Oral health in Leicester:

JOINT STRATEGIC NEEDS ASSESSMENT (Adults)

A Joint Strategic Needs Assessment (JSNA) is a statutory process by which local authorities and commissioning groups assess the current and future health, care and wellbeing needs of the local community to inform decision making.

The JSNA:

Is concerned with wider social factors that have an impact on people's health and wellbeing such as poverty and employment.

Looks at the health of the population with a focus on behaviours which affect health, such as smoking, diet and exercise.

Provides a view of health and care needs in the local community

Identifies health inequalities

Indicates current service provision

Identifies gaps in health and care services, documenting unmet needs

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Leicester City Council

1. CONTENTS

1 INTRODUCTION

Our mouths and teeth are essential to our wellbeing, from the most basic, eating and speaking, to more subtle social functions related to appearance and non-verbal communication. The long-term impacts of poor oral health cannot be underestimated particularly when considering quality of life. Oral health affects people physically and psychologically; and influences how they thrive, look, speak, eat and socialise; as well as contributing to feelings of social wellbeing.

Until the foundation of the NHS in 1948, oral health was generally poor, with extraction the main or only treatment for painful or decayed teeth for most people. The introduction of fluoride toothpaste in the 1970s and water fluoridation schemes in various parts of the country have improved dental health for adults and children, however, not all have benefited from these improvements. Despite significant progress in improving oral health over the past 30 years in the UK, the distribution of dental decay has changed to become increasingly concentrated in vulnerable and socially disadvantaged groups.

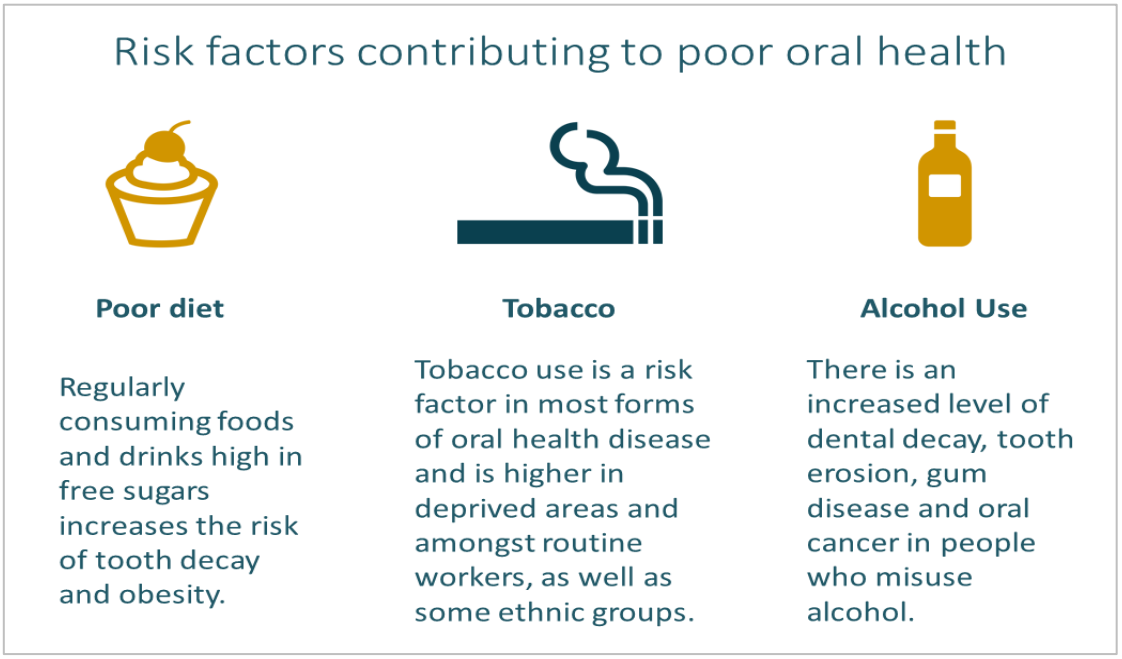
The high prevalence and incidence of poor oral health worldwide makes it a major public health issue. As with many other diseases, the greatest burden of poor oral health is upon disadvantaged and socially marginalized populations. Oral health problems are largely preventable and include tooth decay, tooth erosion, gum disease, oral cancer, and facial and dental injuries. At a societal level, oral diseases are responsible for reduced workforce productivity and are also a significant financial burden to society. The strong association between oral diseases and deprivation, and the fact that oral diseases are largely preventable, makes oral health an important public health issue in Leicester.

2 WHO'S AT RISK AND WHY?

2.1 MAIN MODIFIABLE RISK FACTORS FOR ORAL DISEASE

All age groups and populations are at risk of poor oral health even though it is largely preventable. The main modifiable risk factors for oral disease include having a diet high in sugar, smoking or chewing of tobacco, excessive consumption of alcohol, poor oral hygiene, trauma and irregular use of dental care services (see figure 1 below).

Figure 1. Risk factors contributing to poor oral health



Regularly consuming foods and drinks high in free sugars (those added to foods and drinks by the manufacturer, cook or consumer), as well as sugars naturally present in honey, all kinds of syrups and unsweetened fruit juices increases the risk of tooth decay and obesity.

All forms of tobacco increase the risk of oral cancer, and there is evidence that exposure to second hand smoke also increases the risk. Tobacco related risk is interlinked with inequalities given that the prevalence of smoking is higher in the most deprived areas. A number of minority ethnic groups are also vulnerable because of tobacco related cultural habits (e.g. betel quid chewing) which can place them at an increased risk from oral cancer.

There is an increased level of dental decay, tooth erosion, gum disease and oral cancer in people who misuse alcohol. When alcohol is used in conjunction with tobacco, the risk of developing oral cancer significantly increases. Socio-economic differences in drinking patterns are complex: those unemployed as well as those on high incomes are most likely to drink above recommended levels and also to binge drink. The rate of alcohol-related mortality in England and Wales has increased significantly in recent years, and is substantially greater for men aged 25-49 years from disadvantaged socio-economic groups.

2.2 POPULATION GROUPS AT RISK OF POOR ORAL HEALTH

Oral diseases are not uniformly distributed but are increasingly concentrated in vulnerable and socially disadvantaged groups. Certain communities are more likely to have poor oral health and are less likely to use dental services. These include young adults, the elderly, the more deprived, socially excluded populations along with those with learning disabilities and those in long-term and short-term residential and institutional care. Figure 2 below identifies different groups within the population that are at risk of poorer oral health.

Figure 2. Who is at risk in the population and why?

Cohort in the Population	Rationale
Those living in deprivation	The link between poor oral health and deprivation is well evidenced. Areas with the poorest oral health are often the most deprived parts of the country where access to dental services and cost can also be significant barriers. The 2019 Health Survey for England explored oral health themes[1], revealing adults in lower income households and in more deprived areas are less likely to have functional dentition. Children resident in more deprived areas take more time off school or nursery because of oral health problems. People living in areas of higher deprivation are more likely to experience poor oral health and least likely to access dental services.[2] Children living in the most deprived areas are also significantly more likely to have had a tooth extraction compared to children in less deprived circumstances.[3] Unemployed homeless people are more likely to experience oral discomfort due to health and psychosocial factors associated with being homeless.[4]
Children	Tooth decay remains the most common reason for hospital admission for children aged 5 to 9 years-old and the sixth most common procedure in hospital for children aged 4 years and under.[5] Children in care experience issues with the provision of care and the enforcing of good oral health behaviour is challenging for foster carers.[6]
Adults	Pregnant women: Increased risk of oral/dental disease and low usage of dental services.[7] Men are less likely to see a dentist regularly than females and more likely to attend only when experiencing problems.[8] Irregular dental attenders are more likely to experience tooth loss and increased dental disease experience[4]
Vulnerable older people (including older people living in care homes)	Older people are also at increased risk of dental disease. This group are more likely to have general health complications that make dental treatment planning more difficult and may require modification of dental services. Multiple medications causing dry mouth; reduced manual dexterity causing reduced ability to maintain oral hygiene; Dementia sufferers are less likely to maintain oral hygiene and visit dental services; previous dental disease leading to lack of functional dentition.[9] Care home residents have greater difficulty accessing dental care due to infrequent visits to care homes by dentists and oral health not being prioritised in care homes.[10] The Care Quality Commission have also reported on the state of oral health care in care homes across England in 2019. The report reveals an extensive lack of awareness of NICE guidelines. It concludes that residents are not supported to maintain and improve their oral health.[11]

Cohort in the Population	Rationale
Black and Minority Ethnic groups	Those of non-white backgrounds have lower use of dental services. Children from Chinese and Eastern European backgrounds have higher prevalence, severity and extent of dental decay than other ethnic groups.[12,13]
Those with a poor diet	Children and adults are more at risk of developing tooth decay if they are eating a diet with high and frequent consumption of sugar.[5]
Those living with long term conditions and illness	People with diabetes are more prone to periodontal (gum) disease and premature loss of teeth.[14] Those with mental illness have poorer oral health.[15] Hospice patients are at risk of poor oral health due to the under delivery of oral care for the terminally ill.[16]
Substance use	Illegal drugs can cause sugar cravings or dry mouth, increasing the risk of decay. Some cause clenching and grinding, leading to tooth wear. Illegal drug use is also associated with reduced compliance with oral hygiene regimes.[17,18] Use of smoked and smokeless tobacco is one of the most important risk factors for oral cancer, periodontal disease, mucosal lesions and dental implant failure.[19] Tobacco also increases the severity of gum (periodontal) disease which leads to premature tooth loss and poor wound healing in the mouth. Alcohol consumption increases the risk of oral cancer and dental erosion. Those who consume tobacco and alcohol have a greatly increased risk of developing oral cancer. Excessive alcohol consumption is also linked with orofacial trauma and reduced dental attendance.[20,21]
Those with disabilities	Disabled groups, including those with learning disabilities, autism and other neurodiverse conditions, have poorer levels of oral health, and experience barriers to maintaining oral health and accessing dental services.[22]
People with limited English or health literacy	Those with limited English or health literacy, have barriers to the uptake of preventative treatment, as do children whose parents lack health literacy.
Marginalised groups	Homeless people tend to have greater experience of dental disease and access dental services less than the general population.[4] Those living in secure settings tend to have worse oral health than those in the general population.[23] Gypsies/travellers have a high level of unmet need, low dental attendance levels and make little use of preventative services.[24] Those living in supported accommodation have poorer oral health and restricted in their ability to attend a dental practice.[25]
Refugees and asylum seekers	Asylum seekers and refugees tend to have poorer oral health, and face barriers to access services including difficulty accessing translation support. A survey of those in vulnerable persons resettlement scheme (VPRS) reveals that refugees and asylum seekers are at higher risk of poor oral health. This is because they are less likely to brush regularly, diet and higher smoking prevalence.[26]

3 THE LEVEL OF NEED IN THE POPULATION

The examination of oral health needs amongst adults is limited. The National Dental Epidemiology Programme have completed surveys of adults attending dental practices and dependent older people.[27] However, these surveys do not offer a complete picture of oral health needs amongst adults. Questions on oral health feature in local health and wellbeing surveys. The monitoring of oral cancer related admissions and mortality is an important dataset to monitor oral health amongst adults. Figure 3 provides some indication of the poor oral health levels amongst adults in Leicester. Of particular concern is the significantly higher oral cancer mortality rate per 100,000 population amongst Leicester adults.

Figure 3. Leicester and England oral health comparisons (OHID 2022)

Oral health indicators	Leicester	England
Percentage of adults with active decay (2017/18)	*36.4%*	26.8%
Percentage volunteers (Dependent older people) with any oral health impacts fairly or very often (2016)	*20.6%*	17.7%
Mortality rate for oral cancer (per 100,000 population) 2017-19	*9.2*	4.7

Significantly worse than England	***Similar to England***	***Significantly better than England***

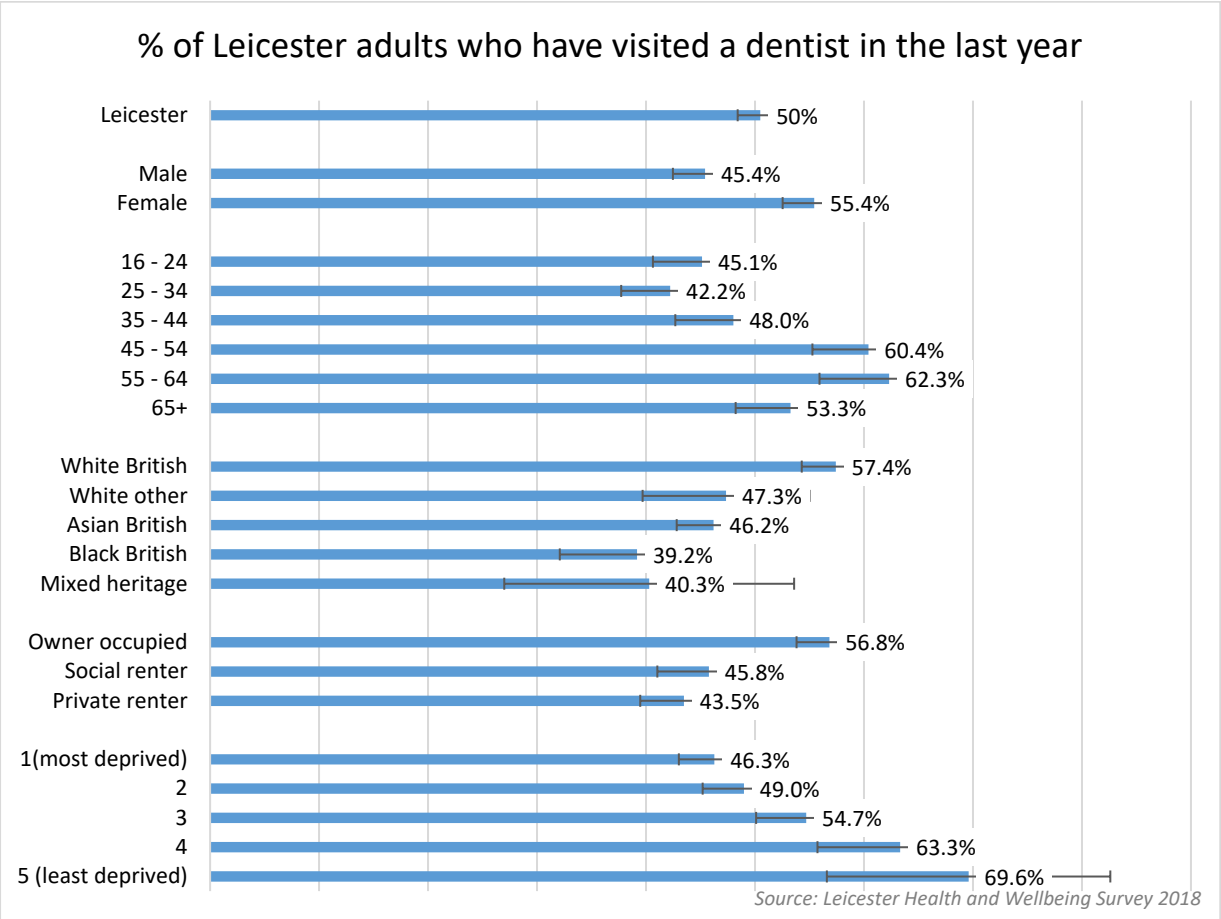
3.1 LOCAL LEICESTER SURVEY INTELLIGENCE

Leicester City Council have commissioned health and wellbeing surveys for both adults (2018) and children (2016/17 & 2021/22). These surveys have asked about dentist attendance and frequency of tooth brushing (for children). They reveal significant differences by gender, age, ethnicity, and deprivation. While the pandemic has detrimentally impacted upon attendance to dental practices the pattern of groups more or less likely to attend dental practices is likely to be similar.

Leicester adults were asked if they had visited a dentist in the last year:

- Males are significantly less likely to have visited a dentist.
- Younger adults are significantly less likely to have visited a dentist and adults aged 45 to 64 are significantly more likely to have visited the dentist.
- By ethnicity, White British residents are significantly more likely to have visited a dentist, while Black British residents are less likely.
- Residents in less deprived areas are more likely to have visited a dentist. [28]

Figure 4. Adults who have visited a dentist in the last year (LHWB survey 2018)



A past survey on oral health in Leicester revealed[29]:

Asian men in employment living in the most deprived one third of the population aged 25 to 44 years are:

- more likely to have described their teeth as bad or very bad
- less likely to clean their teeth at least twice a day
- likely only to attend the dentist when they have trouble with their teeth
- less likely to have visited a dentist in the last two years.

Homeless people are:

- less likely to have reported good or very good dental health
- less likely to clean their teeth twice a day
- more likely to have had problems with their teeth or dentures very or fairly often in the last twelve months.

3.2 ORAL CANCER

Over the last decade, there has been a 30% increase in the incidence of oral cancer in England[30,31]. It is one of the ten most common malignancies in the world and accounts for 2% of all cancers in the UK. 50% of oral cancers in the UK are considered preventable and are linked to lifestyle factors i.e. tobacco, alcohol and diet. Smoking is the main avoidable risk factor for oral cancer and is linked to 65% of oral cancer cases[32]. The prevalence of cigarette smoking in Leicester is between 15%[34] and 20%[33], which is comparable to the national rate of 14%[34]. Smokeless tobacco is also a risk factor, particularly in Leicester due to its population demographic profile, however further data is needed to fully understand this issue. Smokers have a 7 times increased risk of developing oral cancer, while regular smokeless tobacco users are at an 11 times increased risk. Furthermore, alcohol dehydrates the mouth and potentiates the effects of tobacco. People who regularly drink excessive amounts of alcohol and are smokers are at a 38 times increased risk of developing oral cancer. Leicester reports significantly higher rates for alcohol related admissions and specific mortality indicating that excessive alcohol consumption is an issue for some city residents.

The latest (2017-19) incidence rate for oral cancer registrations in Leicester is 22.7 rate per 100,000 population. The Leicester rate is significantly higher than the national rate of 15.4 and is amongst the highest in the country (based on 2017-19 data). The mortality rate for oral cancer in Leicester is 9.2 per 100,000 population which is significantly higher than the England rate of 4.7 for the latest year 2017-19 (Figure 5). This is currently the highest rate reported amongst Local Authorities in England. Although Leicester has high oral cancer incidence and mortality rates, the rate is generally statistically similar to other comparators. The high oral cancer mortality rate may indicate that patients could be presenting and/or being diagnosed late, as earlier diagnosis with cancer reduces the risk of mortality.

Figure 5. Incidence and mortality rate for Oral Cancer (OHID 2022)

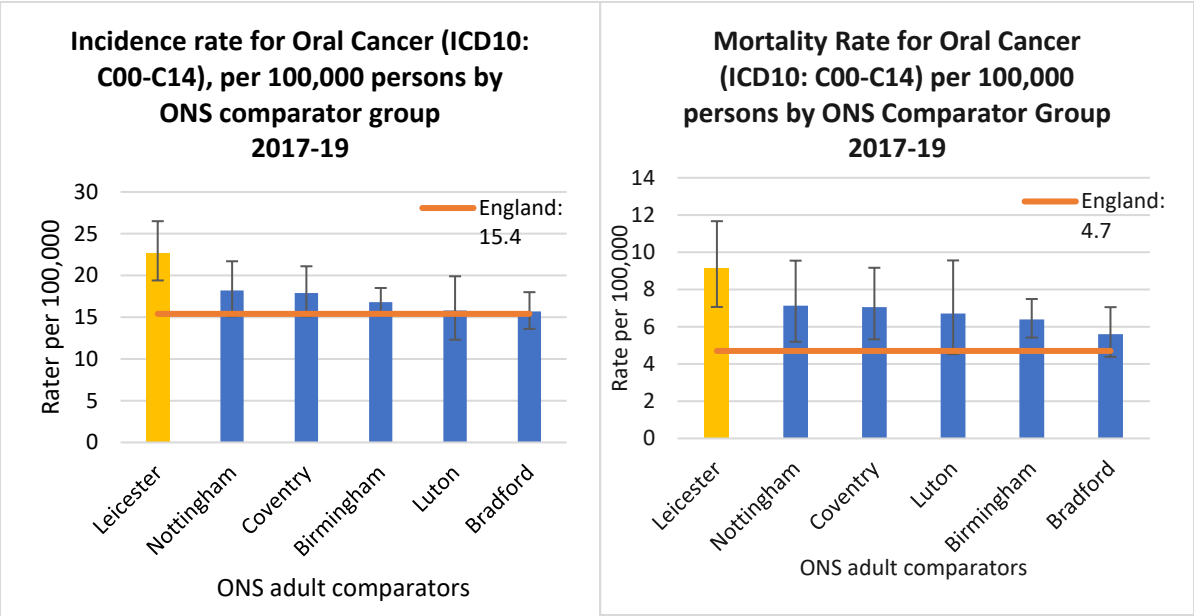


Figure 6 and 7 shows the increasing trend in incidence and mortality rate for oral cancer from 2008-10 to 2017-19 in Leicester and comparators. Leicester has a higher rate than all comparators and has been significantly higher than the National average for many years.

Figure 6. Incidence rate for oral cancer trend data (2008 to 2019) (OHID)

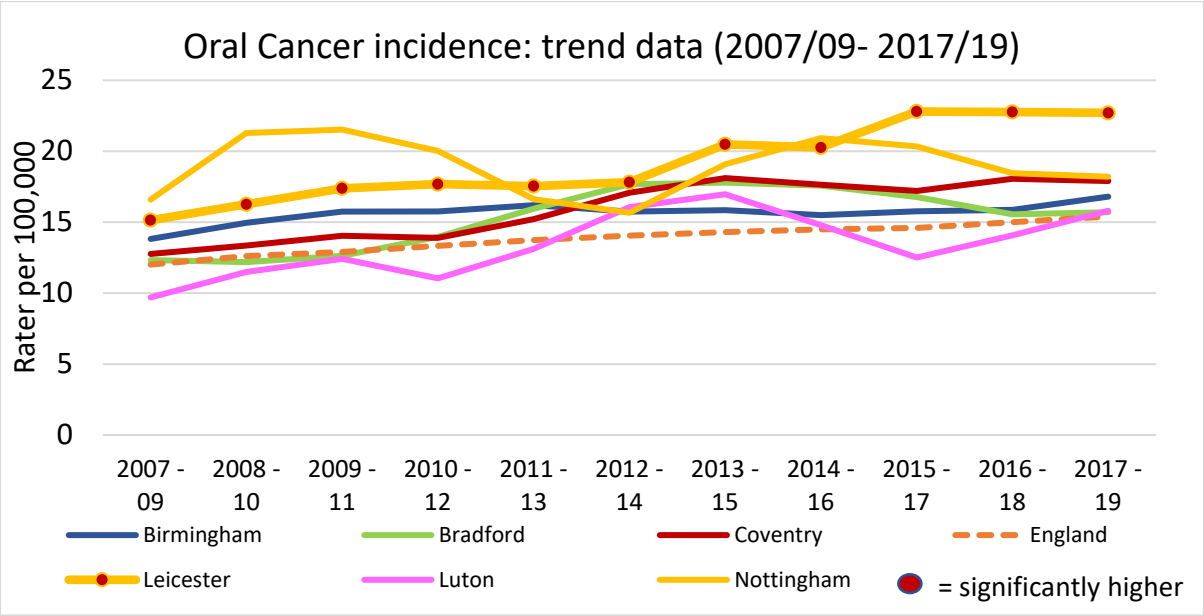
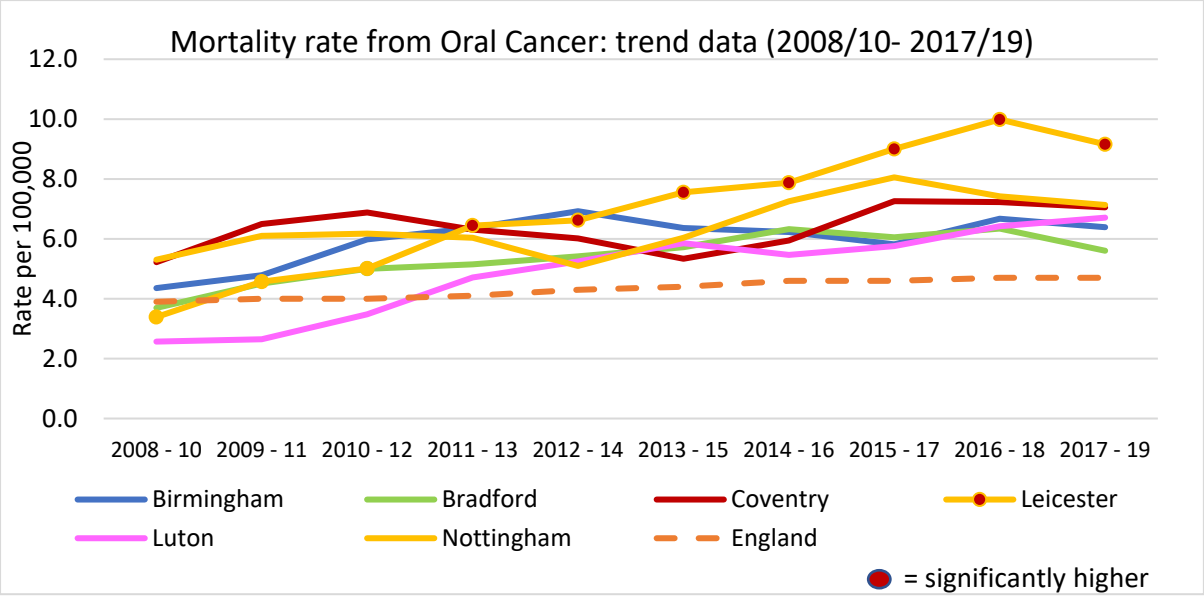
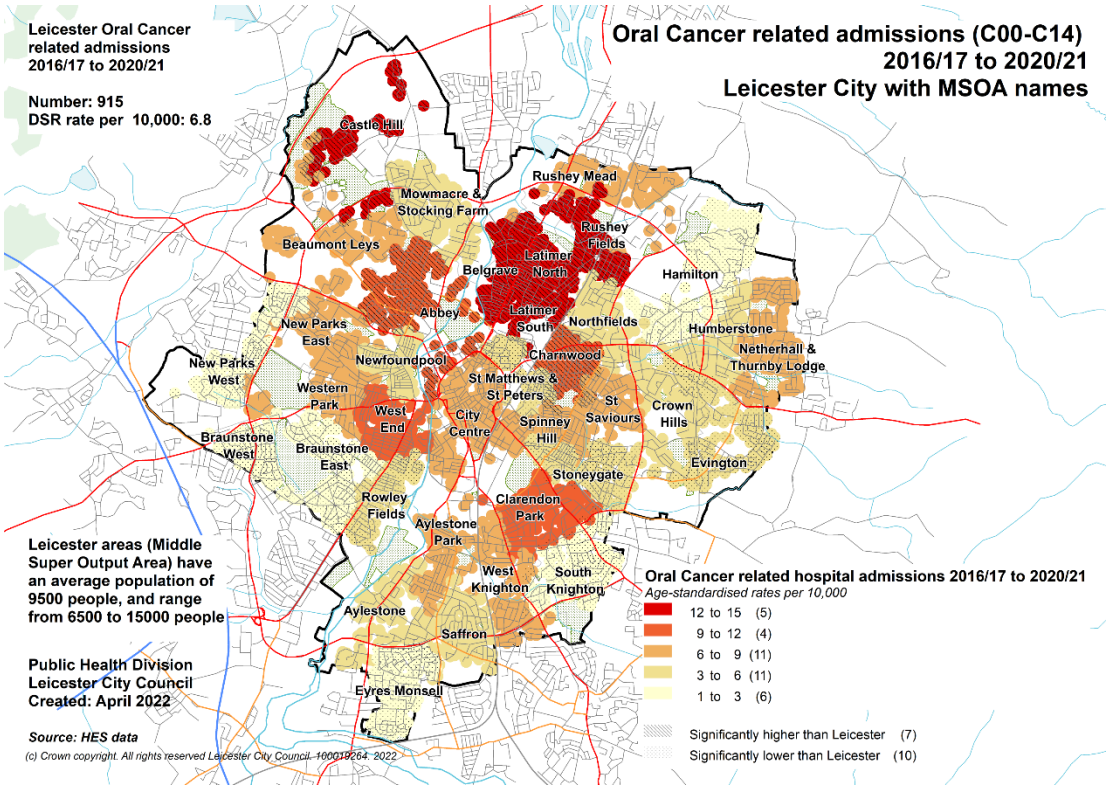


Figure 7. Mortality rate for oral cancer trend data (2008 to 2019) (OHID)



Local data is available on Leicester resident admissions for Oral Cancer from 2016/17 to 2020/21. It reveals that there were 915 oral cancer related admissions over this period of time, and each year there are about 200 oral cancer related admissions. Neighbourhood analysis shows that areas to the North and North West of the city are reporting significantly higher rates of oral cancer admissions.[35]

Figure 8. Oral cancer related admissions by Leicester MSOA (2016/17 to 2020/21)



Further interrogation of these oral cancer admissions for Leicester residents by age sex and ethnicity are shown in figure 9 & 10. For age and sex, rates per 1,000 of the population reveal that males are significantly more likely to have an oral cancer admission. Rates per 1,000 of the population are also higher from age bands 45 to 69. Further analysis by ethnicity and age show that minority (BAME) communities report lower rates of admissions compared to White British residents.

Figure 9. Leicester resident oral cancer admissions rate per 1,000 population by age and sex (HES Data 2022)

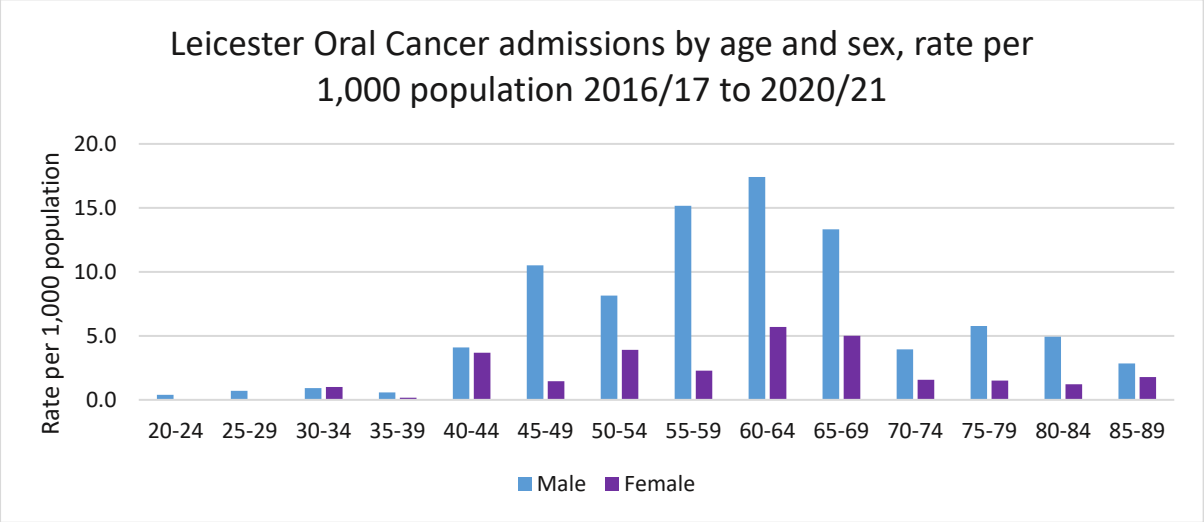
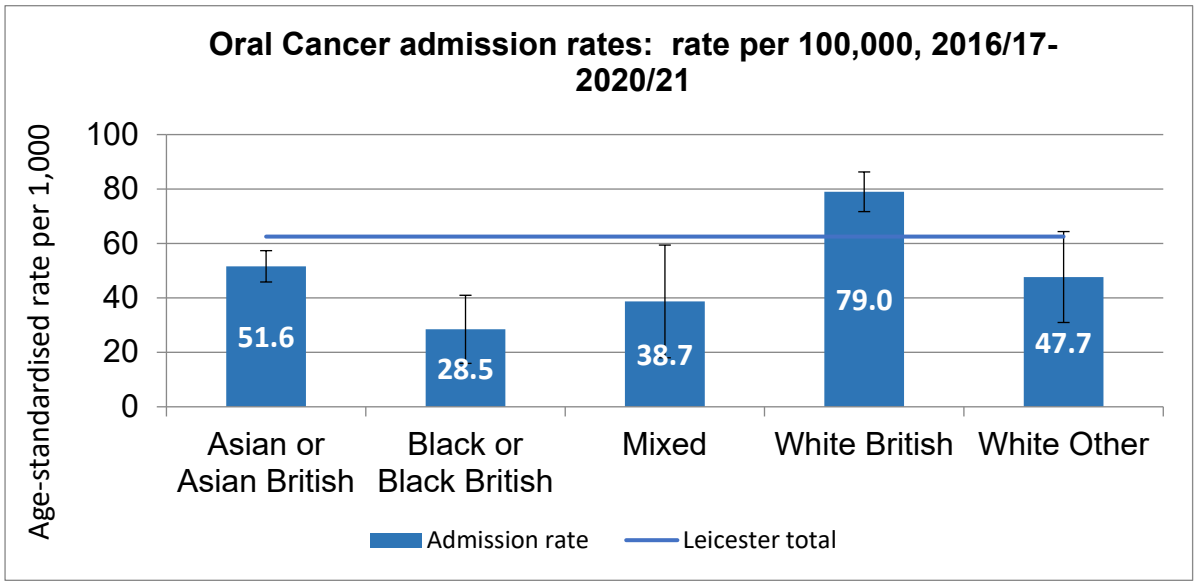


Figure 10. Oral Cancer admission rate by ethnicity 2016/17 to 2020/21 (HES Data 2022)



4 CURRENT SERVICES AND ASSETS IN RELATION TO NEED

NHS England has statutory responsibilities to commission NHS dental services that meet the needs of the local population to continuously improve oral health and reduce inequalities. The NHS General Dental Services should be designed to fit closely with the needs of all sectors of the population whilst maximising the opportunity for those with the greatest need to receive appropriate and timely dental care. Access to NHS dentistry is commissioned for anyone who seeks it, regardless of where they live.

The vast majority of NHS dental care in Leicester is provided by NHS General Dental Practitioners (high street dentists). The Community Dental Service providing both Paediatric and Special Care Dental Services provides specialist dental treatment in a primary care setting for those with complex special needs (including domiciliary dental care). The Hospital Dental Service provides Consultant led services in Oral and Maxillofacial surgery (including Minor Oral Surgery), Orthodontics and Restorative dentistry. There are also private dentistry services in the city.

To improve access to primary dental services NHSE has also commissioned a full range of mandatory services available to all groups of patients (children, fee-paying adults and exempt adults) including two new NHS dental services that are open from 8.00am to 8.00pm, 365 days per year which opened in December 2017 (one practice in West End area and one in City Centre & South area). These 8 to 8 services are routine dental practices but also provide unscheduled (emergency) dental care for patients in pain that do not have a routine dental practice or when their routine dental practice is closed i.e. at weekends or bank holidays.

Dental activity data can be reported based on courses of treatment for patients, by residency. The data is designed to report on types and levels of treatments for patient resident in an area. It does not reflect the unique numbers of patients as a patient can be counted more than once if, for example, over the analysed period they have attended multiple times. The dataset presents the charge bands and the range of treatments being offered. The charge bands for NHS dental treatment are as follows:

- Band 1: covers an examination, diagnosis (including X-rays), advice on how to prevent future problems, a scale and polish if needed and preventative treatment such as application of fluoride varnish or fissure sealant.
- Band 2: covers everything listed in Band 1 above, plus any further treatment such as fillings, root canal work or removal of teeth.
- Band 3: covers everything listed in Bands 1 and 2 above, plus crowns, dentures and bridges.
- Urgent: covers urgent and emergency dental care.

4.1 GENERAL DENTAL SERVICE

According to NHSE, there are 85 NHS dental practices in and near Leicester. It is the responsibility of each dental practice to update the NHS Website with regard to their current status on accepting new NHS patients. Many practices had not updated details for over a year. To reach the most accurate picture Leicester City Council's Public Health team contacted all practices to find out how many were accepting new patients (February 2022).

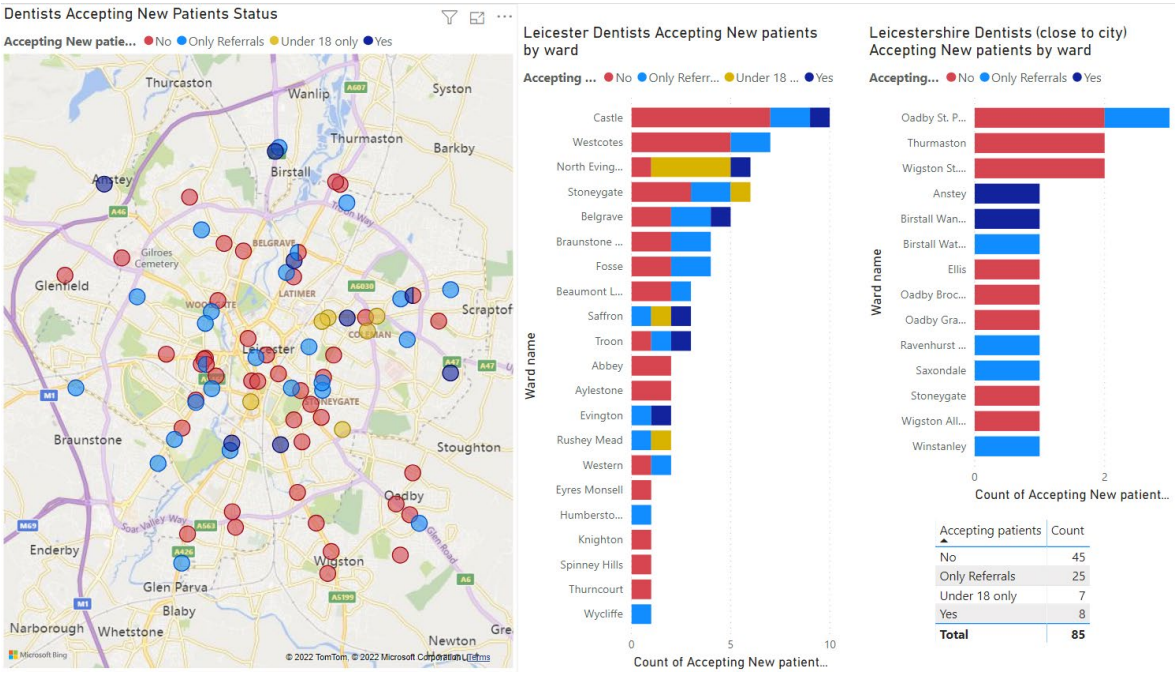
Of those that were contacted:

- 82% are currently not accepting new NHS patients.
- Children (Under 18's) are accepted onto the patient list in 18% of dental practices.
- Adults are accepted onto the patient list in 9% of dental practices.

This represents a sharp decrease in availability of dental practices accepting new patients, when compared against January 2019, which demonstrated that 45% of practices were accepting new adult patients.

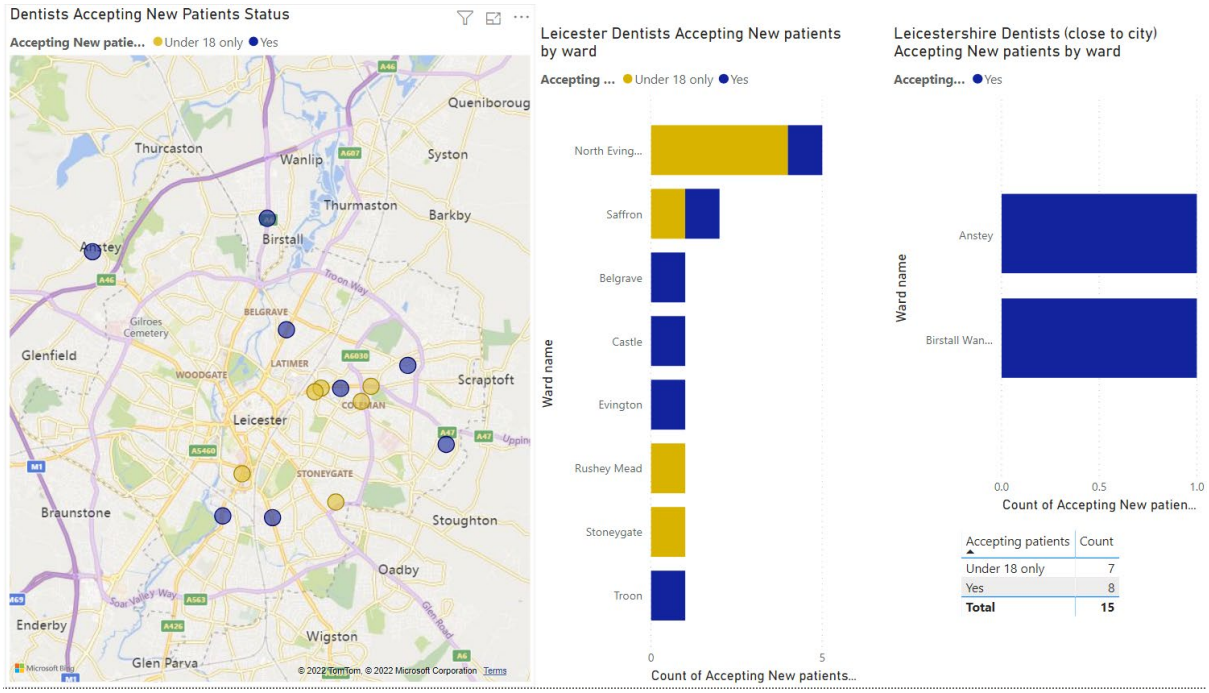
Figure 11 shows NHS dental practice locations in Leicester and surrounds. The map shows that residents in many areas of the city have limited access to a dental practice. Leicester adults currently can only register with 6 dental practices located in Castle, North Evington, Belgrave, Saffron, Troon, and Evington. A further 2 dental practices just outside of the city are also accepting new patients.

Figure 115. Leicester (and surrounds) dental practices and new patient status (NHS 2022)



There are many areas of the city that have no local access to dental practices accepting new patients. Figure 12 shows that residents in the North West, West and South have limited access to dental practices. Analysis by deprivation also shows there are significant challenges for our residents living in areas of deprivation accessing dental practices.

Figure 12.6 Leicester (and surrounds) dental practices accepting new patients (NHS 2022)



Most of the city residential areas are within 15 minutes' walk of a dental practice but there are some areas of the city where residents would need to travel further (figure 13).

Figure 13. Walking distance to NHS dental practices in (and near) Leicester (Shape tool 2022)

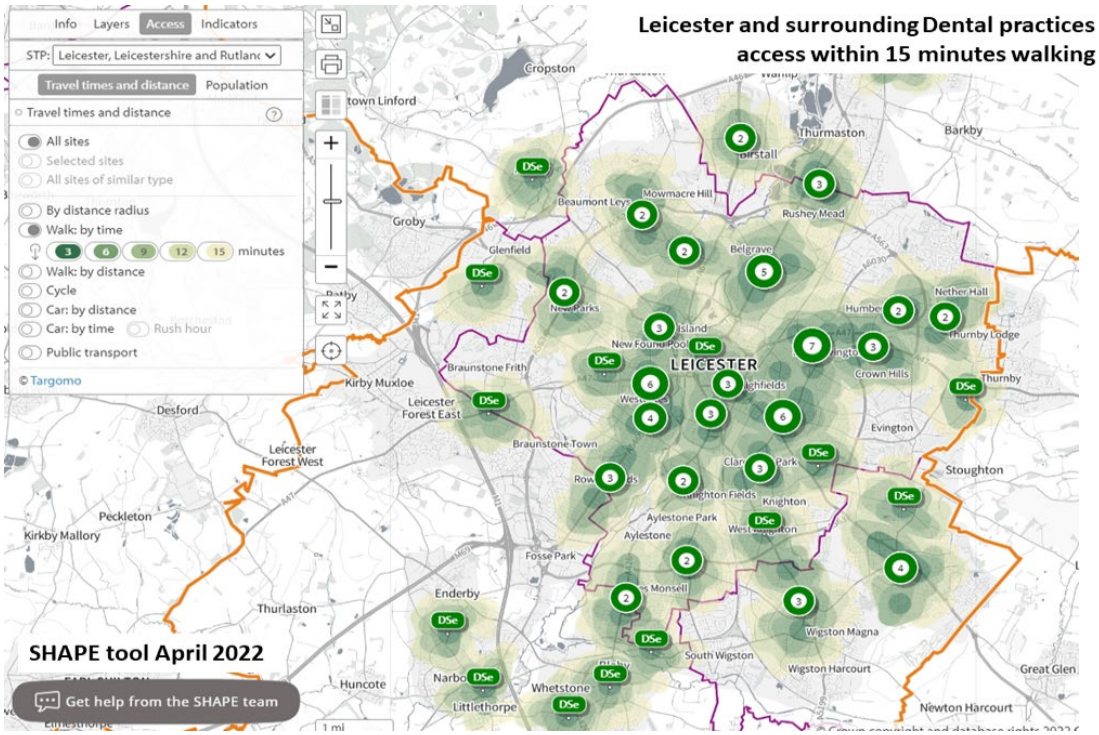


Figure 14 and 15 maps the 8 dentists currently accepting new adult NHS patients and walking/public transport travel to these locations. There are clear access issues for these practices and many people would find it difficult to access these locations if walking and public transport were there only options.

Figure 147. Walking distance to NHS dental practices in (and near) Leicester accepting NHS adult patients (Shape tool 2022)

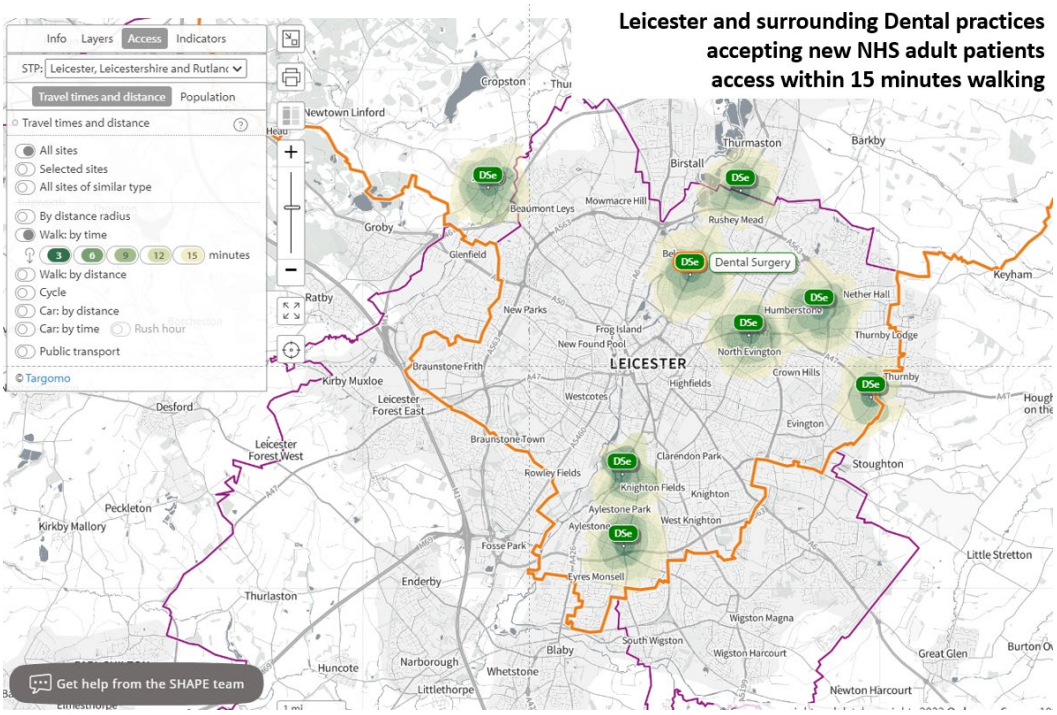
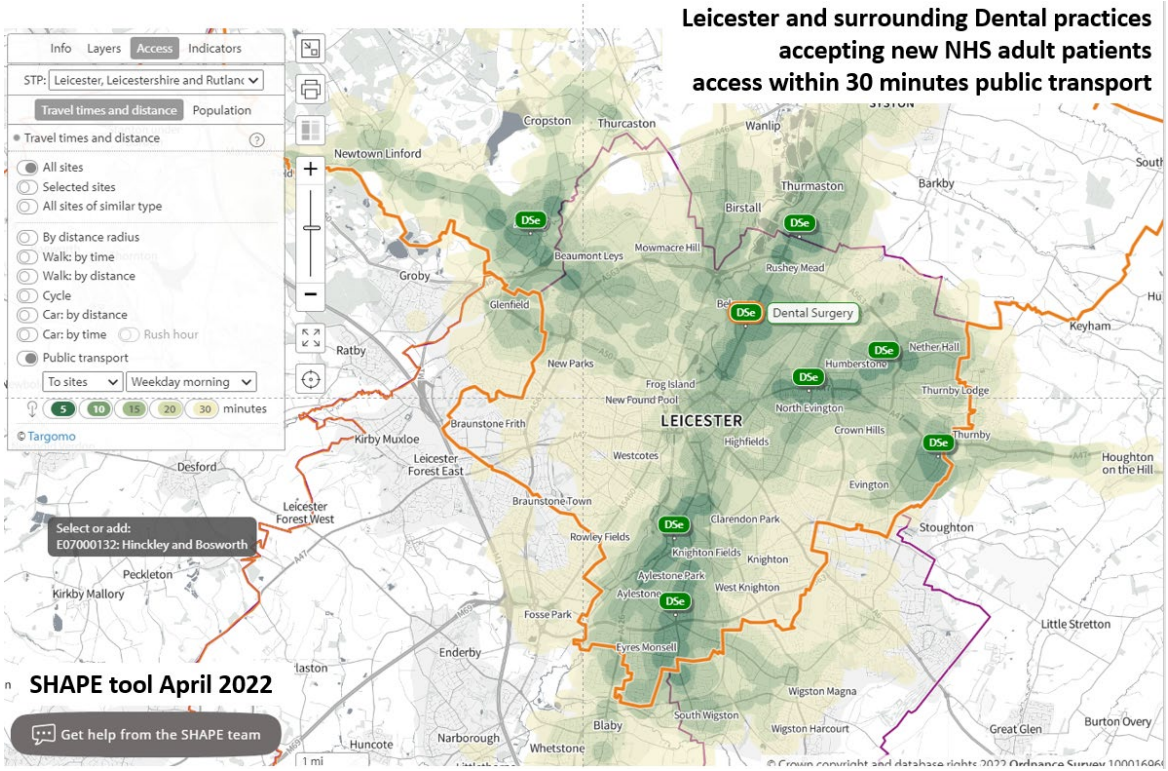


Figure 15. Public transport travel to NHS dental practices in (and near) Leicester accepting NHS adult patients (Shape tool 2022)



4.2 ADULTS DENTAL ACCESS

The proportion of adult residents in Leicester accessing an NHS dental practice in the previous 6 months from June 2019 to December 2021 at any dental practice location of their choice in Leicester has throughout the period been lower than the England average (Figure 16). The impact of the pandemic on dental attendance is also clear. Latest December 2021 data shows that 16% of Leicester adults accessed dental services compared to 17% for England. Levels of attendance have not yet reached pre-pandemic levels. Adults in Leicester are significantly less likely to have attended a dental practice compared to the national average (Dec 2021), however Leicester is higher than some comparator authorities (figure 17).

The 2022 review of Leicester dentists accepting new patients revealed the difficulty in getting on a dental practice list. This is likely to be a contributing factor to the lower levels of dental attendance.

Figure 16.8 Adults accessing NHS dental services (NHS BSA 2019 to 2021)

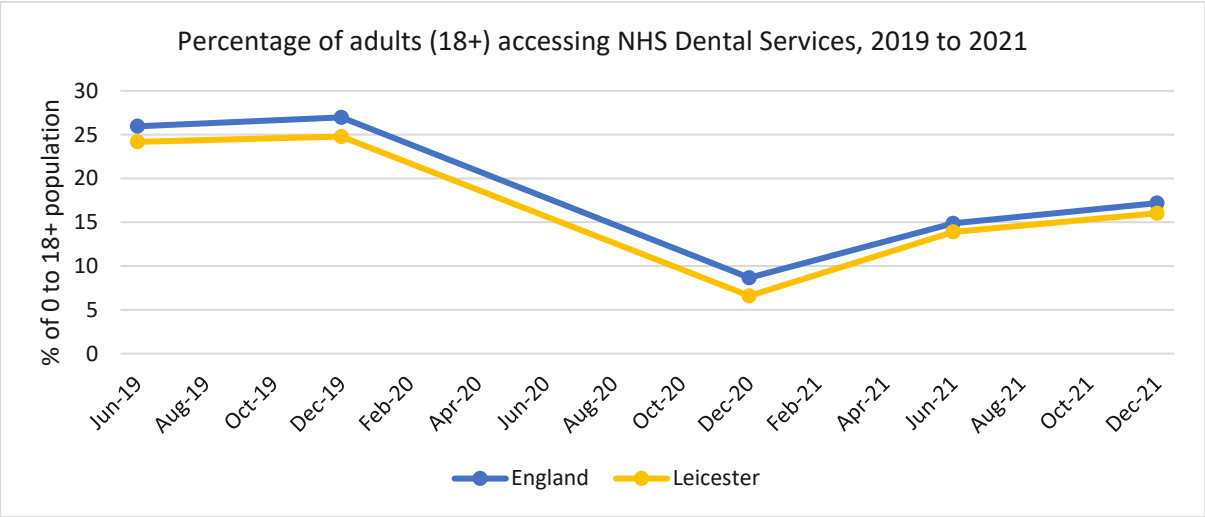
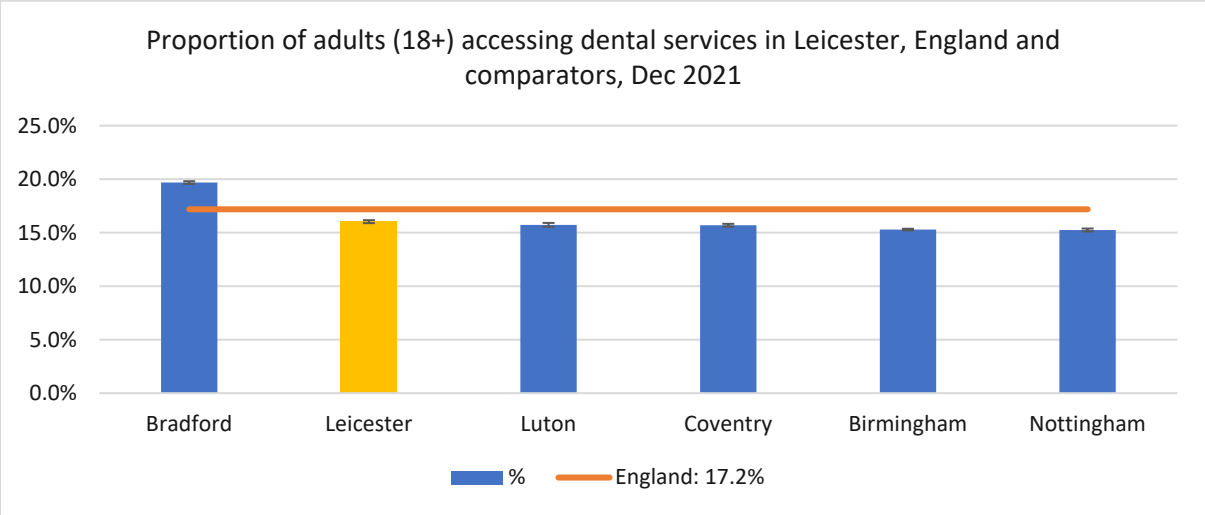


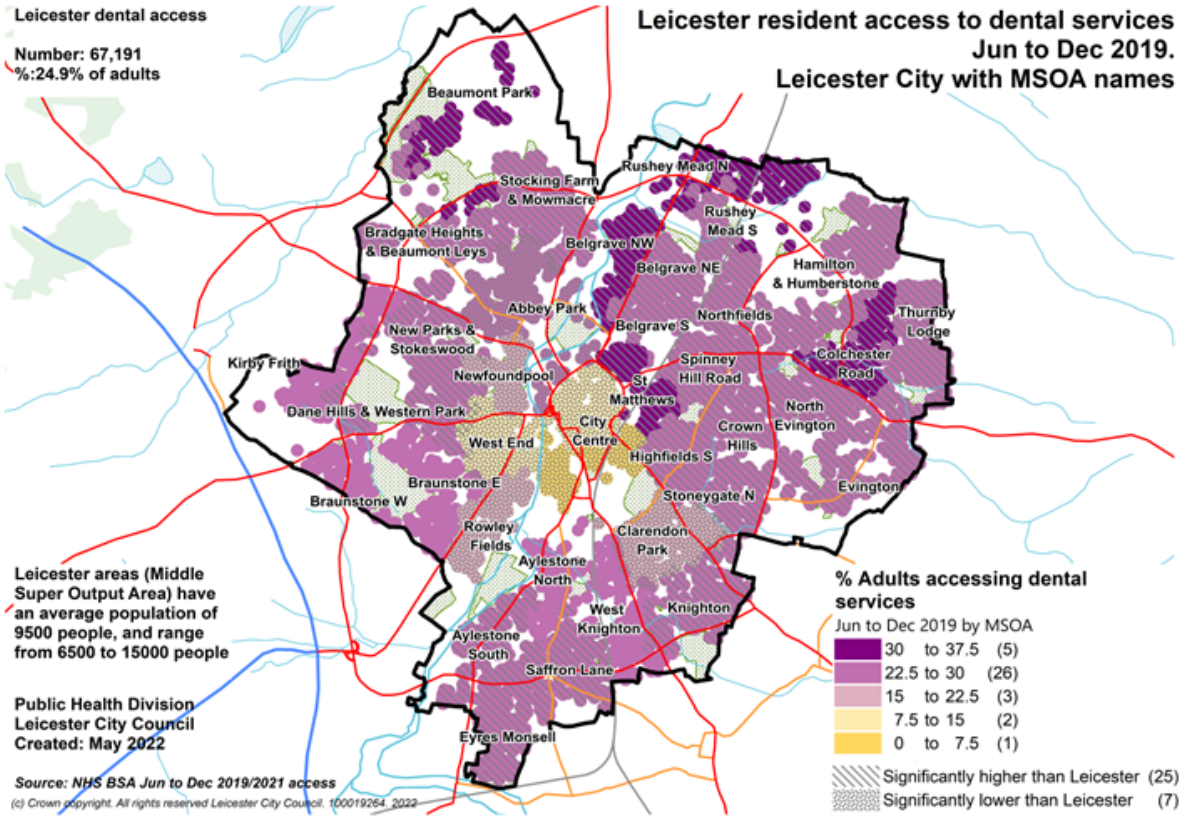
Figure 17.9 Adults accessing NHS dental services (NHS BSA 2021)



Figures 18 and 19 show the proportion of adults (aged 18 to 64 years and 65+ years) in Leicester accessing an NHS dentist in the last 24 months by Middle Super Output Area (MSOA). It shows the impact of COVID-19 on dental access where dental access for adults has fallen from 24% in 2019 to 14% in 2021. Similarly in those aged 65+ dental access has fallen from 41% in the 24 months to March 2020 to 30% in the 24 months Jan 2022.

The map demonstrates variation across the city. There are significantly lower proportions of adults living in the central areas accessing NHS dental services. These are areas where younger adults are more likely to reside. For the 65+ population dental access is higher in the North and some areas to the East. It should be noted that those aged over 65 may have additional needs i.e. disabled access which may prevent them accessing NHS dentistry. It should also be noted that there may be a proportion of residents who may have chosen to access private dentistry instead, especially in areas with lower deprivation such as Knighton.

Figure 18.10 Leicester adult access to dental services by MSOA 2019-2021 (NHS BSA 2021)



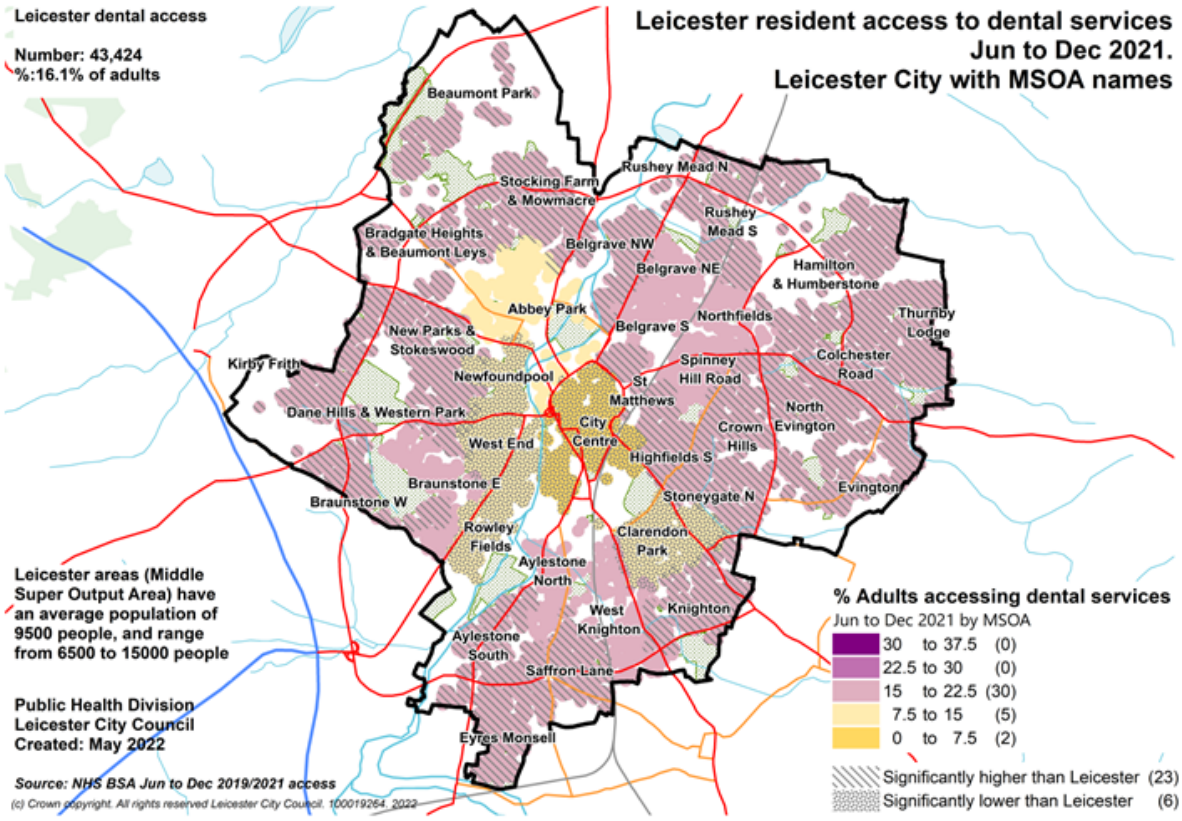
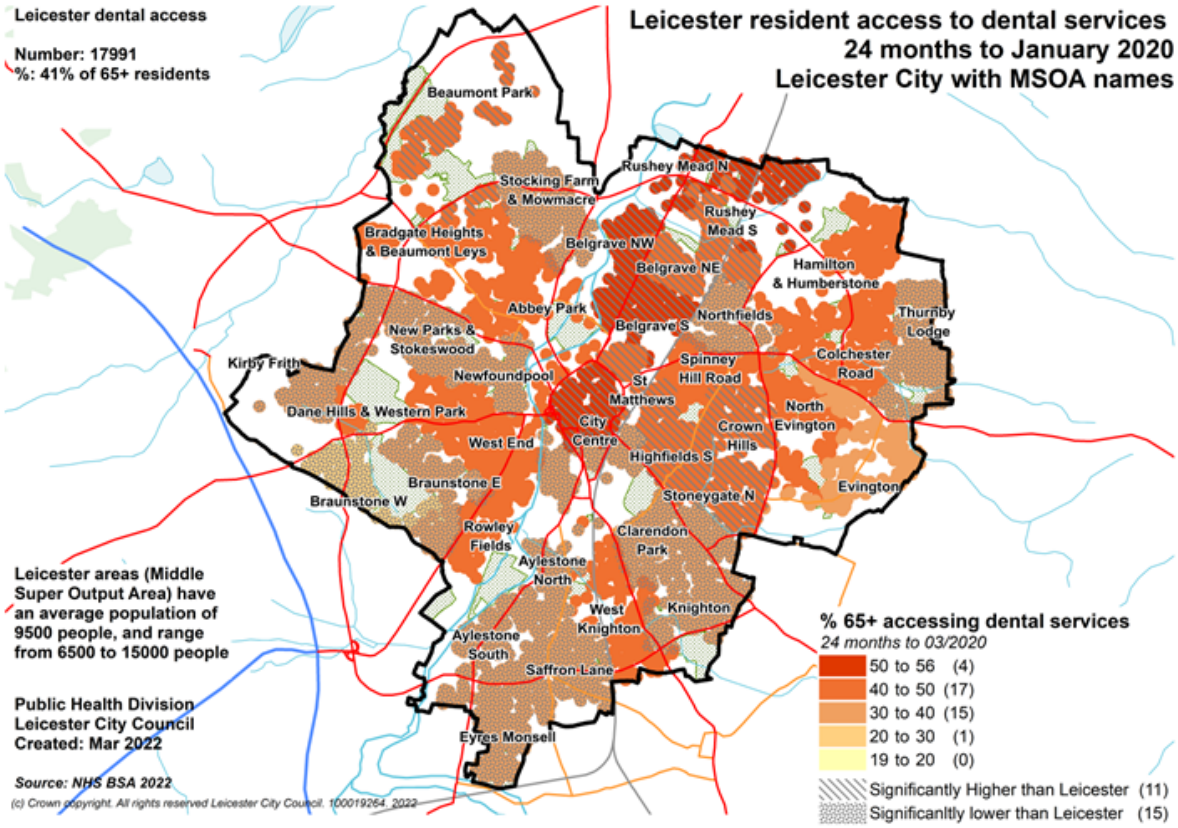
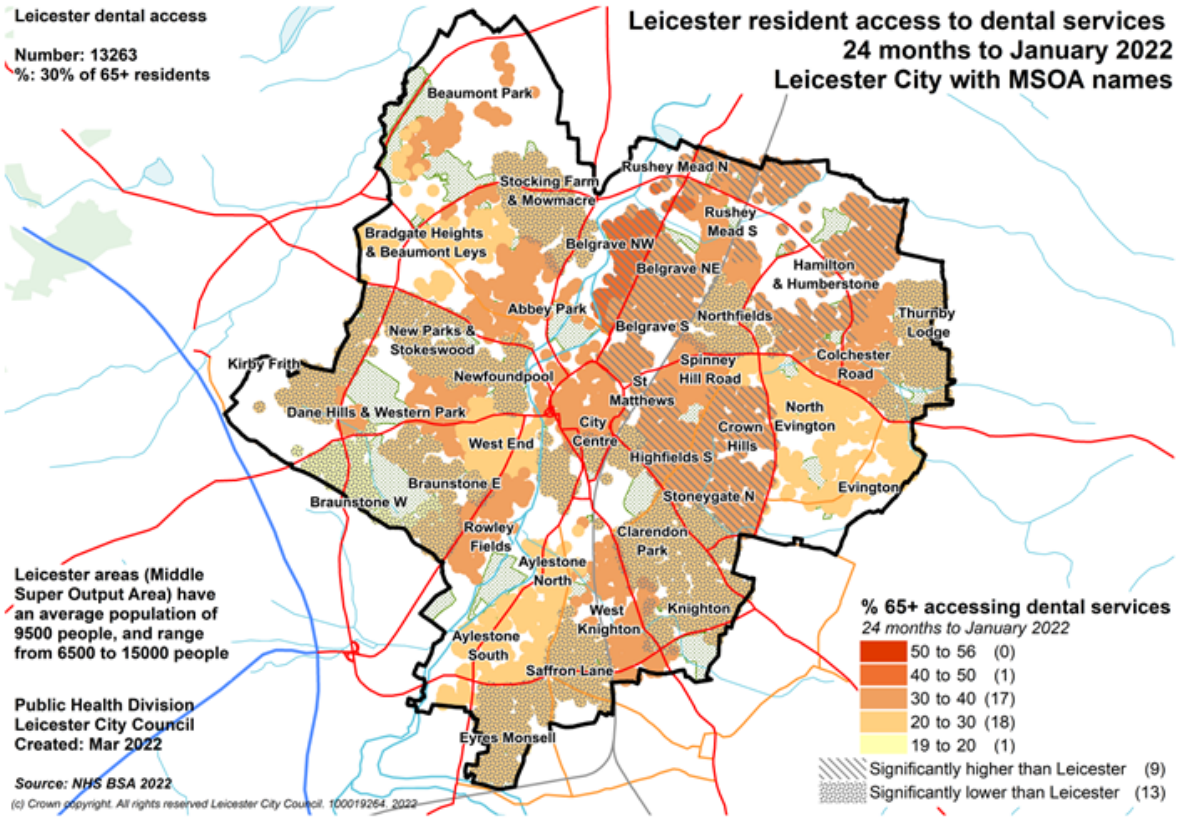


Figure 19. Leicester 65+ access to dental services by MSOA 2019-2021 (NHS BSA 2021)





4.3 ADULT DENTAL ACTIVITY

Dental activity data for adults in Leicester (figure 20 & 21) demonstrates that adults (paying and non-paying) receive less band 1 and more band 2/urgent activity compared to England. Non-paying adults are less likely to have band 1 treatment and more likely to have band 3 and urgent activity. Having more claims in band 2 could suggest the requirement for more complex dental care and more claims in urgent activity could suggest inadequate access (including COVID-19 lockdown implications), cultural behaviour in only attending when in pain or not being able to attend routinely due to NHS dental costs.

Figure 20.11 Adult (paying) dental activity by patient charge band (NHS BSA 2021/22)

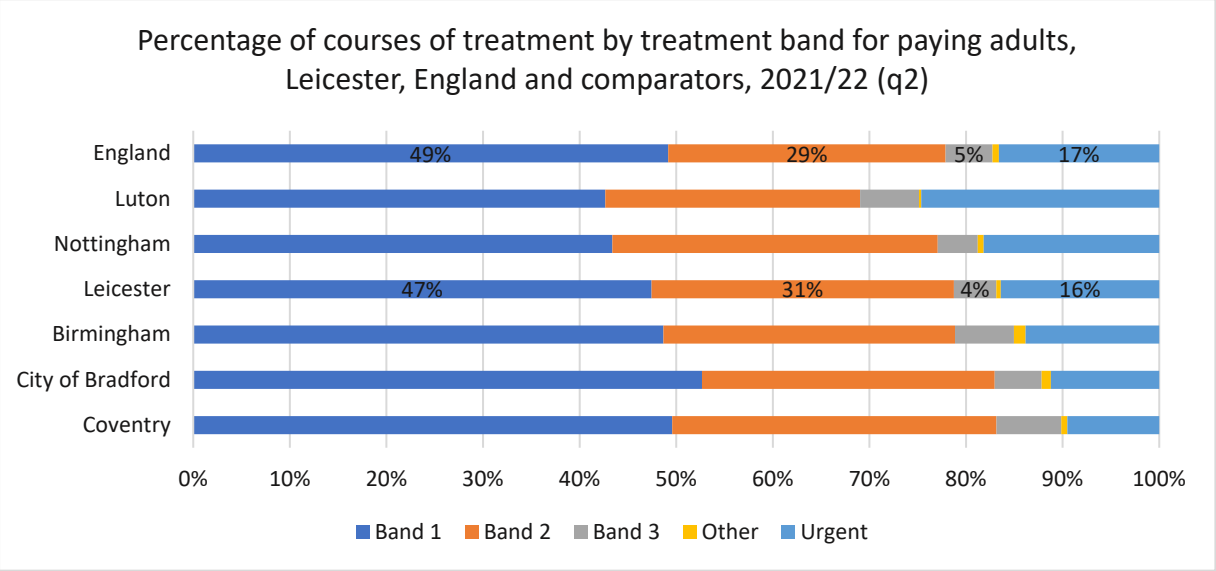


Figure 21.12 Adult (non-paying) dental activity by patient charge band (NHS BSA 2021/22)

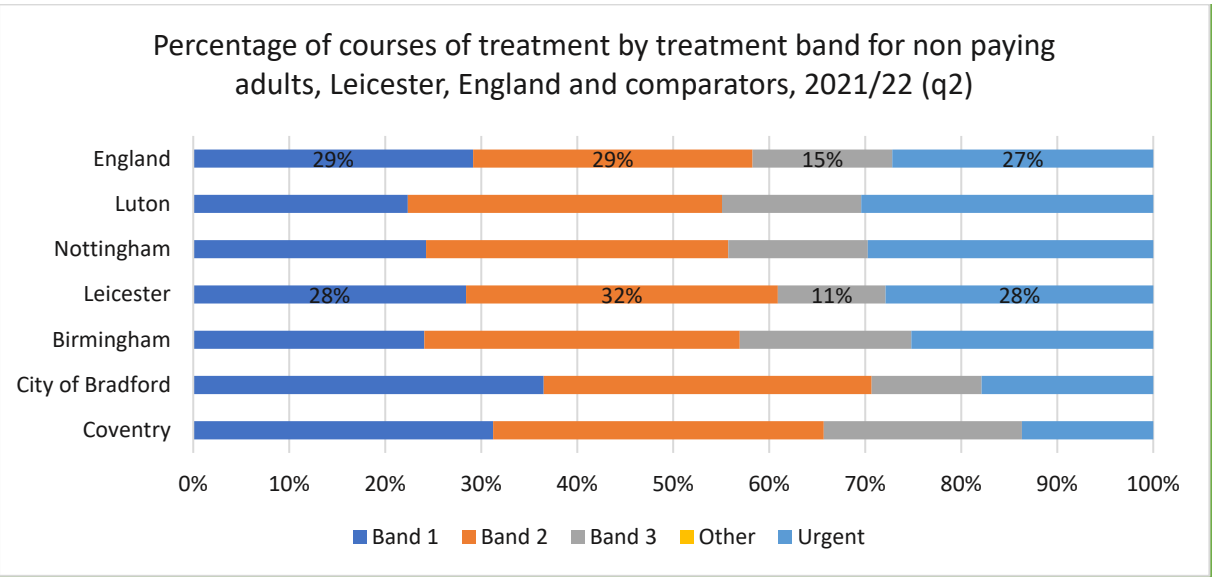


Figure 22 and 23 shows urgent activity by MSOA, this is closely linked with areas of higher deprivation (see figure 2) and areas of high transient populations including the City Centre and West End. There are slightly different patterns for working age and 65+ adults.

Figure 22. Urgent activity for Leicester working age adults 18 to 64 by MSOA (NHS BSA 2021/22)

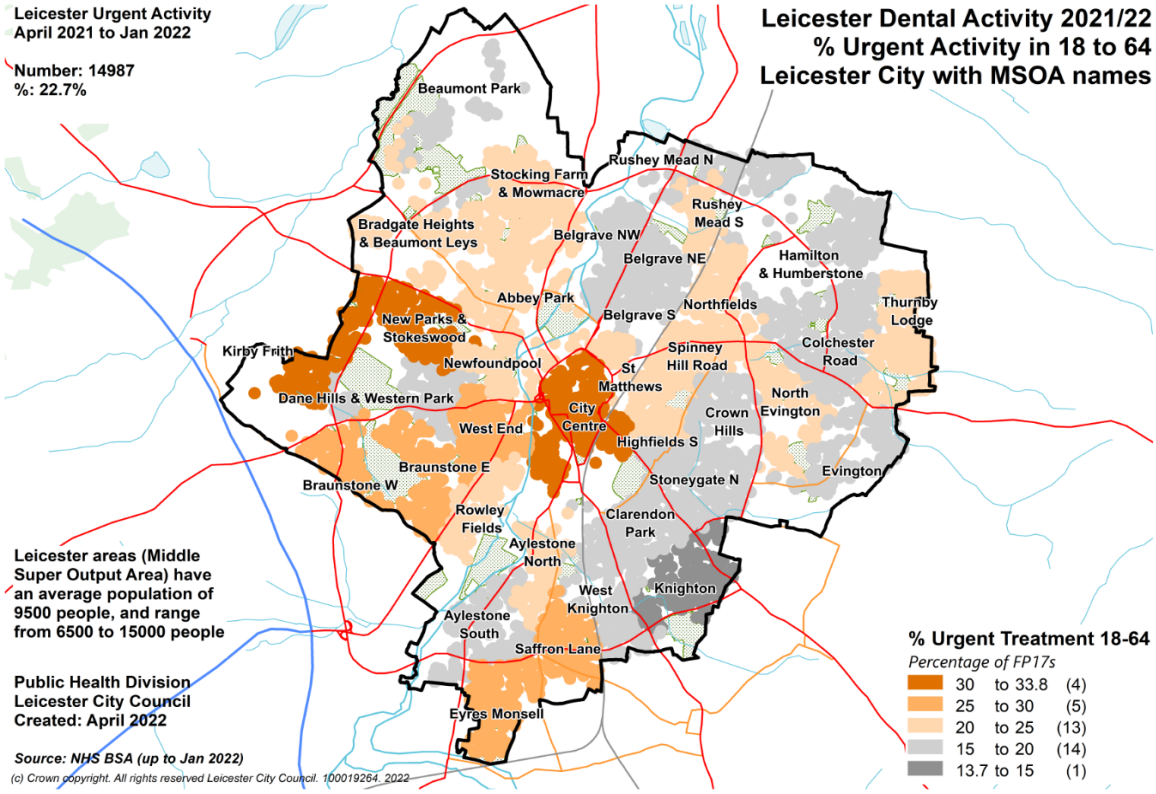
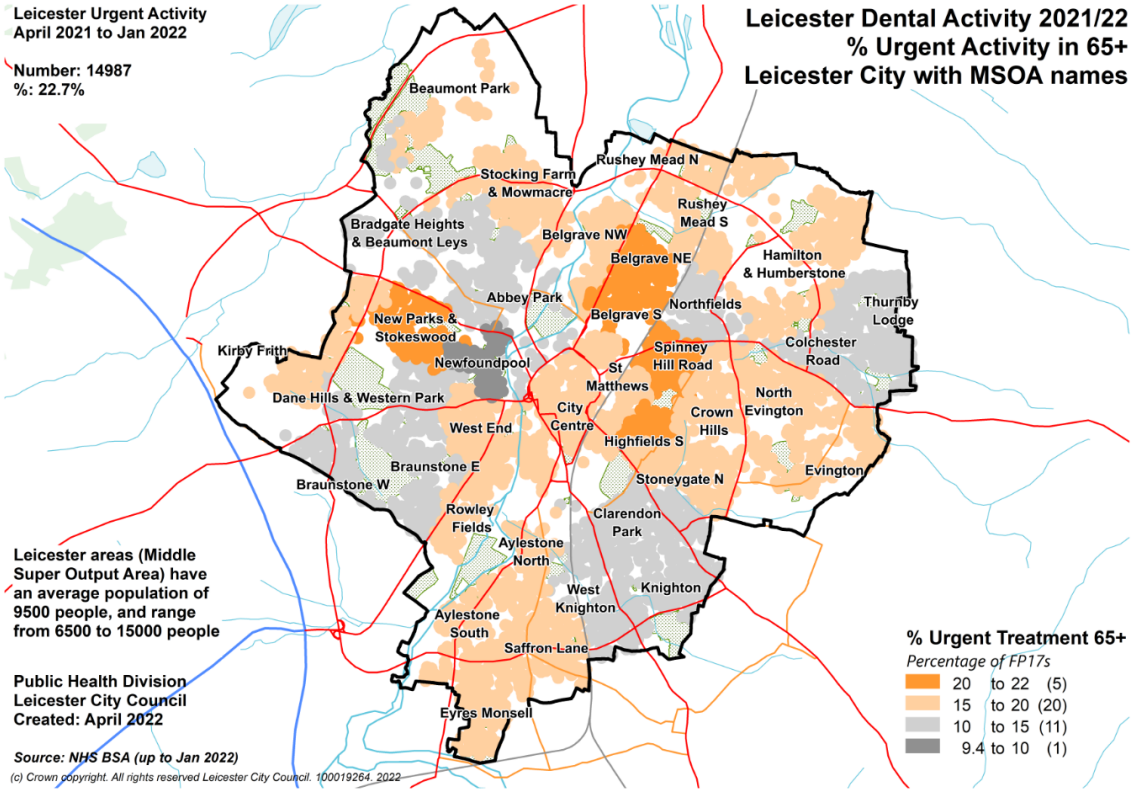


Figure 23.13 Urgent activity for Leicester residents 65+ by MSOA (NHS BSA 2021/22)



Adult dental activity claims for fluoride varnish, fissure sealants and dental extractions has changed in the pre and post pandemic periods. Post pandemic Leicester has seen falls in % of claims for Fluoride varnish from 5% to 2%, and an increase in claims for extractions from 10% to 20% for adult residents in Leicester (figure 24 to figure).

Figure 24. Adult dental activity fluoride varnish, fissure sealants and extractions (NHS BSA 2014/15 to 2015/16)

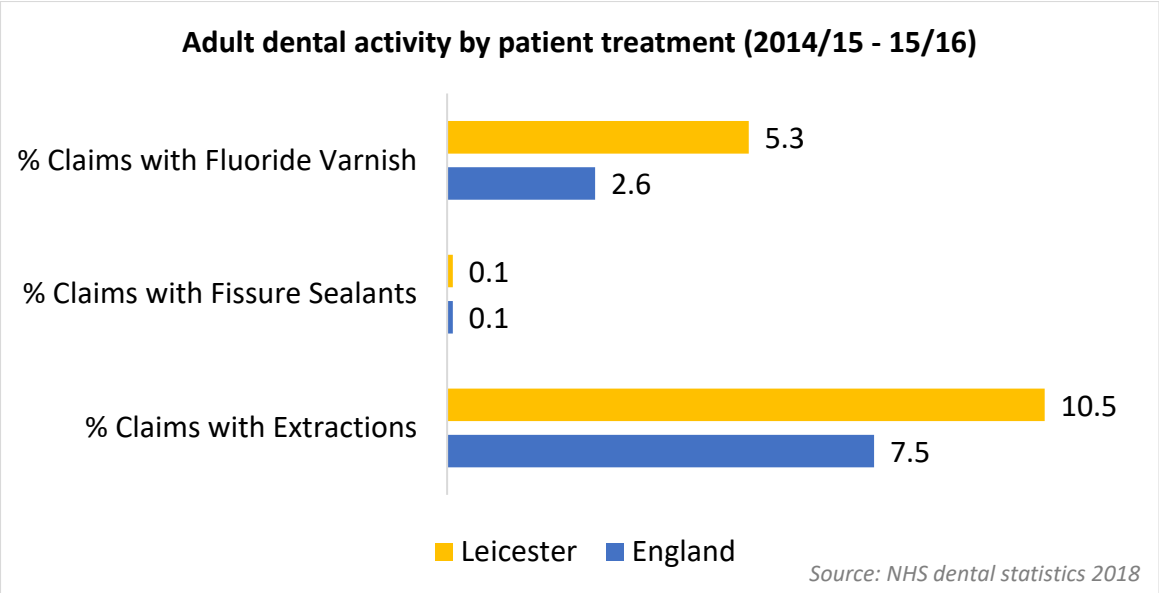


Figure 25. Adult dental activity fluoride varnish (NHS BSA 2020/21 comparison)

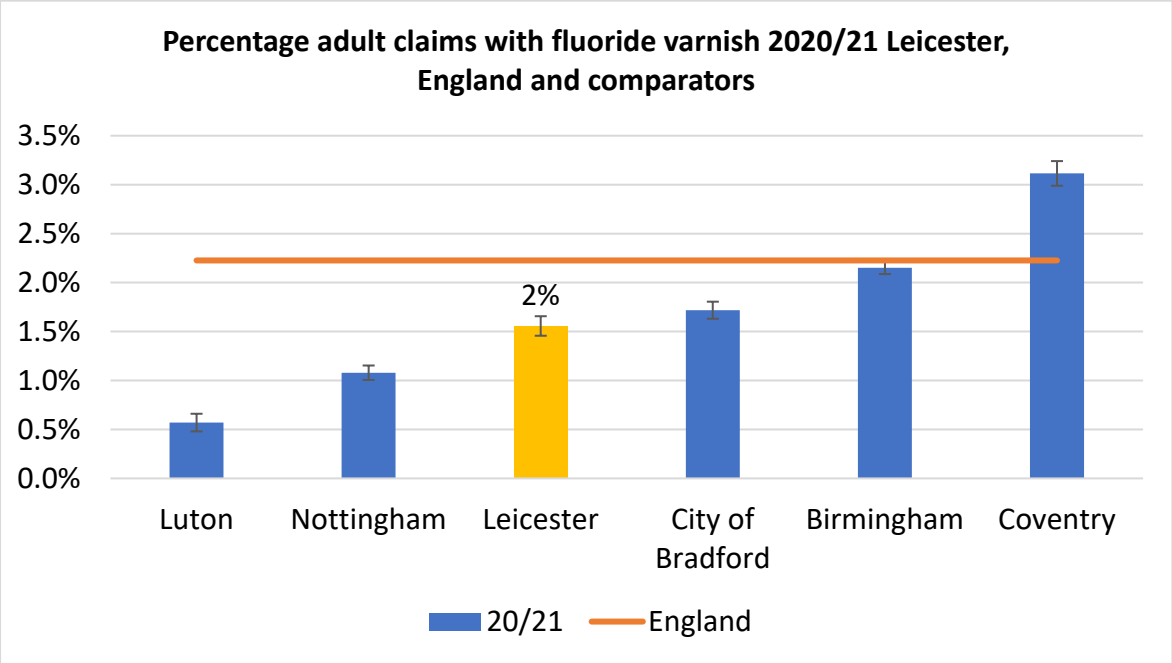


Figure 26. Adult dental activity fissure sealants (NHS BSA 2020/21 comparison)

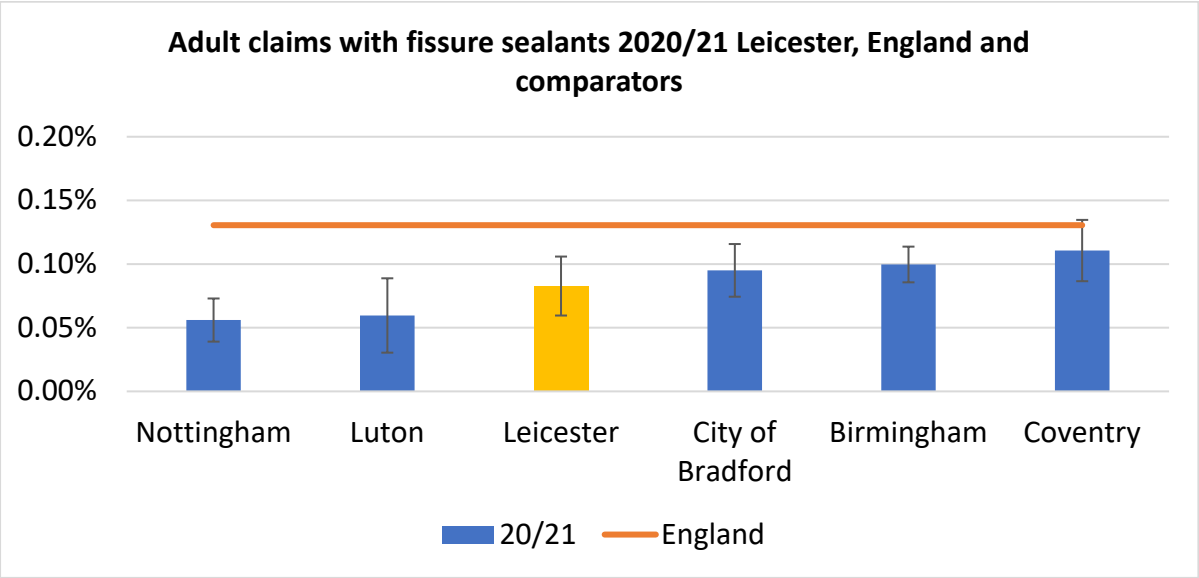
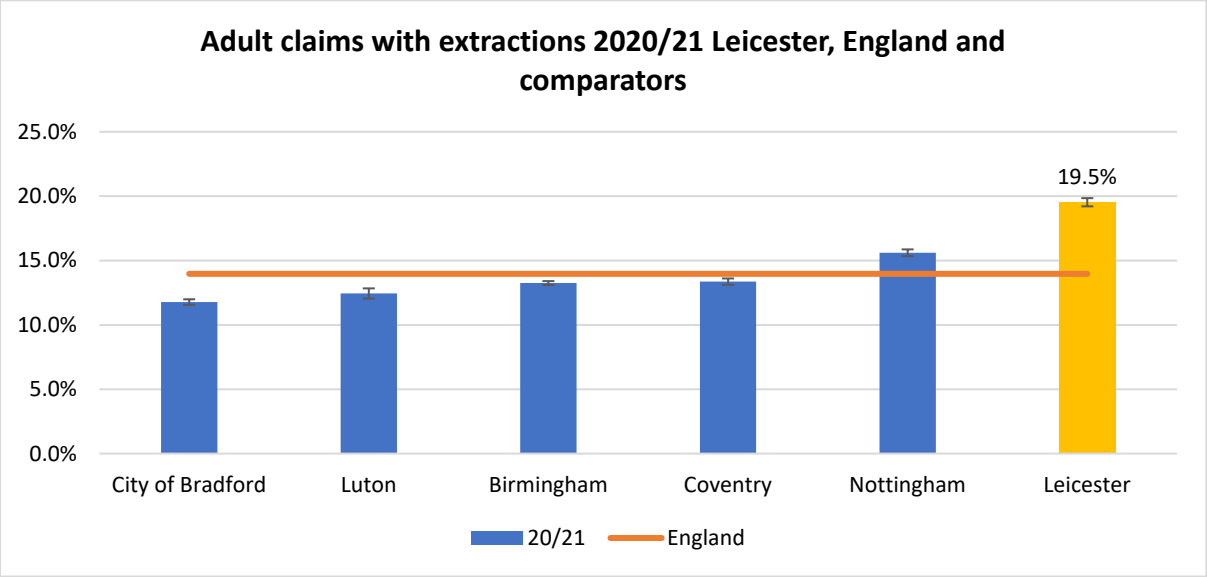


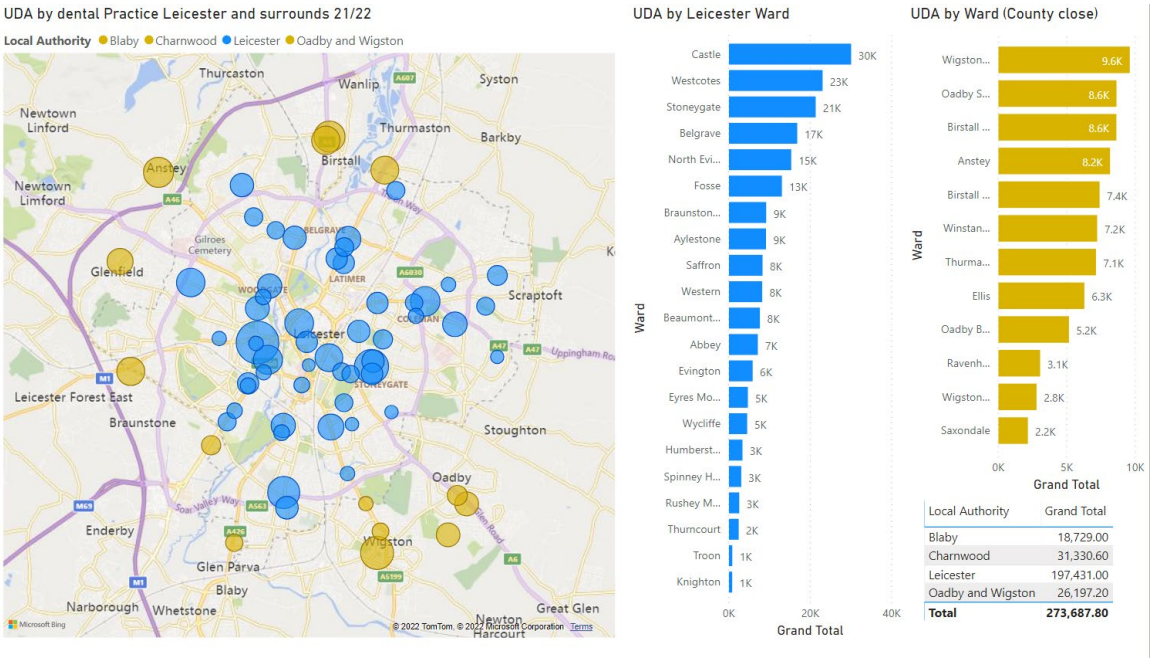
Figure 27. Adult dental activity extractions (NHS BSA 2020/21 comparison)



4.4 COMMISSIONED UNITS OF DENTAL ACTIVITY

Figure 28 shows that there is greater commissioning of Units of Dental Activity (UDAs) for practices located in our central wards Castle, Westcotes, and Stoneygate. There is limited activity in some of our outer estates including Braunstone. However, it is noted that there is an NHS dental practice located at the border of Braunstone (located in Leicestershire County) which may be serving the dental needs of residents in this area.

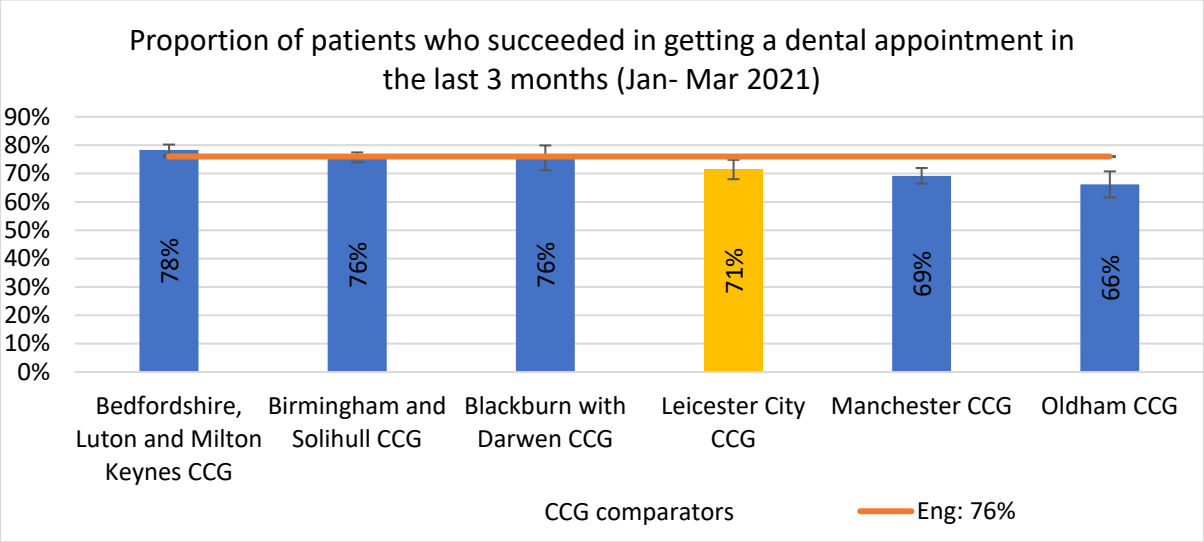
Figure 28. Leicester (and nearby) NHS dental practices and commissioned UDAs by ward (NHS BSA 2021/22)



4.5 PATIENT EXPERIENCE

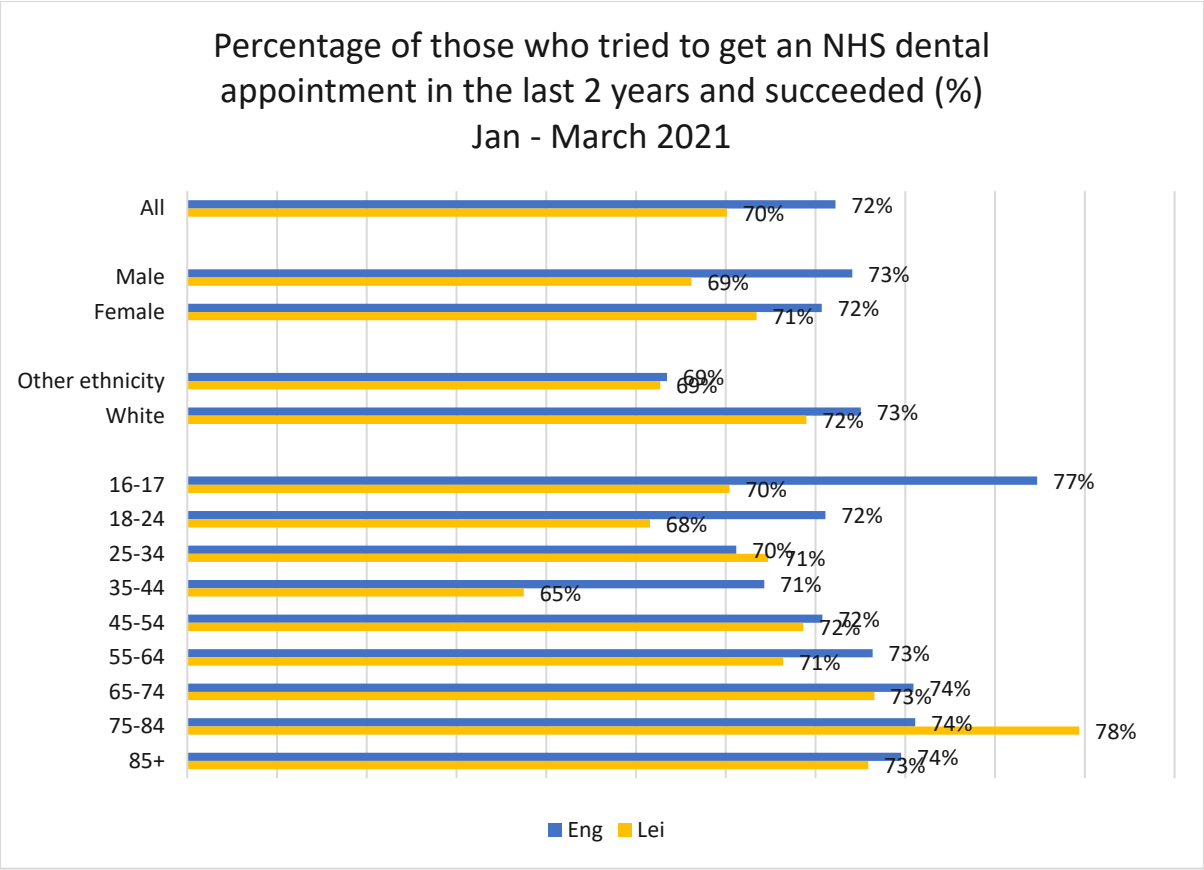
The GP Patient Survey is sent to a sample of patients registered with a GP in Leicester. Not all patients surveyed will be receiving dental treatment in Leicester, although the majority of Leicester dentists do see patients who are living in Leicester and who are registered with a Leicester GP. Analysis of the dental questions in the GP patient survey provides further understanding of those who can successfully access NHS dental services. A total of 672 Leicester residents surveyed had tried to get an NHS dental appointment in the last three months (Jan to Mar 2021), Figure 29 shows that 71% were successful. This is significantly lower than the national rate of success.

Figure 29. Patients who can successfully access a dentist (GP Patient survey 2021)



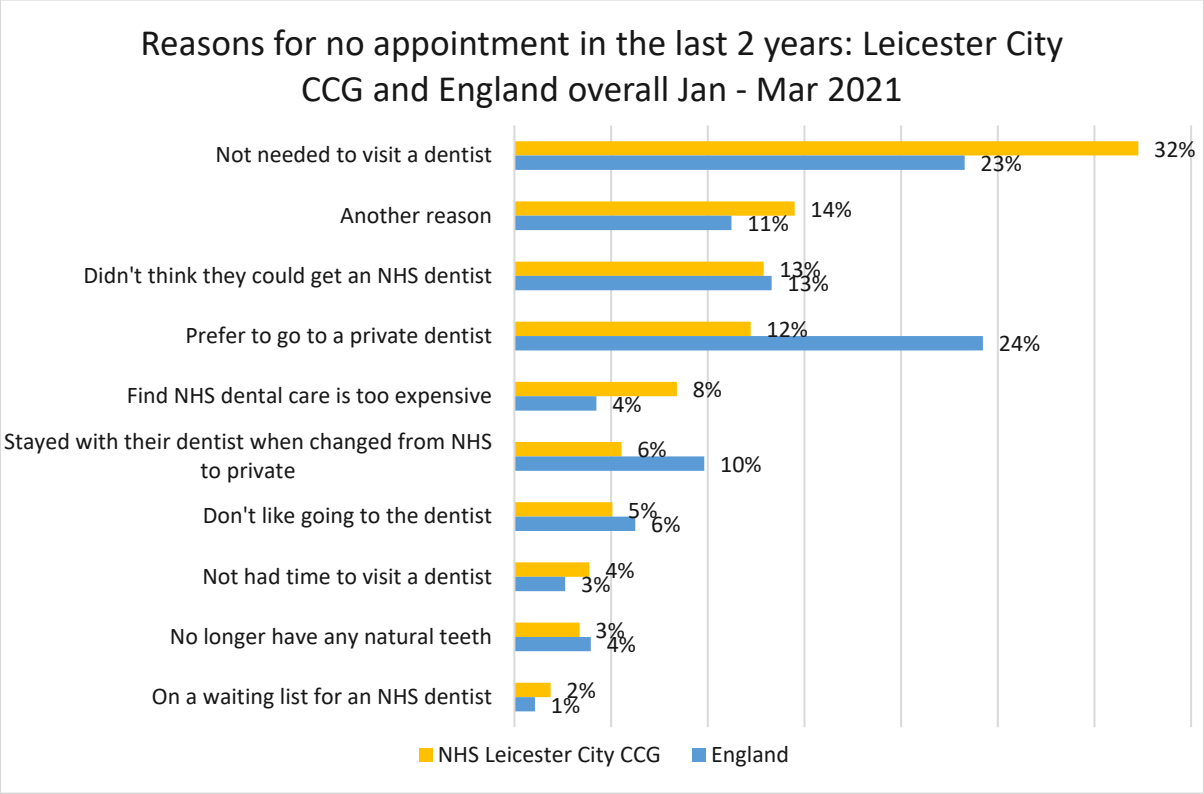
About 3,000 Leicester residents were surveyed about their success in trying to get a dental appointment over the last two years. Analysis shows that males, younger adults and those from a non-White ethnicity in Leicester are finding it more challenging to successfully get a dental appointment (Figure 30).

Figure 30.14 Patients who tried to get an appointment and were successful (GP Patient survey 2021)



The reasons for not having an appointment with an NHS dental practice have also been listed in the GP Patient Survey. Leicester patients are more likely to suggest that they have not needed to attend a dentist or have found treatment too expensive. Leicester patients are also less likely to prefer a private dentist (figure 31).

Figure 31.15 Reasons for no NHS dental appointment over the last two years (GP Patient Survey 2021)



4.6 ORAL HEALTH PARTNERSHIP BOARD

The Oral Health Promotion Partnership Board is the partnership board for oral health in Leicester, Leicestershire and Rutland. The aim of the Board is to facilitate multi-agency partnership working in order to deliver improvements in oral health and reductions in oral health inequalities for the population of Leicester, Leicestershire and Rutland with an initial focus on pre-school children before moving to other age groups.

The remit of the board is:

- Develop, agree and endorse Multi-Partnership Oral Health Promotion Strategies for differing population groups as defined by the Board, commencing with a focus on 0-5 years at the outset
- Identify systems and areas which require further consideration
- Facilitate opportunities to work with other disciplines, agencies and topic areas to build capacity for oral health improvement
- Share knowledge to ensure effective delivery of oral health improvement programmes
- Define task and finish groups
- Receive and consider reports from stakeholders

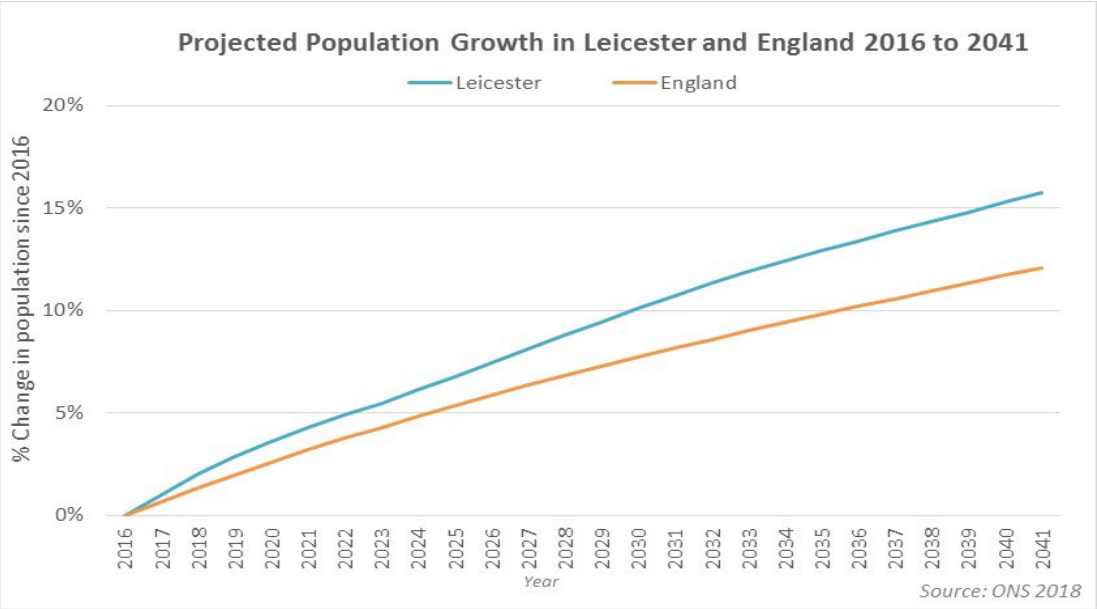
Figure 32.16 Membership of the oral health partnership board

Leicester City Council	Leicestershire and Rutland County Councils	Key Partners
Consultant in Public Health (Chair)	Consultant/Senior Public Health Manager/Oral Health Promotion Manager will attend on behalf of LCC and RCC	Chair of Local Dental Network (Vice Chair)
Head of Early Prevention: Children and Young People's Services		NHS England – Midlands: Commissioner
Oral Health Promotion Service		Health Education East Midlands: Postgraduate Dental Dean
		Healthwatch Leicester: Public & Patient Representative
		Leicestershire Local Dental Committee provider representative
		Community Dental Services CIC: provider representative
		NHS England – Midlands, Consultant in Dental Public Health (Co-opted member)

5 PROJECTED SERVICE OUTCOMES IN 3-5 YEARS AND 5-10 YEARS

The population is predicted to grow to around 377,900 by 2027, an increase of over 24,360 from 2017. In the longer term it is estimated that there will be a 16% increase by 2041. This rate is higher than that expected for England (12%) over the same period. Population projections indicate the biggest increase will be in the older population aged 65+. This may increase the demand on NHS Dental Services due to the complex needs of this population, especially as older people are keeping their natural teeth longer and therefore require maintenance dental work.

Figure 33.17 Projected population growth in Leicester and England (2016-2041)



6 EVIDENCE OF WHAT WORKS

"Health inequalities and the social determinants of health are not a footnote to the determinants of health. They are the main issue." - Michael Marmot

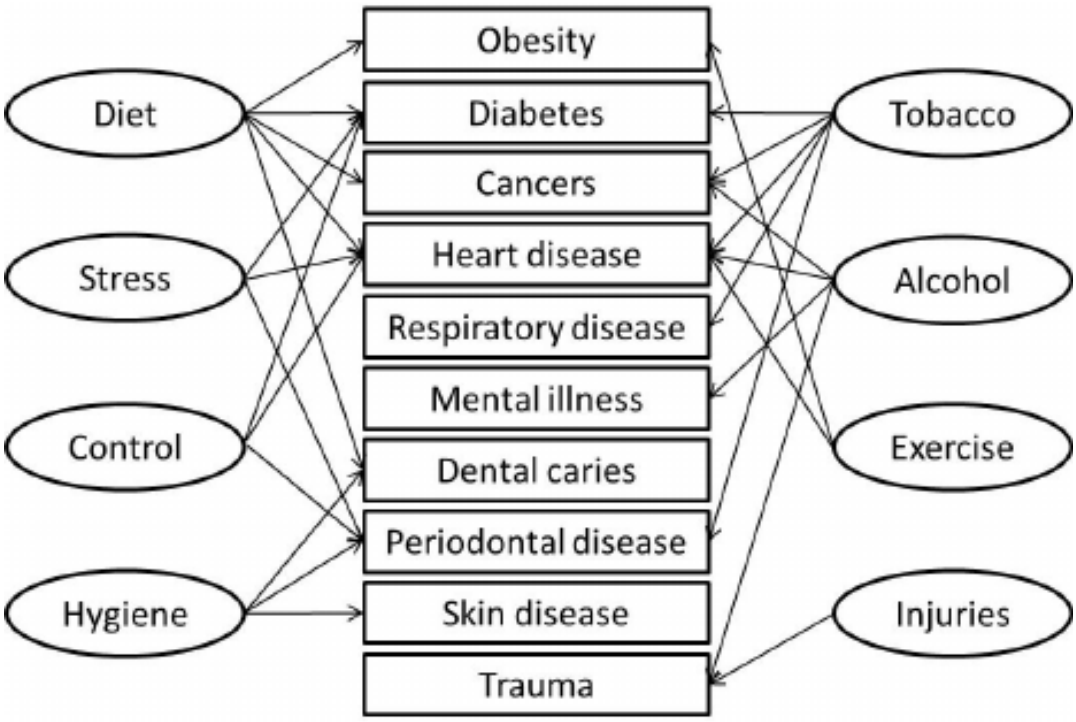
Marmot[36] suggests that interventions focusing solely on the most disadvantaged will not reduce health inequalities sufficiently as everyone experiences some degree of health inequality and a proportionate universalism approach is advocated.

Inequalities in oral health are largely preventable. Prevention can occur at various points on the causal pathway; upstream prevention is delivered at societal level, midstream at community level and downstream at individual or family level. This is shown diagrammatically below.

Figure 34.18 Upstream/downstream: options for oral disease prevention

Oral diseases and conditions also share risk factors with other diseases such as cancer, cardiovascular disease and diabetes. The common risk factor approach integrates general health promotion by focusing on a small number of shared risk factors that can potentially impact a large number of chronic diseases, which includes oral health. Applying a common risk factor approach to multiple public health strategies would impact on multiple health outcomes and ensure more effective use of limited resources.

Figure 35.19 Common Risk Factor Approach (Watt 2000)



The figure above highlights the links between risk factors which are common to a range of general and oral health conditions.

There are several evidence-based publications available to inform oral health decision making at population, community and individual patient level:

- *Commissioning Better Oral Health for Children and Young People*[37] is dedicated to the oral health needs of children and young people and provides guidance on commissioning appropriate oral health improvement interventions to improve oral health and reduce inequalities for children.
- *Commissioning better oral health for vulnerable older people. An evidence-informed toolkit for local authorities*[38] is a resource providing information on the oral health needs of vulnerable older people and guidance on commissioning appropriate oral health improvement interventions to improve oral health and reduce inequalities for vulnerable older people.
- *Oral Health Improvement for Local Authorities and their Partners*[39] is a source of guidance for introducing oral health improvement programmes in a range of settings and highlights where oral health should sit within the local authority structure.
- *Delivering Better Oral Health: an evidence-based toolkit for prevention*[40] is a prevention toolkit for clinical dental teams, providing evidence based, age-appropriate guidance for use when delivering individual patient level care.

- *Dental checks: intervals between oral health reviews*[41] covers assigning recall intervals between oral health reviews that are appropriate to the needs of individual patients.
- *Oral health for adults in care homes*[42] is *a* guideline which covers oral health, including dental health and daily mouth care, for adults in care homes. The aim is to maintain and improve their oral health and ensure timely access to dental treatment.
- *Oral health promotion: general dental practice*[43] is a guideline which covers how general dental practice teams can convey advice about oral hygiene and the use of fluoride. It also covers diet, smoking, smokeless tobacco and alcohol intake.

The following are population, community and patient level oral health improvement interventions and recommendations sorted based on their evidence base:

Figure 36.20 Strong evidence for universal and targeted interventions

Group	Universal	Targeted
Newborns/ infants	Breastfed babies experience less tooth decay and breastfeeding provides the best nutrition for a baby's overall health – support mothers to breastfeed exclusively for the first 6 months of a baby's life.	
Children	As soon as teeth erupt in the mouth brush all tooth surfaces twice daily with a fluoridated toothpaste Use a manual or powered toothbrush Parents/carers should brush or supervise toothbrushing as they get older For children aged 0-3 years: Use a smear of fluoridated toothpaste containing no less than 1,000 ppm fluoride For children aged 3+ years: Use a pea-sized amount of fluoridated toothpaste containing more than 1,000 ppm fluoride As soon as children are able, spit out after brushing rather than rinse Application of fluoride varnish in a clinical setting from age 3 years and applied twice yearly.	Assign a shortened dentist recall interval based on dental caries risk For children aged 0-6 years at high risk of dental decay: Use fluoridated toothpaste containing 1,350-1,500 ppm fluoride Apply fluoride varnish to teeth two or more times a year

Group	Universal	Targeted
Adults	For adults: Use fluoridated toothpaste (1,350 – 1,500 ppm fluoride) Reduce the frequency and amount of sugary food and drinks	For adults at high risk of dental decay: Use a fluoride mouth rinse daily at a different time to brushing Apply resin sealant to permanent teeth on eruption Apply fluoride varnish to teeth two or more times a year For those with high risk of dental decay prescribe 2,800/5,000 ppm fluoride toothpaste For adults with high risk of dental decay: Apply fluoride varnish to teeth two times a year
Public Health messaging	Ask, Advise, Act – tobacco and alcohol use very brief advice. For smokeless tobacco, use the names that the various products are known by locally. Use the AUDIT-C tool (or similar) to assess a patient's level of risk of alcohol harm.	For all adults with high risk of dental decay: Investigate diet and assist to adopt good dietary practice in line with the Eatwell Guide. For those who smoke: Explain that a combination of behavioural support and the medication varenicline, or short-acting with long-acting Nicotine Replacement Therapy, are likely to be most effective. Act on patient response: refer people who want to stop smoking to local stop smoking support, preferably where behavioural support and prescribed stop smoking medicines are available.
Infrastructure/ Environment	Fluoridation of public water supplies	Community-based fluoride varnish programmes

7 KEY CONTACTS

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8 REFERENCES

[1] NHS Digital (2021): Health Survey for England 2019

[2] O'Sullivan I et al, Foundation report: adult dental health survey 2009. London: The Health and Social Care Information Centre, 2011.

[3] Office for Health Improvement and Disparities (2023) Hospital-based tooth extractions in 0 to 19 year olds. Hospital-based tooth extractions in 0 to 19 year olds - GOV.UK (www.gov.uk)

[4] Collins J, Freeman R. (2007) Homeless in North and West Belfast and oral health needs assessment. British Dental Journal; 202 (12) 6

[5] Public Health England 2017. Available at: https://publichealthmatters.blog.gov.uk/2017/06/14/health-matters-child-dental-health/ (accessed 8th April 2019)

[6] Muirhead V et al (2017) How do foster carers manage the oral health of children in foster care? A qualitative study, Community Dent Oral Epidemiol; 45;529–537

[7] Bahramian H et al. (2018) Qualitative exploration of barriers and facilitators of dental service utilization of pregnant woman: a triangulation approach, BMC Pregnancy And Childbirth, 18 (1) 153

[8] Health and Social Care Information Centre. (2011). Service considerations – a report from the Adult Dental Health Survey 2009 https://files.digital.nhs.uk/publicationimport/pub01xxx/pub01086/adul-dent-heal-surv-summ-them-the6-2009-rep8.pdf (accessed 22nd October 2018)

[9] PHE. (2018) Commissioning better oral health for vulnerable older people. London https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738722/CBOH_VOP_V16_Final_WO_links.pdf (Accessed on 21st September 2018)

[10] BDA (2017) Act now on oral health of care home residents https://bda.org/news-centre/press-releases/act-now-on-oral-health-of-care-home-residents (accessed 21st September 2018)

[11] Care Quality Commission (2019) Smiling Matters: Oral health care in care homes. Smiling matters: oral health care in care homes | Care Quality Commission (cqc.org.uk)

[12] Arora G et al (2017). Ethnic differences in oral health and use of dental services: cross-sectional study using the 2009 Adult Dental Health Survey. BMC Oral Health 17:1.

[13] PHE (2018). National Dental Epidemiology Programme for England: oral health survey of five-year-old children 2017 http://www.nwph.net/dentalhealth/201617Survey5yearoldchildren/NDEP%20for%20England%20OH%20Survey%205yr%202017%20Report%20Gateway%20Approved%20v2.pdf (accessed 21st September 2018)

[14] Botero JE et al. (2012) Tooth and periodontal clinical attachment loss are associated with hyperglycemia in patients with diabetes. Journal of Periodontology; 83(10): 1245-1250.

[15] Ho HD et al. (2018) Perceptions of oral health by those living with mental illnesses in the Victorian Community – the consumers perspective. Int J Dent Hyg; 16(2) 10-16

[16] Soileau K et al. (2018) The hospice patient's right to oral care: making time for the mouth. J Palliat Care. 33 (2) 65-69

[17] Tripathee S et al (2012) The relationship between sugar-containing methadone and dental caries: A systematic review; Health Education Journal;72 (4) 469 – 485

[18] Oral Health Foundation. Drugs, alcohol and your oral health; https://www.dentalhealth.org/drugs-alcohol-and-your-oral-health (accessed 21st September 2018)

[19] Sehgal et al. (2016). Tobacco consequences oral health: a review article. A Journal of Toxicology; 6 (1)

[20] The NHS Website. Alcohol Misuse; https://www.nhs.uk/conditions/alcohol-misuse/ (accessed 21st September 2018)

[21] Grocock, R. (2018). The relevance of alcohol to dental practice. BDJ Team 5, 18025; https://www.nature.com/articles/bdjteam201825 (accessed 22nd October 2018)

[22] Griffiths J (2006) Accessible to all: removing barriers to good oral health, Vital 3, 39 - 41 https://www.nature.com/vital/journal/v3/n4/full/vital518.html (accessed on 21st September 2018)

[23] Jones CM et al, (2004) Scottish Prisons Dental Health Survey 2002 Edinburgh: Scottish Executive: http://www.scotland.gov.uk/Resource/Doc/47210/0013527.pdf (accessed on 21st September 2018)

[24] Edwards DM et al. (1997) Oral health care in the lives of gypsy travellers. BDJ 183 (7)

[25] PHE (2018) National Dental Epidemiology

Programme for England: oral health survey of mildly dependent older people, 2016. London. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738722/CBOH_VOP_V16_Final_WO_links.pdf (accessed 21st September 2018)

[26] PHE (Unpublished report) Leicester asylum seeker and refugee oral health model of care programme evaluation

[27] National Dental Epidemiology programme for England (OHID), Surveys and intelligence: adults. https://www.gov.uk/government/collections/oral-health#surveys-and-intelligence:-adults

[28] Leicester City Council, Ipsos Mori (2018): Health and wellbeing survey (adults). https://www.leicester.gov.uk/your-council/policies-plans-and-strategies/public-health/data-reports-and-strategies/leicester-health-and-wellbeing-surveys/

[29] Information by Design (2015): Leicester Dental Survey

[30] National Cancer Intelligence Network (2010): Oral Cavity Cancer – Survival Trends in England; available at http://www.ncin.org.uk/publications/data briefings/oralcancer.aspx (accessed 8th April 2019)

[31] Oral cancer rates rise by two thirds BMJ 2016; 355 doi: https://doi.org/10.1136/bmj.i6369 (Published 25 November 2016) Anne Gulland

[32] Cancer Research (2014): Oral Cancer Statistics; available at http://www.cancerresearchuk.org/cancer-info/cancerstats/types/oral/uk-oral-cancer-statistics (accessed 8th April 2019)

[33] Leicester Health and Wellbeing Survey – Adults 2018

[34] Public Health England (2022): Local Tobacco Control Profiles; available at: https://fingertips.phe.org.uk/profile/tobacco-control/data#page/0/gid/1938132885/pat/6/par/E12000004/ati/102/are/E06000016 (accessed 31st March 2022)

[35] Hospital Episode Statistics. Leicester Oral Cancer (C00-C14) related admissions (2016/17 to 2020/21).

[36] Marmot, M. (2010) Fair Society, Healthy Lives. Strategic Review of health Inequalities in England post-2010. The MARMOT REVIEW

[37]Public Health England, Local authorities improving oral health: commissioning better oral health for children and young people (2014) available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/PHE503/CBOHMaindocumentJUNE2014.pdf (accessed 8th April 2019)

[38] Public Health England, Guidance on Commissioning better oral health for vulnerable older people (2018) available at: https://www.gov.uk/government/publications/commissioning-better-oral-health-for-vulnerable-older-people (accessed 8th April 2019)

[39] NICE, Oral health: local authorities and partners (2014) available at: https://www.nice.org.uk/guidance/ph55 (accessed 8th April 2019)

[40] Public Health England, Delivering Better Oral Health Toolkit (2021), available at: https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention (accessed 9th May 2022)

[41] NICE, Dental checks: intervals between oral health reviews (2004) available at: https://www.nice.org.uk/guidance/cg19 (accessed 8th April 2019)

[42] NICE, Oral health for adults in care homes (2016) available at: https://www.nice.org.uk/guidance/ng48 (accessed 8th April 2019)

[43] NICE, Oral health promotion: general dental practice (2015) available at: https://www.nice.org.uk/guidance/ng30 (accessed 8th April 2019)