Rutland County Council

Rutland

Joint Strategic Needs Assessment

ORAL HEALTH

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Business Intelligence Service

Leicestershire County Council

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Executive Summary

Poor oral health is a major public health problem, owing to its high prevalence and incidence worldwide. Oral health diseases include tooth decay, erosion, gum disease, oral cancer, and facial and dental injuries; their burden falls unequally upon disadvantaged and vulnerable populations. However, these conditions are highly preventable with simple measures such as improved oral hygiene and/or diet, access to fluoride and regular dental check-ups playing a major role in prevention of, and early treatment of disease.

Although Rutland's population has, on average, lower levels of socio-economic disadvantage or general ill-health, there are pockets of rural deprivation, expressed as problems with access to services, barriers to housing and mental health issues and social isolation. Demographically, Rutland has a substantial, and rising, proportion of elderly population, many of whom are living in rural settings. Other vulnerable groups include children in need, looked after children, disabled, prisoners and families of military personnel stationed in Rutland.

Because of the relatively small size of Rutland's population, national indicators, including survey results, may be difficult to interpret and follow over time.

The latest dental surveys among the 5-year-olds and other indicators of oral health suggest average or better than average oral health in this group, however, among the 3-year-olds there was an indication of potentially poor infant feeding practices, which may need further exploration. The rates of access to NHS dental services for children in Rutland is also better than for adults, and higher than England's average, although very few practices accept new patients under 18.

For Rutland's adults, oral health also seems average or better than average. The rates of oral cancer are similar to elsewhere and the mortality rate is low; the levels functional dentition is within national average, while levels of active decay are lower. However, there are significant problems with access to dental care, with dental practices, even those outside of the County, not accepting new adult patients. It is very likely that access issues affect the vulnerable groups disproportionately. Compared to the national average, the rate of access to NHS dentistry for those 65 and over was particularly low in 2021/22 (26% vs 37%). Men of working age access the services less commonly than women. There is some indication of patient flows to dental practices outside the County (Stamford and Melton in particular) but it is difficult to quantify where patients access their treatment.

The COVID-19 pandemic had a significant impact on rates of treatment which, by June 2022, was still below the pre-pandemic levels, particularly for adults.

There was a fall in patient experience of NHS dentistry when compared to previous years, more pronounced than the national decline. In 2020/21 less than 75% of patients described their experience as good or fairly good, historically this indicator was over 80%.

Rutland currently does not have an oral health promotion service or a supervised tooth brushing programme; health visitors provide oral health advice.

1 Introduction and Overview

Oral health is one of the key indicators of overall health and wellbeing and is necessary for important daily functions, such as eating, speaking and smiling.

Oral diseases include a range of chronic clinical conditions such as dental caries (tooth decay), periodontal (gum) disease, and oral cancers. While tooth decay affects population of all ages, gum disease is more prevalent in older people. Oral conditions can a have substantial effects, causing pain, sepsis, impacting the quality of life and work productivity. Although largely preventable, oral diseases are highly prevalent, with dental caries estimated as the most common disease globally (35% of world's population having untreated tooth decay) and periodontal disease affecting almost 11% of people world-wide[1].

Consistently across studies and settings, oral diseases were shown to be closely linked to socioeconomic status and the broader social determinants of health, sharing common risk factors with other non-communicable diseases, such as overweight and obesity, high sugar consumption, tobacco use, and harmful alcohol use. Their distribution and severity vary between populations, with more vulnerable, disadvantaged and socially excluded groups experiencing more oral health problems.

Tooth decay can be prevented by reducing the amount and frequency of consumption of sugary foods and drinks and optimising exposure to fluoride. Likewise, gum disease can be prevented by good oral hygiene and stopping smoking; and the risk of oral cancer may be reduced by stopping smoking, drinking alcohol within recommended safe limits and eating a healthy diet.

2 The Population of Rutland

2.1 Demography

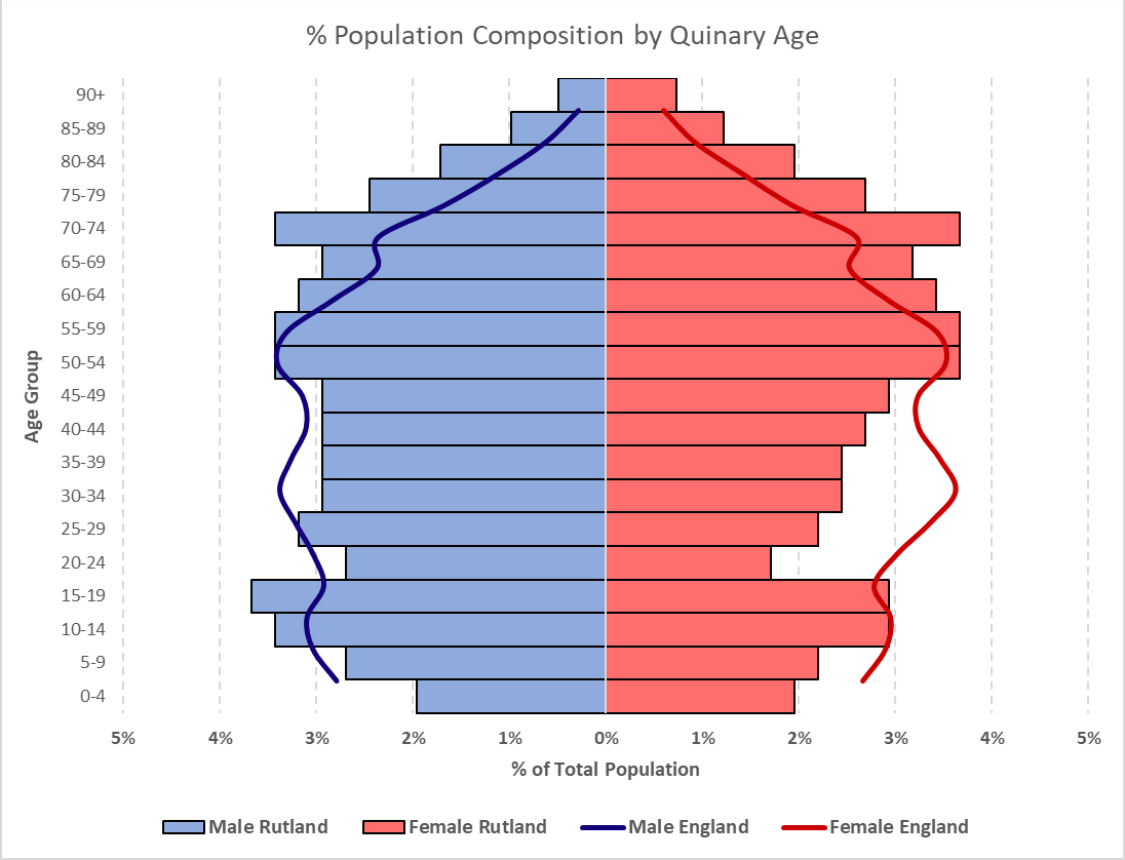
The recent Census 2021 population figures show that there is relatively more elderly and less children in Rutland when compared to other areas (Table 1). This includes over a quarter (25.4%) of those over the age of 65, compared to 18.5% across England. The ratio of those over 65 to 15-64 age group is nearly 43, compared to 29 for England as a whole ('old age dependency ratio').

Table 1. Broad age group population comparison between Rutland, national, regional and Leicestershire structure (Census 2021 - thousands) (Source: ONS 2022)

Area	**0-14**		**15-64**		**65-79**		**80+**		**Total**
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	
England	9,839	**17.4**	36,250	**64.2**	7,603	**13.5**	2,798	**5.0**	**56,490**
East Midlands	827	**16.9**	3,102	**63.6**	706	**14.5**	246	**5.0**	**4,880**
Leicestershire	117.0	**16.4**	447.3	**62.8**	109.3	**15.3**	38.8	**5.4**	**712.4**
Rutland	6.2	**15.2**	24.3	**59.4**	7.5	**18.3**	2.9	**7.1**	**40.9**

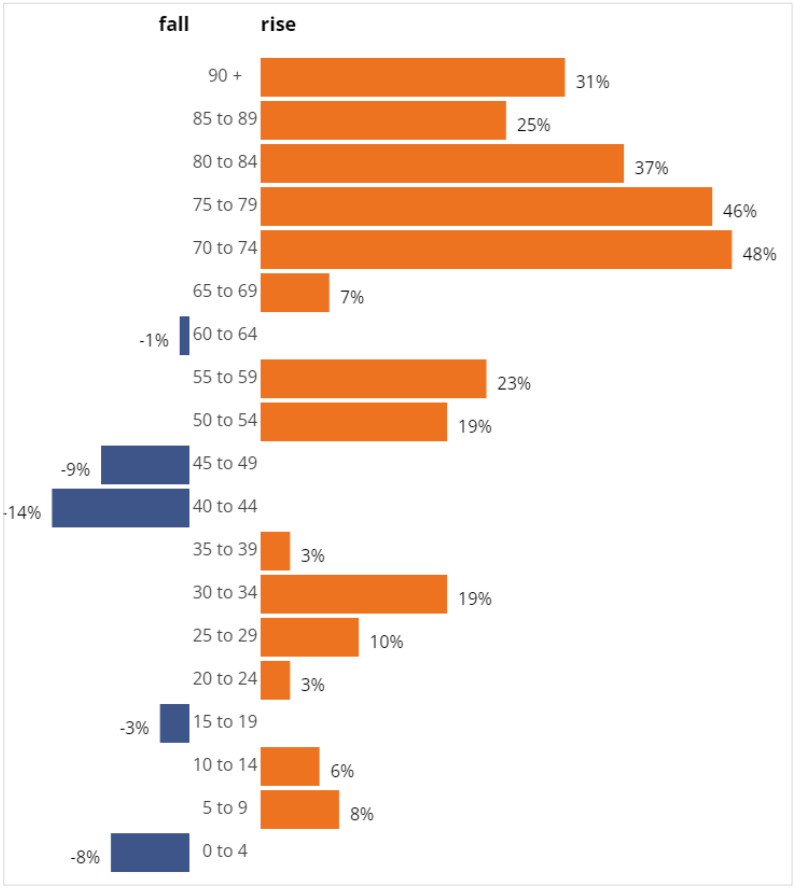
Rutland had proportionately more residents in older age groups (above the age of 50), particularly women, when compared to England (Figure 1). Conversely, there are less children and younger adults, again particularly for females.

Figure 1. Age structure of Rutland population - Census 2021 (Source: ONS 2022)



There has been an increase of 31.2% in people aged 65 years and over between 2011 and 2021 (Figure 2), particularly for people in their seventies (46-48%), with a decrease of 2.4% in children aged under 15 years.

Figure 2. Population change (%) between 2011 and 2021 in Rutland, by age group (Office for National Statistics 2022)



2.2 Socio-Economic Deprivation

The average levels of deprivation in Rutland measured by the Index of Deprivation (IoD)[2] are not high when compared to the national figures, with only one area classified as just above the national average of deprivation (in the fifth national decile - Figure 3) and 80% of the population living in the 40% least deprived areas nationally (Office for National Statistics).

Although a useful measure at a larger scale, IoD is known to be biased towards urban type of deprivation. As Rutland is predominantly rural, it has specific issues expressed better through the Barriers to Housing and Services domain of the IoD. Within this domain, six out of the 23 Rutland LSOA's are classified in the most deprived 10% nationally (Figure 4).
More detail on deprivation of specific groups have been identified through the *Rutland Health Inequalities JSNA* [3] including:

- Potential issues of childhood poverty - when housing costs are factored-in, the proportion of children in relative low-income families is this proportion is estimated to be over 17%, with significant variation between areas.
- Levels of benefit support have increased substantially since 2020, with significant geographical variation
- Fuel poverty remains a significant issue in six of the Rutland LSOAs.

Based on these and a number of other indicators, the report identified three Rutland LSOAs of particular concern – Cottesmore, Oakham North West and Greetham.

2.2.1 Deprivation and Oral Health

The clear and persistent link between socioeconomic status and oral health has been well documented through research and routine surveillance and is exemplified in the national oral health indicators for children and adults.

Thus, the prevalence of tooth decay in *3-year-old children* (NDEP Survey[4]) shows a three-fold variation between the most (nearly 17% of surveyed children) and the least deprived (6%) areas of the country. Tooth extractions rates for children 0-19 (Hospital Episode Statistics, HES, for 2020/21) also show a three-fold variation, with nearly 180/100,000 in the most deprived areas, compared to less than 60/100,000 (Figure 5). Trend data show that, while the overall extraction rate has decreased in the recent years, these inequalities persist. Some further details on tooth extraction in children in the Child Dental Access chapter.

The *Health Survey for England* (2019)[5] has shown that, despite overall falling rates of adults without natural teeth, the rates of functional dentition (defined as 20 or more natural teeth) are significantly lower in the most deprived quintile of deprivation (75% and 76% for men and women, respectively) than in the least disadvantaged (90% and 88%, respectively).

Figure 3. Socio-economic deprivation by lower super-output area (LSOA) in Rutland.

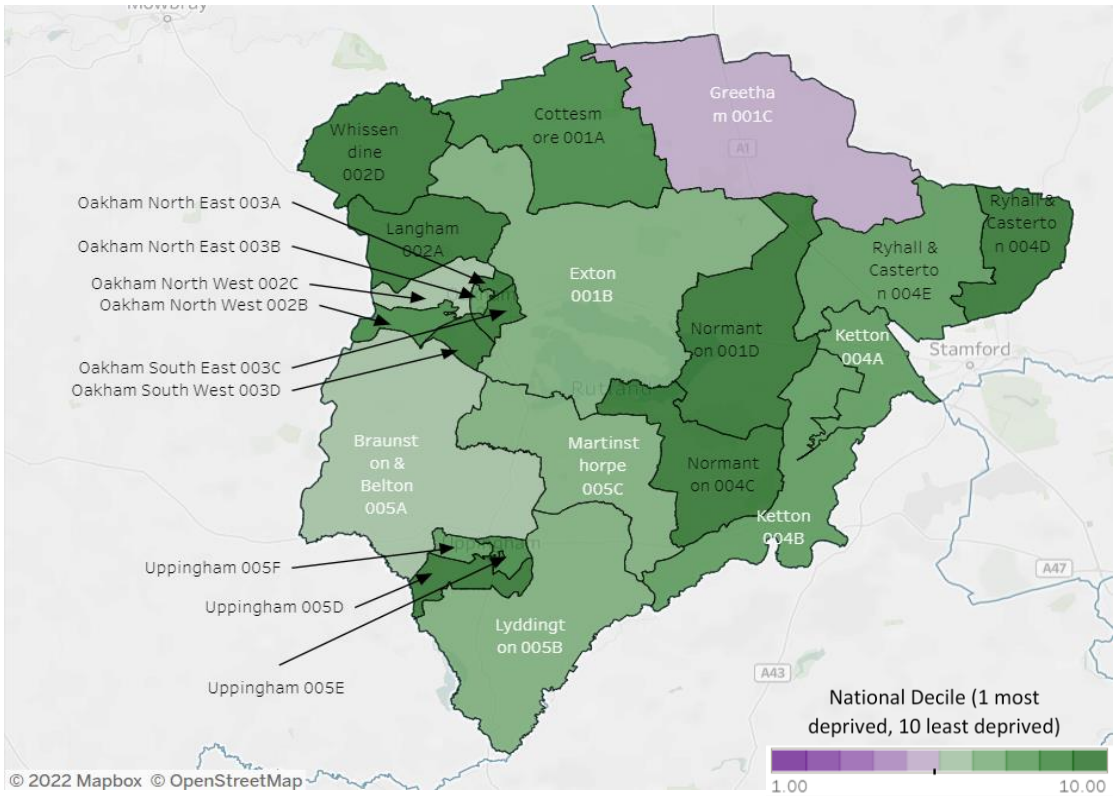


Figure 4. Barriers to Housing and Services domain of the IoD in Rutland.

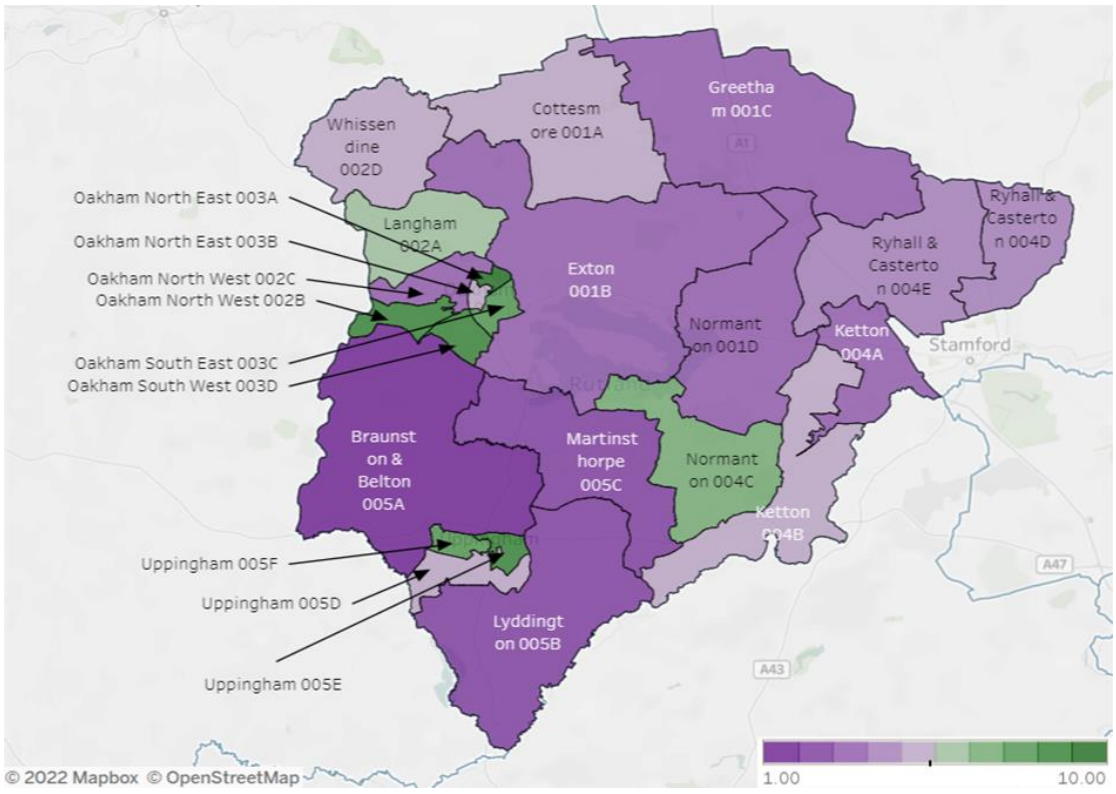
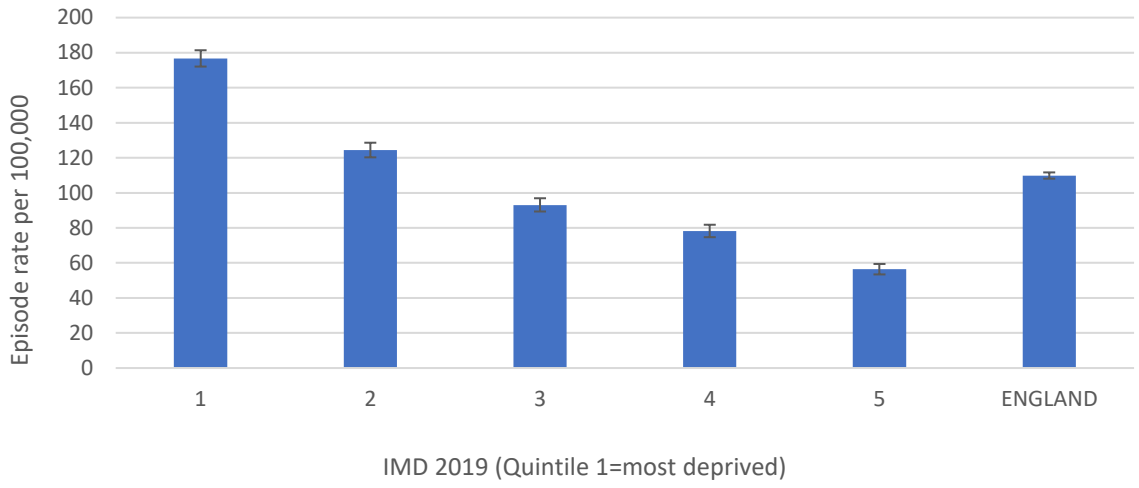


Figure 5. Episode rate per 100,000 IMD quintile population of tooth caries-related tooth extractions in hospital 0-19Y for 2020-21 (n=14,645) (Source: OHID, December 2021)



2.3 Ethnicity

Although the relationship between ethnicity and oral health outcomes is complex and can be confounded by other factors, there is strong evidence that those of non-white backgrounds have lower use of dental services[6]. The recent surveys have also shown that children from Chinese and Eastern European backgrounds have higher prevalence, severity and extent of dental decay than other ethnic groups.

In 2021 the largest proportion (94.8%, N=38,909) of Rutland population was of white[i] ethnic background which is significantly more than the average for England (81%). The total number in other ethnic groups was 2,141, with highest numbers classified as 'mixed and other', followed by Asian[ii], black[iii] and other population groups (Figure 6). In the decade since 2011 the size of ethnic minority population of Rutland had doubled to 5% of the total in 2021 (Figure 7). However, of the total 10% population increase in Rutland (from 3.7 thousand in

[i] Includes the following categories – white English/Welsh/Scottish/Northern Irish/British, Irish and other white

[ii] Includes Asian or Asian British groups – Bangladeshi, Chinese, Indian, Pakistani or other

[iii] Includes black and black British, African, Caribbean and other black groups

2011 to over 41 thousand in 2021) the highest increase in numbers was in white population (by over 2.6 thousand).

Figure 6. Ethnic profile of Rutland's population (Source: ONS Census 2021)

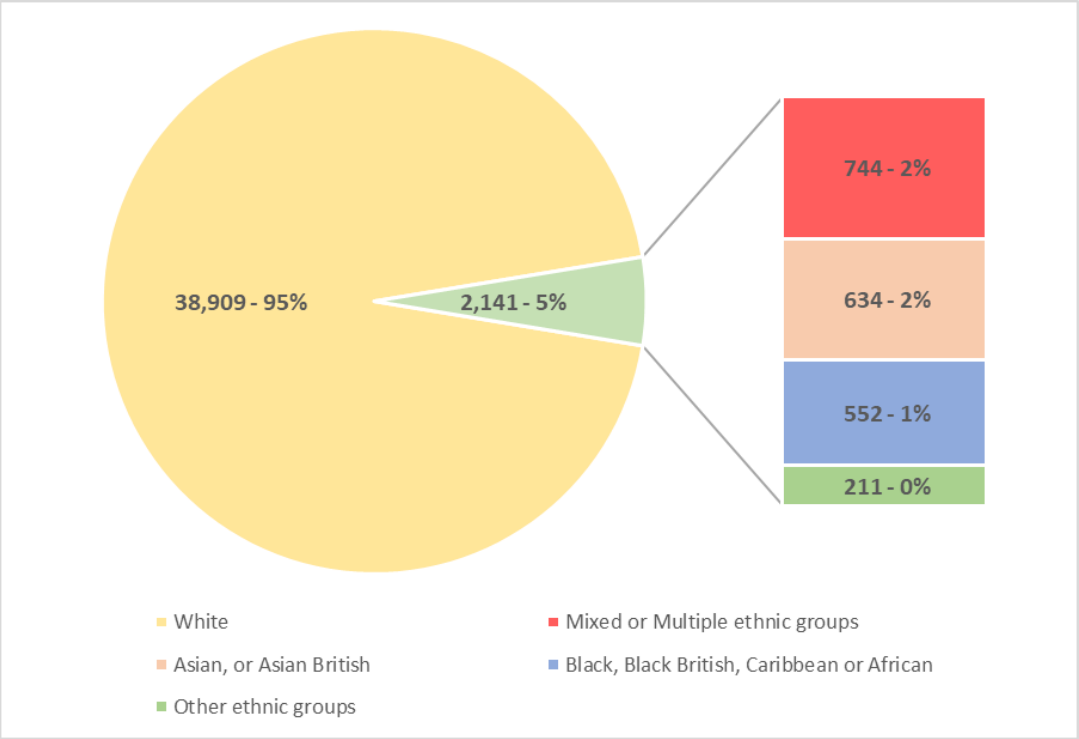
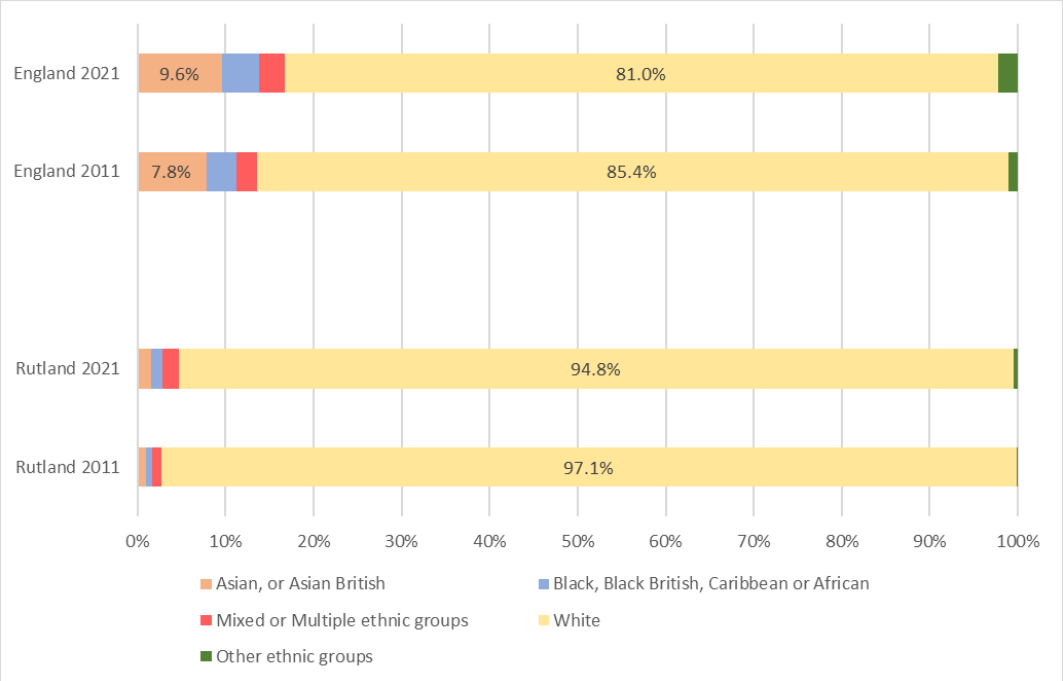


Figure 7. Percent change between 2001 and 2011 Census (Source: ONS)



2.4 Urban-rural Classification

According to data from the latest population Census (2021), Rutland is the fourth least densely populated local authority area in the East Midlands[7].

More than a third of Rutland population live in areas classified as rural (37%), a third in 'urban city and town' and the remaining 30% as 'rural town and fringe' (Figure 8).

Geographically, only a small proportion of areas, around Oakham, are classified as urban with the remainder described as rural, either 'town or fringe' in character (Uppingham and eastern-most areas) or 'rural dispersed' (Figure 9).

There are several issues affecting the health and wellbeing of rural communities, including low-paid work, unemployment of young people, high costs of housing and fuel poverty. Access to health services is also of concern, as dental as well as general practices, and other services are further away than in urban areas. In addition, rural areas often lack public transport, while poor broadband and mobile phone network availability hinders communication and access to online health services, banking, and shopping.

Figure 8. Population by rural-urban classification (Census 2011 data)

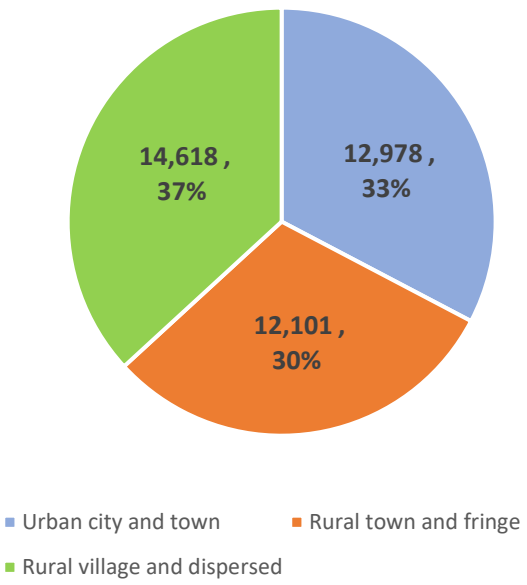
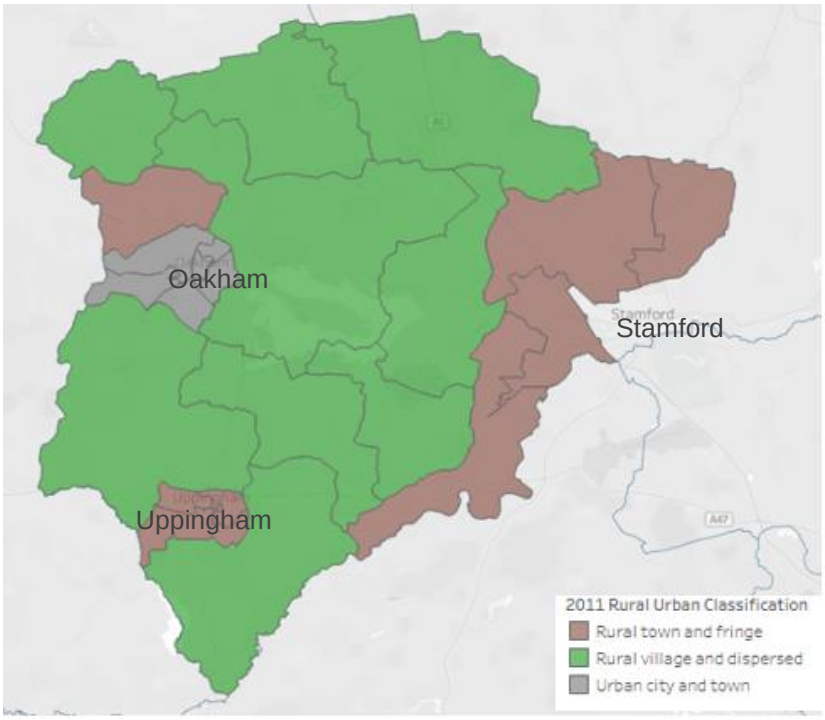


Figure 9. Rural-urban classification of Rutland LSOAs (Source: ONS Census 2011)



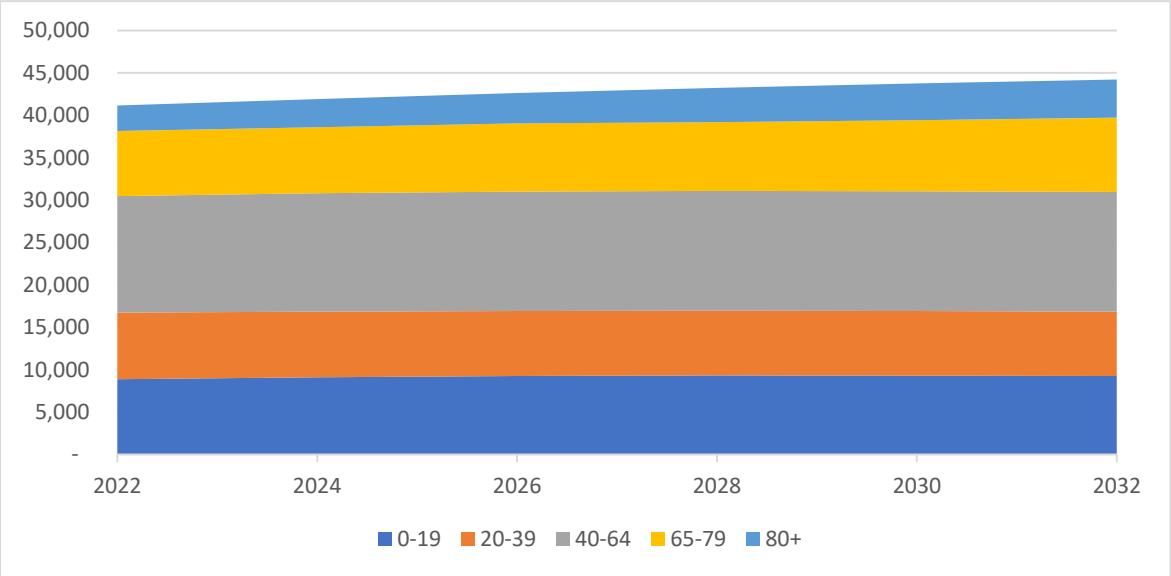
2.5 Projected Population Growth

Currently available projections are based on 2018 population estimates published by the ONS[8], which in turn are based on Census 2011 population figures. These projections are likely to be rebased by the ONS later in 2022 using Census 2021 results.

With this caveat in mind the following is expected by 2032 [9] **(**Figure 10):

- The population of Rutland is projected to increase by over 7% to circa 45,250 in the next decade, an increase of over 3,000 people. This is a higher rate of increase than that for England (4%) and East Midlands (6%).
- The greatest change is expected in the oldest population group (80 and above), accounting for over 1,500 additional elderly people in Rutland.
- There is also a projected significant increase in the numbers of residents aged 65 to 79 - by over a thousand in the next ten years.

Figure 10. Rutland population projections 2022-32 (source: ONS 2022)



Age	2022	2024	2026	2028	2030	2032	Change 2022-32	
0-19	8,878	9,088	9,266	9,326	9,310	9,245	367	4%
20-39	7,851	7,748	7,649	7,629	7,592	7,582	269	-3%
40-64	13,740	13,964	14,092	14,137	14,122	14,121	381	3%
65-79	7,679	7,790	8,025	8,099	8,405	8,757	1,078	14%
80+	3,000	3,312	3,584	4,034	4,327	4,516	1,516	51%
Total	43,169	43,926	44,642	45,252	45,786	46,251	3,082	7%

3 Who is at Risk and Why?

Most of chronic ill-health in the population is characterised by complex and multi-factorial risks, often determined by social, physical or political environment.

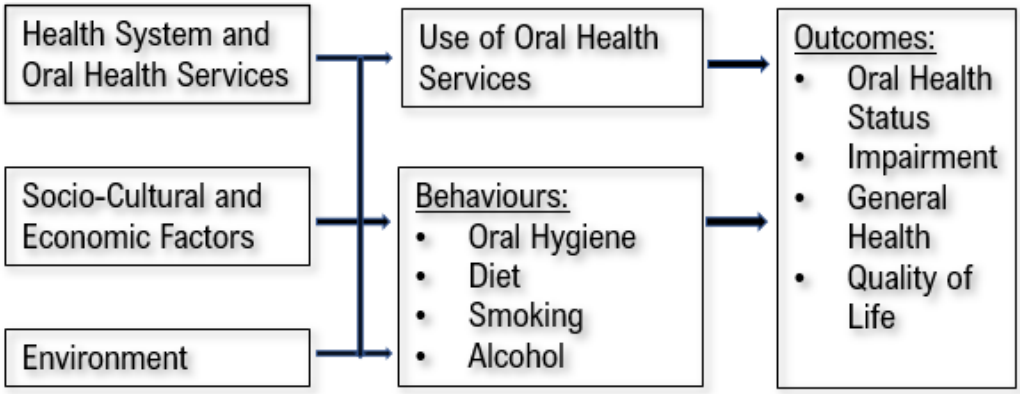
In the context of oral health, several models[10] [11] link behavioural and environmental risk factors, such as diet, smoking, alcohol consumption, exercise or levels of stress, to oral disease and other conditions (Figure 11).

The risk factors particularly important in the context or oral health include:

- poor oral hygiene - the main cause of gum disease, also implicated in dental decay
- diets high in sugar and fat – linked to dental decay as well as coronary heart disease, stroke, obesity, diabetes, and cancers

- smoking - implicated in gum disease and other diseases of the soft tissues of the mouth, as well as cancers of the lung, throat and mouth, coronary heart disease and diabetes
- excessive alcohol consumption - linked to high blood pressure, liver disease, coronary heart disease and cancers of the mouth, as well as being a cause of many social problems, violence, and injuries.

Figure 11 Common risk factor approach for oral health (after Petersen 2003[7])



3.1 Population Groups at Risk

Several population groups are at higher risk of poor oral health[12], including those experiencing socio-economic deprivation, children looked after (CLA), military personnel and their families, pregnant women, people with disabilities, the elderly (particularly dementia sufferers, people with long-term conditions and care home residents), some ethnic groups and several marginalised groups – the homeless, travellers, refugees and asylum seekers.

This section describes population groups in Rutland likely to experience poorer oral health.

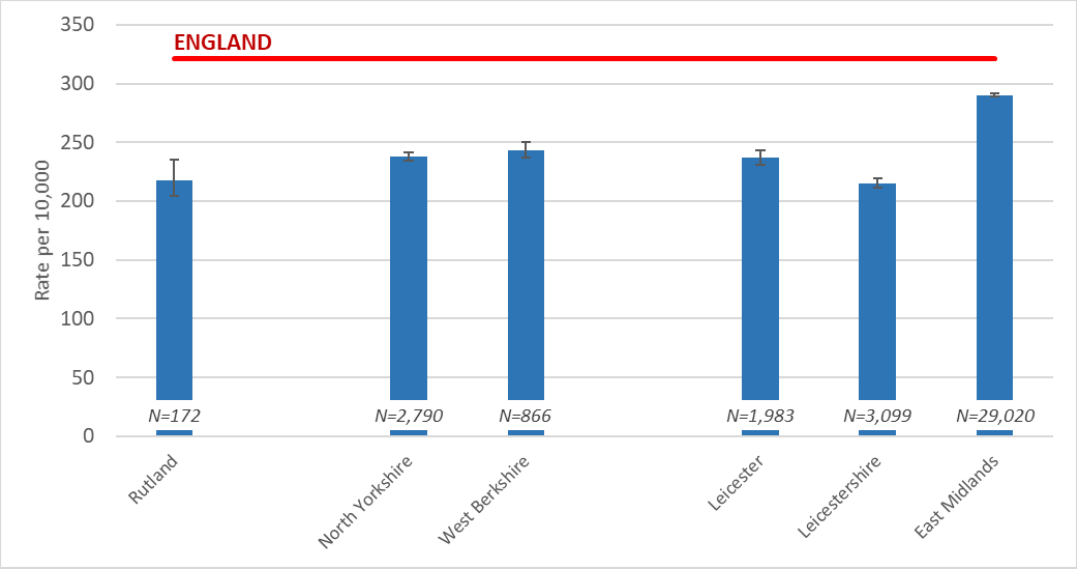
3.1.1 Children with Special Educational Needs, Children in Need and Children Looked After

As of the spring school census 2021 in Rutland there were 778 children (13.2%) with identified special educational needs or disabilities (SEND). 56% of children with SEND were aged 0-11 years (primary) and 44% 12-17 years; 698 (89.7%) of children with SEND are white British. The next biggest category is 'white other' (3.08%) then black African (1.15%), which is broadly reflective of Rutland's ethnicity[13].

The overall rate of *children in need (CIN)* in Rutland in 2021 was 218/10,000 (estimated number 172), significantly lower than the average for England (321/10,000) and the East

Midland (290). The rate is somewhat lower than its statistical neighbours[iv] and similar to Leicestershire (Figure 12).

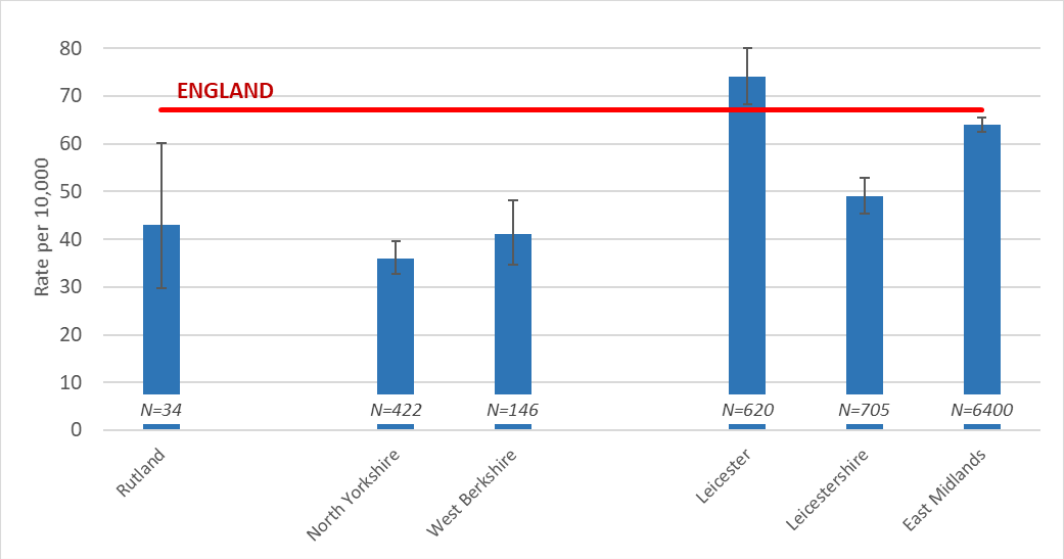
Figure 12. Children in need (rate per 10,000 of population under 18) in Rutland and comparator areas (Source: LAIT 2022)



Children looked after (CLA) are generally in the poorer state of health when they enter the care system, they could also experience more issues with provision of dental care, when compared to other children. Qualitative research indicates that foster carers may have more problems with enforcing health-related behaviours, including those underpinning oral health[14]. The number of looked after children in Rutland is relatively low (N=34 in 2021[15]) and, expressed as rate per all under 18s in the population, consistently lower than the national or regional average, while being similar to its 'statistical neighbours' (Figure 13).

[iv] North Yorkshire and West Berkshire are the closest area statistical comparators for Rutland, specifically for children – Children's Services Statistical Neighbour Benchmarking Tool

Figure 13. Looked after children (rate per 10,000 of population under 18) in Rutland and comparator areas (Source: LAIT 2022)



3.1.2 Vulnerable Elderly

Older people are at much higher risk of suffering from long-term physical and mental conditions, increasing their risk oral ill health. Risk factors include poor nutrition, impaired manual dexterity, poor oral hygiene. Previous dental disease is the cause of lack of functional dentition on many of the elderly population. Added to this are issues with access to dental services, particularly for those residing in care homes[16] as well as residents of remote rural areas.

3.1.3 People with Disabilities

Both physical, mental, including learning disabilities, can lead to poor oral health outcomes, through poor diet, lack of oral hygiene, potentially higher rates of smoking and alcohol consumption. This groups.

As of the spring school census 2021 13.2% (778 children) of the school population have identified Special Educational Needs or Difficulties (SEND), with a quarter of those (25%) with moderate or severe learning difficulties[17].

3.1.4 Prison Populations

Many studies have shown poor oral health among prisoners, with over 8-fold higher rates of untreated caries in some reports[18]. Surveys conducted in the UK show the general health of people in prison is poorer than the general population, with higher dependency on tobacco and recreational drugs, and higher rates of alcohol misuse. Prison populations generally have

poor oral health, with reports of periodontal disease and dental decay levels as much as four times higher than the general population. People in prisons are more likely to have come from socially excluded or disadvantaged backgrounds, suffering from lower educational attainment which may relate to learning difficulties. Oral health needs on admission to prison are high, with significant levels of unmet dental treatment need. Research in North West England showed the decayed, missing and filled (DMFT) scores of people entering prison are around twice as high as those of the general population[19].

As reported by the Ministry of Justice[20], there is one prison in Rutland, category C men's prison in Stocken, near Oakham, with a population of 1,026; this prison has an operational capacity of 1,059[21].

NHS England commissions Time for Teeth[v] to provide NHS dental services for the prison population in Rutland.

3.1.5 Military Personnel

Armed Forces personnel and their families are recognised as a vulnerable group in the population, whose health needs are often higher than that of the general population, and can be caused by

- social isolation, separation, interruption of training and education
- poor access to dental service for the families, particularly if relocating often
- maintaining continuity of treatment, including orthodontic treatment
- higher that average rates of smoking and alcohol consumption.

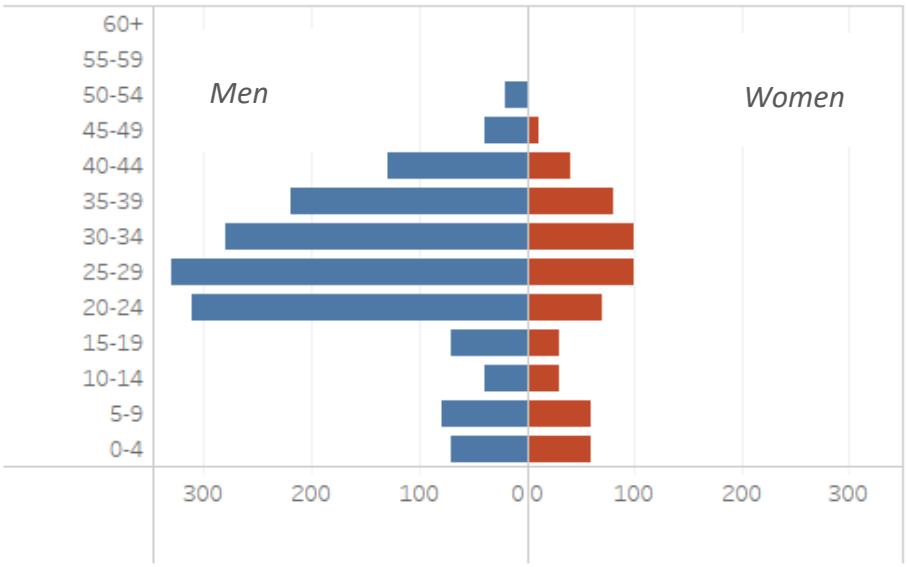
The UK Armed Forces have a distinct age, sex and sociodemographic profile. In 2019 just under a quarter were under 25 years of age, with the average age of an officer 37 and average of 30 years for other ranks; by gender, 11% were female[22]. Research has shown that 63% of non-officer UKAF personnel were recruited from the most deprived quintiles (1 and 2)[23]. Social inequalities could explain the higher levels of active caries found in non-officer recruits, with 2.0 decayed teeth per recruit compared with 0.9 in the similarly aged UK general population[24].

Currently most of military population are stationed in Kendrew Barracks, nr Cottesmore and St George's Barracks, nr Luffenham. As of October 2021, there were 2,160 Armed Forces

[v] https://www.timeforteeth.co.uk/where-we-work.php

personnel and entitled civilian personnel with a Defence Medical Services registration in Rutland (over 5% of the estimated total resident population), 53% were for male personnel aged 20-39 and 27% were female personnel (Figure 14), which is higher than the national average. In addition, using the 1.7 multiplier, there could be over 3,670 family members (or 9% of Rutland's population).

Figure 14. Age structure of military population in Rutland, October 2021[25](MoD 2022)



Defence Primary Healthcare (Dental) are responsible for providing primary dental care for the service personnel; it has the further capability of a consultant-led managed clinical network which manages complex needs of service personnel within the military. This includes Tier 2 practitioners across clinical dentistry specialisms including oral surgery. This means that very few service personnel require NHS secondary care input.

Unlike military personnel themselves, their families need to access primary dental care provided locally, and on re-location need to find a practice accepting new NHS patients. Wider health needs of army personnel and their families were assessed in 2019 (available here: https://www.rutland.gov.uk/my-services/health-and-family/health-and-nhs/joint-strategic-needs-assessment/).

3.1.6 Refugees and Asylum Seekers

A combination of socio-economic circumstances lies behind the observed poor oral health outcomes in this group. Poor literacy level and language barriers are important factors why refugees and asylum seekers are much less likely to access dental care or health improvement services[26]. The risk factors include higher rates of smoking, alcohol consumption and diet hight in sugar and fat.

3.1.7 Overweight and obese

Overweight and obese people are in the high-risk category for a number of lifestyle and clinical reasons, such as higher likelihood of consuming sugary food and drink with corresponding high level of tooth decay or comorbidities, for example diabetes, increasing their risk of periodontal disease.

Just over 17% of adults are obese in Rutland, which is significantly lower than the national average and below rates recorded across all Rutland's statistical neighbours. Although the rate of adult obesity is relatively low, it indicates as much as 7,000 people across Rutland could be at increased risk. The combined rate of adult overweight and obesity is 59.5%, which similar to the national average.

Similarly to the adult rate, obesity in children aged 10-11 (Year 6) are significantly lower than national and statistical comparator rates, with 12.5% with BMI indicating obesity, with a quarter of those children severely obese (3%). The corresponding rates for England are 21% and 4.7%. The rate of obesity among 4–5-year-olds is 7.7%, compared to 9.9% for England. Although these rates are comparatively low, a substantial number of children is at an increased risk.

4 Oral Health Needs - Children

The *National Dental Epidemiology Programme (NDEP)* includes examination of oral health in a random sample of children attending government funded academies and LA maintained schools. The aim is to measure prevalence and severity of dental caries in children to inform policy makers, and to evaluate health inequalities across the country and over time.

The most recent surveys concerned children aged 3 (2020) and the 5-year-olds (2019).

4.1 Oral Health of 3-year-old Children

Dental caries (tooth decay) and periodontal (gum) disease are the most common dental pathologies in the UK. Tooth decay has become less common over the past two decades but is still a significant health and social problem. It results in destruction of the crowns of teeth and frequently leads to pain and infection. Dental disease is more common in deprived communities than those that are more affluent. The indicator is a good direct measure of dental health and an indirect, proxy measure of child health and diet.

The latest published results for the 3-year-olds are the 2019-20 data, the second survey for this age group[27]. Data collection was curtailed by the COVID-19 pandemic in early 2020.

Nationally, of the 3-year-olds participating in the survey, 10.7% already had experience of dental decay. Among children with experience of dental decay, each had on average 3 affected teeth (CI 2.81-3.03); at age 3-years, children normally have all 20 primary teeth. At the regional level, the highest experience of dental decay in 2020 was in northern England. As an example, 3-year-old children living in Yorkshire and The Humber were more than twice as likely to have experience of dental decay (14.7%) than children living in the East of England (6.7%).

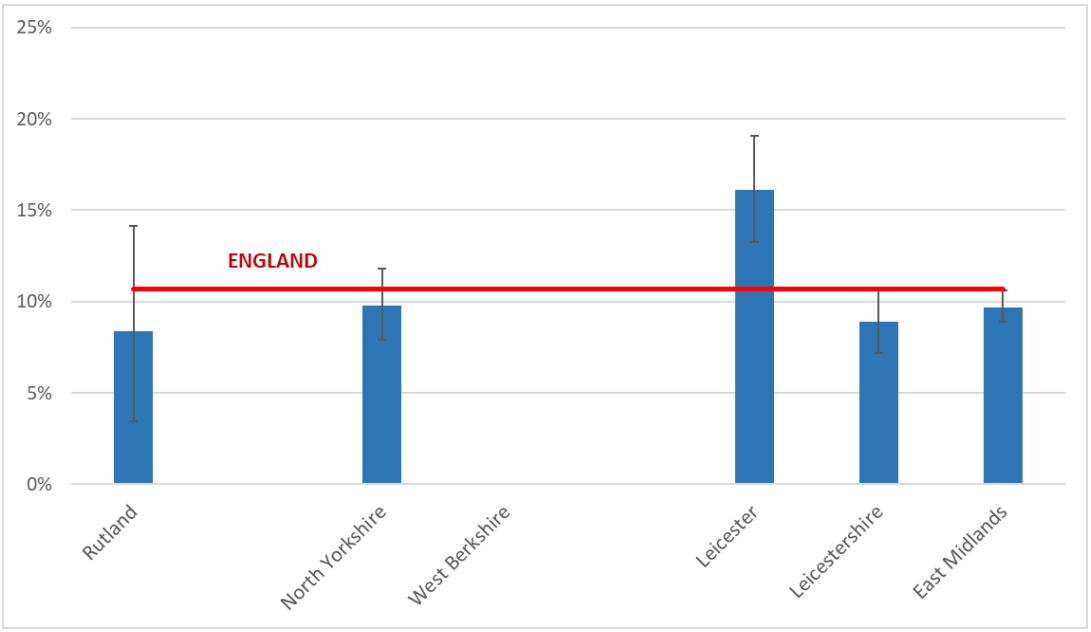
There is a strong link between rates of dental decay and deprivation. The survey has shown that children living in the most deprived areas of the country re almost 3 times as likely to have experience of dental decay (16.6%) as those living in the least deprived areas (5.9%).

There is also variation in prevalence of experience of dental decay by ethnic group and this was significantly higher children classified as 'other' ethnic group (20.9%) or as Asian/Asian British (18.4%).

Only 39 children (10% of total) were examined in Rutland, thus results have to be treated with caution. With the small sample caveat in mind, the experience of dental decay in this group of children in Rutland was 8.4%, similar to the national and regional average, as well as national (North Yorkshire/West Berkshire[vi]) and local (Leicestershire) comparators. The rate was almost half of that for Leicester (16%), but the difference is not statistically significant (Figure 15).

[vi] North Yorkshire and West Berkshire are the closest area statistical comparators for Rutland for children – Children's Services Statistical Neighbour Benchmarking Tool

Figure 15. Prevalence of experience of dental decay among three-year-old children (NDEP 2020)



Source: PHE 2021 (no data for West Berkshire – no children examined)

Further comparative data for Rutland on the dental health of the 3-year-old children are given in Appendix Table 1. While the examined population of children had similar mean numbers of teeth with experience of decay or untreated decay, it appears that all children with experience of decay (8.4%) also had incisor teeth affected (8.4%, 95% CI: 3.0-21.2%), a proportion significantly higher than the East Midlands, Leicestershire or north Yorkshire.

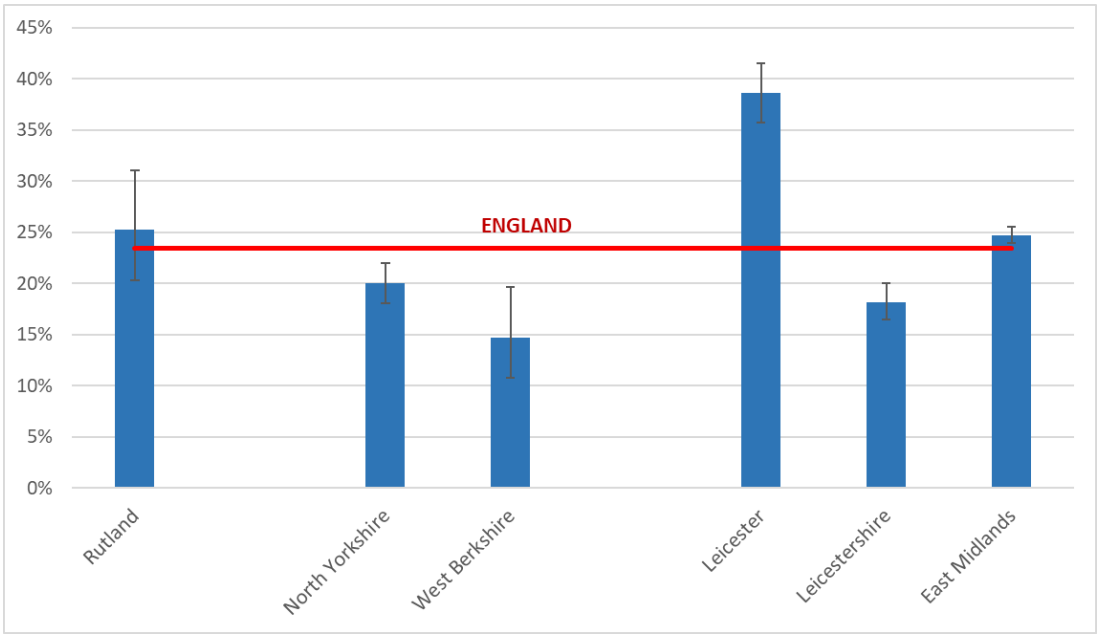
Experience of dental decay of incisor teeth in this age group is associated with infant feeding practices such as consuming sugar-sweetened drinks from a feeding bottle, especially when these are given overnight or for long periods of the day.

4.2 Oral Health of the 5-year-old Children

Across England, less than a quarter (23.4%) of 5-year-old children had experience of dental decay in the latest survey which is comparable to the 2017 results (23.3%). Among all 5-year-olds, 0.8 teeth had dental decay of which 75% (0.6) were untreated.

The prevalence of experience of dental decay in Rutland was 23.5% (Figure 16). This is similar to the national or regional average, significantly lower than Leicester, but borderline higher than Leicestershire (Rutland's regional 'statistical neighbour') or West Berkshire (a close-matching national 'statistical neighbour'). The rate in North Yorkshire (another statistical comparator) was similar to that in Rutland.

Figure 16. Prevalence of experience of dental decay among five-year-old children (Source: NDEP 2019)



Further details for this age group are given in Appendix Table 2. As measures of severity, mean numbers of teeth with active decay or experience of dental decay were lower or comparable to other areas. Although it appears that the proportion of 5-year-olds with active decay (24.6%, 95% CI: 19.7-30.2%) was higher than Leicestershire (15.7%) or statistical comparators, it was broadly in line with the national and regional average. Figure 17 below presents additional comparator data (a set of CIPFA 'statistical neighbours') for the prevalence of decay among 5-year-olds in Rutland.

Figure 17. Percentage of dental decay among 5-year-old children in 2019 - Rutland and its CIPFA nearest neighbours, compared to England average (PHE 2022)

Percentage of 5 year olds with experience of visually obvious dental decay 2018/19 — Proportion - %

Area	Recent Trend	Neighbour Rank	Count	Value	95% Lower CI	95% Upper CI
England	–	-	-	23.4	23.1	23.7
Neighbours average	–	-	-	-	-	-
Rutland	–	-	-	25.3	20.3	31.0
Herefordshire	–	1	-	31.9	28.1	36.1
Wiltshire	–	2	-	13.1	9.4	18.0
Central Bedfordshire	–	3	-	14.5	10.8	19.2
Shropshire	–	4	-	23.8	18.1	30.6
North Somerset	–	5	-	13.9	8.4	22.1
Cheshire East	–	6	-	*	-	-
Bath and North East Somerset	–	7	-	20.8	16.1	26.5
West Berkshire	–	8	-	14.7	10.8	19.7
East Riding of Yorkshire	–	9	-	*	-	-
Cornwall	–	10	-	*	-	-
South Gloucestershire	–	11	-	14.3	9.8	20.2
Solihull	–	12	-	14.5	10.4	19.8
Cheshire West and Chester	–	13	-	22.7	17.9	28.3
Isle of Wight	–	14	-	*	-	-
Bedford	–	15	-	24.7	19.7	30.4

4.2.1 Variation in Children's Oral Health

Across England, the survey has shown a wide variation in prevalence and severity of dental decay - by geographical area (five-fold between local authority areas), deprivation (more two-fold between the least and the most deprived areas) and ethnicity. Time trends have also shown that the gaps have not improved since 2015.

The numbers of the surveyed children are too low to robustly detect inequality gaps locally (252 or 75% of all 5-year-olds in Rutland), but one can expect specific issues rural access disadvantage in parts of Rutland.

4.3 Hospital Tooth Extraction Rates (Children and Young Adults)

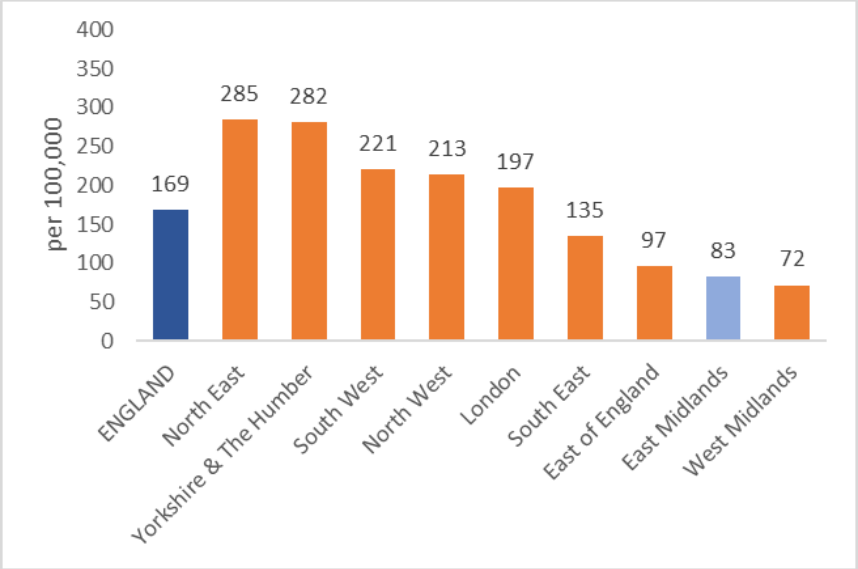
Most of hospital tooth extractions in children and young adults are as result of dental decay and the rates are closely correlated to socio-economic deprivation, which a t a national level was illustrated earlier (see Figure 5 in the section on Deprivation and Oral Health).

In England there was a steady reduction (17%) in the number of such episodes since 2014/15. There was a more significant fall in 2020/21, however this is most likely a reflection of service changes due to the COVID-19 pandemic than representative of longer-term trend.

Among all regions in England (Figure 18), the East Midlands had the second lowest rate in 2020/21 – just over 83 FCEs per 100,000 population, compared to nearly 170/100,000 nationally.

For Rutland (as well as for four Leicestershire districts) numbers were generally low (under 8) and were suppressed. Thus, the local rates are low, but may be subject to annual variation.

Figure 18. Rates of hospital episodes including tooth extraction in 2020/21 (0-19 year olds) in the English regions (Source: OHID 2022)

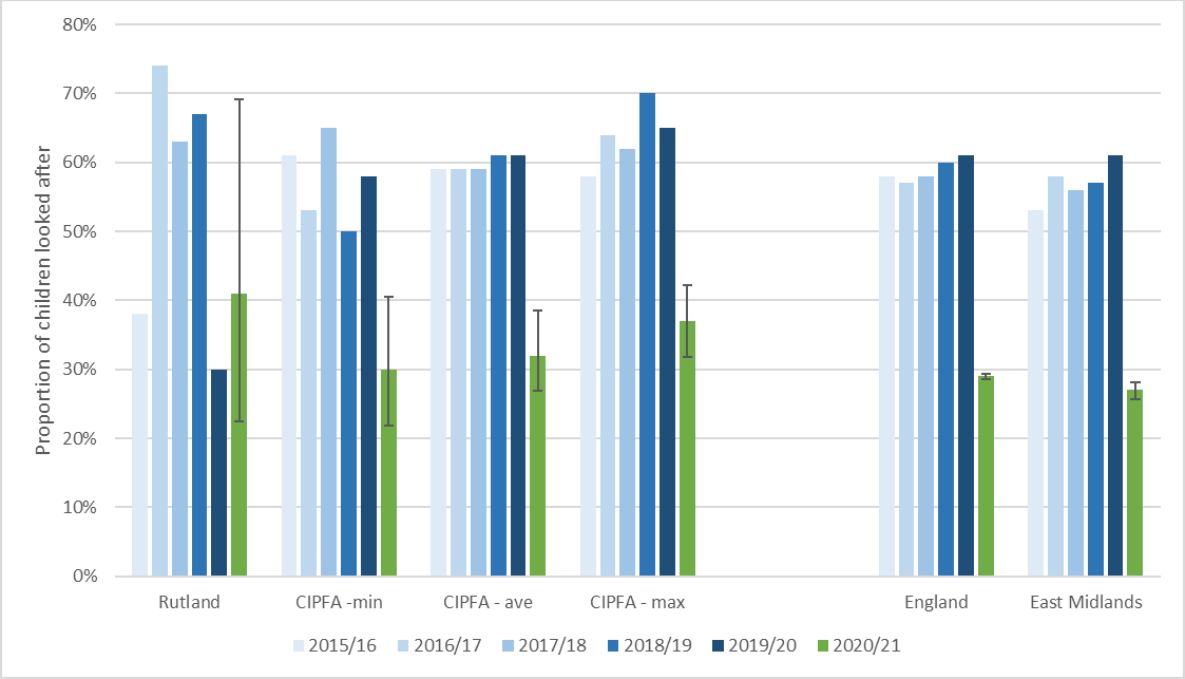


4.4 Looked After Children

The Department for Education (DfE) provides the local authorities with a set of indicators (the *LAIT Tool*), which include the proportion of the proportion of looked after children who had their teeth checked by a dentist in the last 12 months. Across all areas, this proportion halved in 2020/21 when compared to the previous years, which is most likely the effect of service changes due to the COVID-19 pandemic.

In March 2021, there were 34 looked after children in Rutland and 14 (41.2%) had their teeth checked by a dentist the last 12 months (DfE[28]). Although this proportion appears higher than the national and regional average, and higher than all rates in all Rutland CIPFA comparators, it is not statistically significant because of small numbers (Figure 19**).**

Figure 19. Percentage of looked after children who had their teeth checked by a dentist (Source: DfE 2022)



5 Oral Health Needs - Adults

5.1 Oral Cancer

Mouth (oral) cancer is preventable, with tobacco and alcohol use as its main avoidable risk factors (conveying 15 times greater risk). HPV infections also increase the risk. Oral cancer can be diagnosed early at dental check-up, leading to a much better prognosis. Incidence has been rising nationally, although, this cancer is relatively less common (2% of all cancers) in England than in the rest of the world.

Nationally, survival rates for oral cancer are almost 80% for 1-year survival, 65% for 5-year survival and 60% for 10-year survival (based on data for 2009-2012)[29].

Annually in Rutland, there are less than 10 new cases per year and a relatively small number of deaths, so it would be difficult to present robust comparative analysis, unless using figures combined over a number of years. From routine monitoring, presented below, it appears that the population of Rutland doesn't have excessive morbidity or mortality from oral cancer.

In the three years between 2017 and 2019, there were 25 new cases of oral (individuals registered with this diagnosis) in Rutland, which corresponds to an average of 8 new cases

per year. With the low numbers of cases, the rate appears higher than that for England or Leicestershire, however, the difference is not statistically significant (Table 2).

Registration rate for Rutland is also comparable to the five closest 'statistical neighbours' (CIPFA model) and the East Midlands (Figure 20).

Table 2. Rates of oral cancer in Rutland, Leicestershire and England 2017-19 (Source: PHE 2022, Fingertips)

AREA	Number	Rate (95% CI)
ENGLAND	24,115	15.4 (15.2-15.6)
Rutland	25	19.6 (12.6-29.0)
LEICESTERSHIRE	284	13.4 (11.9-15.1)

Figure 20. Comparative oral cancer registration rates in 2017-19 for Rutland (per 100,000)

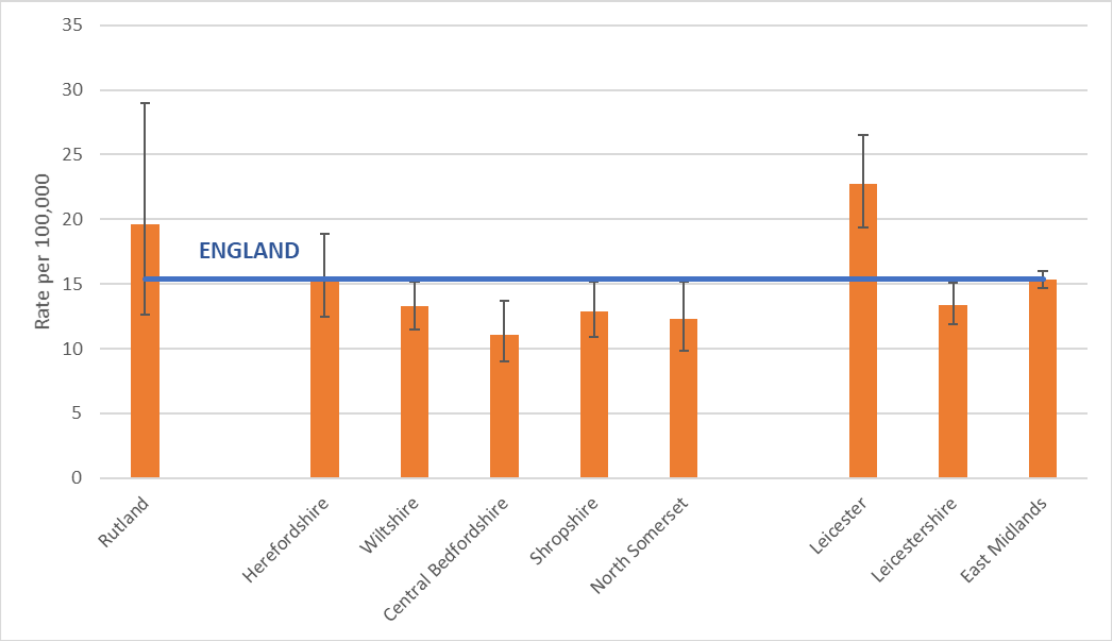
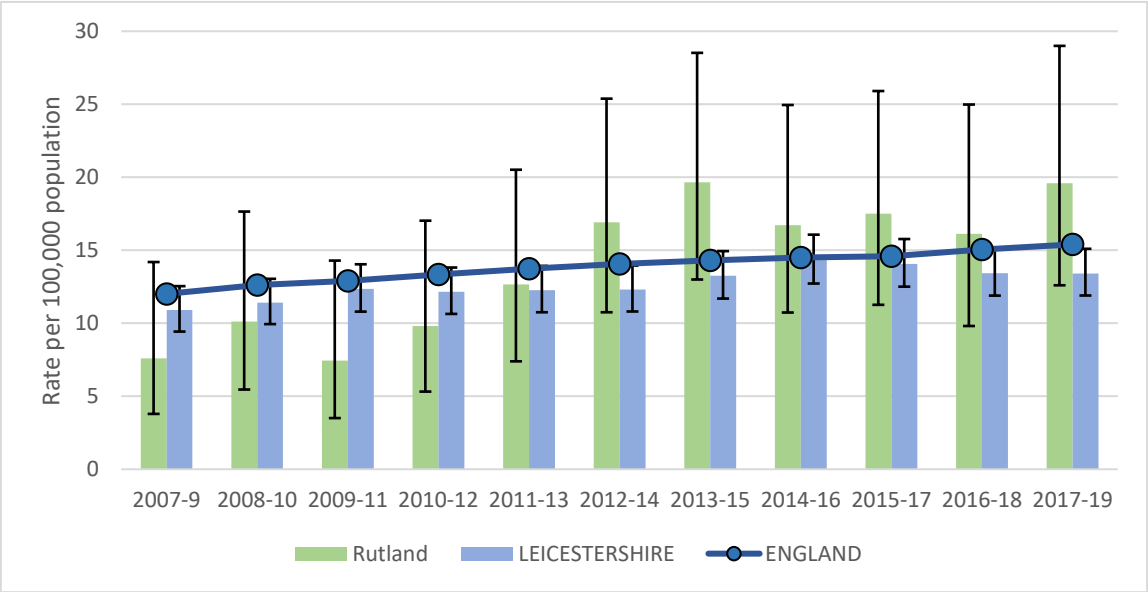


Figure 21 below shows longer time trends in oral cancer registration data for Leicestershire and Rutland, compared to the national average.

Nationally, the rates of oral cancer have increased steadily from 12/100,000 in 2007-9 to over 15/100,000 in 2017-19 (a 28% increase). Because of the small numbers involved, the apparent increase in Rutland is not statistically significant.

Figure 21. Trends in oral cancer registration rates - 2007 to 2019 (3-year averages) (Source: PHE 2022 (Fingertips)



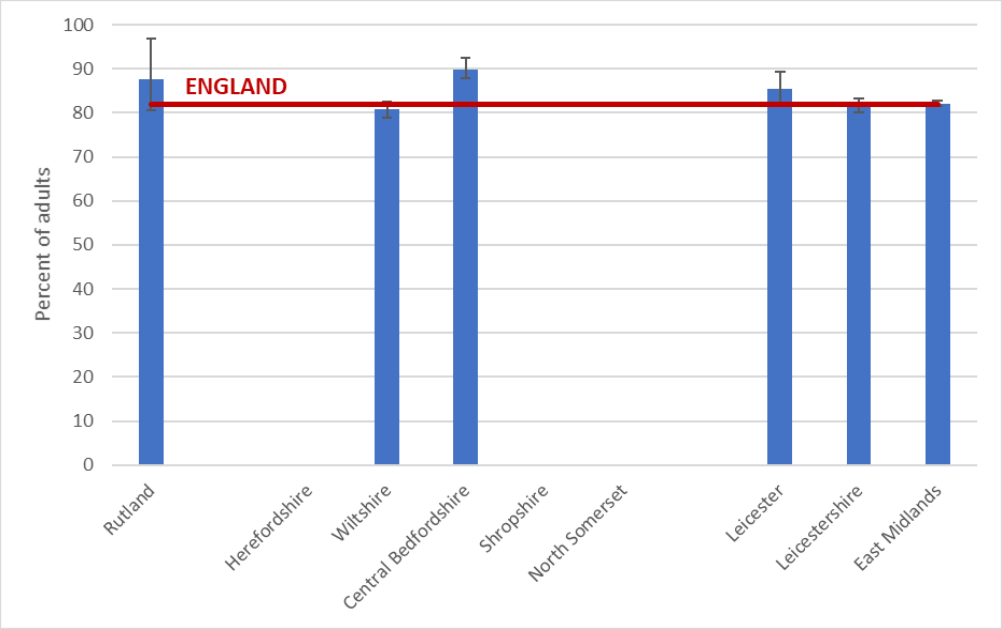
Because of small numbers involved, *mortality* rates for Rutland have not been published[30].

5.2 Adult Oral Health Survey 2018

The data collected in 2018 through the Oral Health Survey of patients attending general dental practices[31] show that the proportion of adults with functional dentition in Rutland is similar to the national and regional average, as well to other comparator areas (Figure 22).

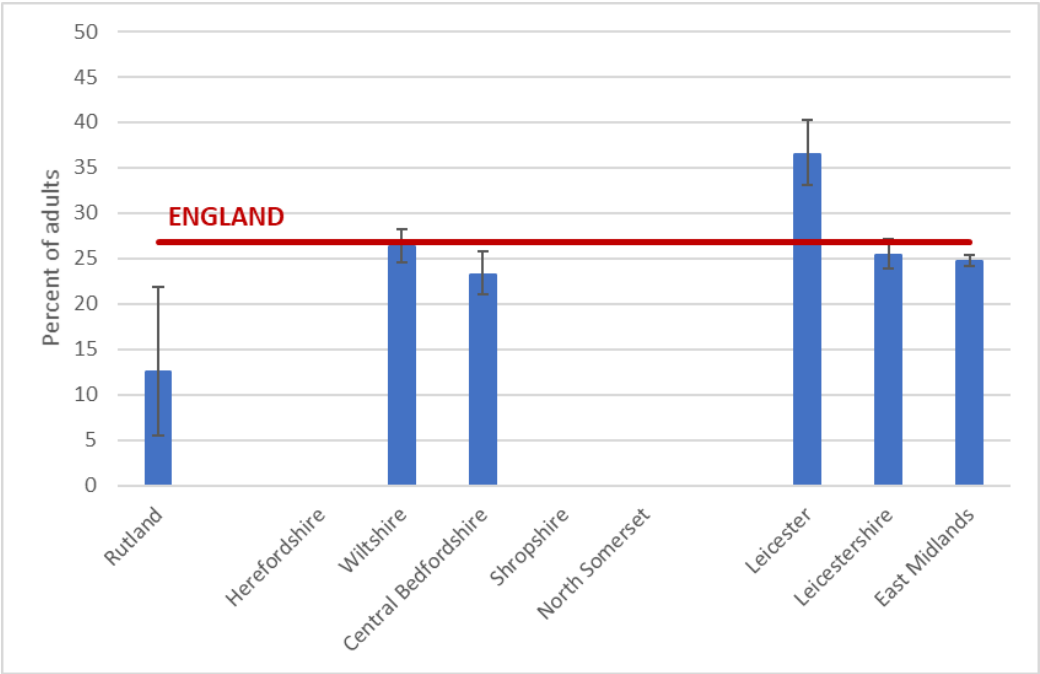
The total number of completed questionnaires with a clinical examination for Rutland was just 54 (survey sample size), so the results have to be treated with caution.

Figure 22. Percentage of adults with functional dentition (21 or more natural teeth) in 2018. No data for some comparator areas (Source: PHE 2020).



The Survey has also shown that 13% of adults in Rutland are likely to have one or more obvious untreated decayed teeth (DT>0), which significantly lower than the national or regional (East Midlands) average, as well as below local (Leicester and Leicestershire) and national (Wiltshire, Central Bedfordshire) comparators (Figure 23).

Figure 23. Proportion of adults with active decay in 2018. No data for some comparator areas (Source: PHE 2020).



6 Current Services

6.1 Outline of NHS Dental Services

This section presents a brief outline of the dental services commissioned by the NHS. Under the current arrangement (2006) NHS England (NHSE) is responsible for commissioning all NHS dental services, including:

- primary dental care service ('hight street' surgeries)
- community dental services
- specialist dental services (Intermediate Minor Oral Surgery – IMOS)
- services provided by NHS Hospital Trusts
- dental services in secure settings

6.1.1 Primary Care Dental Services

The main point of contact for residents that choose NHS dental care. Services are provided by independent providers (individuals, partnerships or corporate providers, usually high street dental practices) and commissioned in accordance with national regulations. The commissioning responsibility for the NHS dental service lies with the NHS England and NHS Improvement (Midlands) and there are no limitations based on patient residence. Generally, patients are not registered with a practice, but regular attendance may be informally regarded as such.

Primary dental care includes routine assessments and urgent appointments, preventative care (advice and, where appropriate, the application of fluoride varnish or fissure sealants), treatments including fillings, extractions and root canal treatment, treatment of wider oral health matters such as gum disease, referral for specialist consultation where appropriate and restorative treatment such as crowns, bridges, partial or complete dentures.

For purpose of renumeration, treatment is assigned to one of three treatment bands or as urgent care. Treatment bands include the following:

- band 1 covers an examination, diagnosis, advice, scale and polish if needed and preventative treatment such as application of fluoride varnish or fissure sealant;
- band 2 covers, in addition to the above, any further treatment such as fillings, root canal work or removal of teeth;
- band 3 covers everything listed in two bands above, plus restorative treatment, such as crowns, dentures or bridges;
- the fourth category covers all urgent and emergency dental care.

Fee-paying patients (adults) contribute a fixed amount according to the charge band, treatment for children (all 0-17 years of age) is free, as is for adults who are exempt for a specific reason. Orthodontic treatment may be provided under the NHS where it is clinically necessary.

Dental services activity is monitored by the NHS Business Services Authority (NHS BSA) and reported as courses of treatment for patients resident in a given area, wherever this activity took place. Value given to courses of treatment is defined as Units of Dental Activity (UDAs). These give weight to the complexity of a course of treatment, for example, while there is one UDA for examination only, there could be 12 UDAs for a course of treatment including laboratory work[32].

6.1.2 Community Dental Services (CDS)

This is a dental care referral service for children and adults, enabling the improvement of oral health for individuals and groups at risk (particularly any impairment or disability). Care provided to patients who have a need beyond the skill set and facilities of a general dental practitioner.

Community Dental Services include dental treatment under general anaesthetic (GA pathway)[vii] in secondary care sites (e.g. children who require multiple tooth extractions), children with complex health needs and who require restorative treatment, and for adults with special needs that may impact upon their ability to co-operate. Community Dental Services also provide additional services, for example oral health promotion, epidemiology for Local Authorities, and outreach projects for vulnerable groups.

6.1.3 Intermediate Minor Oral Surgery (IMOS)

Oral Surgery care that deals with the diagnosis and management of pathology of mouth and jaws that requires surgical intervention. Requires enhanced clinical skills and experience; can be provided in primary or secondary care setting. Commissioned under a PDA agreement. Monitored by the NHS BSA.

6.1.4 Secondary Care Dental Services

The majority are specialist services at Level 3, provided in the secondary or tertiary care setting. Commissioned under the NHS Standard Contract, subject to national and local service specifications.

[vii] GA pathway is commissioned under a shared care arrangement.

6.1.5 Commissioning of NHS Dental Services

Dental practices are commissioned on the basis of UDAs, which are annually allocated to each practice and cannot be changed without an agreement by both parties. It has been recognised that changes in commissioned UDAs have not always followed trends in demand or need for services. From the 1st of April 2023, the commissioning responsibility will transfer to the Integrated Care Board (ICB).

As indicated in the previous section, there is no system patient registration, patients can choose any practice convenient for them. While a practice is responsible for patients undergoing treatment, once a treatment is completed the practice has no ongoing responsibility for a patient. However, many surgeries have patient lists and may be taking on new NHS patients, if there is capacity.

During the COVID-19 pandemic, practices were prioritising urgent care, vulnerable patients (including children) and high-risk patients.

The recent Midlands regional commissioning strategy[33] highlighted a number of current issues including falling levels of dental access in primary care (particularly for vulnerable groups), staff shortages (lower recruitment and poor retention), increasing pressure on service by private patients re-patriating to the NHS, low orthodontic capacity and poor throughput of patients. Community Services are also suffering from problems with access, workforce issues and list backlogs. Long waiting lists and significant capacity issues are also quoted for IMOS and secondary dental care.

6.2 Access to NHS Dental Service in Rutland

This section looks at access to primary care dental service in Rutland exploring the following measures:

- numbers and location of dental practices, including proportion of practices accepting new NHS patients;
- access to these practices - by walking, public transport or car drive time;
- proportions of residents accessing services in previous 24 (adults) or 12 (children) months;
- numbers of dentists per population;
- GP Patient Survey

6.2.1 Dental Practices in Rutland and Surrounding Areas

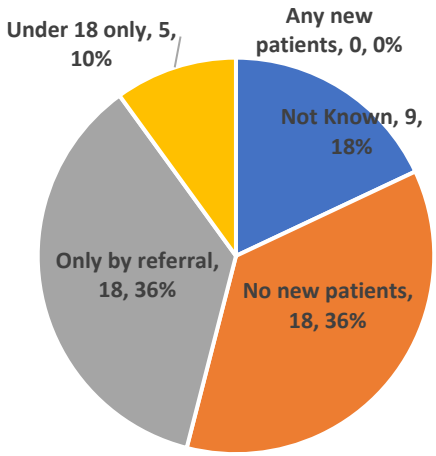
There are six NHS dental practices within Rutland, including four in Oakham and two in Uppingham. One of the NHS dental practices in Uppingham also provides NHS orthodontic services, there is one specialist NHS Orthodontic practice in Oakham and one NHS

Orthodontic Pathway contract in Oakham. Extended hours and out of hours care is provided by 8-8 practice in Oakham (8am to 8pm every day of the year).
Only urgent dental care is provided out of hours. This is triaged into:

- routine dental problems (with a timeline for access to appropriate service of 7 days);
- urgent dental conditions (patient to be treated within 24 hours);
- dental emergencies (requiring a contact with a clinician within 60 minutes) - patients can attend any NHS dental service at any locality.

As of the end of July 2022, of the 50 closest (Rutland and cross-border) practices recommended for Rutland residents by the NHS 'Find a dentist' online service none of practices were accepting new adult NHS patients, 18 (36%) accepted referrals only and 5 (10%) accepted children. The remaining 18 (36%) were not currently accepting any new NHS patients (Figure 24). Checks were made with practices who had not recently given an update, although not all details were available. Many of these 50 practices are outside of Rutland (up to 16 miles from Oakham), including some Leicester practices, Stamford or Corby.

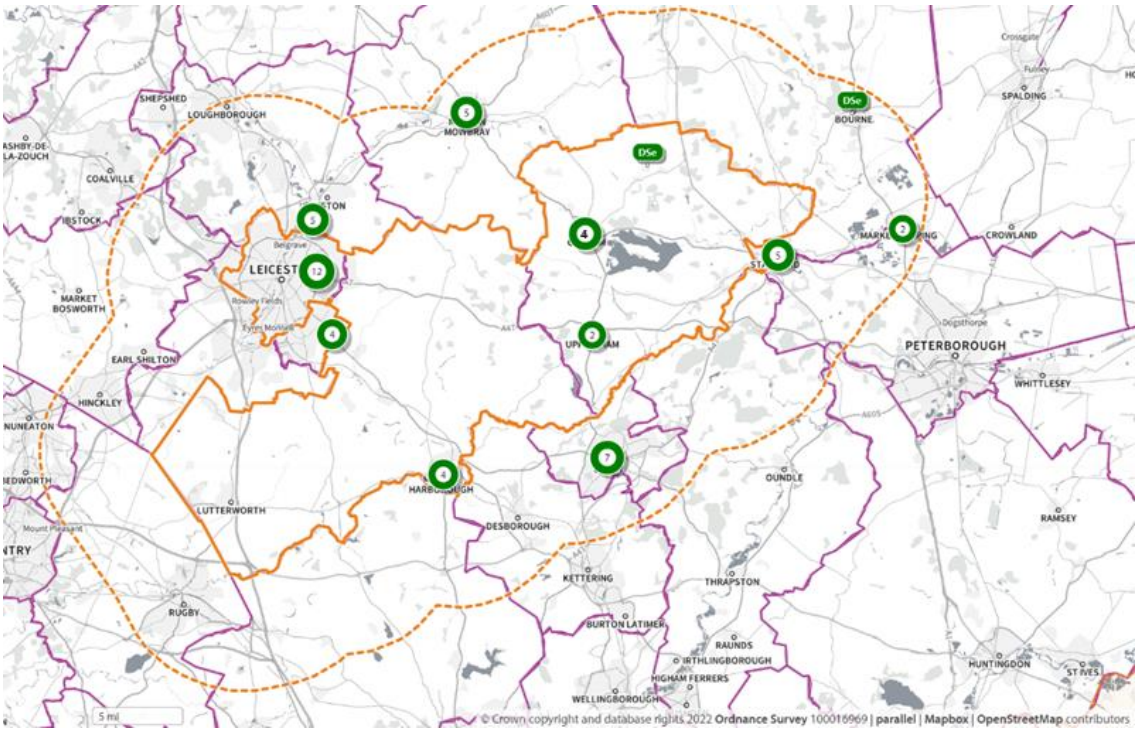
Figure 24. Practices within 16 miles accepting new patients (Source: NHS)



There is likely to be a cross-boundary flow of patients. In addition to the six practices within Rutland there are 19 NHS dental practices near the Rutland borders, including four in Melton Mowbray (1 orthodontic), six in Market Harborough (1 pathway contract), three in Stamford and six in Corby (1 mixed). Orthodontic services near the Rutland borders include one specialist NHS Orthodontic practice in Melton Mowbray, one in Market Harborough (NHS Orthodontic Pathway contract), and one of the practices in Corby also providing NHS orthodontic services.

Figure 25 presents geographical locations of dental practices.

Figure 25. Map of practices in and around Rutland, identified by the NHS search in July 2022.



6.2.2 Access: Walk, Public Transport and Drive Time

Nearly a half of Rutland's population (19,662) have more than 15-minute walk to a nearest dental practice. Of those, the majority (63%) reside in the areas classified as 'rural village and dispersed' and the rest (37%) in 'rural town and fringe' (Table 3, Figure 26).

Table 3. Walking time to dental practice by rurality and deprivation (SHAPE 2022)

Walking time > 15 min	**Number**	**%**
Rural village and dispersed	12,368	62.9%
Rural town and fringe	7,294	37.1%
Urban city and town	0	0.0%
Quintile 3 (most deprived)	4,833	24.6%
Quintile 4	6,956	35.4%
Quintile 5 (least deprived)	7,873	40.0%
Rutland >15 min	**19,662**	**48.6%**
Rutland <= 15 min	**20,814**	**51.4%**

Just under a third of Rutland's population (12,797) have more than 30 min travel by public transport to a nearest dentist, with most of those excluded from rural village or rural town and fringe areas (54% and 46%, respectively) and no discernible pattern of deprivation (Table 4, Figure 27).

Table 4. Public transport time by rurality and deprivation (SHAPE 2022)

Public Transport > 30 min	**Number**	**%**
Rural village and dispersed	6,950	54.3%
Rural town and fringe	5,847	45.7%
Urban city and town	0	0.0%
Quintile 3 (most deprived)	3,754	29.3%
Quintile 4	5,593	43.7%
Quintile 5 (least deprived)	3,450	27.0%
Rutland > 30 min	**12,797**	**31.6%**
Rutland <= 30 min	**27,679**	**68.4%**

No residents of Rutland are outside of the 30-minute drive from a dental practice (Figure 28).

Figure 26. Walking times (up to 15 min) to dental practice in Rutland (Source: SHAPE 2022)

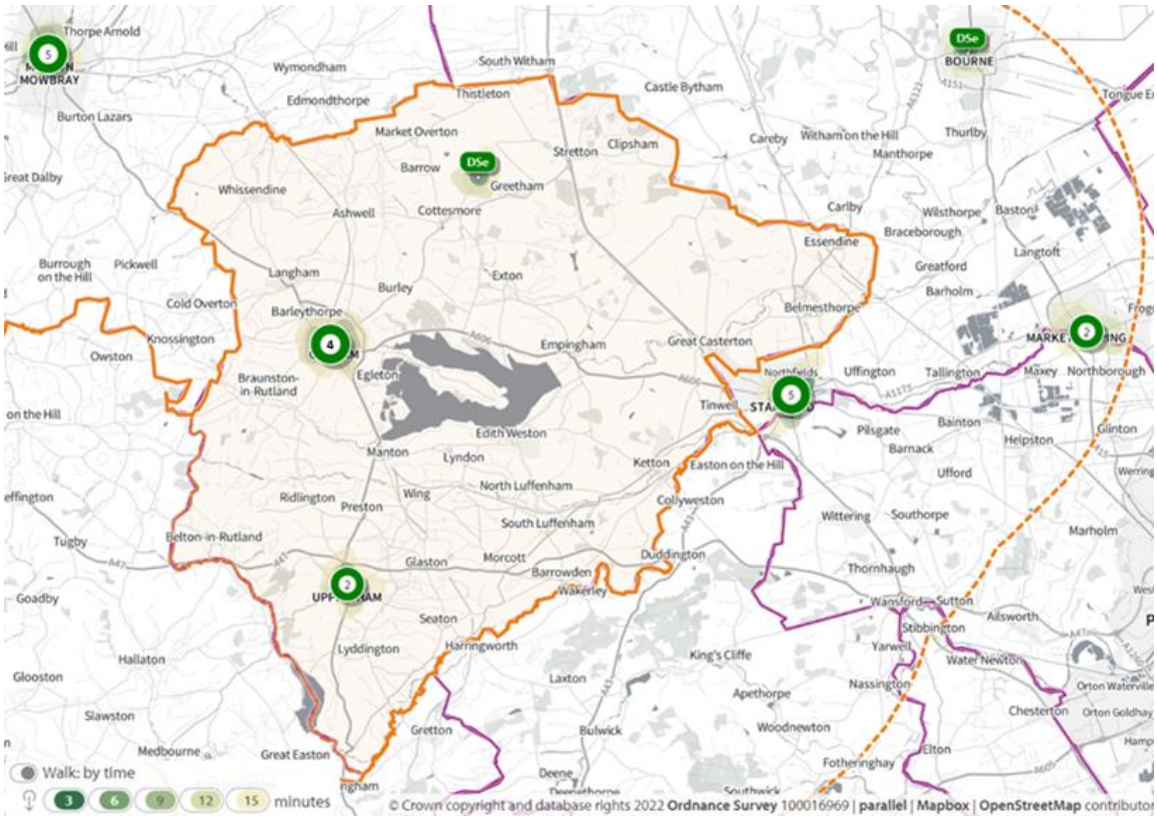


Figure 27. Public transport access times (up to 30 min, on weekday) in Rutland (Source: SHAPE 2022)

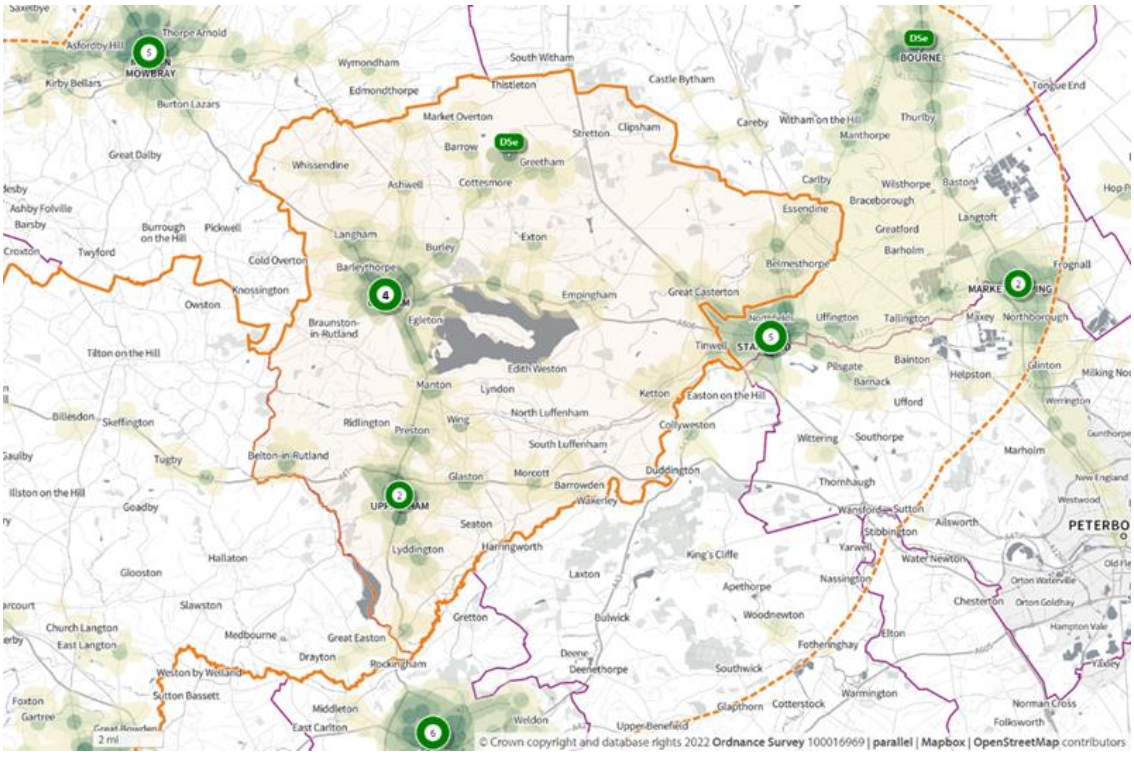
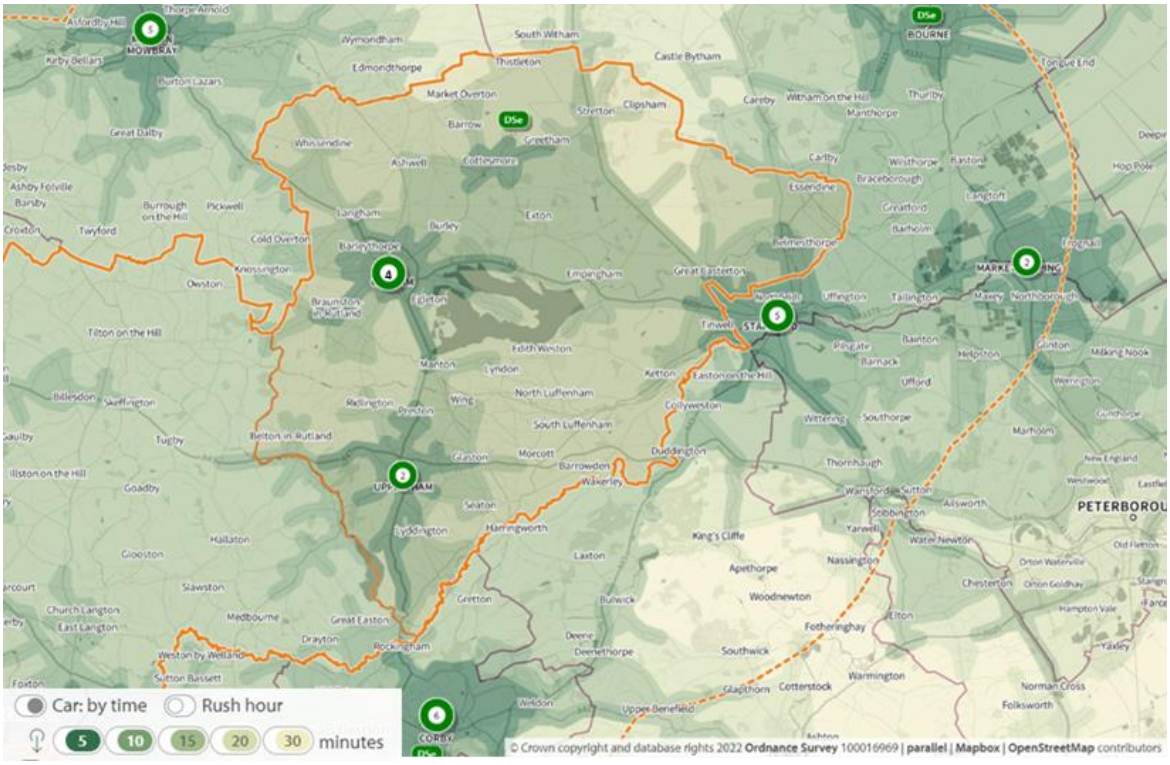


Figure 28. Drive times to a nearest dental surgery (up to 30 min) in Rutland (Source: SHAPE 2022)



6.2.3 Patients Seen by a Dentist in 24 or 12 months

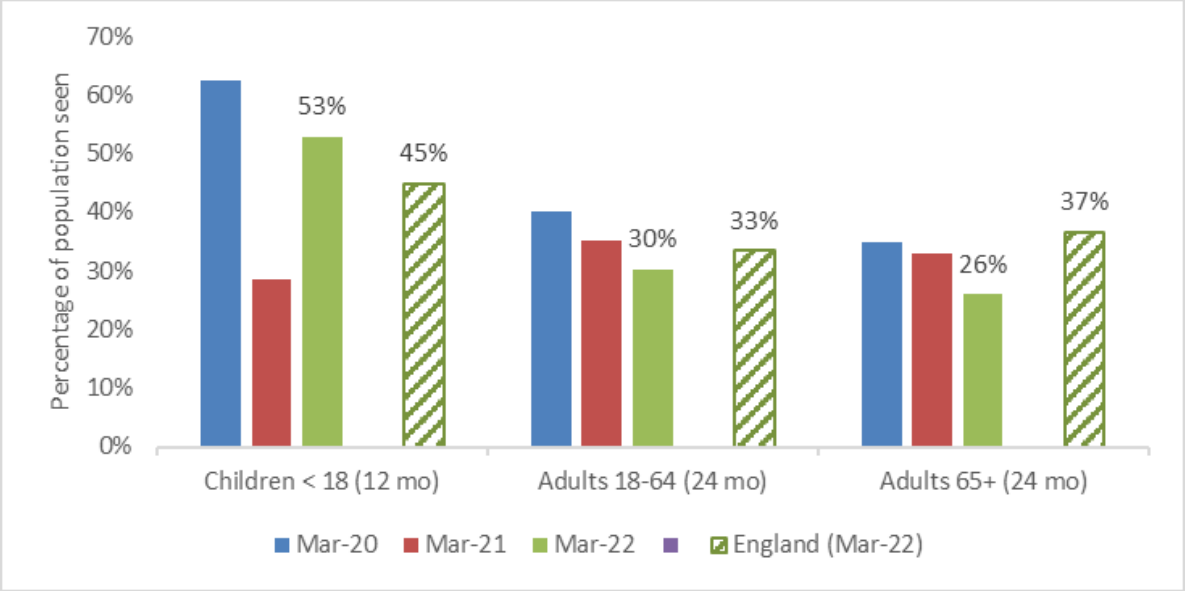
This indicator shows what proportion (%) of the estimated resident population has been seen by a dentist in the previous 24 months (for adults) or 12 months (for children). This is measured in the last day (31st of March) of each financial year.

It is important to stress that, as a result of COVID-19 restrictions (from the 25 March 2020 all routine, non-urgent dental care, including orthodontics, was cancelled or deferred), any measures of access to NHS dental service in the last three years are inevitably distorted. Further details of the effect of COVID-19 pandemic are presented in *The Impact of the COVID-19* Pandemic chapter below (page 45).

Figure 29 shows the rates of access in the last three years for main population age groups, compared to the average for England. There was a significant drop in coverage for children in Leicestershire and Rutland in 2020/21 (from well over 60% to below 30%), with subsequent partial recovery in 2021/22. Rates for both adult groups were lower and, against the national trend, without recovery in the last year. The lowest coverage is for residents 65 or above –

only over a quarter (26%) in Rutland accessed NHS dentistry, much lower than the national average of 37%, with working-age adults' rate also below the England's figure. However, access rate was higher than the national average for children (53% vs 45%).

Figure 29. Rates of access to NHS dental services for Rutland residents in the last three years, with England average for comparison (Source: NHS BSA 2022).



Access varied across areas in Rutland (Table 5), nearly two-fold for children (Figure 30), although comparatively Leicestershire showed more significant gaps, over 4-fold for adults of working age, for example.

The highest access rates for adults are in the east of Rutland (Figure 31 and Figure 32).

There was no correlation between rates of access and deprivation in Rutland at a small (LSOA) geographical level – graphs are presented din the Appendix (see Appendix Figure 1 and Appendix Figure 2).

Table 5. Range of variation in access, by MSOA, for broad age groups (NHS BSA 2022)

AREA	Children 0-17	Adults 18-64	Adults 65+
Rutland	37% - 75%	23% - 39%	21% - 33%
Leicestershire	33% - 62%	13% - 50%	24% - 48%

Figure 30. Access to NHS dental service for children (0-17) in Rutland

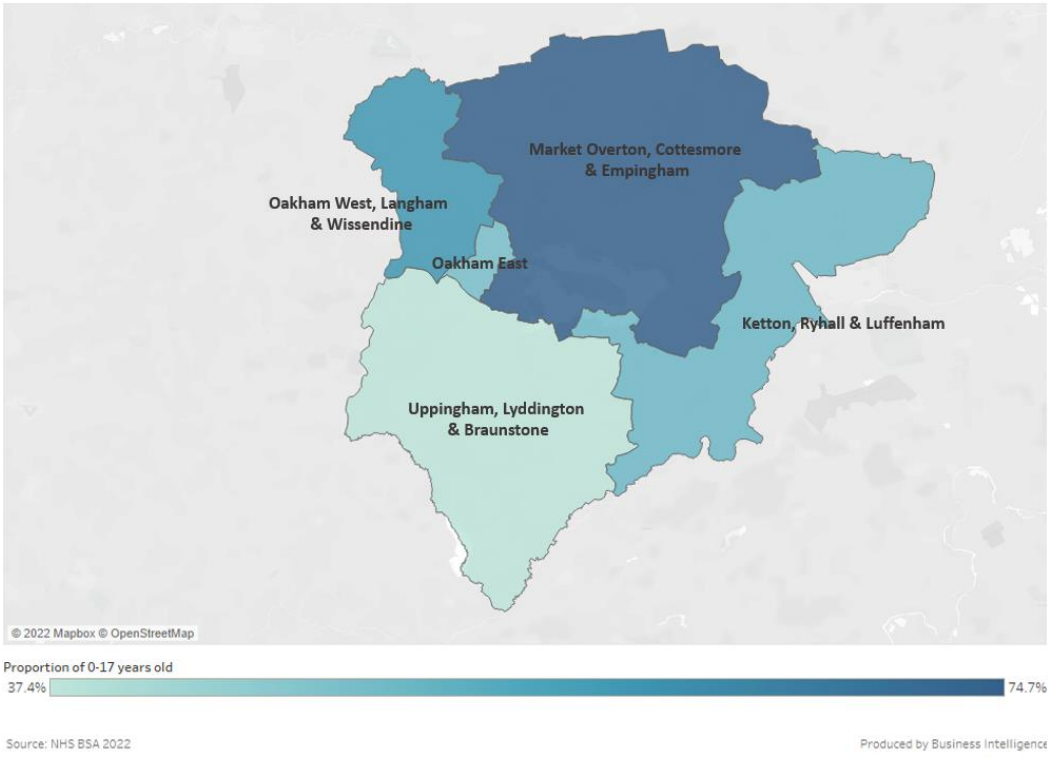


Figure 31. Access to NHS dental service for adults 18-64 in Rutland

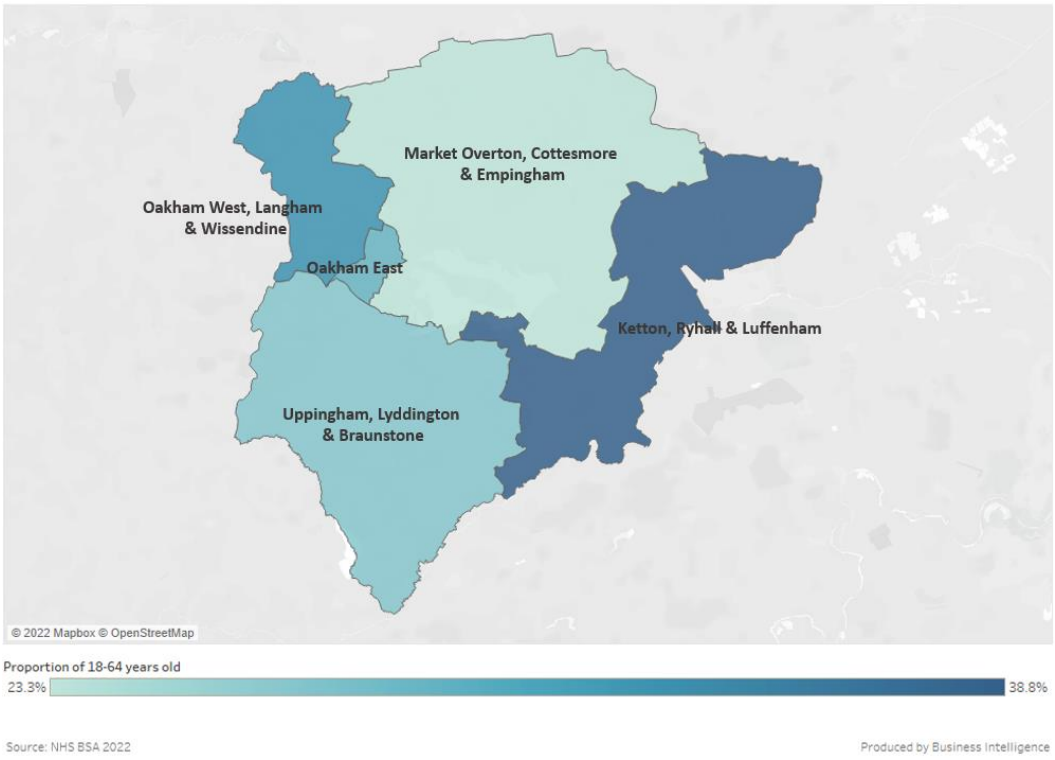
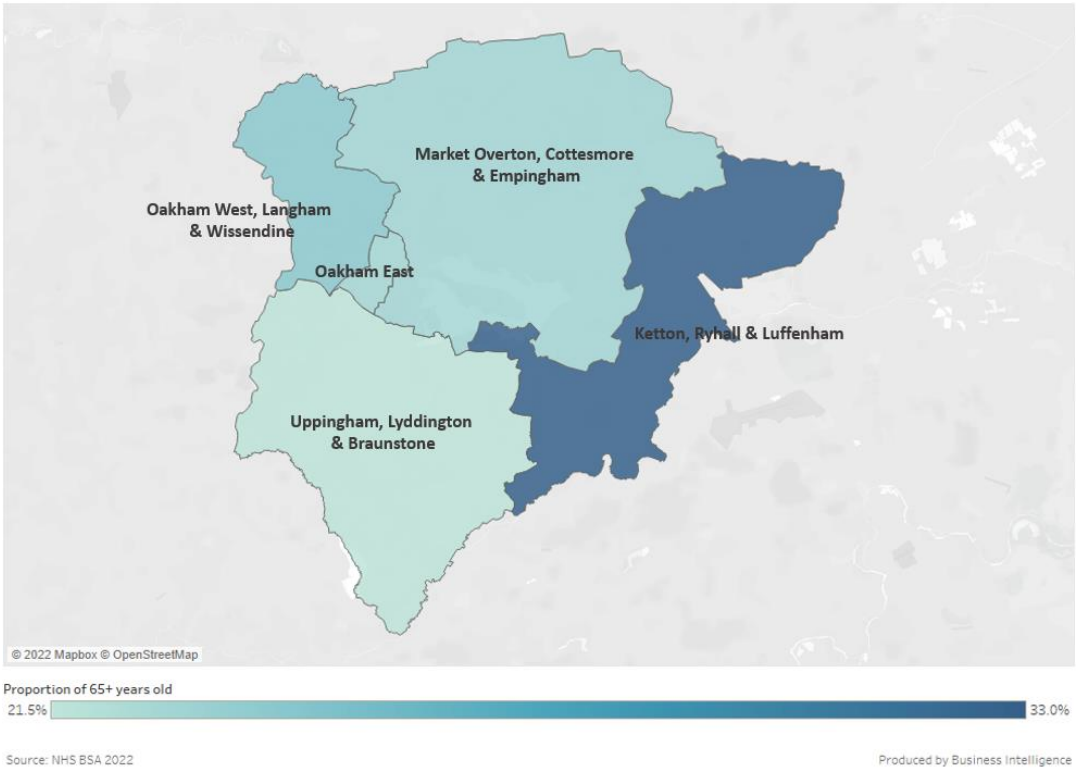


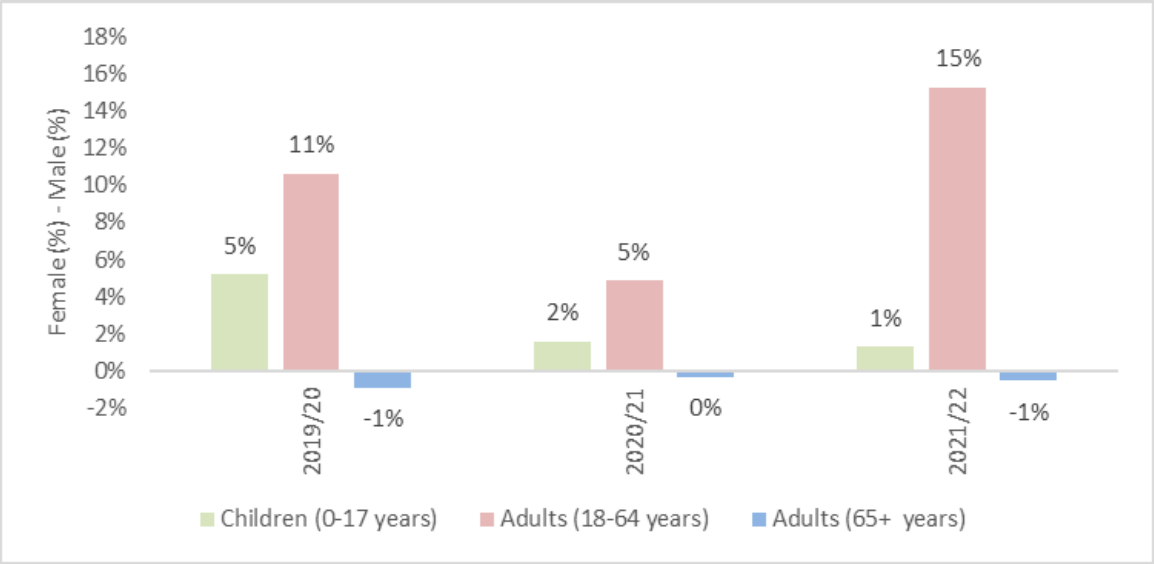
Figure 32. Access to NHS dental service for adults 65+ in Rutland



6.2.4 Equity of access – Sex and Ethnicity

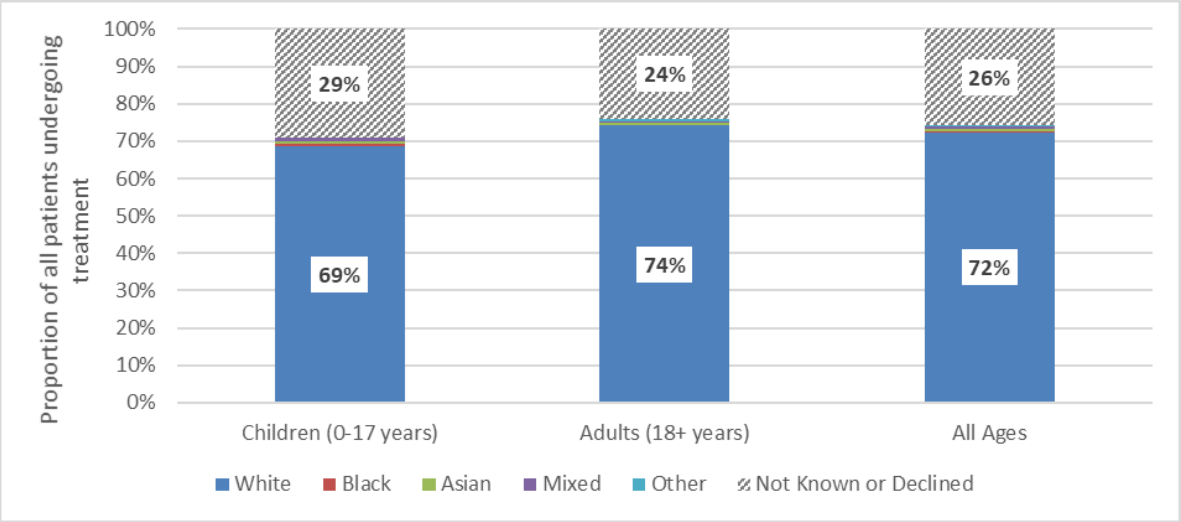
Using counts of unique patients accessing services between April 2019 and March 2022, proportionately more women of working age were accessing the dental service, compared to men in this age group (up to 15% more in 2021/22 - Figure 33), with a small excess in the under-18 group (1-5%) and very similar rates in the over-65s.

Figure 33. Sex differentials NHS dental activity in Rutland (Source: NHS BSA 2022)



The ethnicity of patients undergoing dental treatment is generally poorly recorded, with 26% overall (29% for children) not known or marked as declined (Figure 34). Only 2% of patients treated in Rutland are recorded as group other than white. In Census 2021, nearly 5% of Rutland population declared themselves in groups other than white, however with such high number of unclassified records it is difficult to judge whether ethnic minority patients truly have lower access to dental care.

Figure 34. Recorded ethnicity for patients undergoing NHS dental treatment (Source: NHS BSA 2022)



6.2.5 Number of Dentists per Population

This indicator is a high-level proxy of access to NHS dental service. At the time of writing, it is available at the CCG level, up to 2020/21.

Both Leicestershire Clinical Commissioning Group (CCG) populations had higher than national average access to NHS dentists in the last two years, although there were significant reductions in the number of such dentists between 2019/20 and 2020/21.

This is particularly noticeable for the NHS West Leicestershire CCG with nearly 16% reduction in the rate of access and 39 dentists less in the last covered year.

East Leicestershire and Rutland CCG experienced less of change (2% - half the national figure - with only 4 dentists less in the last year). The crude rate of access to NHS dentists still remains higher for both local CCGs (51-54/100,000) than the national or regional average of 42.2/100,000 (Table 6).

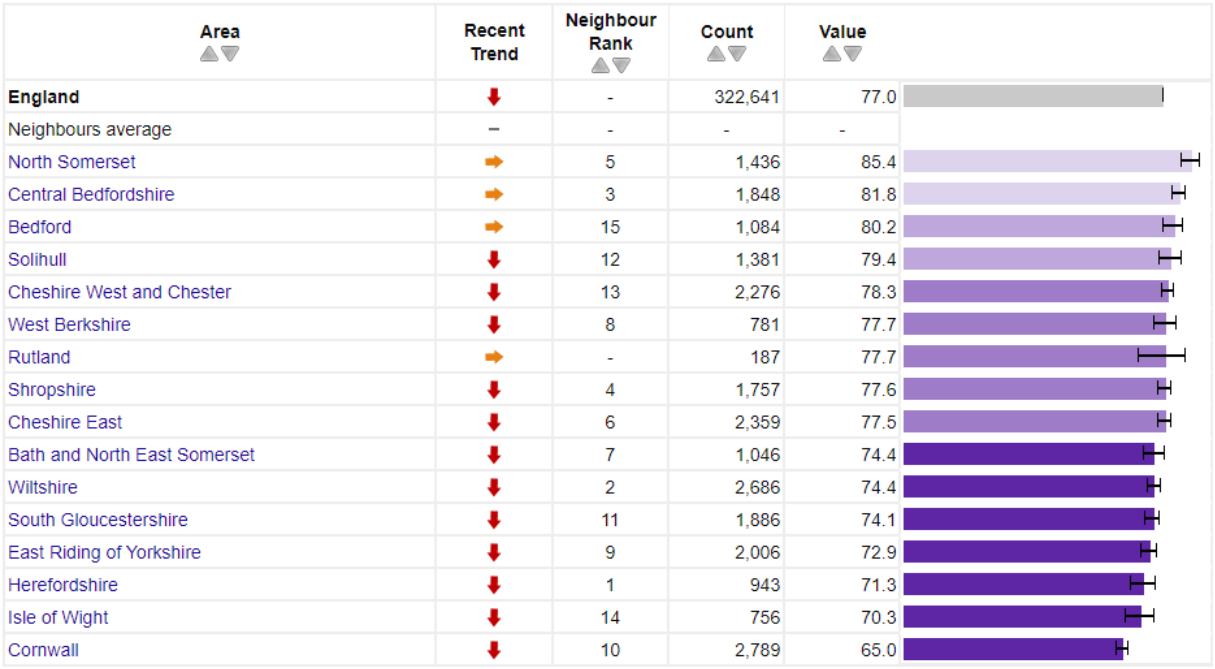
Table 6. Access to dentist with NHS activity in two most recent years - comparative rates (Source: HSCIC 2022)

AREA	2019/20			2020/21			Difference	
	Total dentists	Population per dentist	Dentists per 100,000 population	Total dentists	Population per dentist	Dentists per 100,000 population	Dentists (number)	Change (%)
England	24,684	2,280	43.9	23,733	2,372	42.2	-951	-3.9
Midlands	4,549	2,331	42.9	4,341	2,442	40.9	-208	-4.6
NHS East Leicestershire & Rutland CCG	188	1,801	55.5	184	1,840	54.3	-4	-2.1
NHS West Leicestershire CCG	245	1,663	60.1	206	1,978	50.6	-39	-15.9

6.2.6 Access to a Dental Appointment - GP Patient Survey

Figure 35 shows the comparator figures for access to NHS dental appointments in 2020/21 reported through the GP Patient Survey. The 77.7% rate in Rutland is statistically similar to the national average as well as to most of its 'statistical neighbours'[34]. The data also indicate that, similarly to North Somerset, Bedford and *C*entral Bedfordshire there was no fall in access, compared to previous year. Of note is the relatively small response sample for Rutland (N=187).

Figure 35. Successfully obtained an NHS dental appointment in 2020/21 (Source: PHE Fingertips 2022)



Area	Recent Trend	Neighbour Rank	Count	Value
England	↓	-	322,641	77.0
Neighbours average	–	-	-	-
North Somerset	→	5	1,436	85.4
Central Bedfordshire	→	3	1,848	81.8
Bedford	→	15	1,084	80.2
Solihull	↓	12	1,381	79.4
Cheshire West and Chester	↓	13	2,276	78.3
West Berkshire	↓	8	781	77.7
Rutland	→	-	187	77.7
Shropshire	↓	4	1,757	77.6
Cheshire East	↓	6	2,359	77.5
Bath and North East Somerset	↓	7	1,046	74.4
Wiltshire	↓	2	2,686	74.4
South Gloucestershire	↓	11	1,886	74.1
East Riding of Yorkshire	↓	9	2,006	72.9
Herefordshire	↓	1	943	71.3
Isle of Wight	↓	14	756	70.3
Cornwall	↓	10	2,789	65.0

6.3 Dental Activity

This section presents data on NHS dental activity in the last three years, the impact of COVID-19 pandemic, activity by patient type, treatment bands, preventive clinical treatments and hospital extraction rates for children.

6.3.1 The Impact of the COVID-19 Pandemic on Access to NHS Dental Services

In response to the COVID-19 pandemic, from the 25 March 2020 all routine, non-urgent dental care including orthodontics was cancelled or deferred, with no data available for January to June 2020.

This section presents comparative trends in dental activity for the period between January 2019 and June 2022.

Figure 36 shows the time trends in the all-age rates of access to dental NHS services (numbers of people accessing per population), comparing pre-pandemic year (2019) and the most recent period. The pre-pandemic all-age rates in Rutland were 29% and lower (by circa 5%) than regional, LLR, Leicestershire or its statistical neighbour average, while being comparable to England and Leicester rates. By the latter half of 2020, the rates fell down to about 7% with some recovery since then (22% in 2022). However, in the first half of 2022, Rutland rates were still below the pre-pandemic coverage and remaining below the comparator areas.

Rutland rates seem to be comparatively higher for children and younger age groups (under 18s, Figure 37). Pre-pandemic rate for children in Rutland was 49%, above the national average and other comparators, except for Leicestershire. Rate for children has been rising since 2020, from the low of 13% to 42% in 2022, which is still below the pre-pandemic level. These trends seem to be in line with Leicestershire and Leicester rates, and above the national, regional or statistical neighbour averages.

The rates for adults (Figure 38) seems significantly lower, 24% in 2019, below the national and other comparators, except for Leicester. Rate for adults has been rising since 2020, from 6% to 18% in 2022, still below the pre-pandemic level. These trends seem to be in line with the comparators, however Rutland rates are generally lower, and recovery seems slower than elsewhere.

Figure 36. The percentage of Rutland population (all ages) accessing NHS primary care dental services from 2019 to 2022, compared to national average and other areas (Source: NHS BSA July 2022).

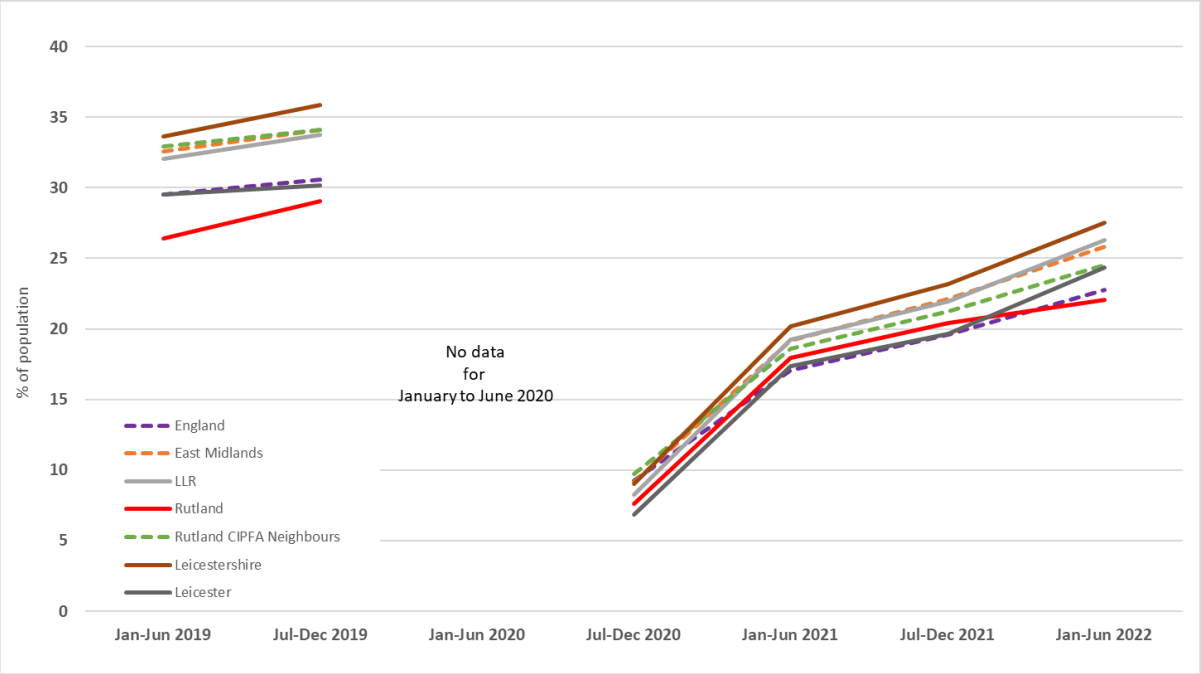


Figure 37. The percentage of 0-17 population of Rutland accessing NHS primary care dental services from 2019 to 2022, compared to national average and other areas (Source: NHS BSA July 2022).

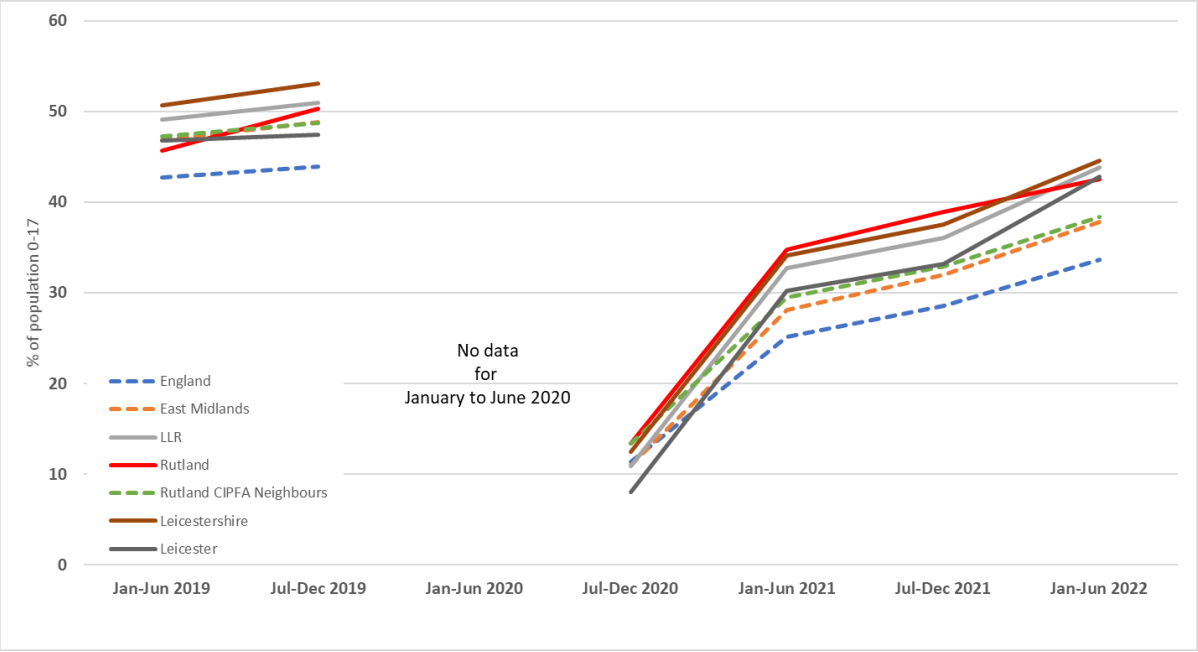
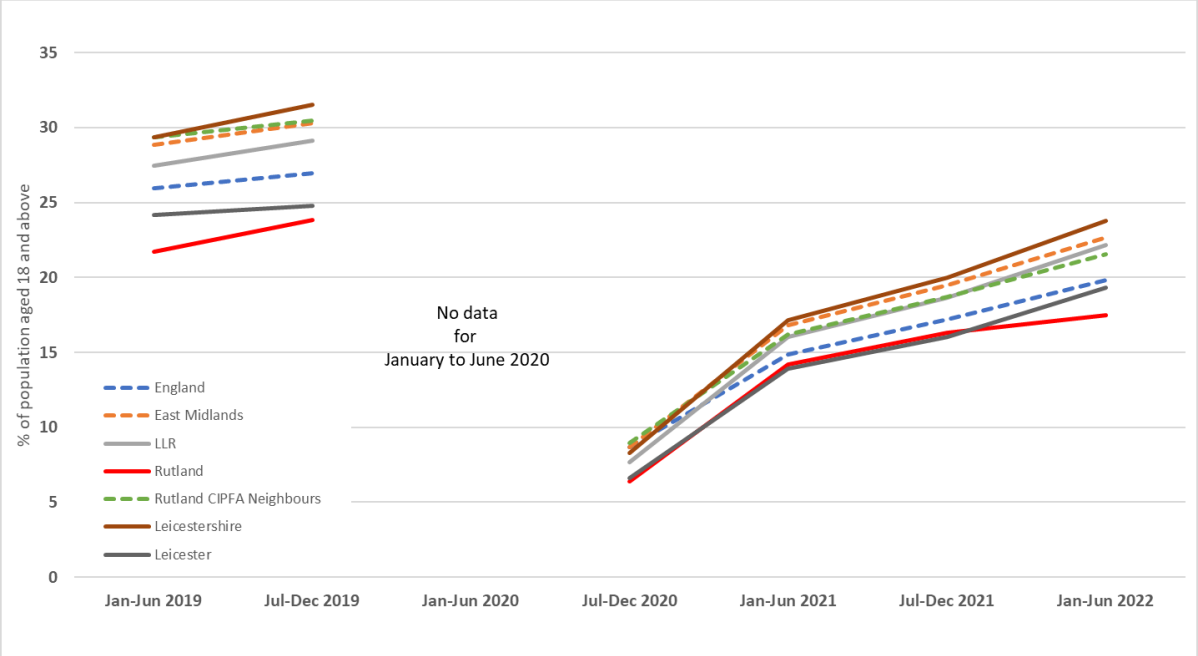


Figure 38. The percentage of adult population of Rutland accessing NHS primary care dental services from 2019 to 2022, compared to national average and other areas (Source: NHS BSA July 2022).



6.3.1.1 Estimated gap in access to pre-pandemic period

It can be estimated that, to achieve the same rates of access in Rutland as were experienced pre-pandemic (July – December 2019), an additional 600 children and 2,100 adults would have to be treated. This calculation adjusts for changing population estimates.

6.3.2 Patient Type

Patients undergoing treatment are classified according to age and exemption status:

- paying adults - pay a charge to the full cost of the treatment
- non-paying adults - exempt or remitted from paying a charge to the full cost of the treatment
- children – free NHS treatment for all 0–17-year-olds

Common reasons for exemption for adults are:

- in full-time education
- pregnant or mother of a baby in the year before treatment starts
- NHS inpatient (treatment by a hospital dentist) or outpatient

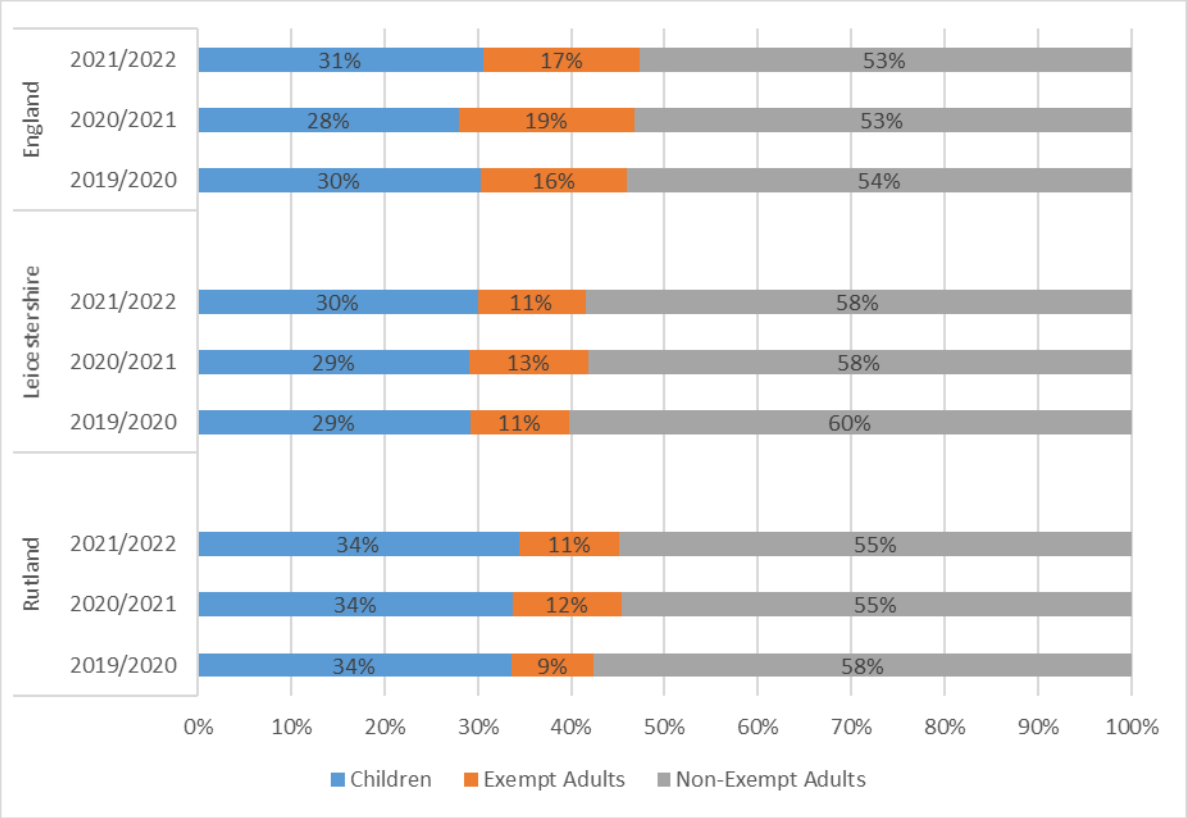
- on income support, pension credit or other financial support schemes

Compared to the national average, there were proportionately more courses of treatment for children in Rutland (e.g., 34% vs 31% for England in 2021/22), and less for non-paying (exempt) adults (11% vs 17% for England), with these differentials less pronounced for Leicestershire as comparison (Figure 39).

These findings are undoubtedly affected by the COVID-19 pandemic, with the numbers of treatments significantly lower in 2020/21 across all categories of patients, and a small proportional increase in treatment of children in that year (details in Appendix Table 3).

For the commissioning area (LLR East – 03W), in the last quarter of 2021/22 (March 2022), the proportions were 30.8% children, 10% exempt adults and 59.2% fee-paying adults, comparable to Leicestershire.

Figure 39. NHS dental treatment for Rutland residents by patient type in the last 3 financial years (Source: NHS BSA)

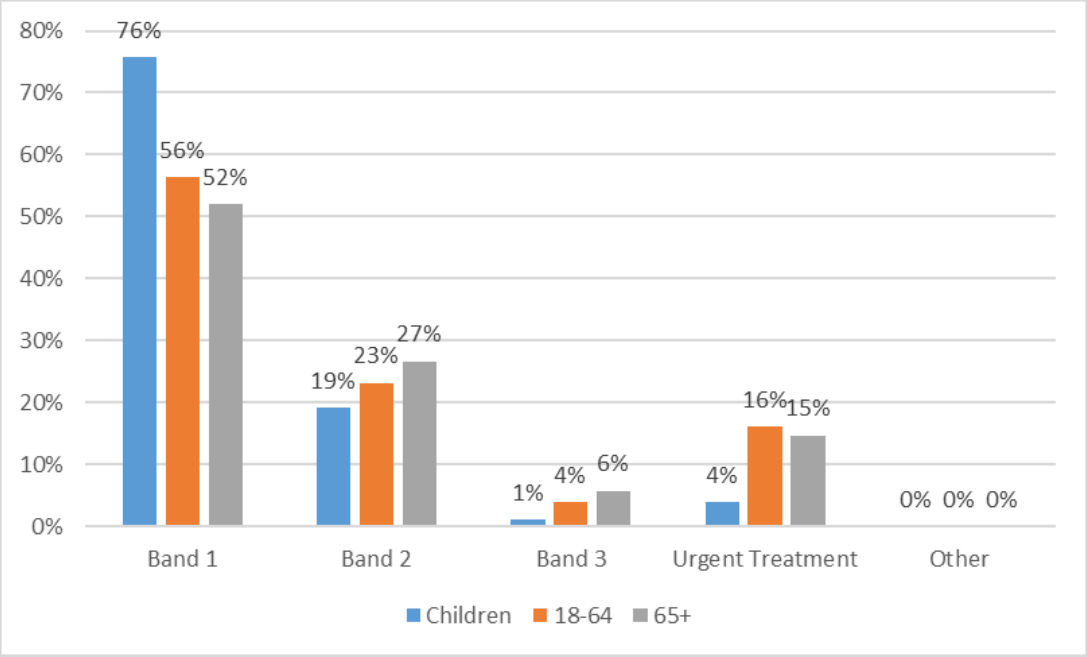


6.3.3 Treatment Bands

Over three quarters (76%) of treatments for Rutland's children are band 1 (e.g., examination, advice or preventative treatment, such as fluoride varnish or fissure sealant), while 19% were band 2 treatments, and only 4% activity was urgent (Figure 40).

For comparison, the national (England) proportions for children in 2021/22 were 70% in band 1, 22% in band 2 and 6% urgent, thus Rutland has relatively more band 1 activity and less band 2 or urgent treatments.

Figure 40. Courses of treatment for Rutland residents in 2021/22 by treatment band (% claims in age group) (Source: NHS BSA).



6.3.4 Urgent Treatment

In the last three years, children had 5% of urgent treatment, working age adults 16% and older adults 14% (Table 7). There was little variation between the MSOAs, and no obvious relationship with deprivation in MSOAs, although the deprivation gradient in Rutland, as defined by the IMD 2019, is generally not wide enough to show such differences reliably.

Table 7. Rates of urgent dental treatment in main age groups in Rutland in the three years from 2019/20 to 2021/22 (Source: NHS BSA 2022)

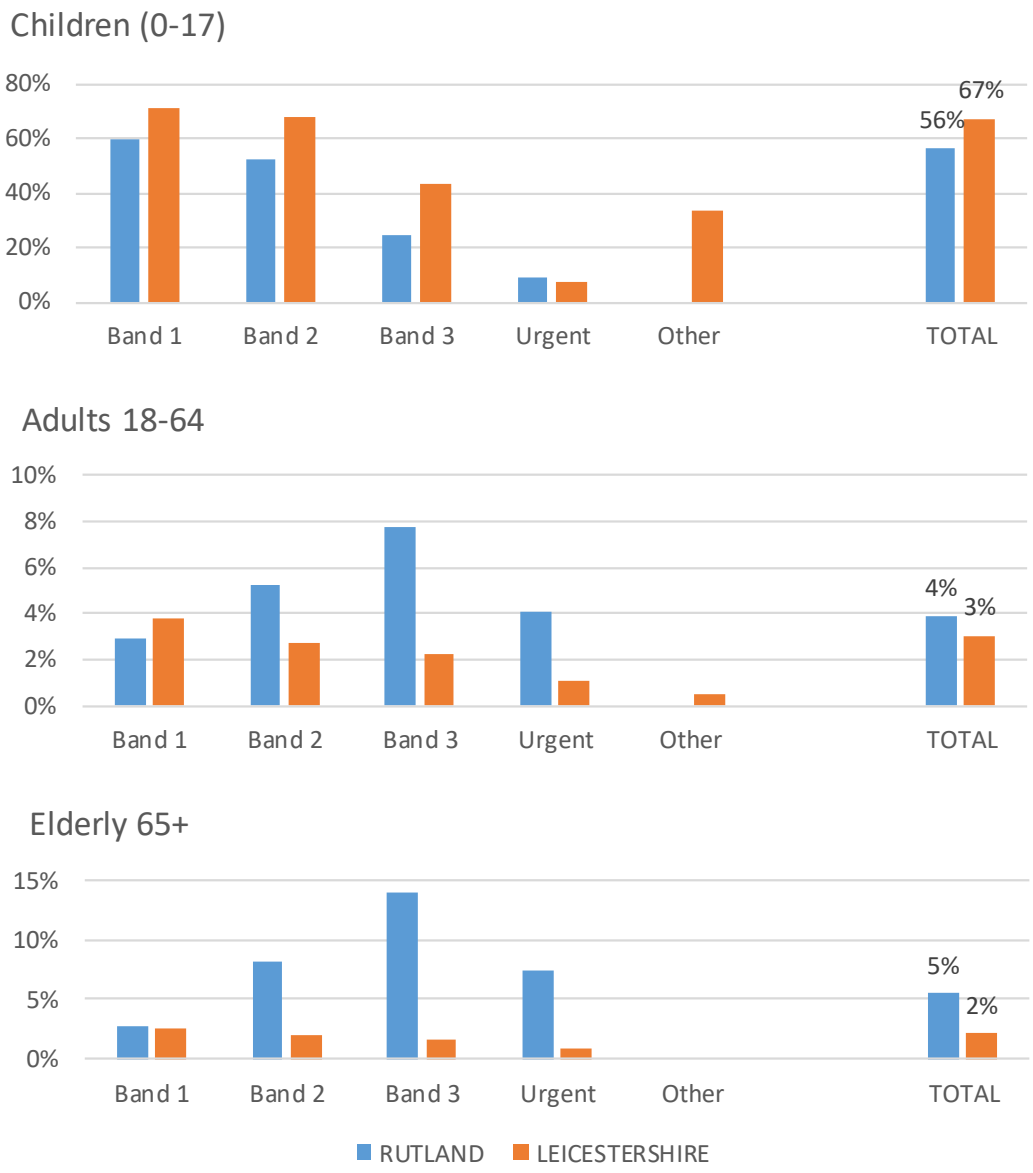
MSOA	IMD score	0-17		18-64		65+	
		No	%	No	%	No	%
Market Overton, Cottesmore & Empingham	10	140	4%	708	19%	257	14%
Oakham West, Langham & Whissendine	8.9	174	4%	766	15%	209	11%
Oakham East	5.7	171	5%	633	15%	289	13%
Ketton, Ryhall & Luffenham	7.6	148	4%	813	14%	512	16%
Uppingham, Lyddington & Braunston	9.8	171	5%	739	17%	370	16%
RUTLAND TOTAL		**17,662**	**5%**	**3,659**	**16%**	**1,637**	**14%**

6.3.5 Treatments including fluoride varnish

Both fluoride varnish (FV) and fissure sealants are primary preventative measures. The first involves fluoride preparation applied to the teeth surface, the second application of sealant material to the pit and fissure systems. FV treatment is an effective treatment in children under the age of 17.

In 2021/22, fluoride varnish treatment was part of a 56% of claims for children, 4% and 5% for adults. For children, the proportion of FV was lower than in Leicestershire (67%) but higher than the average for England (53.8%). For all adults (ages 18 +), 4.4% of treatments were FV in Rutland, which is higher than in Leicestershire (2.8%) and higher than England (2.6%) (Figure 41).

Figure 41. Fluoride Varnish Claims as percentage of all claims by treatment band and age group for Rutland and Leicestershire in 2021/22) (Source: NHS BSA 2022)



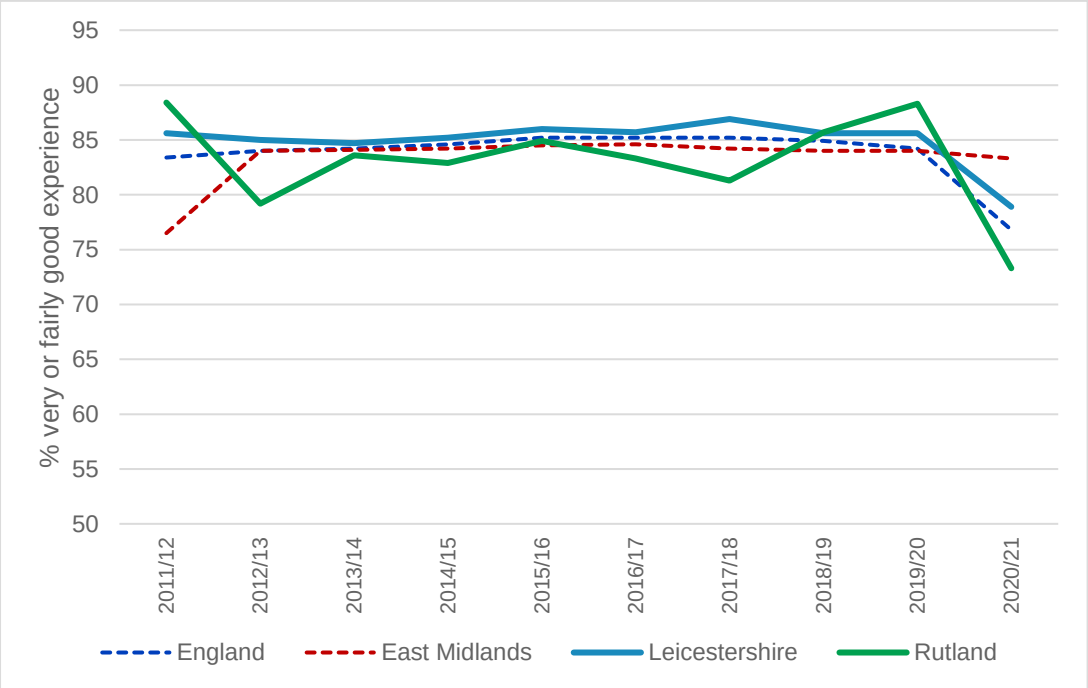
6.4 Patient Experience

Patient experience of the NHS dental services are published nationally as part the NHS Outcomes Framework (indicator 4a.iii) [35]. The latest publication (2022) reported on data for the period 2011/12 to 2020/21. Data collected through the GP Patient Survey.

The Framework reports the percentage of people describing a 'very good' or 'fairly good' experience of NHS dental services, weighted for design and non-response, with breakdown into several population groups.

In line with the national (but not the East Midlands') trend, there was a fall in good/fairly good patient experience in 2020/01 (from about 85% in previous years to 78%), more pronounced in Rutland (dropped below 75%) than in Leicestershire (Figure 42 below).

Figure 42. Trends in patient experience (Source: NHS Digital 2022)



7 Oral Health Improvement

Local authorities (LAs) have a statutory responsibility for oral health improvement as part of their overall responsibility for public health. LAs role includes undertaking health needs assessment and the commissioning of health improvement programmes, as appropriate to local needs. LAs also have a collaborative role in evidence-based planning and evaluation of services, and assessment of oral health inequalities. Dental public health consultants, working for OHID (Office for Health Improvement & Disparities), provide expert advice to local authorities, NHSE, Healthwatch and other partners.

7.1 Evidence for Public Health Interventions

Guidance on what works in oral health promotion is provided by Commissioning Better Oral Health for Children and Young People[36] and Oral Health Improvement for Local Authority and Partners[37]. Generally, the guidance recommends a population approach with advice and actions for all, with additional interventions aimed at those at higher risk of developing

disease, with many different approaches and options available. A range of possible approaches are summarised in the upstream/downstream model (Figure 43) of oral health promotion[38]. Clinical intervention and individual dental health education are the lowest level, with community level interventions in the middle, and large-scale, regional or national, measures at the top.

Figure 43. Upstream/downstream model of oral health promotion

Source: Watt (2007)

Because oral diseases share many risk factors with other common conditions, including cancer and cardiovascular disease, as described in Chapter 3 (Who is at Risk and Why?), a common risk factor approach can be very effective for health improvement.

Delivering Better Oral Health: An Evidence-Based Toolkit for Prevention[39] provides detailed evidence-based, age-specific guidance for oral health care providers and commissioners.

Universal measures, underpinned by strong evidence include:

- Breastfeeding - supporting mothers to breastfeed exclusively for the first 6 months of a baby's life.
- Children - brushing or supervised toothbrushing by parents/carers
- Brushing all tooth surfaces twice daily with a fluoridated toothpaste (manual or powered toothbrush) and as soon as children are able, spit out after brushing rather than rinse
- 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

- Application of fluoride varnish in a clinical setting from age 3 years and applied twice yearly
- For children aged 7+ and adults: fluoridated toothpaste (1,350 – 1,500 ppm fluoride)
- Reduction in the frequency and amount of sugary food and drinks
- Tobacco and alcohol - very brief advice (Ask, Advise, Act).
- Fluoridation of public water supplies

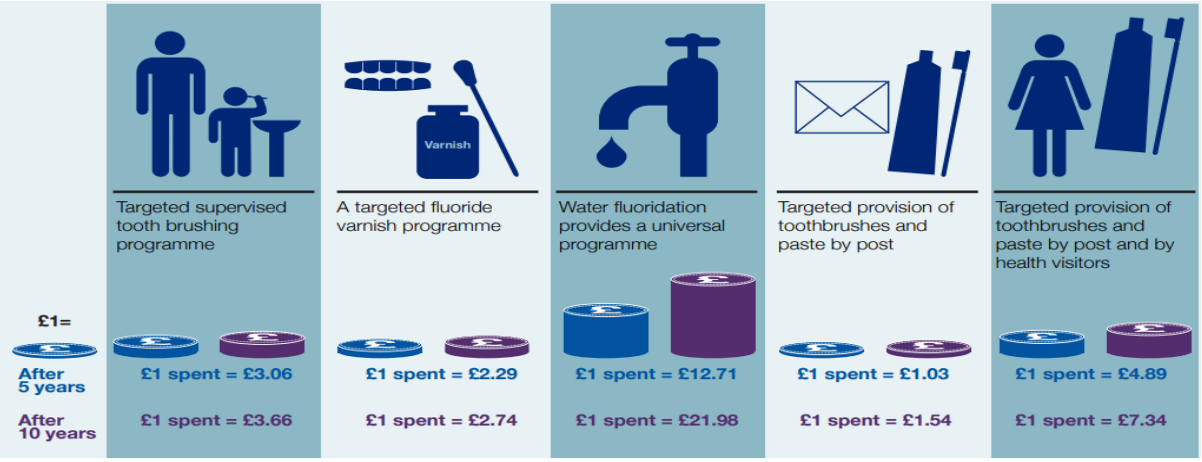
Targeted, evidenced measures include:

- Shortened recall interval based on dental caries risk
- For children aged 0-6 years at high risk of dental decay:
    - using toothpaste containing 1,350-1,500 ppm fluoride
    - application of fluoride varnish to teeth two or more times a year
- For children aged 7+ years and adults at high risk of dental decay:
    - using a fluoride mouth rinse daily at a different time to brushing
    - resin sealant application to permanent teeth on eruption
    - fluoride varnish application to teeth two or more times a year
- For those 10+ years with high risk of dental decay:
    - using 2,800 ppm fluoride toothpaste
- For those 16+ years with high risk of dental decay:
    - using either 2,800 ppm or 5,000 ppm fluoride toothpaste
    - daily fluoride rinse
- For all children and adults with high risk of dental decay:
    - dietary advice and assistance in adopting good dietary practice
    - supporting toothbrushing, where required
- For adults with high risk of dental decay – application of fluoride varnish to teeth two times a year
- For those who smoke - a combination of behavioural support and medication, as appropriate
- Community-based fluoride varnish programmes
- Supervised tooth brushing in targeted childhood settings
- Distribution of toothbrushes and toothpaste (i.e. postal or through health visitors)

7.1.1 Return on Investment (ROI)

Water fluoridation gives highest return on investment (£22 per £1 after 10 years, Figure 44), followed by targeted provision of toothbrushes and toothpaste by health visitors (£7.4), with other measures relatively less effective at population level. Except for targeted fluoride varnish programme (NHSE), all these interventions are part of oral health promotion for 0-19s.

Figure 44 Public health interventions - return on investment



Fluoridated water is currently supplied to 10% of England's population; Rutland is not included. The new Health and Care Act 2022 is expected to centralise the responsibility for water fluoridisation decisions (currently within LA remit) with a view to level up the existing oral health inequalities.

Fluoride varnish application is recommended twice a year for all children above the age of three, more often in those at increased risk of decay (see above). It offers an increased level of protection from decay, in addition to regular toothbrushing and is a free NHS service to all children. In 2021/22, Rutland had a significantly lower rate of fluoride varnish for children 0-17, compared to Leicestershire average – 48.2% against 57.4% (Figure 41), this is despite a similar overall level of access for children (measured as all FP17 claims - 85.8% and 85.3%, respectively).

7.2 Oral Health Promotion in Rutland – Current and Future Initiatives

Up to 31st August 2022 oral health promotion was a part of the 0-19 Healthy Child Programme provided by Leicestershire partnerships trust (LPT). Currently, the programme is separated into 0-11 and 11+ services, the former of which is still provided by LPT. Oral health is a priority of the health visiting programme of the 0-11 service where health visitors are able to give advice, information and sign posting for parents.

There is an *Oral Health Promotion Partnership Board* across Leicester, Leicestershire and Rutland (LLR). Public Health represent Rutland on this board. Non-recurrent monies from NHS England were made available for the area and this is held by Leicester City on behalf of

all three local authority areas. The Partnership Board make the decisions about the spend of the money and are currently looking at the following initiatives across LLR:

- £150K (recurrent for two years) to support oral health improvement initiatives and activities;
- £40K (non-recurrent) to support purchase and distribution of toothbrushing packs to food banks and other venues;
- £10K (non-recurrent) to enable each local authority's oral health promotion service to expand and improve their resources;
- £10K (non-recurrent) to provide each child with a toothbrushing pack as part of the dental epidemiology survey;
- They are looking at using resources to support care homes in formulating what the minimum oral health promotion offer should be in their establishments and would require links into dentistry.
- There is an intention to recruit to two posts, one of which will cover Leicestershire and Rutland to embed Oral Health promotion into policies and link into the Make Every Contact Count programme.

Public health is responsible for commissioning the annual *Dental Epidemiology Fieldwork survey* which is a statutory function. The fieldwork survey focuses on the dental health of five-year-olds every other year with the intervening year being another selected age group. This could be another children's age group or working aged adults. In the conducting of the dental examinations for the survey the provider will recommend whether dental treatment is required and the urgency of such treatment. The provider is able to fast track into the community special care dental services as they also provide that service.

Rutland currently do not have an oral health promotion service or a supervised tooth brushing programme. Health visitors provide oral health advice, but do not distribute toothbrushes or toothpaste. However, public health for Leicestershire and Rutland is working with other LLR partners to determine such a programme through additional joint funding. This would mean extending the offer for oral health promotion that is provided by the Health Improvement Team of Leicestershire to cover Rutland as well and will offer the following components:

1. Supervised toothbrushing programmes in Early Years Settings in Rutland
2. Oral Health training for professionals
3. Oral Health campaigns

8 Identified Gaps and Recommendations

This assessment demonstrated that, although on average oral health of Rutland's population appears to be relatively good when compared to the national average or comparator local authority areas, there are some specific concerns for individual population subgroups and there are substantial problems with access to NHS dental services.

Demographic findings point at a higher than average, and rising, proportion of elderly population. Many of these older residents live in rural areas, which predominate in Rutland, experiencing isolation and poor access to services. Although on average, deprivation in the county is relatively low, there are strong indications of poor access to services, including health services, and detectable barriers to housing. These factors need to be taken into consideration when commissioning new services and health promotion programmes.

Among the youngest children (according to the 2020 dental survey of the 3-year-olds) there was a higher-than-expected rate of decay in incisor teeth in which could indicate poor infant feeding practices, particularly excessive consumption of sugary drinks. Although statistically significant, this finding is based on a very small survey sample size and has to be treated with caution. However, a further investigation and a targeted health promotion programme may be indicated for the youngest children.

Currently, there is no oral health promotion service or a supervised tooth brushing programme in Rutland; the health visitors provide oral health advice, but do not distribute toothbrushes or toothpaste.

There are substantial problems with access to dental care. At the time of this investigation, none within the 16-mile radius (whether local to Rutland or cross-border) was accepting new adult patients and only one in ten (5 out of 50) were accepting new patients under 18. It is very likely that access issues affect some groups disproportionately and populations such as families of military personnel stationed in Rutland, vulnerable elderly or disabled, may have particular difficulties. Emerging barriers to accessing NHS dental service are not unique to Rutland - list backlogs and staff shortages have been highlighted regionally as growing issues in NHS dental service.

The patterns of 'access rates' within Rutland would indicate significant cross-border flows of patients, but details on where the care is provided are unknown. Access rates in the first part of 2022 were lagging behind the national rates for the adult patients, with some indication than adult men accessed services less often than women.

Measured through the GP Patient Survey, the levels of satisfaction with NHS dental service have dropped in 2020/21 to below 75%, 10% below the regional average.

There are some important caveats and limitations relating to available data on oral health. For many routinely collected oral health indicators, the samples and numbers of observations are relatively small in Rutland. Thus, any observations or conclusions must be treated with caution, as they are subject to statistical uncertainty and/or temporal fluctuation. For the same reason, it is very difficult to detect any variation (or correlation with known health determinants) within Rutland. It is also important to note that many of the collected oral health indicators are subject to a substantial time lag, they are usually published with one or two-year delay. In addition, this investigation covers the time of the COVID-19 pandemic which makes any interpretation of longer-term health needs (and outcomes) difficult and may affect our understanding of patterns of service use, urgent.

Based on the findings of this assessment the following recommendations are suggested for the commissioners of NHS Dental Services and Local Authority:

- Dental access issues should be investigated further, and steps taken to improve access locally, with focus on:
    - the elderly, particularly those living alone and in residential homes
    - men of working age
    - vulnerable groups, including families of military personnel
- Provide up-to-date information on available NHS Dentistry
- Investigate current pattern of service use, particularly cross-border flows and the use of private dentistry
- Consider targeted health promotion for the elderly
- Consider a targeted health promotion for youngest children (0 to 3-year-olds)
- Consider increasing level of fluoridation programmes across Rutland, including promotion of fluoride varnish and toothpaste.
- Consider the feasibility of water fluoridation in Rutland, aligned to any upcoming changes to the Health and Care Act 2022 regarding fluoridation responsibilities for local areas.
- Commission health promotion service or supervised toothbrushing to Early Years Settings in Rutland

GLOSSARY OF TERMS

BMI = Body Mass Index

BSA: Business Services Authority

CCG: Clinical Commissioning Group

CDS = Community Dental Service

CI = Confidence Interval

CIN = Children in Need

CIPFA = Chartered Institute of Public Finance and Accountancy

CLA = Children Looked After

DfE = Department for Education

FV = Fluoride Varnish

HES = Hospital Episodes Statistics

HSCIC = Health and Social Care Information Centre

ICB = Integrated Commissioning Board

IMOS = Intermediate Minor Oral Surgery

IoD = Index of Deprivation

LA = Local Authority

LAIT = Local Authority Interactive Tool

LLR = Leicester, Leicestershire and Rutland

LSOA = Lower Super Output Area

MoD = Ministry of Defence

MSOA = Middle Super Output Area

NDEP = National Dental Epidemiology Programme

NHS BSA = NHS Business Services Authority

NHSE = NHS England

OHID = Office for Health Improvement and Disparities

ONS: Office for National Statistics

PHE = Public Health England

SEND = Special Educational Needs and Disabilities

SHAPE = Strategic Health Asset Planning and Evaluation

UDAs = Units of Dental Activity

APPENDIX

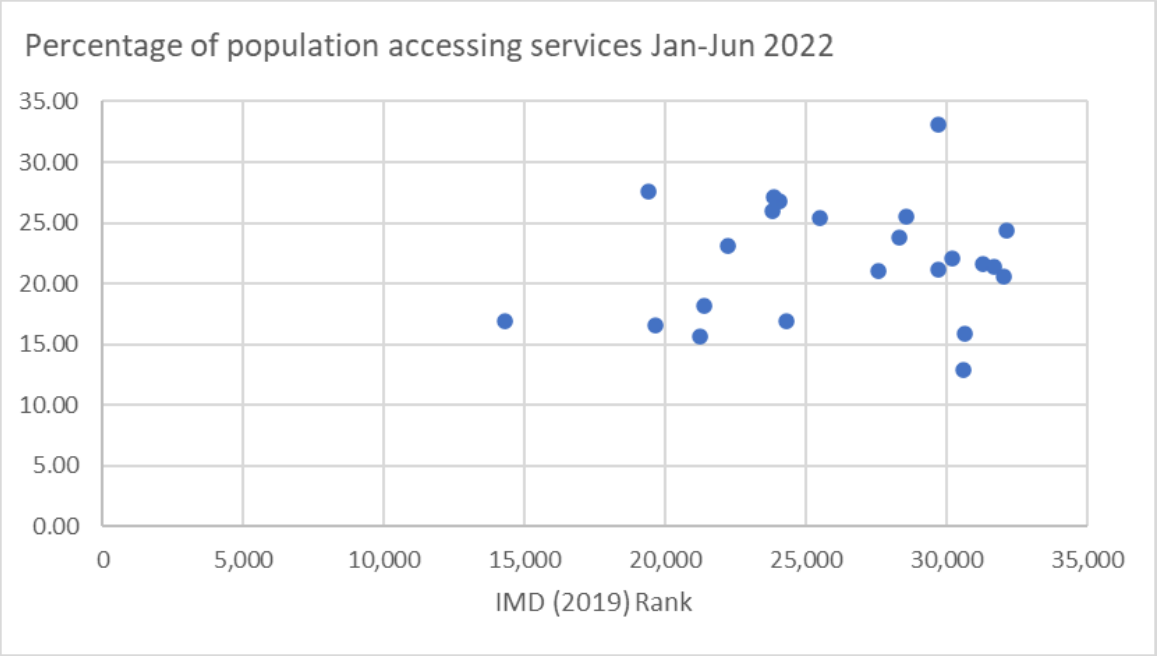
Appendix Table 1 Measures of oral health among 3-year-old children - Rutland, its statistical (*) l and local neighbours (**), as well as England and the East Midlands (Source: NDEP 2020)

	Rutland	North Yorkshire*	West Berkshire*	Leicester	Leicestershire**	East Midlands	England
Mean number of teeth with experience of dental decay in those examined	0.3	0.2	nk	0.5	0.2	0.3	0.3
Mean number of untreated dental decay in those examined	0.3	0.1	nk	0.4	0.2	0.2	0.3
Prevalence (%) of experience of dental decay	8.4	9.8	nk	16.1	8.5	9.7	10.7
Mean number of teeth with experience of dental decay in those with decay experience	nk	1.8	nk	3	2.7	2.8	2.9
Mean number of teeth with untreated dental decay in those with decay experience	nk	1.5	nk	2.8	2.3	2.4	2.6
Mean number of teeth missing due to decay in those with decay experience	nk	0.1	nk	0.1	0.2	0.3	0.2
% of 3-year-old with experience of dental decay affecting incisor teeth	8.4	0.8	nk	7.2	2.4	2.8	3.4
% of 3-year-old children with substantial amount of plaque visible	0	0.5	nk	1.2	0.5	0.6	1.9
% of 3-year-old children with pufa	0	1.5	nk	0.5	0.3	0.3	0.4

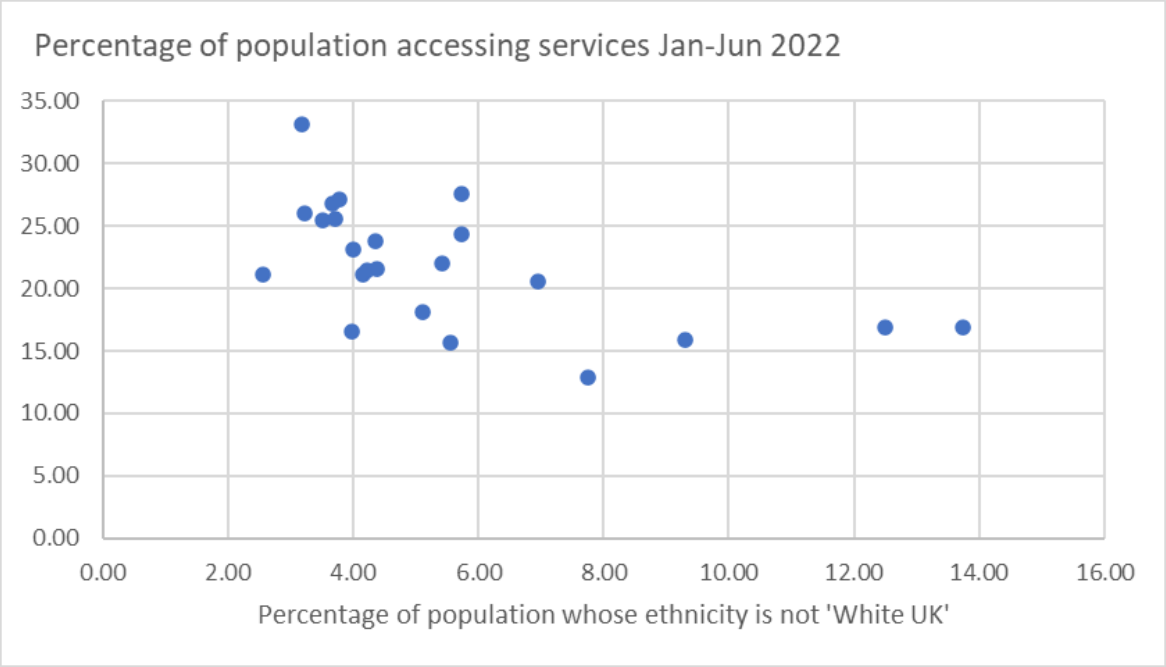
Appendix Table 2 Measures of oral health among 5-year-old children - Rutland, its statistical (*) l and local neighbours (**), as well as England and the East Midlands (Source: NDEP 2019)

	Rutland	**North Yorkshire***	**West Berkshire***	**Leicester**	**Leicestershire****	**East Midlands**	**England**
Prevalence of experience of dental decay	25.3%	20.0%	14.7	38.60%	18.2%	24.7%	23.4%
Mean number of teeth with experience of dental decay	0.7	0.6	0.5	1.6	0.5	0.8	0.8
Mean number of teeth with experience of decay in those with experience of dental decay	2.8	2.8	2.8	4.1	2.8	3.4	3.4
Mean number of decayed teeth in those with experience of dental decay	2.5	2.1	3	3.3	2.3	2.7	2.7
Proportion with active decay	24.6%	17.6%	12.3%	34.7%	15.7%	21.7%	20.4%
Proportion with experience of tooth extraction	0.8%	1.7%	0.4%	3.3%	1.0%	1.8%	2.2%
Proportion with dental abscess	0.8%	0.5%	2.5%	2.9%	1.2%	1.6%	1.0%
Proportion with teeth decayed into pulp	1.9%	2.1%	3.1%	8.5%	2.2%	4.1%	3.3%
Proportion with decay affecting incisors	2.0%	3.6%	5.1%	11.4%	3.0%	4.6%	5.2%
Proportion with high levels of plaque present on upper front teeth	0.9%	0.3%	4.4%	0.9%	0.5%	0.4%	1.2%

Appendix Figure 1 Correlation between deprivation and access to NHS service across Rutland LSOAs



Appendix Figure 2 Correlation between ethnicity and access to NHS service across Rutland LSOAs



Appendix Table 3 Courses of treatment by patient type in Rutland Leicestershire and England, over the course of the last three years (NHS BSA 2022)

	Year	Children (0-17)		Exempt Adults		Non-Exempt Adults	
		Number	%	Number	%	Number	%
Rutland	2019/2020	5,173	33.2%	1,430	9.2%	9,212	59.1%
	2020/2021	2,306	34.8%	734	11.1%	3,623	54.7%
	2021/2022	4,341	34.6%	1,328	10.6%	7,018	55.9%
Leicestershire	2019/2020	97,545	28.3%	36,459	10.6%	210,440	61.1%
	2020/2021	38,791	29.6%	15,322	11.7%	77,009	58.7%
	2021/2022	77,783	29.6%	28,714	10.9%	155,934	59.4%
England	2019/2020	11,628,279	30.3%	6,027,299	15.7%	20,725,595	54.0%
	2020/2021	3,345,347	27.9%	2,260,561	18.9%	6,378,744	53.2%
	2021/2022	8,070,100	30.6%	4,390,201	16.7%	13,902,459	52.7%

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