%**	**0.6%**	**0.5%**	**0.3%**	**0.3%**	**0.3%**	**20,929**	**21,608**	**19,947**

* denotes figure <6 suppressed because of disclosure control. All other subnational figures rounded to the nearest 5
**England totals based on unsuppressed figures

Adult oral health

Table G: - Adult **o**ral health impacts in Yorkshire and the Humber 2018 by local authority

Upper-Tier LA Name	% functional dentition (21 or more teeth)	% active decay (DT>0)	Average number of decayed teeth (for those with	% with filled teeth	% with dentures	% with bleeding on probing	% with PUFA	% with any treatment need	% urgent treatment need	% not seen a dentist in the last 2 years	% suffering any oral health impacts (fairly or very often)
Humber Coast & Vale											
East Riding of Yorkshire	82.8	37.5	1.9	98.4	14.1	76.2	7.9	90.5	3.2	5.3	17.2
Kingston upon Hull, City of*											
North East Lincolnshire**											
North Lincolnshire	77.6	21.2	2.7	88.2	23.5	30.6	8.4	67.9	9.0	11.9	10.9
York	89.5	7.9	1.3	92.1	7.9	25.0	2.7	56.8	2.7	11.1	15.6
North Yorkshire*	77.7	19.0	1.6	91.7	17.3	31.5	3.1	82.7	2.4	3.7	12.4
West Yorkshire											
Bradford	91.7	33.3	1.9	90.0	5.0	31.7	1.7	76.7	5.0	9.6	19.2
Calderdale*											
Kirklees*											
Leeds	89.2	33.5	1.8	92.2	12.6	66.9	3.0	61.8	1.2	5.9	24.0
Wakefield*											
South Yorkshire											
Barnsley*											
Doncaster*											
Rotherham*											
Sheffield*											
Yorkshire and the Humber	**82.8**	**25.0**	**1.9**	**91.7**	**15.6**	**44.6**	**4.3**	**75.4**	**3.2**	**6.1**	**16.5**

England	**81.9**	**26.8**	**2.1**	**90.2**	**15.4**	**52.9**	**5.2**	**70.5**	**4.9**	**7.9**	**17.7**

* Did not participate in the survey
**North East Lincolnshire - insufficient numbers examined for estimate
^^ Includes Craven
PUFA – presence of pain, ulceration, fistulae or abscess – a measure of sepsis

Adult oral health

Figure A

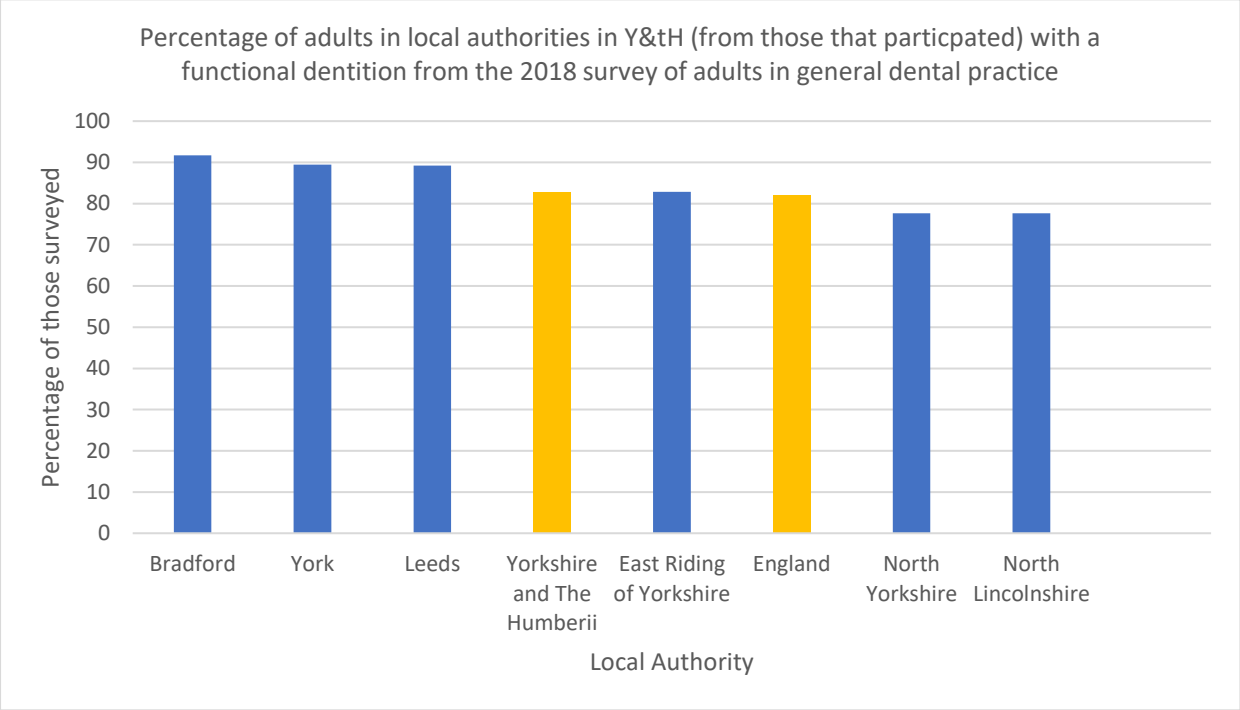
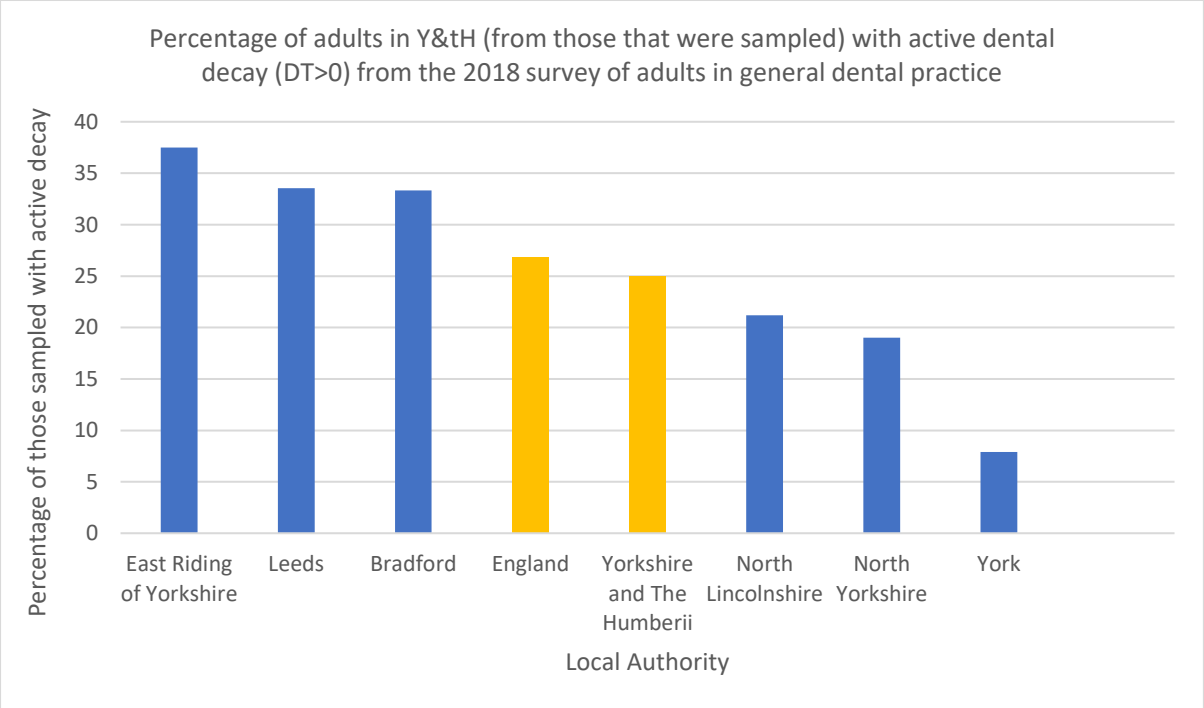


Figure B



The report and full tables of results are available at: [Oral health survey of adults attending general dental practices 2018 (publishing.service.gov.uk)]

Oral Cancer

Figure C: Standardised incidence of C00-C14 by lower-tier local authority area, 2012 to 2016

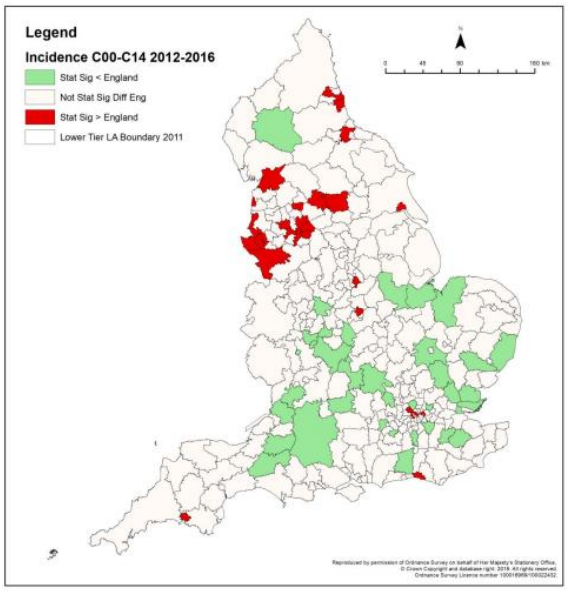
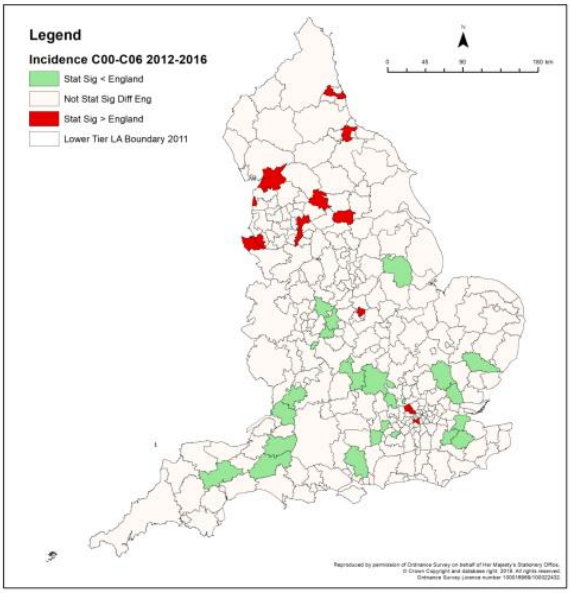
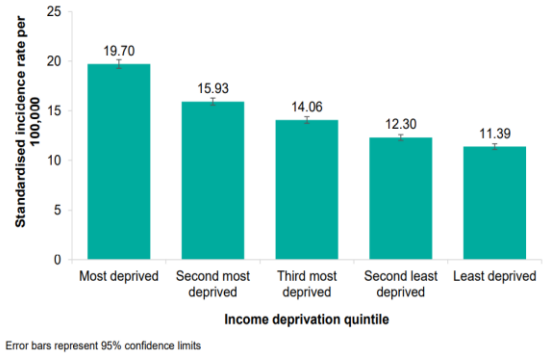


Figure D: Standardised incidence of C00-C6 by lower-tier local authority area, 2012 to 2016



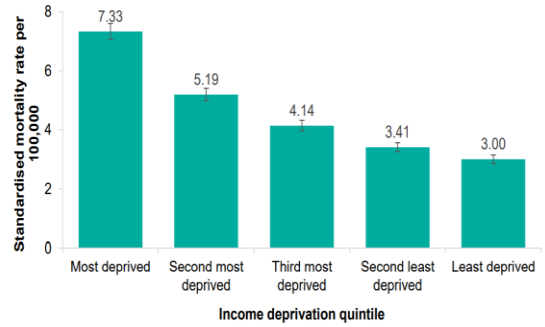
Oral Cancer

Figure E: Standardised incidence of C00-C14 in England by income deprivation (IMD 2015) quintile, 2012 to 2016.



Error bars represent 95% confidence limits

Figure F: Mortality due to C00-C14 in England by income deprivation (IMD 2015) quintile, 2012 to 2016.



Error bars represent 95% confidence limits

Oral cancer

Table H:Standardised incidence and mortality of C00-C14 and C00-C06 by statistical region, upper-tier local authority area and lower-tier local authority area, 2012 to 2016.

Geography	C00-C14						C00-C06					
	Standardised incidence per 100,000	Lower 95% CI	Upper 95% CI	Standardised mortality per 100,000	Lower 95% CI	Upper 95% CI	Standardised incidence per 100,000	Lower 95% CI	Upper 95% CI	Standardised mortality per 100,000	Lower 95% CI	Upper 95% CI
England	**14.55**	**14.4**	**14.71**	**4.54**	**4.45**	**4.62**	**8.36**	**8.24**	**8.48**	**2.19**	**2.13**	**2.25**
Yorkshire & the Humber	**15.26**	**14.76**	**15.75**	**4.7**	**4.42**	**4.99**	**8.7**	**8.32**	**9.07**	**2.18**	**1.98**	**2.37**
Humber Coast & Vale												
East Riding of Yorkshire	13.65	11.87	15.42	3.88	2.87	4.88	8.14	6.75	9.53	1.94	1.19	2.69
Kingston upon Hull,	18.26	15.56	20.96	6.48	4.72	8.24	10.24	8.18	12.3	2.55	1.41	3.69
North East Lincolnshire	16.76	13.68	19.84	5.7	3.74	7.67	9.25	6.91	11.59	2.64	1.2	4.08
North Lincolnshire	13.32	10.62	16.01	4.42	2.78	6.07	7.68	5.54	9.81	2.41	1.12	3.7
York	14.43	11.81	17.05	4.35	2.84	5.85	8.85	6.77	10.93	2.05	0.94	3.15
North Yorkshire**	13.99	12.66	15.32	3.48	2.80	4.16	7.65	6.67	8.64	1.33	0.89	1.76
Hambleton	11.91	8.59	15.23	1.89	0.29	3.48	7.91	5.14	10.68	†	†	†
Harrogate	15.00	12.19	17.81	3.50	2.06	4.94	7.34	5.34	9.34	1.12	0.18	2.06
Richmondshire	15.87	10.38	21.36	6.59	2.76	10.42	10.21	5.62	14.79	†	†	†
Ryedale	10.91	6.61	15.21	†	†	†	6.40	2.98	9.82	†	†	†
Scarborough	16.21	12.7	19.73	4.08	2.17	5.99	7.74	5.20	10.27	†	†	†
Selby	13.76	9.81	17.71	3.58	1.28	5.88	8.11	5.02	11.20	†	†	†
West Yorkshire												
Bradford	17.28	15.4	19.15	6.11	4.93	7.29	10.39	8.91	11.88	3.03	2.17	3.89
Calderdale	14.45	11.87	17.04	3.69	2.29	5.1	8.54	6.47	10.60	2.03	0.93	3.13
Craven	12.51	8.17	16.86	3.27	0.72	5.82	6.52	3.23	9.8	†	†	†
Kirklees	15.31	13.46	17.16	5.24	4.08	6.4	9.18	7.73	10.63	2.83	1.98	3.68
Leeds	16.24	14.76	17.71	5.06	4.19	5.94	9.48	8.34	10.61	2.27	1.69	2.85
Wakefield	16.73	14.62	18.85	5.14	3.9	6.38	10.55	8.83	12.27	2.69	1.76	3.62

South Yorkshire												
Barnsley	13.59	11.27	15.91	4.72	3.25	6.19	7.17	5.47	8.87	2.72	1.59	3.86
Doncaster	14.36	12.28	16.45	4.14	2.97	5.31	8.04	6.43	9.65	2.1	1.22	2.98
Rotherham	15.47	13.14	17.81	4.2	2.91	5.48	8.72	6.92	10.52	1.47	0.63	2.31
Sheffield	15.27	13.62	16.92	4.85	3.9	5.81	7.45	6.29	8.62	1.67	1.09	2.25

** includes Craven

† cells left blank as the rates are based on fewer than 10 cases and have been suppressed.

Rates statistically significantly lower than the England mean have been highlighted in green and rates statistically significantly higher than the England mean have been highlighted in red

Table I: Residential schools for children with learning or physical disabilities provided by Local Authorities in Y&H

LA/ICS	School	Numbers	Age range	Disabilities
H&NY				
ERYorkshire	Kingsmill Special School	TBC	3 to 19	
	St Anne's Special School	TBC	3 to 19	
Kingston upon Hull,	Oakfield School	30	11 to 16	Social, Emotional, and Mental Health difficulties
North East Lincs				
North Lincs				
York	No residential schools			
North Yorkshire**	Welburn Hall	80	16 to 19	Autism, MLD / SLD
	Brompton Hall	60	8 to 16	SEMH (many also have ASD / ADHD)
Hambleton				
Harrogate				
Richmondshire				
Ryedale				
Scarborough				
Selby				
West Yorkshire				
Bradford	No residential schools			
Calderdale	William Henry Smith school	79	5-19	SEMH - ADHD, ASD, FASD, OCD and Attachment Disorder Of the 79 students: (28 residential+6 part time residential)
	Stafford Hall school	12	11-18	Learning Difficulties, Autism and associated challenging behaviours.
Craven				
Kirklees	No residential schools			
Leeds	No information available			
Wakefield	Camphill Wakefield	60	16 to 25	ADHD, ASD, ASP, AUT, CLD, DYSP, EBD, EPI, LD, MLD, SCLD, SLD, SPLD
	Hesley's Ivy Lane School & Ivy Close Children's Home (not open yet)	24	11 to 19	Learning disability, autism and complex needs, including behaviours that challenge.
South Yorkshire				
Barnsley	No residential schools			
Doncaster	Doncaster School for the Deaf	29	4 to 19	Hearing Impairment
	Fullerton House School	32	8 to 19	ASD, Severe Learning Difficulty
	Wilsic Hall School	30	11 to 19	ASD, Severe Learning Difficulty
Rotherham	Ellern Mede Moorgate School	12	under 18 to 25	Eating disorder facility
Sheffield	Brantwood Specialist School	49	7 to 19	Autism Spectrum Conditions, Pathological Demand Avoidance and Attachment Disorder

Migrants Asylum Seekers, Resettled refugees, Unaccompanied Asylum-Seeking Children (UASC) and Roma Community

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. Most commonly, refugees experience high levels of dental caries, periodontal disease, oral lesions and traumatic dental injuries (FDI. 2020).

Similarly, to the general population, people from migrant communities could be classified into 3 main groups in terms of their engagement with dental care services:

- People who wish to engage with services and require support to achieve dental fitness
- People who only wish to engage in case of an urgent need/pain
- People who do not wish to engage

When designing dental care pathways, some of the specific barriers for accessing care by migrants can be around:

- Language
- Prior beliefs about oral health
- Anxiety
- Understanding administration including exemption or partial exemption

The section below tables J and K are a summary of data kindly collated by Migration Yorkshire

Table J Summary of data relating to Asylum seekers, resettled refugees, Unaccompanied Asylum-Seeking Children and Roma Community in Y&tH – notes to accompany table K

Vulnerable group	Basis of Data/Data source	Data includes	Data excludes	Numbers dependent upon	Y&H Local Authority participation	Comments
Asylum seekers	Recipients of S95 Home Office support (whilst awaiting a decision on asylum claim)	'Dispersal' [individuals who are destitute and living in no-choice dispersal housing] and 'Subsistence only' [individuals receiving a subsistence allowance only - not housing] claimants.	People who have had their claim refused but are still living in dispersal housing [under 'Section 4'], Unaccompanied children, and those whose cases are considered closed.	Numbers arriving in the UK, the proportion that the Home Office send Y&tH to be accommodated, location of available housing/friends and family, timeframe for case assessment and post-decision outcome.	Data reveals small numbers in Harrogate, North Lincolnshire and York possibly as part of temporary arrangements during the pandemic.	Permanent accommodation site - Wakefield up to 250 people on 'Section 98' support are housed temporarily for a matter of days/weeks until their longer term accommodation [S95 'dispersal' accommodation] in the community is allocated.
Resettled refugees	People resettled via Government resettlement schemes Home Office - cumulative count of resettled refugees	Prior to 2021, the resettled refugee data covered VPRS and the Vulnerable Children Resettlement Scheme (VCRS),	Prior to 2021 data excluded the smaller numbers arriving under the Gateway Protection Programme (GPP) and the Mandate scheme.	Numbers arriving in the UK, how many people the local authority has offered to host, and whether the individuals' needs can be met in that area, such as housing size and adaptation for the family's	All have participated	Most resettled refugees to date have been Syrians arriving under the (VPRS).

	since the start of the Vulnerable Persons Resettlement Scheme VPRS scheme (March 2014 to June 2021).	From 2021, the VPRS and VCRS have been replaced by the UKRS. The resettled refugee data covers the UKRS as well as the Community Sponsorship scheme and the smaller schemes which were previously excluded.	In 2021, new resettlement schemes for people from Afghanistan (ARAP and ACRS) were announced and have not yet been incorporated into any dataset.	physical needs, school places and appropriate medical care.		
Unaccompanied asylum-seeking children (UASC)	Department for Education - snapshot of UASC as of March 2020.	Spontaneous arrivals and children coming into care of Local Authorities through different formal schemes including the (VCRS) and the Dublin schemes.	Those in the Leaving Care system or on the National Transfer Scheme (NTS). Figures in Y&tH will have increased during 2021 due to the introduction of the NTS to relocate unaccompanied children from the South East to Local Authorities around the country.		All Local Authorities are potentially hosting unaccompanied asylum-seeking children and have a legal duty to provide accommodation.	UASC are children, who have applied for asylum in their own right and are separated from both parents and/or any other responsible adult.
Roma	Department of Education – School Census snapshot and rate as of 2020/21	State funded nursery, primary, secondary, special and pupil referral schools.	The ethnic category used in data collection includes 'Gypsy/Roma', which may include wider Gypsy groups, - best indicator at this time.	There is a separate category for 'Irish Traveller', so this group will not be included.		Challenges surrounding data collection Department of Education shows Yorkshire and Humber to have the second highest number of school students who are Gypsy/Roma.

Data is provided at lower local authority level for asylum seekers and resettled refugees but only at upper tier local authority for unaccompanied asylum seeker children and Roma Travellers.

Table K Summary of data relating to Asylum seekers, resettled refugees, Unaccompanied Asylum-Seeking Children and Roma Community in Y&tH

Local Authority / ICS	Number of asylum seekers in receipt of S95 support (June 2021)	Number of resettled refugees (March 2014 to June 2021)	Mid Year Population Estimate (2020)	Number of asylum seekers in receipt of S95 support per 1,000 population (June 2021)	Number of resettled refugees per 1,000 population (March 2014 to June 2021)	Number of unaccompanied asylum-seeking children (UASC) looked after by the local authority (2020)	Number of unaccompanied asylum-seeking children (UASC) per 1,000 0-17 population looked after by the local authority (2020)	0-17 Mid Year Population Estimate (2020)	Number of students classified as White: Gypsy Roma (January 2020)	Percentage of students classified as White: Gypsy Roma (January 2020)
Humber Coast & Vale										
East Riding of Yorkshire	0	165	343201	0	0.5	13	0.2	63378	61	0.001
Kingston upon Hull, City of	511	135	259126	2	0.5	34	0.6	57585	133	0.003
North East Lincolnshire	93	38	159364	0.6	0.2	17	0.5	34460	36	0.001
North Lincolnshire	2	57	172748	0	0.3	17	0.5	35677	57	0.002
York	54	84	211012	0.3	0.4	0	0	36602	59	0.002
North Yorkshire**	1	291	620610	0	0.5	19	0.2	117670	164	0.002
Hambleton	0	60	91932	0	0.7					
Harrogate	1	61	161545	0	0.4					
Richmondshire	0	43	53732	0	0.8					
Ryedale	0	21	55629	0	0.4					
Scarborough	0	36	108737	0	0.3					
Selby	0	32	91697	0	0.3					
West Yorkshire										
Bradford	1040	635	542128	1.9	1.2	20	0.1	142619	987	0.01
Calderdale	338	78	211439	1.6	0.4	8	0.2	45951	128	0.003
Craven	0	38	57338	0	0.7					
Kirklees	621	147	441290	1.4	0.3	9	0.1	100020	49	0.001
Leeds	999	383	798786	1.3	0.5	59	0.3	170581	1039	0.008
Wakefield	346	129	351592	1	0.4	17	0.2	74986	48	0.001
South Yorkshire										
Barnsley	346	23	248071	1.4	0.1	0	0	51621	65	0.002
Doncaster	243	19	312785	0.8	0.1	0	0	67362	432	0.009
Rotherham	465	38	264984	1.8	0.1	7	0.1	57453	564	0.012
Sheffield	858	402	589214	1.5	0.7	22	0.2	118398	1669	0.02

** Data relating to North Yorkshire cannot be aligned at ICS level as it includes data from Harrogate, Hambleton, Richmondshire, Ryedale, Scarborough, Selby which are all aligned with HCV but also includes data relating to Craven which is aligned with West Yorkshire ICS

Data from the School Census has been provided to indicate concentrations of the Roma population at local authority level. The ethnic category used is 'Gypsy/Roma', so this may cover some wider Gypsy groups, however this is the best indicator. People from Roma communities experience high levels of tooth decay, which may be linked to a traditionally high sugar diet.

Table L Summary table of prisons in Y&tH and numbers of prisoners at each site

Name and category of prison	Number of prisoners/patients at site
HMP &YOI Doncaster (B)	1145
HMP&YOI Hatfield (D)	378
HMP Lindholme (C)	1010
HMP Moorland (C)	1006
HMP Wealstun (C)	832
HMP Leeds (B)	1218
HMP Hull (B)	1056
HMP Humber (C)	1069
HMP Wakefield (A)	750
HMP Full Sutton (A/B)	546
HMP Wetherby (male juvenile)	360
HMP Newhall (Closed Category prison for female adults, juveniles and young offenders, with mother and baby unit)	425
HMP/YOI Askham Grange (open prison and young offender institute)	128
Adel Beck (secure children's home)	24
Aldine House (secure children's centre)	10
Wathwood Secure Hospital	78

Despite the increased need for treatment, evidence suggests that people in prison infrequently seek dental care (Jones et al. 2005). This may be exacerbated by the limited service provision. All the prisons apart from HMP Hatfield and HMP Askham Grange, have access to on-site NHS dental services, which are commissioned as a tripartite agreement between NHSEI Health and Justice commissioning team, the dental provider and the healthcare provider. Prisoners from Askham Grange are released on temporary licence to access dental services at a local community dental service clinic. Prisoners from HMP Hatfield may be released on temporary licence to access dental services at HMP Moorland or out in the wider community. There is no in-house dental service in the children's secure units, but there is a dental clinic at the secure hospital.
Currently, prison dental services in Yorkshire and the Humber provide on average a range of approximately 1 to 6 sessions per week, so the clinics are unused for much of the week. The capacity has been adversely impacted by restrictions in prisons due to COVID-19, which meant that services were only able to deliver a restricted service. Whilst provision of urgent dental care was maintained throughout the pandemic, routine care resumed after several months but was prohibited during outbreak period. Mobilisation has also been affected by the need for extensive post-AGP (aerosol generating procedure) downtime due to poor ventilation, and lack of trained staff available to provide the alarm bell response requirements. Long waiting times have been particularly reported at HMP Lindholme.
The transient nature of the prison population, as a result of people having short sentences or being relocated to other facilities, also means courses of treatment are often disrupted or left incomplete (NAPDUK 2013). Providers of dental healthcare services are faced with challenges, including funding for healthcare services and staffing (including recruitment, retention and training) (Heidari et al. 2014). A managed clinical network for the North East and Yorkshire has been set up to provide peer support and drive improvements to services.
The challenges affecting delivery of dental care in prisons in Y&tH include:

- Opportunities and funding to enable refurbishment of dental suites to meet national standards of infection prevention and control, improve ventilation and improve prison safety and security for dental staff
- Access for prisoners with disabilities, such as provision of lifts and wheelchair-accessible dental suites.
- Enablement of transport and prison staffing to take prisoners to other prisons/hospitals for dental care
- Consistency and reporting of dental care via FP17 forms
- Provision of care in the local community for prisoners released on temporary licence (ROTL).
- Continuity of care for those transferred to other prisons or released back into the community.

Further work is required is around oral health promotion, through working in partnership with other services e.g. stop smoking services, and making use of prison health champions for peer support. Dental services also need to develop a stronger voice within the healthcare team.

Recommendations, which are supported by a recent PHE survey (PHE. 2019)
Responsibility for dental services in secure settings lies with the NHSEI Health and Justice commissioning team. Recommendations for the Health and Justice commissioning team and secure settings MCN include:

• Undertake an Oral health needs assessment and service review of prison dental services at prison level in Y&tH to inform continued collaborative working between prisons, commissioning teams and providers to ensure need is aligned with oral health prevention, service provision and in-line with current national guidance . This should include the whole pathway right from initial assessment upon reception, prevention and treatment services

whilst in prison and continuity of care upon transfer to another prison or release back into the community.
• Undertake an inventory of fixtures, fittings and equipment at each prison dental service, and ensure HMPPS, NHSEI and the providers understand each other's roles and responsibilities around capital funding and ongoing maintenance to meet national standards including those related to: infection prevention and control, ventilation, safety and security.
• Ensure new build dental suites or refurbishments meet national standards from the outset, particularly around infection prevention and control and ventilation.
• Improve recording and reporting of dental activity.
• Develop good relationships between the dental staff and prison healthcare.
• Encourage prevention and oral health promotion both within the prison dental services and in partnership with other prison services to encourage MECC.
• Develop the prison dental workforce and MCN, and drive improvements to prison dental services.
• Increase clinical capacity, particularly where longer waiting times are being experienced.

Oral health inequalities – vulnerable groups
People with longstanding medical conditions

Data regarding the prevalence of the following long-standing medical conditions (diabetes) and those individuals that have alcohol related health problems and are dependent upon drugs and alcohol is available on a Yorkshire and the Humber and local authority footprint for those aged 18-64 and is available via PANSI data (see table M) for older people with the following conditions via POPPI data (see table N):

- Older people:
    - With cardio-vascular disease
    - With dementia
    - Living alone
    - Predicted to be living in a care home
    - With obesity

Disadvantaged groups

Prevalence between Local Authorities and ICS footprints are predicted to be almost identical regardless of the location of the local authority or the ICS footprint. From PANSI data there appeared to be no predicted increase or decrease in the prevalence of the specific conditions below at the level of local authority or ICS footprint or between 2020-2040. Any predicted change being between 1-2%.

Table M: PANSI data relating to prevalence of health inequalities 2021 for those aged 18-64 years of age

Inequality	**Percentage of 2020 population in Y&tH predicted to be affected**
Alcohol related health problems	4-5%
Diabetes	3-4%
Dependent upon drugs	3-4%

Table N POPPI data relating to prevalence of health inequalities 2021 for those aged 65 years and over

Inequality	Percentage of 2020 population in Y&tH predicted to be affected
Cardio-vascular disease	31-32%
Dementia	7%
Diabetes	12-13%
Living alone	32-33%
Predicted to be living in a care home	3-4%
Obesity	30%

Access

Figure O: Proportion of the population (0-17 years of age) in Local Authorities in Yorkshire & the Humber (expressed as a percentage) accessing primary dental care between Jul-Dec 2019 and Jul-Dec 2020

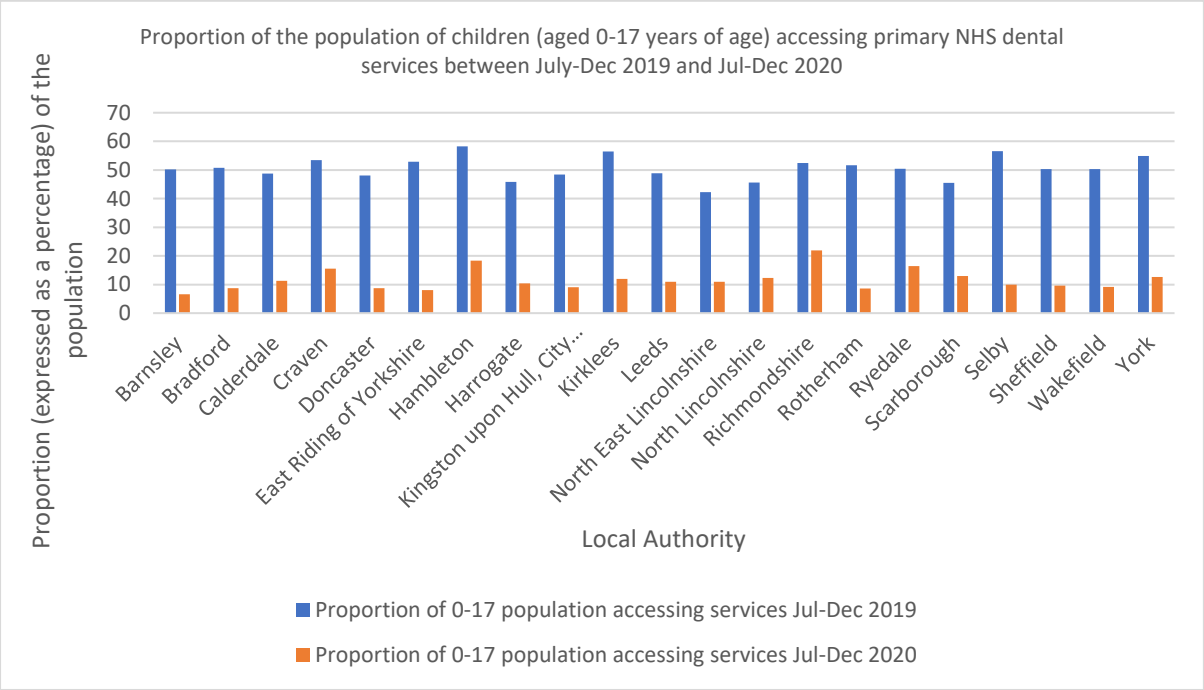


Figure P: Proportion of the population (aged 18 years and over) in Local Authorities in Yorkshire & the Humber (expressed as a percentage) accessing primary dental care between Jul-Dec 2019 and Jul-Dec 2020

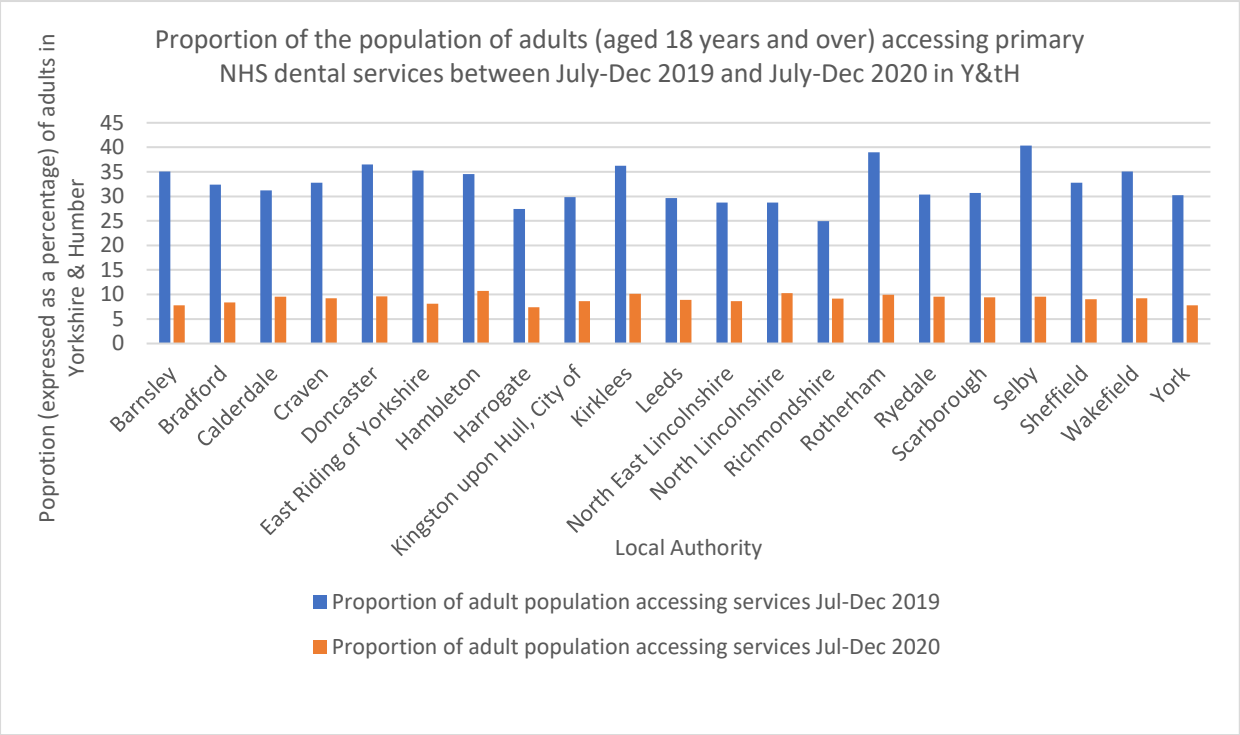
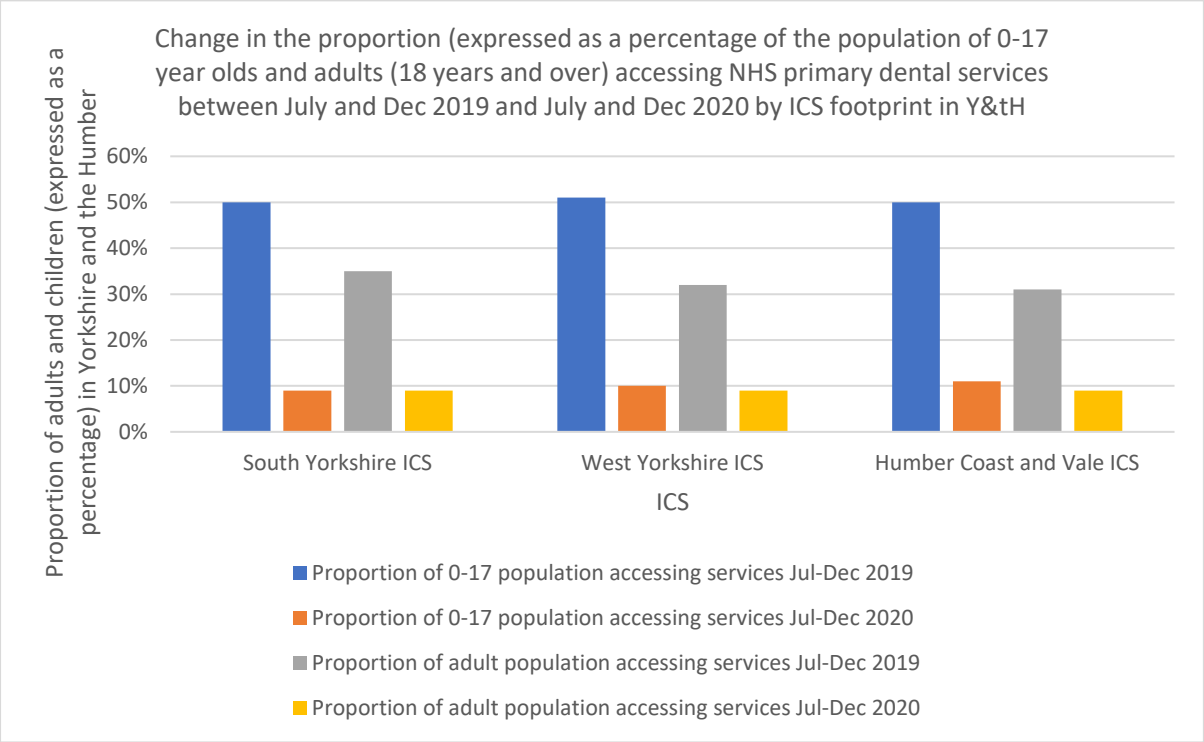


Figure Q: Proportion of the population (0-17 and 18 years and over) in Local Authorities in Yorkshire & the Humber (expressed as a percentage) accessing primary dental care between Jul-Dec 2019 and Jul-Dec 2020



Workforce

Figure 28 Numbers of dental specialist registrars by location and specialty in Y&tH between 2019 and 2020