



Public Health
England

Protecting and improving the nation's health

National Dental Epidemiology Programme for England: oral health survey of 3-year-old children 2020

A report on the prevalence and severity
of dental decay
Version 2

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Executive summary

This report presents summarised results from the Public Health England (PHE) National Dental Epidemiology Programme (NDEP) survey of 3-year-old children, 2019 to 2020.¹ Data collection was curtailed by the outbreak of the coronavirus (COVID-19) infection and the closure (except to children of key workers) of all schools and nurseries in England in March 2020. Therefore the survey had to be terminated and the final 3 months of data collection were lost. This meant 20 of 151 upper tier and 67 of 314 lower-tier local authorities were unable to return useable data. Additionally 30 upper-tier local authorities did not commission the survey. Very few areas reached the minimum sample size of 250 children and the results should be interpreted with caution, particularly when making comparisons with other surveys.

However, nationally 19,479 3-year-olds participated in the survey allowing estimates of prevalence and severity of disease experience at national and regional levels and for the majority of upper-tier local authorities. Experience of dental decay includes decayed teeth as well as teeth missing or filled due to decay. Of the 3-year-olds participating in the survey, 10.7% already had experience of dental decay despite having had their back teeth for just 1 or 2 years. Among the 10.7% of children with experience of dental decay, each had on average 3 affected teeth (CI 2.81-3.03)² (at age 3-years, children normally have all 20 primary teeth).

Regional variations existed, with the highest experience of dental decay in northern England. Three-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%). In some local authority areas up to a third of 3-year-olds had experience of dental decay, for example Salford, which had the highest prevalence in England (27.5%).

Children living in the most deprived areas of the country were almost 3 times as likely to have experience of dental decay (16.6%) as those living in the least deprived areas (5.9%). There was also variation in prevalence of experience of dental decay by ethnic group and this was significantly higher in the Other ethnic group³ (20.9%) and the Asian and Asian British ethnic group (18.4%) than other groups.

This is the second national survey undertaken for this age group in England. The first was completed in 2013, also by PHE (1). The findings indicate that the oral health of 3-year-olds has changed little since 2013 when 11.7% had experience of dental decay.

¹ Survey data were collected during the 2019 and 2020 school years.

² All report confidence intervals are the 95% confidence intervals. This is the range of measures in which we can be 95% confident that the true value lies.

³ The ethnicity code set reflects categories used in the 2011 national population census

Local authorities are responsible for improving health, including oral health (2). This report provides baseline and benchmarking data that may be used in joint strategic needs assessments and oral health needs assessments to plan, commission and evaluate oral health improvement interventions and dental services. PHE and the National Institute for Health and Care Excellence have published documents to support local authorities in these activities (3) (4) (5) (6) (7).

Dental decay is largely a preventable disease. Further work to improve oral health and reduce inequalities is needed as by the age of 3-years, 1 in 10 three-year-olds had experience of obvious dental decay and in some areas this was as high as 1 in 4.

Poor oral health impacts on children and families affecting children's ability to eat, smile and socialise and causing pain and infection with days missed at nursery, and for parents work, to attend the dentist and hospital to have teeth out.

Summary results can be found in [Appendix A](#) and [Appendix B](#) of this report. Full tables of results are available from the [oral health collections page](#).

Introduction

This report presents a summary of the results of the oral health survey of 3-year-old children during the 2019 to 2020 school year. This is only the second survey of this particular age group to have been performed in England. The previous one was undertaken in 2012 to 2013. Of particular note is that data collection was curtailed by the outbreak of the coronavirus (COVID-19) infection and the closure (except to children of key workers) of all schools and nurseries in England in March 2020. This meant many lower tier authorities had to terminate the survey before any data was collected or terminate part way through data collection.

Across the UK, standardised and coordinated biennial surveys of child dental health have been conducted since 1985, to standards set by the British Association for the Study of Community Dentistry (BASCD) (8) (9) (10). Gradually, coordinated surveys across the UK have been replaced by individual nations working to their own timetables. This has resulted in high quality, comparable data for use by local, regional and national government and the NHS in planning health services and interventions. It is also crucial in understanding and addressing persistent regional health inequalities. PHE has responsibility for coordinating these surveys in England as part of the National Dental Epidemiology Programme of annual surveys.

The PHE national dental public health team facilitated the survey and worked to BASCD guidance, which helped ensure standardisation of examiners. The responsibility for commissioning the survey lies with upper-tier local authorities, as set out in Statutory Instrument 3094 (2012) (11). Those local authorities that participated commissioned local dental providers to undertake the fieldwork according to a national protocol (12).

Information from the surveys is vital to inform oral health needs assessments at a local level. NHS and local authority commissioners utilise the information as part of the commissioning cycle when planning and evaluating local services and health improvement interventions.

The survey reported here provides information on the prevalence and severity of experience of dental decay in 3-year-old children attending nurseries, both private and state funded, nursery classes attached to schools and playgroups. It has not been possible to include children who do not attend such sites and the possibility for bias from this is acknowledged but cannot be measured as reliable estimates for the numbers of children outwith the sites included in this survey are unavailable.

Method

The survey was undertaken during the 2019 to 2020 academic year. The survey population was children who had reached the age of 3 years but not yet had their fourth birthday on the day of examination. The sampling frame was children attending nurseries (both state-funded and private) and nursery classes attached to schools and playgroups. The sampling unit was local authority boundaries at unitary, metropolitan or lower tier levels. Random samples were drawn for each local authority in England using a method that ensured the sample mirrored the proportions of children attending each type of childcare institution within each local authority. Data was collected by trained and calibrated clinicians who were typically employed by NHS trusts providing community dental services. BASCD standards for sampling, training and calibration of examiners and the clinical examination (8) (9) (10) were applied, as in previous surveys.

A visual-only examination method was used and informed the d_3mft index. This is the standard severity index for teeth with experience of dental decay. It includes teeth with visually obvious decay into dentine, which was the threshold for recording the presence of decay and is indicated by the subscript '3' (d_3t), missing teeth due to decay (mt) and filled teeth due to decay (ft). Visually obvious decay into dentine is the measurement threshold that is widely accepted in the literature for dental surveys, but it provides an underestimate of the true prevalence and severity of disease as it does not capture decay confined to the tooth enamel. The presence and absence of plaque and extensive decay using the pufa index (open pulp (p), traumatic ulceration (u), (f) fistula, (a) abscess) were also recorded.

The protocol also required that written consent from a child's parent or from someone with the competence to give consent on behalf of a child was obtained before any child could participate in the survey.

Data was collected using a tailor-made data collection format in Microsoft Access. Electronic files of the raw, anonymised data were uploaded to a secure folder on a shared network drive by regional dental epidemiology coordinators (DECs). The data was collated, checked and cleaned. Using the home postcodes of the participants, the data was assigned to lower super output areas so that Index of Multiple Deprivation 2019 (IMD 2019) scores could be assigned (13).

Population weighting⁴ was used to calculate estimates of a range of measures of oral health for each local authority. Deprivation scores were used to allow weighting of the data to more closely match the actual distribution of deprivation quintiles⁵ in the source population.

Prevalence of experience of dental decay is presented with confidence limits calculated using the Wilson-Score method. Due to the skewed nature of the data, mean numbers of teeth with experience of dental decay for all children (for trend comparison) and mean numbers for those children with experience of dental decay are presented together with the upper and lower 95% confidence limits. The median number of teeth with experience of dental decay for all children is also presented at national level, together with the interquartile range, in line with good practice for reporting dental epidemiological studies (14). However, the median values at regional and local authority area level are not presented. This is due to the distribution of experience of dental decay in the 3-year-old population where the majority of children have not experienced the disease hence the median values are all zero.

Error bars indicate 95% confidence limits on charts in this report. Confidence intervals were used to assess statistical significance.

Data suppression was applied when there were fewer than 6 children examined to avoid identification of individuals.

⁴ The sampling method used for this survey was childcare settings based and therefore not truly representative of the population of 3-year-old children by Index of Multiple Deprivation (IMD) quintile. Thus, the sample was treated as a stratified random sample, that is, children were selected randomly from each IMD quintile but the sampling probability varied between IMD quintiles. For this reason, IMD-weighted estimates were produced to provide more robust estimates of overall prevalence.

⁵ Deprivation quintiles divide populations into fifths according to distribution of IMD 2019 scores.

Results

Headline results from the survey are presented in this report at national, regional and upper-tier local authority level. Full reporting at lower-tier local authority level was not possible as data was missing for almost half of the local authorities due to the impact of COVID-19. Full tables of results at national, government region, lower and upper-tier local authorities are available from the [oral health collections page](#).

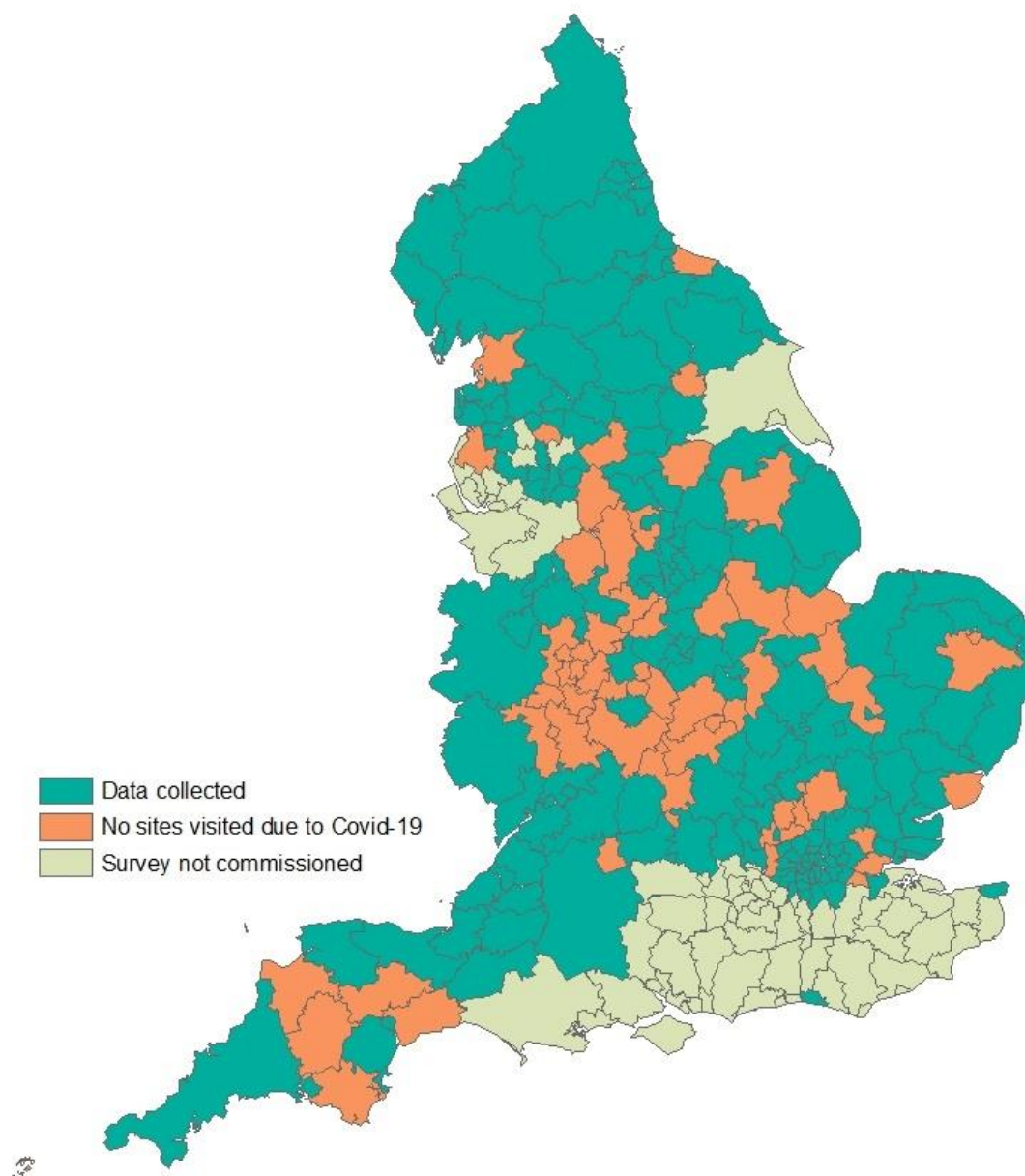
Participation in the survey and impact of COVID-19

Data collection for the survey was planned to run from October 2019 until the end of the school year in July 2020. COVID-19 arrived in the UK in late January 2020. Over the subsequent months, it caused unprecedented upheaval and disruption to the country. On 20 March 2020, it was announced that all schools and childcare settings would close (except to children of key workers) until further notice. Therefore the survey had to be terminated and the final 3 months of data collection were lost.

In total, 121 upper-tier local authorities out of 151 commissioned the survey. Those that did not commission the survey did so for a variety of reasons including an inability to commission a team to undertake the fieldwork. A further 17 upper-tier local authorities did not return any data due to the COVID-19 pandemic and 3 more did not reach the minimum sample size of 30 for results to be reported. This meant estimates were available for 101 upper-tier and 165 out of 314 lower-tier local authorities ([Map 1](#)). Very few lower tier local authorities reached the minimum sample size of 250 children and the results should be interpreted with caution, particularly when making comparisons with other surveys.

It should be noted that the South East region estimates only included data for a quarter of its upper-tier local authorities and the regional level findings should be interpreted with great caution. The North West region was also affected and approximately half of its upper-tier local authorities are not represented in the data.

Map 1: Overview of participation in the 3-year-old survey in England by lower-tier local authority, 2019 to 2020.



A total of 19,479 participants were linked to geographical areas and included in the final analysis, which represented 3% of the population of this age cohort. This was a considerable decrease in sample size from 2013, when 53,814 children (8% of the population) were examined. The main reason for the smaller number of participants was the impact of the COVID-19 pandemic. Additionally, 24 fewer upper-tier local authorities commissioned the survey than in 2012 to 2013.

The proportion of 3-year-olds who participated in the survey varied at regional level from 6% in the East Midlands to 1% in the South East and West Midlands. At upper-tier local authority level the range was from 25% in Hartlepool to 0.7% in Manchester.

In the areas where there was at least 1 examination, the proportion of consent sought children who were examined was approximately 44%, ranging from 65% in the East of England to 16% in the South West. It is likely that non-response bias applies and should be considered when drawing conclusions.

Approximately 9% of children with consent refused to take part on the day of examination. Absenteeism accounted for a further loss of approximately 11% of consented children.

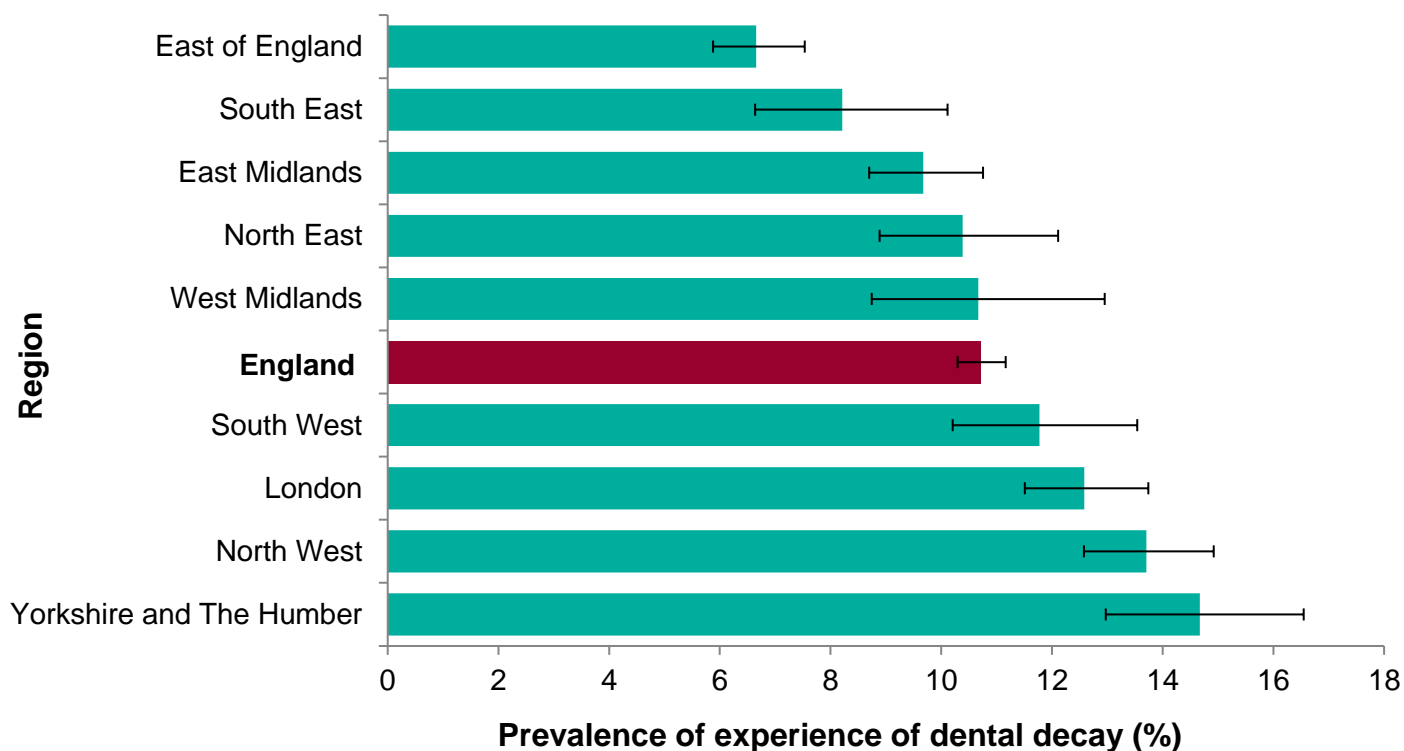
Of the children examined, 73.8% were from a white ethnic background, 8.8% from an Asian or Asian British background, 5.7% from a mixed ethnic background, 3.8% from a Black or Black British ethnic background, 2.1% from an 'other' ethnic background and 5.8% no ethnic background was provided. These proportions were similar to those of the general population of 3-year-olds in England.

The deprivation profile of the data collected was also similar to that of the general population of 3-year-olds in England.

Prevalence of experience of dental decay in 3-year-olds

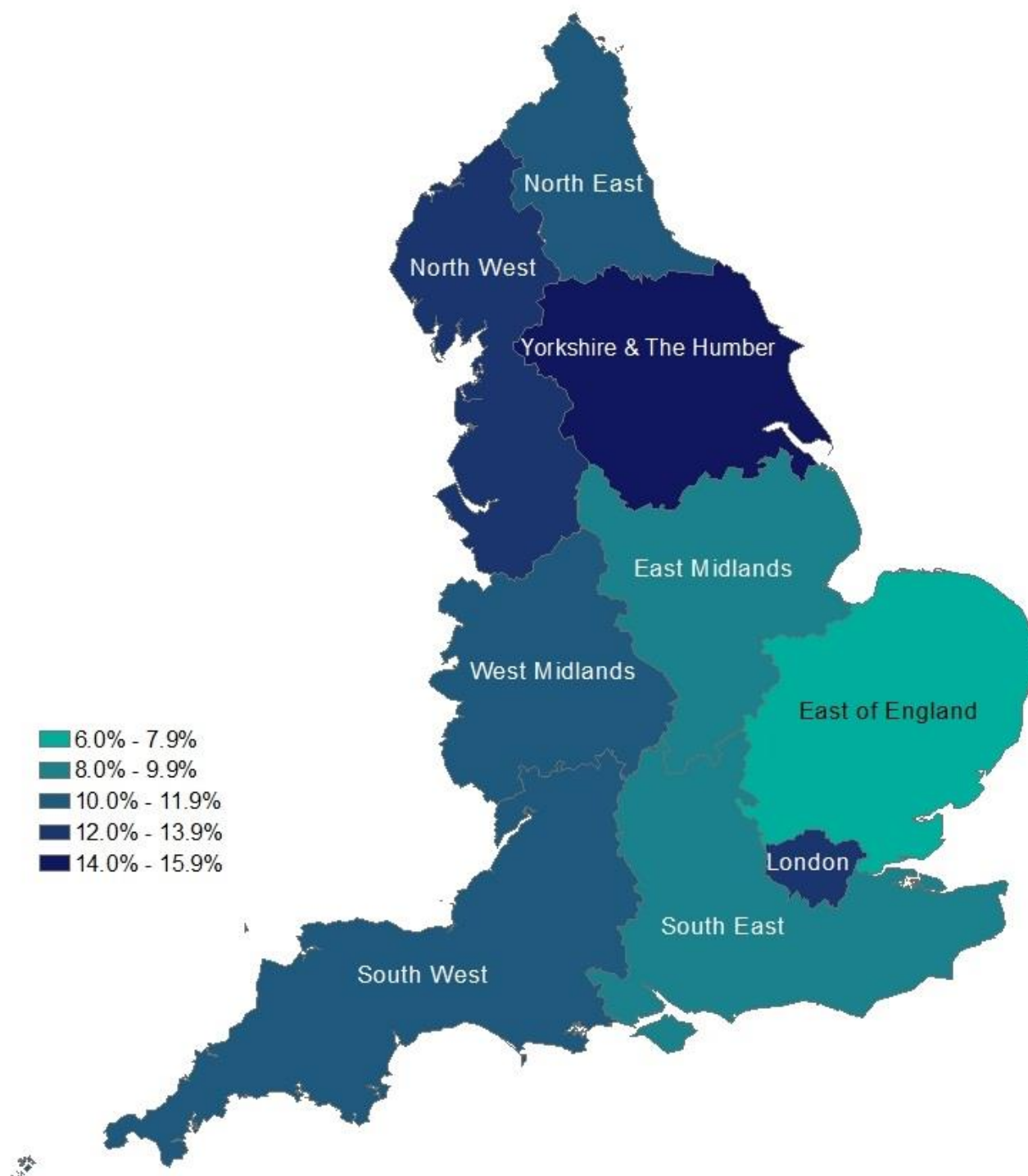
In England, 10.7% of 3-year-old children surveyed had experience of dental decay. Prevalence varied across the regions from 6.7% in the East of England to 14.7% in Yorkshire and The Humber ([Figure 1](#); [Map 2](#)). Some regional values were disproportionately affected by limited participation in the survey, for example, almost three quarters of upper tier local authorities in the South East did not participate in the survey.

Figure 1: Prevalence of experience of dental decay in 3-year-olds in England by region, 2020.



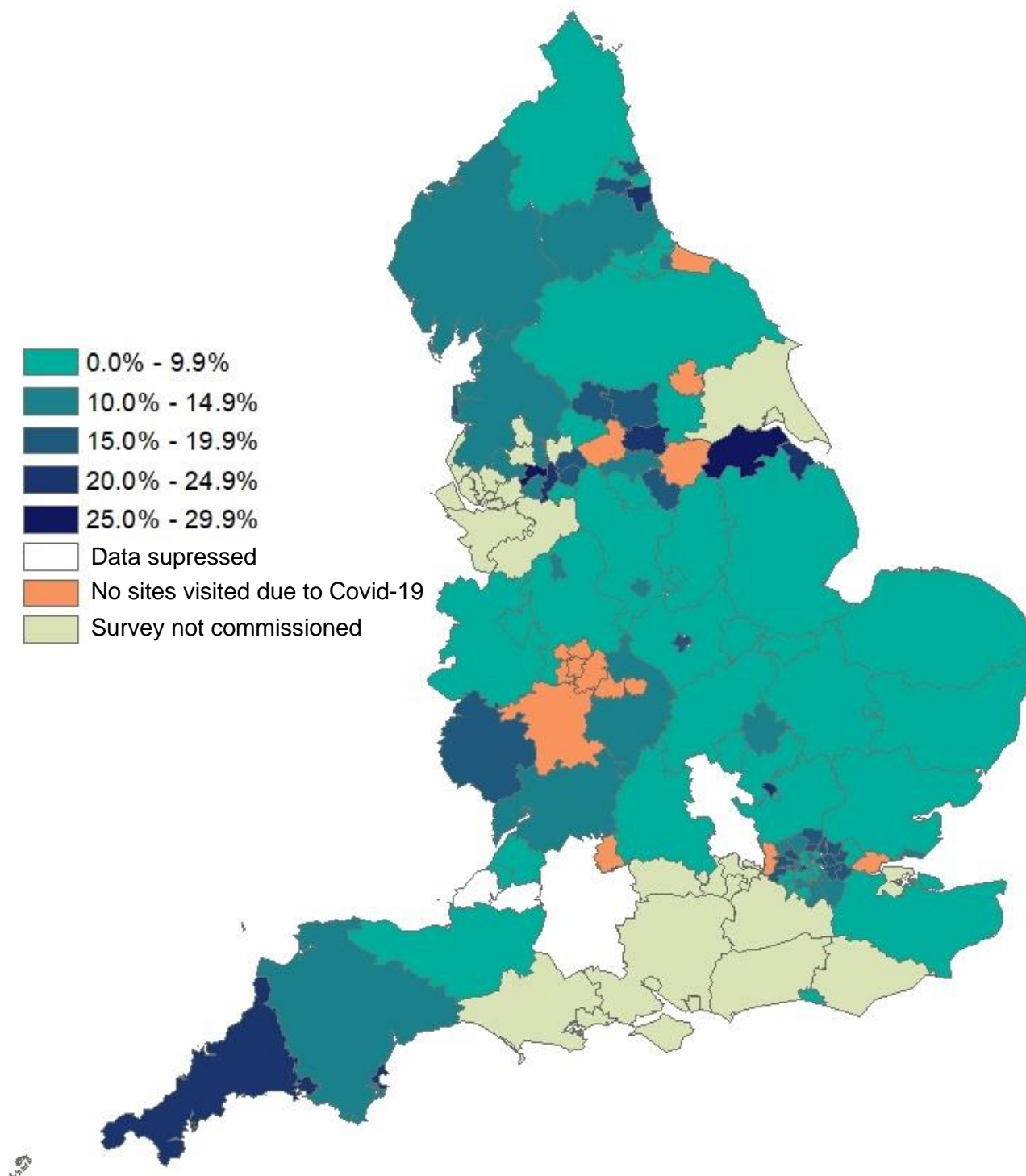
Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

Map 2: Prevalence of experience of dental decay in 3-year-olds in England by region, 2020.



At upper-tier local authority level there were wider variations in prevalence of experience of dental decay, ranging from 0.9% in Sheffield to 27.5% in Salford ([Map 3](#)).

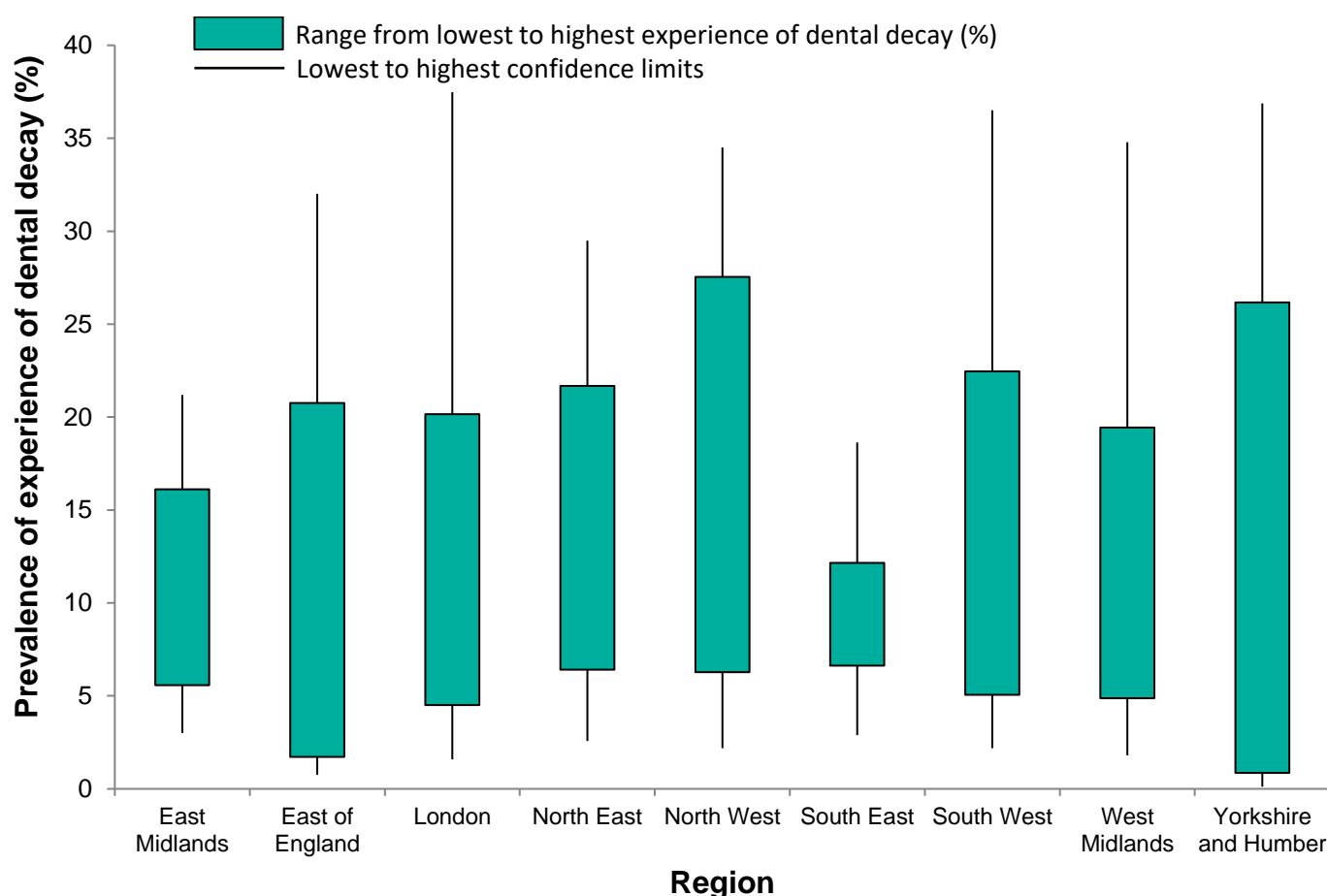
Map 3: Prevalence of experience of dental decay in 3-year-olds in England by upper-tier local authority, 2020.



Variations in prevalence of experience of dental decay in 3-year-olds

Within regions there are differing levels of variation in the proportion of children with experience of dental decay between local authority areas (Figure 2). The widest level of variation was found in Yorkshire and Humber, where the local authority area with the lowest prevalence had 0.9% of children having experience of dental decay and the highest with 26.2% of children having experience of dental decay. In the South East the range was narrower from 6.6% to 12.2%. However, few local authorities commissioned the survey in the South East and this may not reflect the true picture.

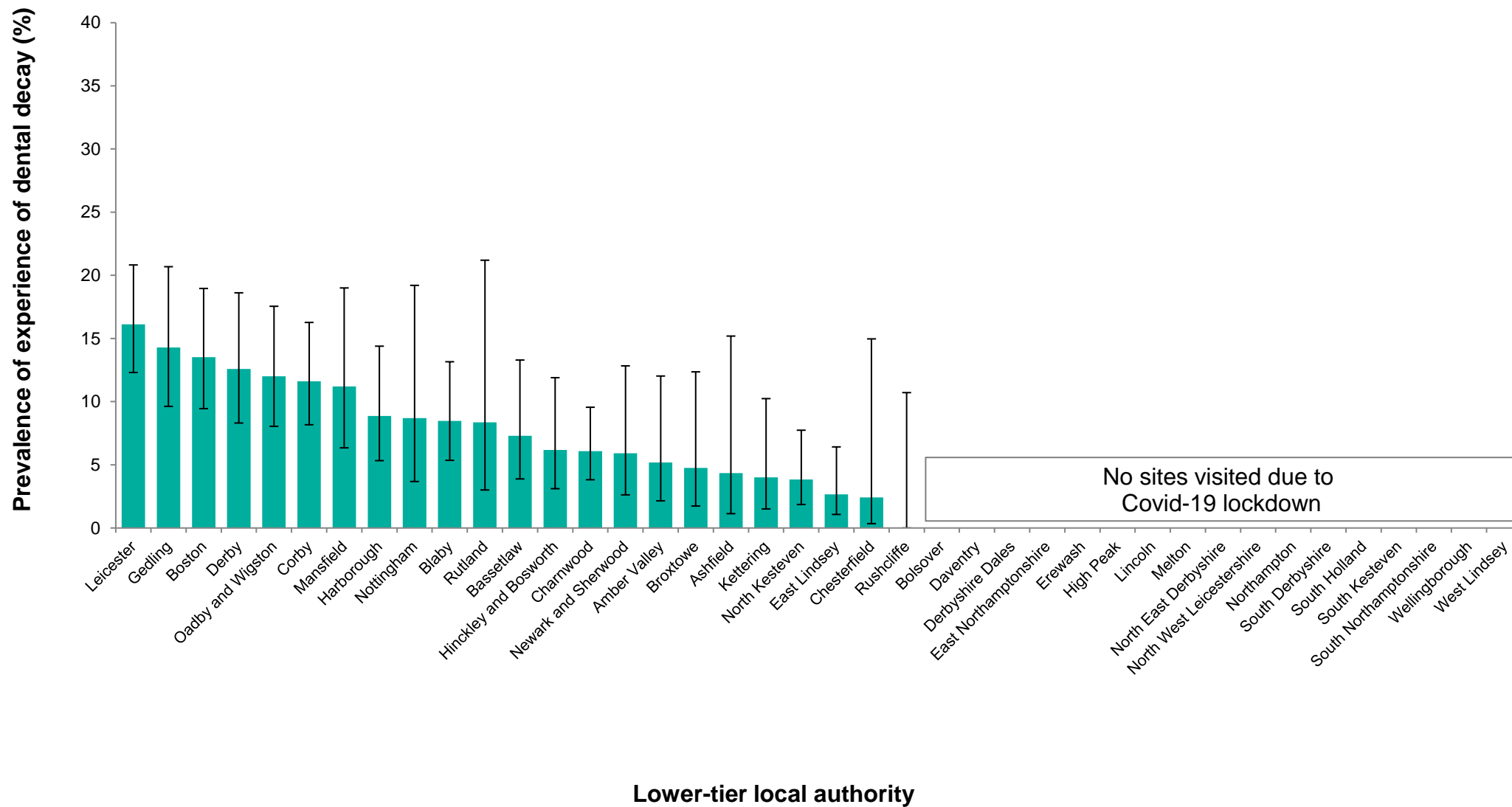
Figure 2: Range of experience of dental decay in upper-tier local authority areas among 3-year-olds in England by region, 2020.



Note: data missing for three-quarters of the local authority areas in the South East region

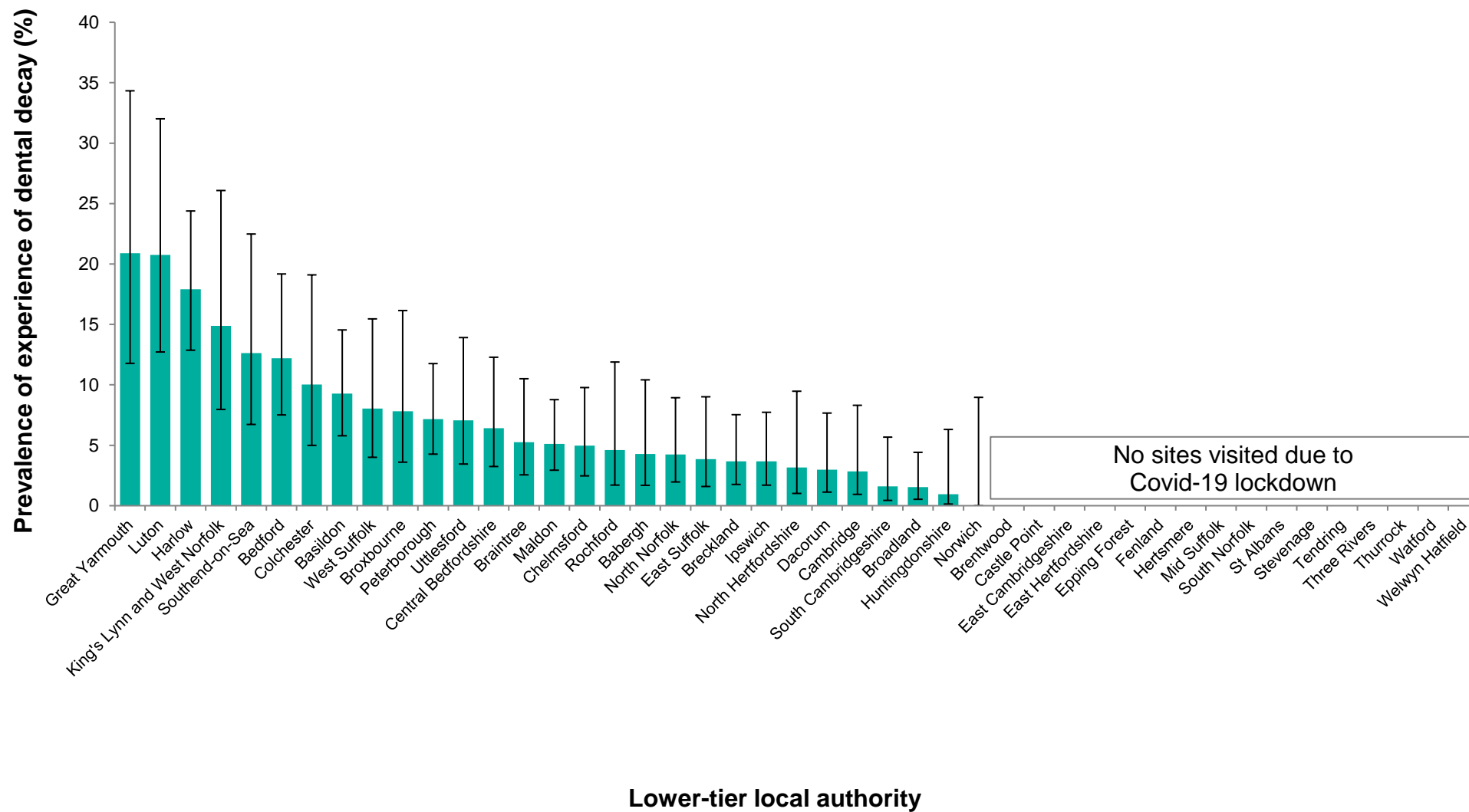
The variations in prevalence of experience of dental decay between lower-tier local authority areas within each region are shown below (Figures 3 to 11). In almost half of lower-tier local authorities, data could not be collected due to COVID-19. Data could not be reported in some local authority areas where the number of children examined was too small to be included in the analyses and this is reflected in the charts below as 'data not available'.

Figure 3: Prevalence of experience of dental decay in 3-year-olds in the East Midlands by lower-tier local authority area, 2020.



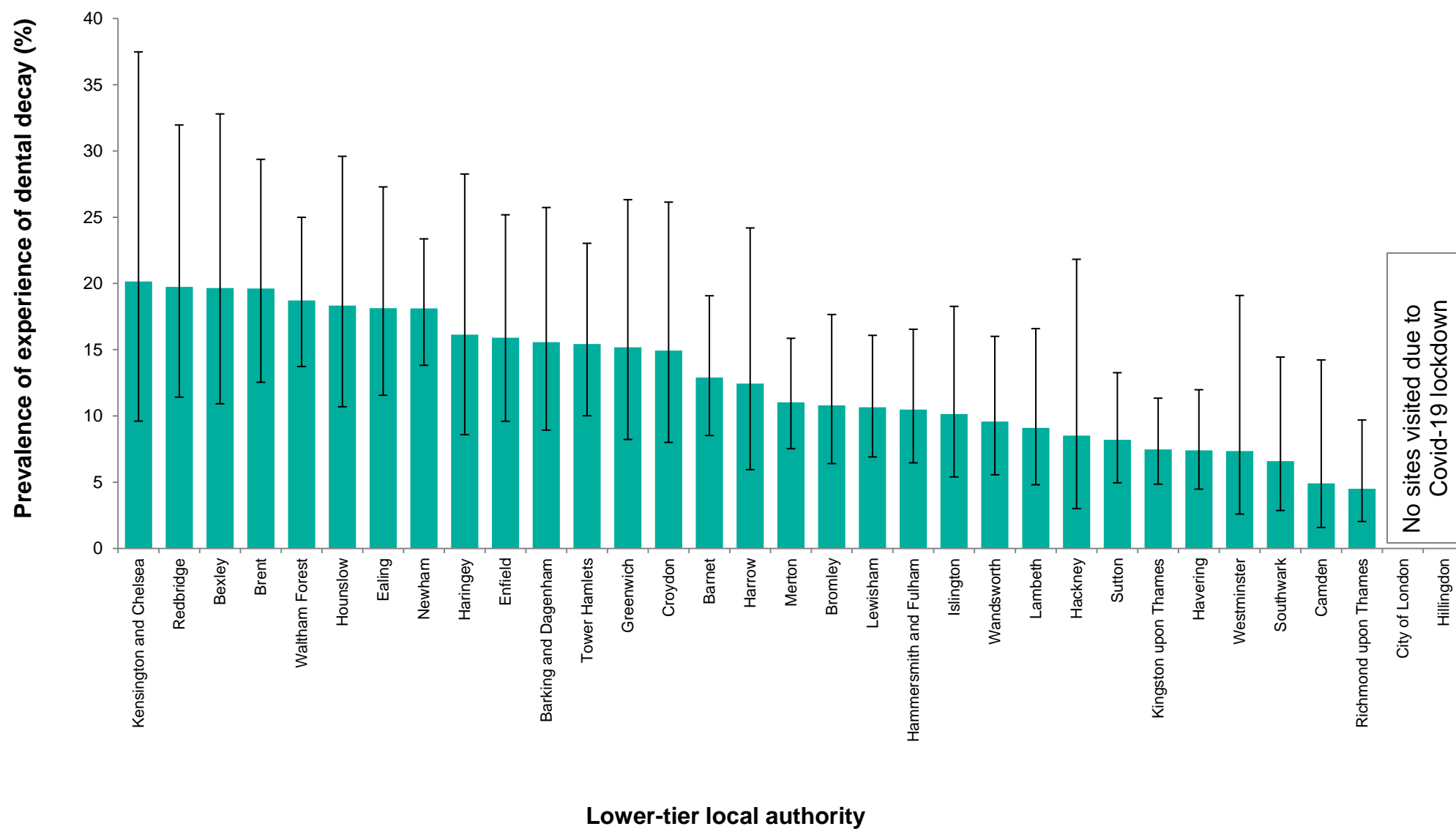
Note: error bars represent 95% confidence limits.

Figure 4: Prevalence of experience of dental decay in 3-year-olds in the East of England by lower-tier local authority area, 2020.



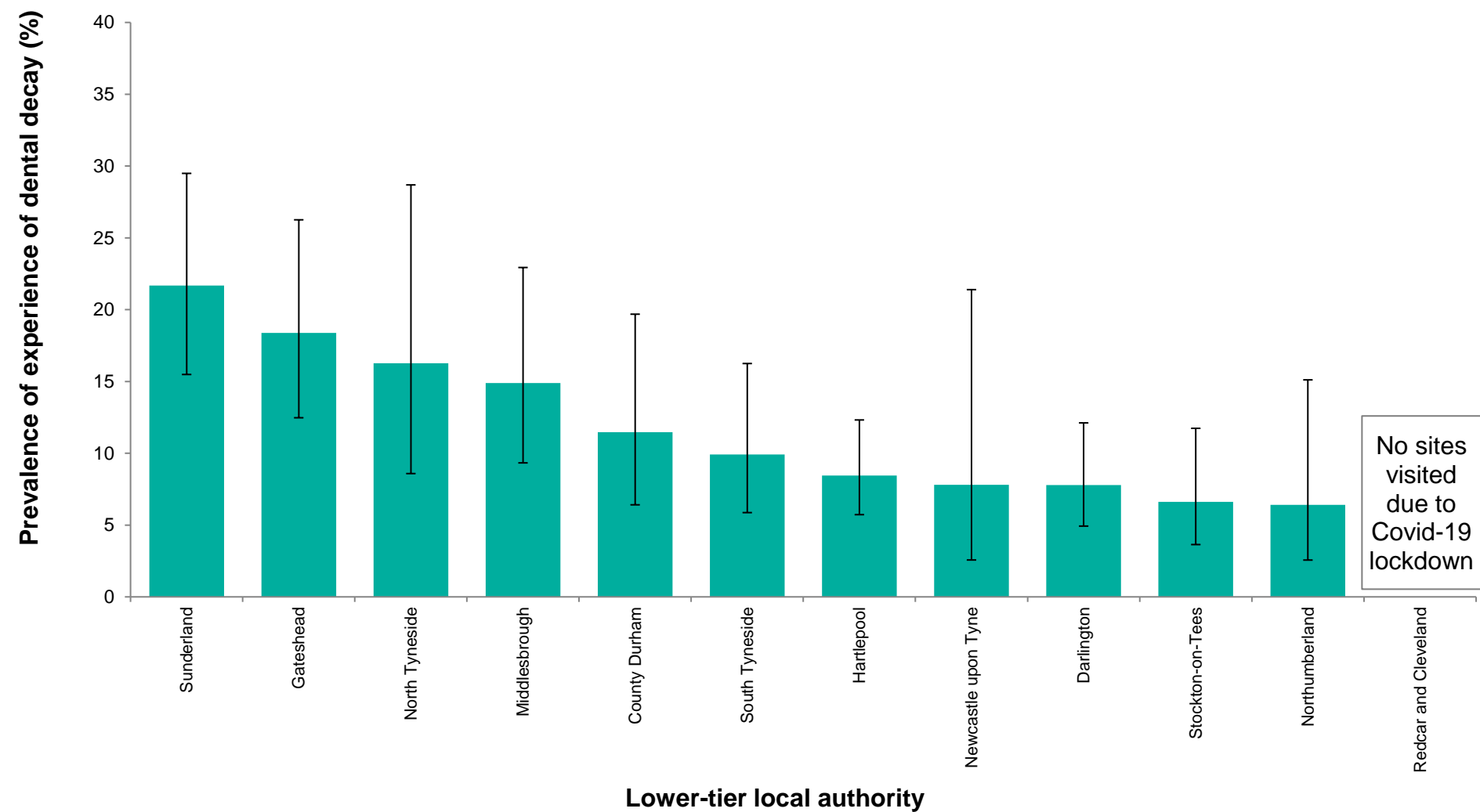
Note: error bars represent 95% confidence limits.

Figure 5: Prevalence of experience of dental decay in 3-year-olds in London by lower-tier local authority area, 2020.



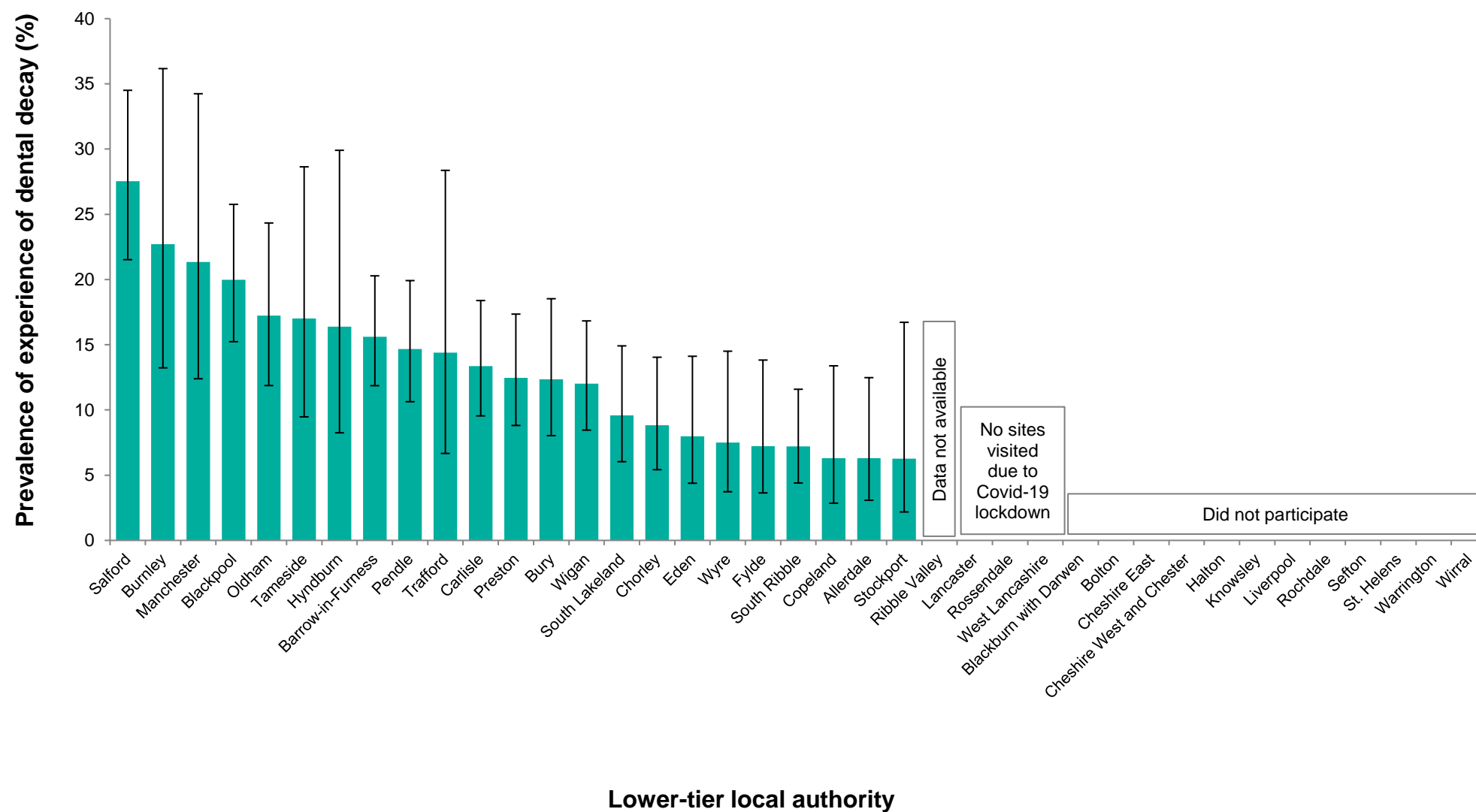
Note: error bars represent 95% confidence limits.

Figure 6: Prevalence of experience of dental decay in 3-year-olds in the North East by lower-tier local authority area, 2020.



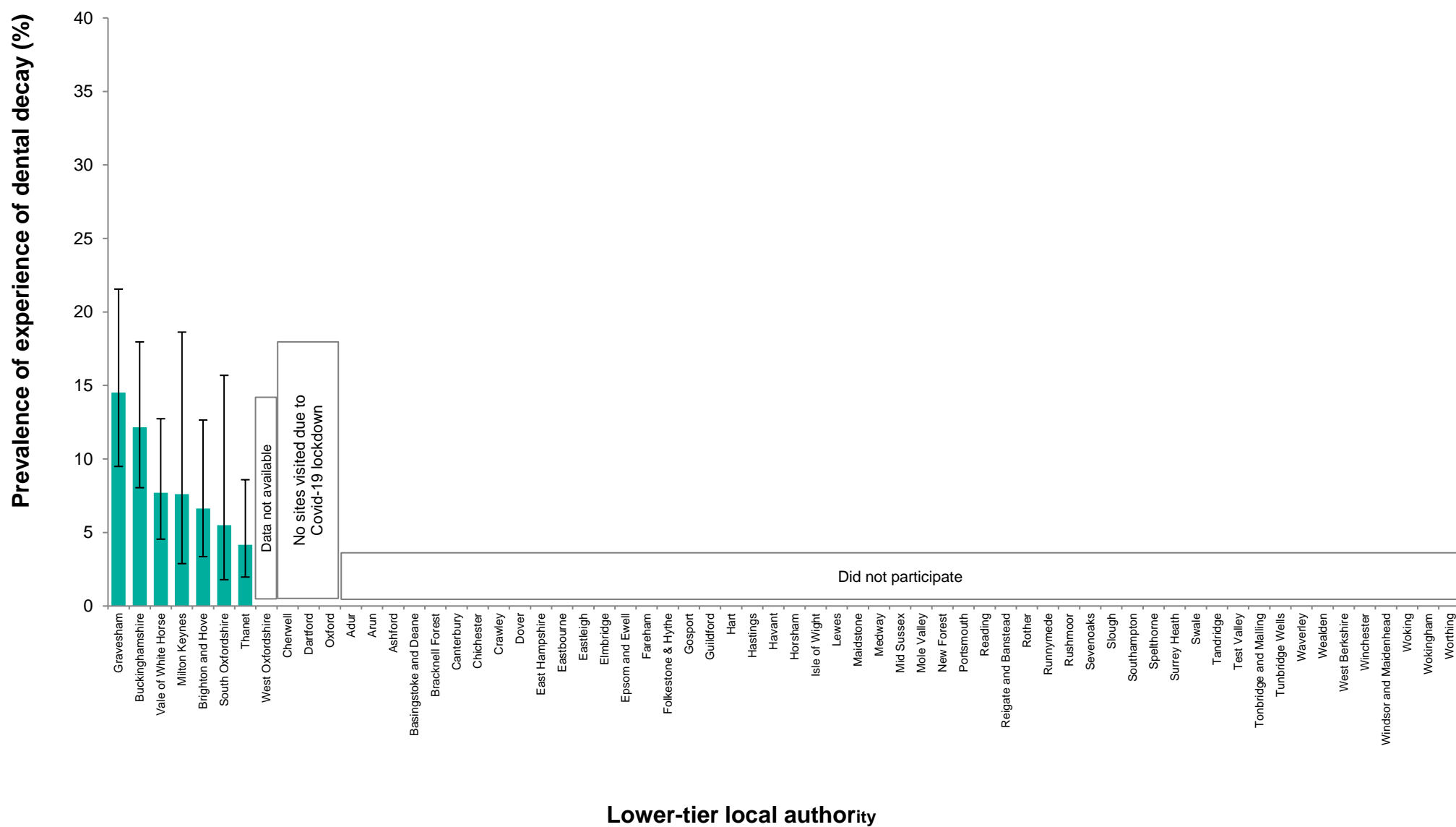
Note: error bars represent 95% confidence limits.

Figure 7: Prevalence of experience of dental decay in 3-year-olds in the North West by lower-tier local authority area, 2020.



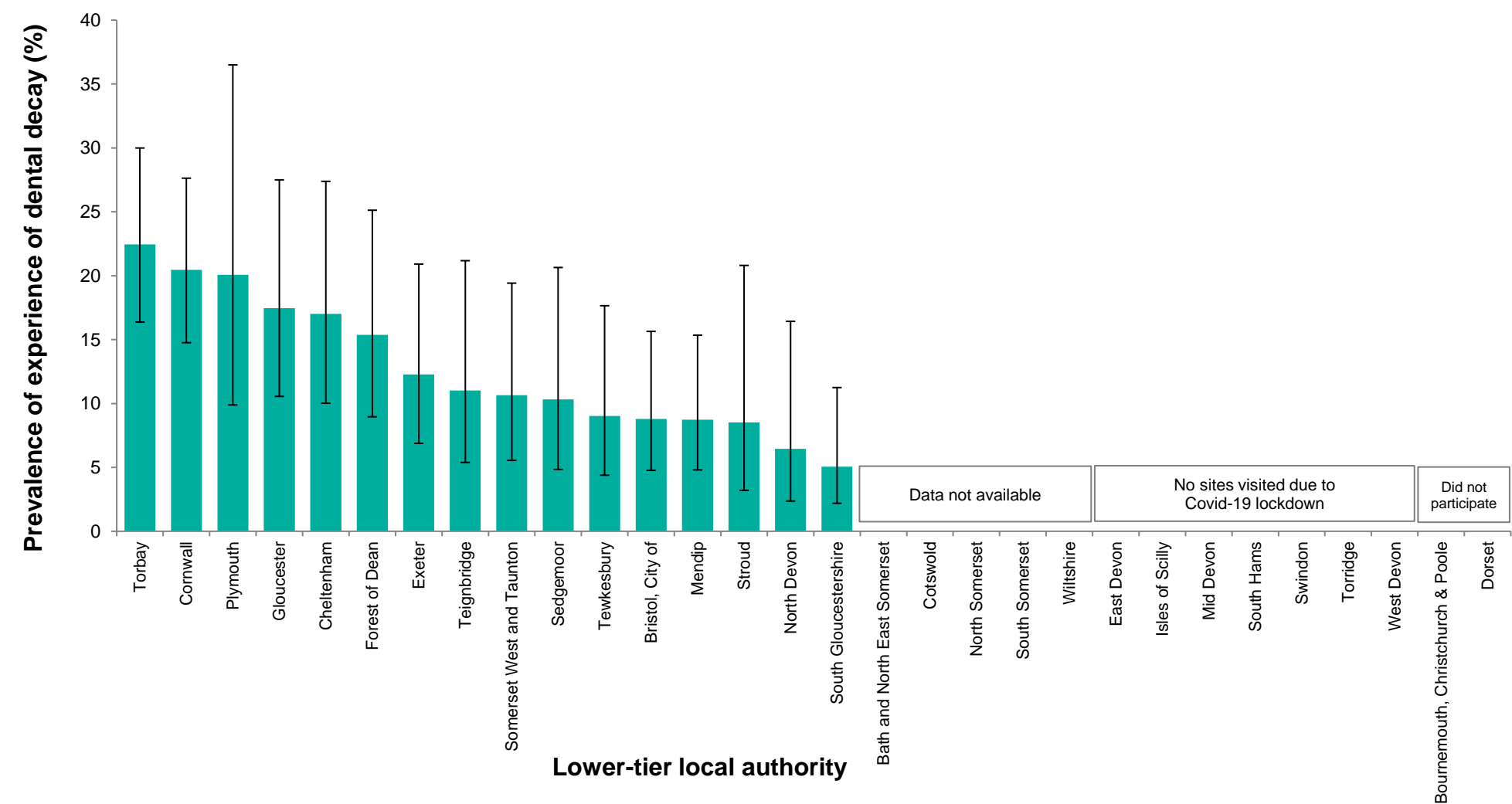
Note: error bars represent 95% confidence limits. Blackpool data collected in 2019.

Figure 8: Prevalence of experience of dental decay in 3-year-olds in the South East by lower-tier local authority area, 2020.



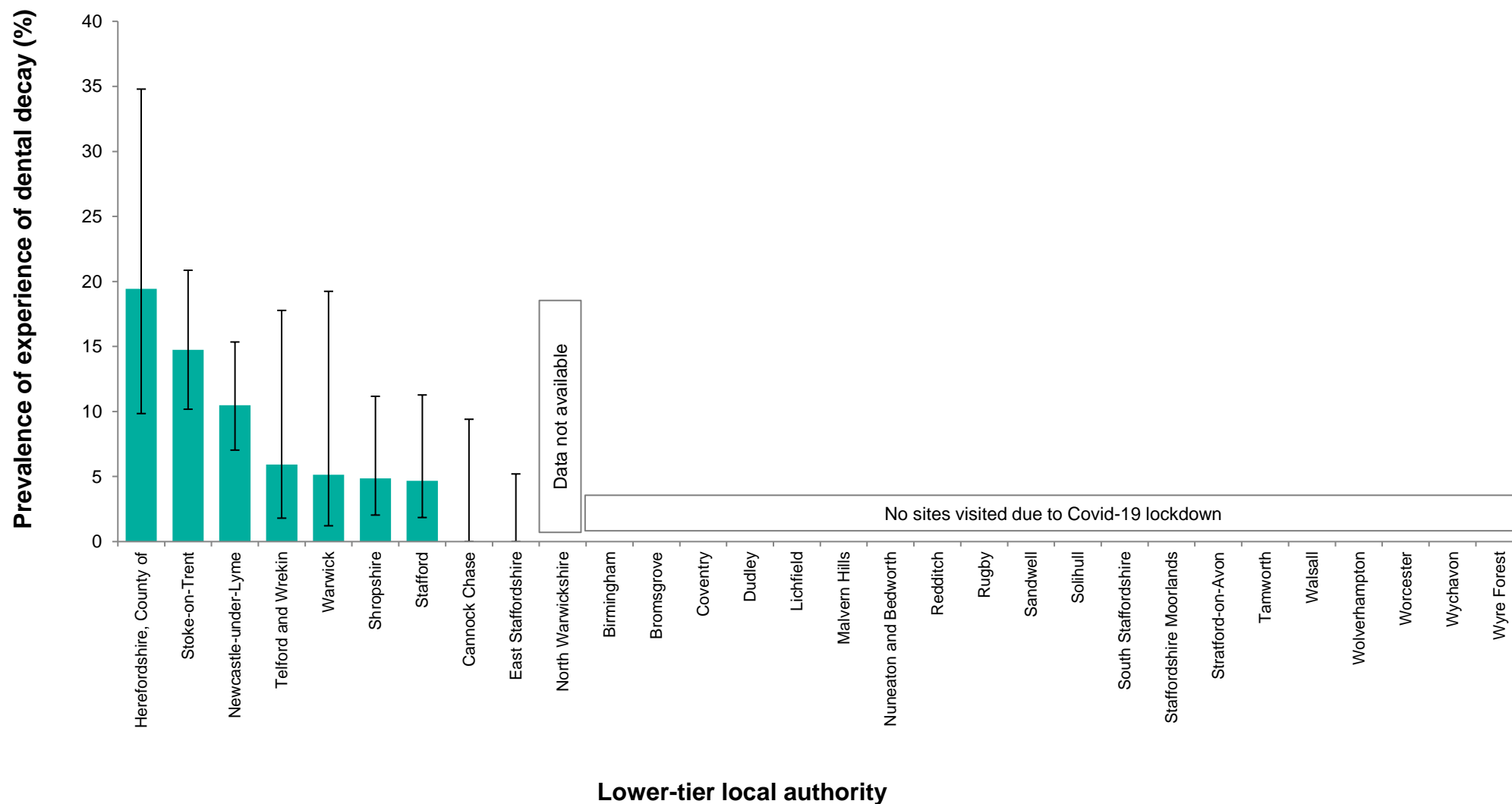
Note: error bars represent 95% confidence limits.

Figure 9: Prevalence of experience of dental decay in 3-year-olds in the South West by lower-tier local authority area, 2020.



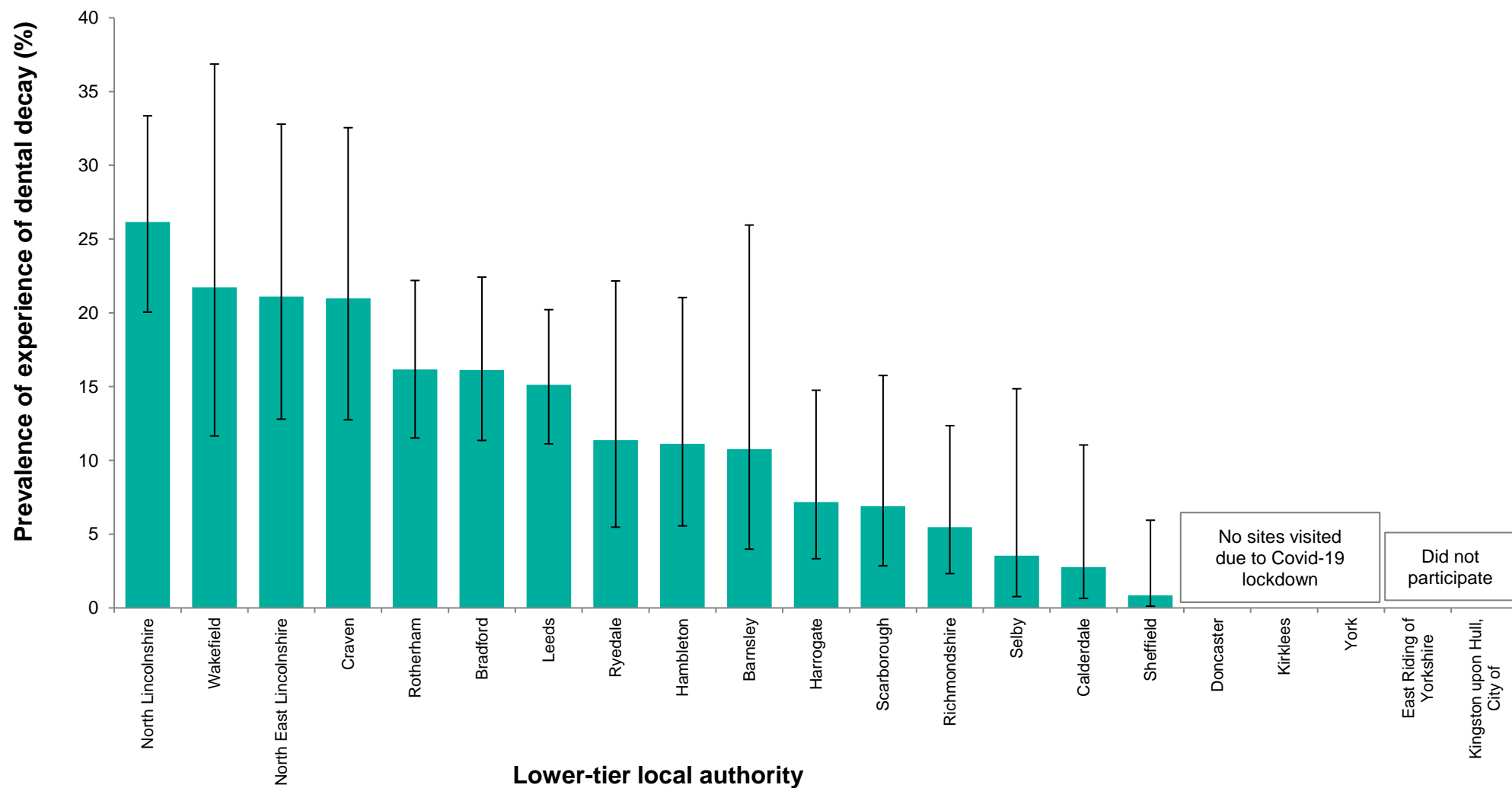
Note: error bars represent 95% confidence limits.

Figure 10: Prevalence of experience of dental decay in 3-year-olds in the West Midlands by lower-tier local authority area, 2020.



Note: error bars represent 95% confidence limits.

Figure 11: Prevalence of experience of dental decay in 3-year-olds in Yorkshire and The Humber by lower-tier local authority area, 2020.



Note: error bars represent 95% confidence limits.

Severity of experience of dental decay in 3-year-olds

As the proportion of 3-year-old children across England with experience of dental decay was 10.7%, the mean number of teeth with experience of decay in all children examined was low at 0.3 (CI 0.30-0.33). The median number of teeth with experience of dental decay was 0 (inter quartile range 0, 0-0), which was to be expected, as more than 80% of children surveyed had no experience of dental decay.

There was little variation in the severity of experience of dental decay between the regions. All examined means and means in only those children who have experience of dental decay are presented below ([Table 1](#)).

Table 1: Mean and median number of teeth with experience of dental decay, including incisors, in 3-year-olds in England, by region 2020.

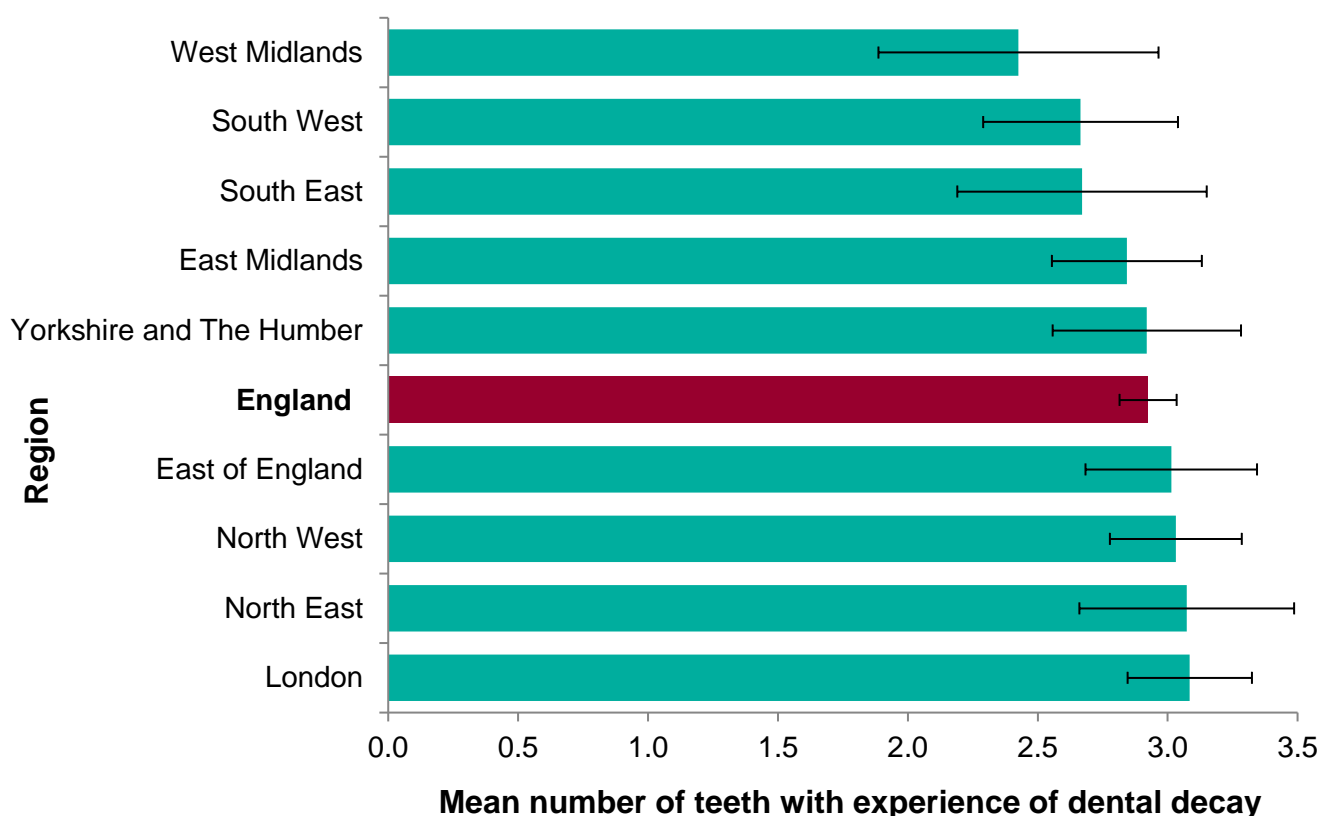
Region name	Percentage of population examined	Mean number of teeth with experience of dental decay in those examined (95% confidence intervals)	Mean number of teeth with experience of dental decay in those with decay experience (95% confidence intervals)	Median number of teeth with experience of dental decay in those with decay experience	Inter quartile range (Q1-Q3)
North East	5	0.3 (0.25 - 0.38)	3.1 (2.66 - 3.49)	2	3 (1 - 4)
North West	4	0.4 (0.36 - 0.47)	3.0 (2.78 - 3.29)	2	3 (1 - 4)
Yorkshire and The Humber	2	0.4 (0.35 - 0.51)	2.9 (2.56 - 3.28)	2	3 (1 - 4)
East Midlands	6	0.3 (0.23 - 0.32)	2.8 (2.55 - 3.13)	2	3 (1 - 4)
West Midlands	1	0.3 (0.18 - 0.34)	2.4 (1.89 - 2.96)	2	1 (1 - 2)
East of England	5	0.2 (0.17 - 0.23)	3.0 (2.68 - 3.34)	2	3 (1 - 4)
London	3	0.4 (0.34 - 0.43)	3.1 (2.85 - 3.32)	2	3 (1 - 4)
South East	1	0.2 (0.16 - 0.28)	2.7 (2.19 - 3.15)	2	2 (1 - 3)
South West	2	0.3 (0.25 - 0.38)	2.7 (2.29 - 3.04)	2	2 (1 - 3)
England	3	0.3 (0.30 - 0.33)	2.9 (2.81 - 3.03)	2	3 (1 - 4)

Note: data missing for three-quarters of the local authority areas in the South East region.

There was some variation in the severity of experience of dental decay at upper tier local authority level, ranging from 0.0 (CI 0.00-0.07) in Sheffield to 1.1 (CI 0.67-1.46) in North Lincolnshire.

As the majority of children had no experience of dental decay it is important to look at the severity of disease in only those children who have experience of dental decay. Among these children, the mean number of teeth with experience of dental decay was 2.9 (CI 2.81-3.03). At a regional level there was little variation in experience of dental decay among 3-year-old children with any decay experience (Figure 12). The median number of teeth with experience of dental decay among these children was 2 (inter quartile range 3, 1-4) (Table 1).

Figure 12: Mean number of teeth with experience of dental decay in 3-year-olds with any decay experience in England by region, 2020.



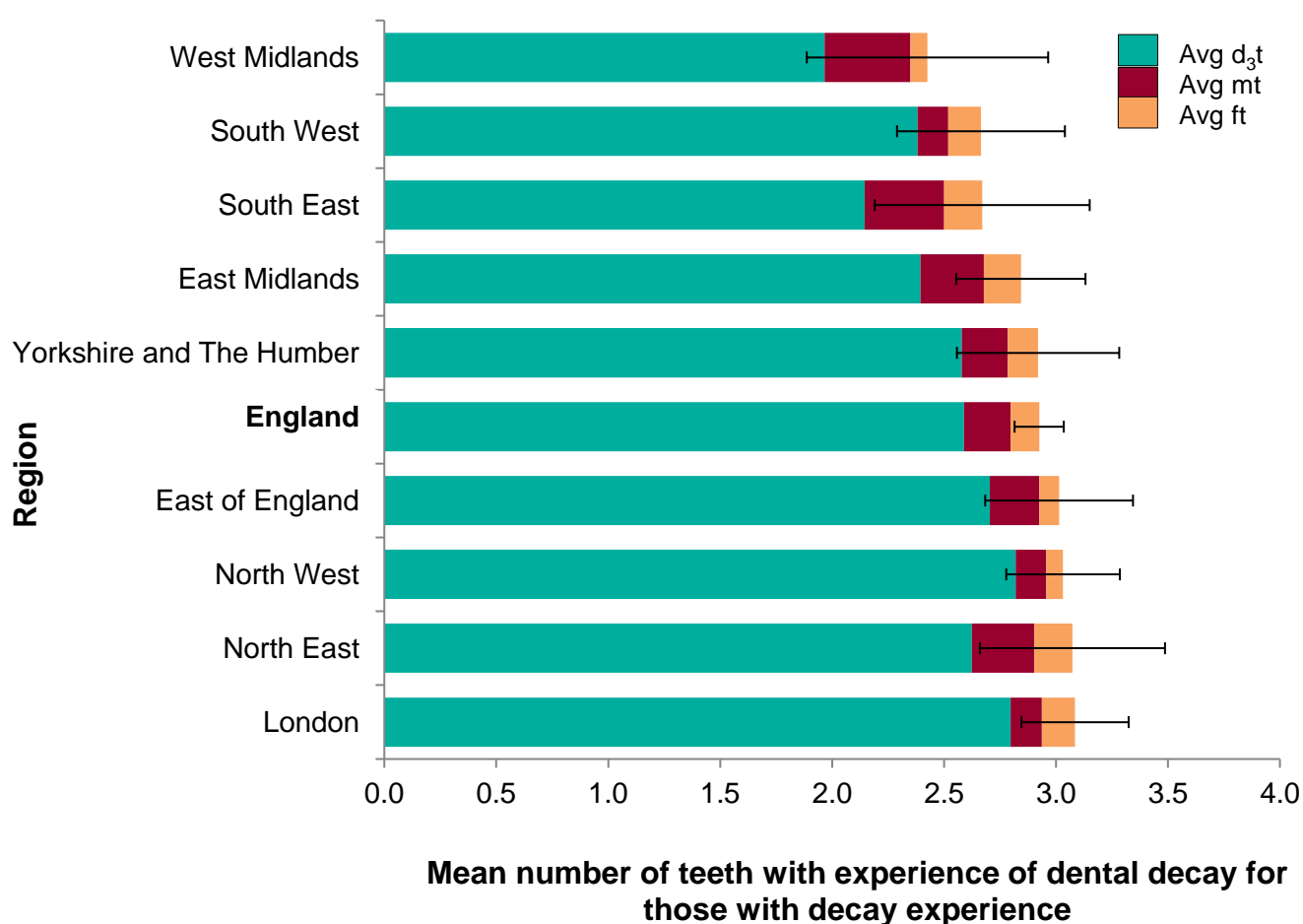
Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

At upper-tier local authority level the variation was greater, ranging from 1.2 (CI 1.17-1.17) teeth in Warwickshire to 4.9 (CI 2.80-6.92) in Middlesbrough.

Untreated dental decay in 3-year-olds

The majority of experience of dental decay in this age group was obvious, untreated decay. On average, 3-year-old children with experience of dental decay had 2.6 (CI 2.48-2.70) teeth with untreated decay into dentine. At the regional level the average number of decayed teeth ranged from 2.0 (CI 1.44-2.49) in the West Midlands to 2.8 (CI 2.57-3.07) in the North West (Figure 13). The number of teeth with untreated dental decay ranged from 1 to 16 and the median was 2 (inter quartile range 3, 1-4).

Figure 13: Mean number of teeth with experience of dental decay among 3-year-olds with any decay experience in England by region, 2020.



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

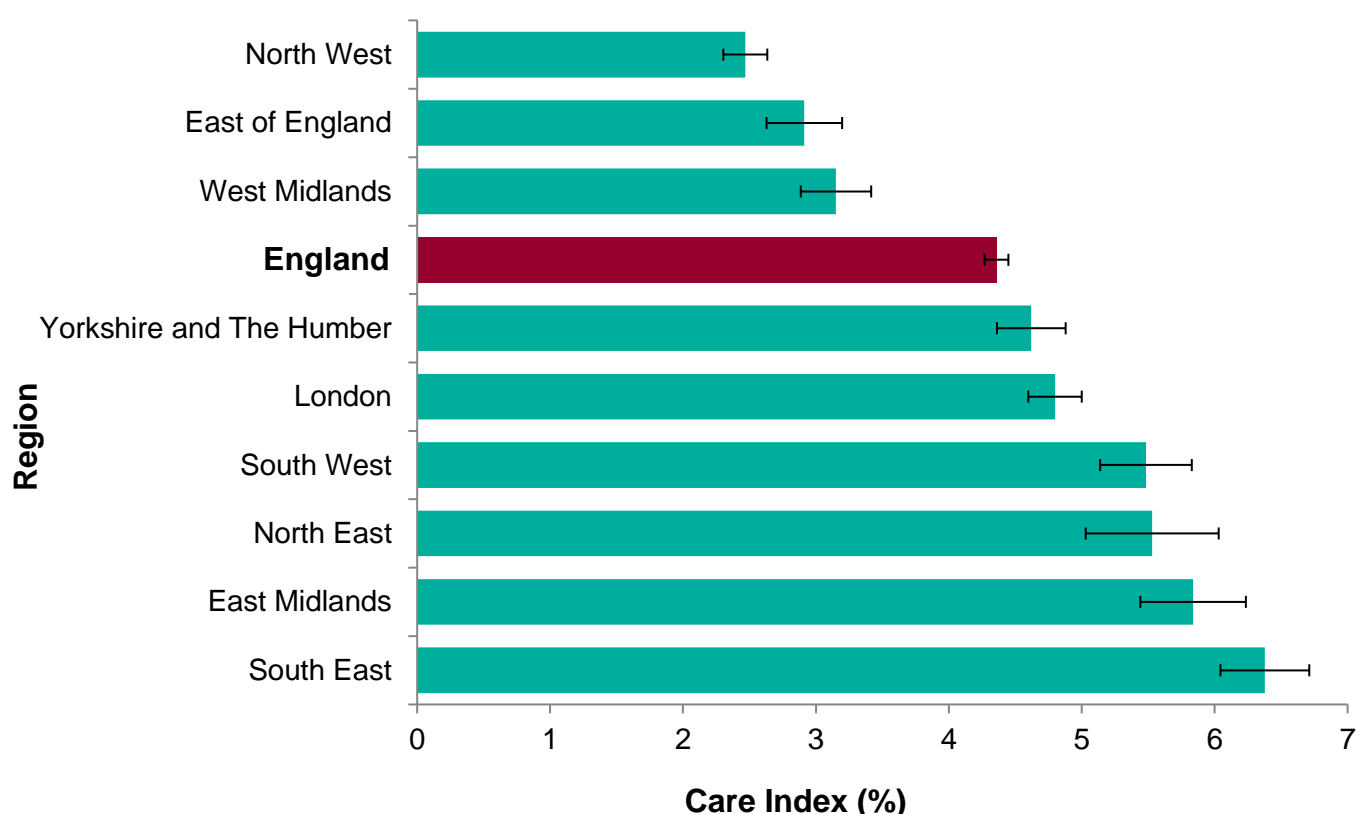
The care index in 3-year-olds

The care index gives an indication of the restorative activity of dentists in each area. It is the proportion of teeth with experience of dental decay that have been treated by filling. Caution

should be taken in making assumptions about the extent or the quality of clinical care available when using this index.

The proportion of decayed teeth that were filled was 4.4% across England. This varied between regions from 2.5% in the North West to 6.4% in the South East (Figure 14).

Figure 14: Care index in 3-year-olds in England by region, 2020.



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

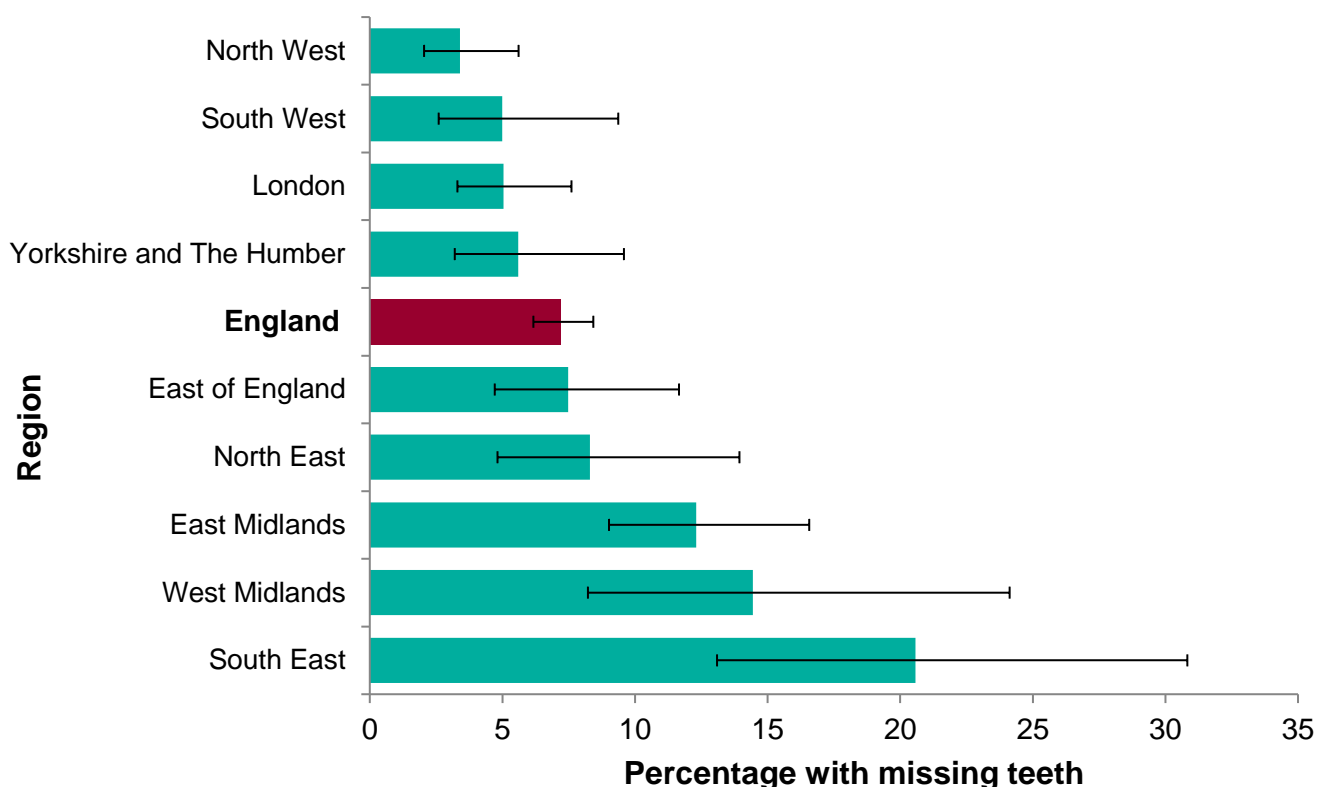
The proportion of 3-year-olds with experience of dental decay with missing teeth

The most likely reason for missing teeth at this age is extraction. Extraction of teeth in young children usually involves admission to hospital and a general anaesthetic. The proportion of 3-year-olds with experience of dental decay who had had teeth extracted in England was 7.2% and each child had on average 2.9 (CI 2.43-3.35) teeth removed. The number of teeth removed ranged from 1 to 14 and the median was 2 (inter quartile range 3, 1-4).

At regional level the proportion of 3-year-olds with experience of dental decay who had had teeth extracted ranged from 3.6% in the North West to 20.5% in the South East (Figure 15). It

should be noted that these figures do not necessarily reflect need for extractions but the variable access to hospital dental services across the country.

Figure 15: Percentage of 3-year-old children with experience of dental decay who had had one or more teeth extracted due to decay in England by region, 2020.

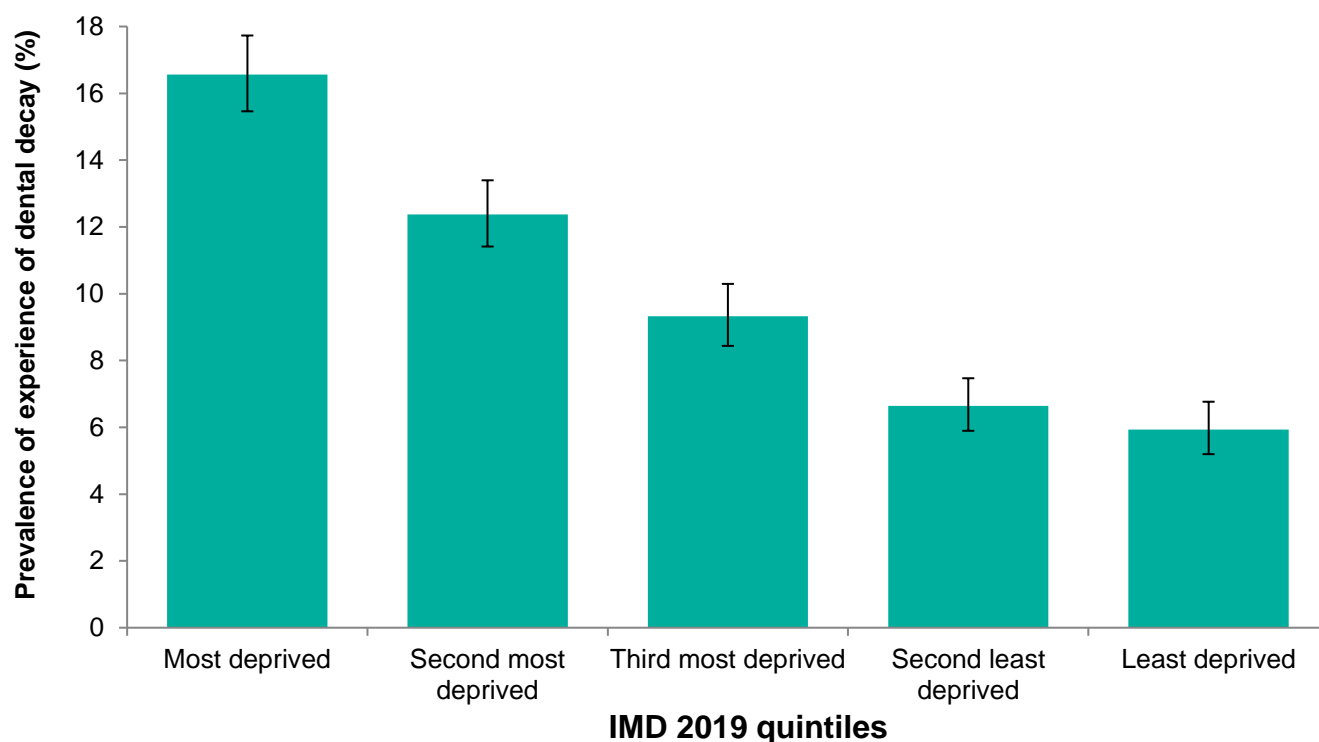


Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

Prevalence and severity of experience of dental decay in 3-year-olds by level of deprivation

Oral health inequalities have recently been highlighted as a public health problem by the publication of a recent report (15). It is of concern that inequalities in oral health are stark even by age 3-years. In 2019 to 2020 3-year-olds in the most deprived areas of the country (16.6%) were nearly 3 times as likely to have experience of dental decay than those in the least deprived areas (5.9%) (Figure 16).

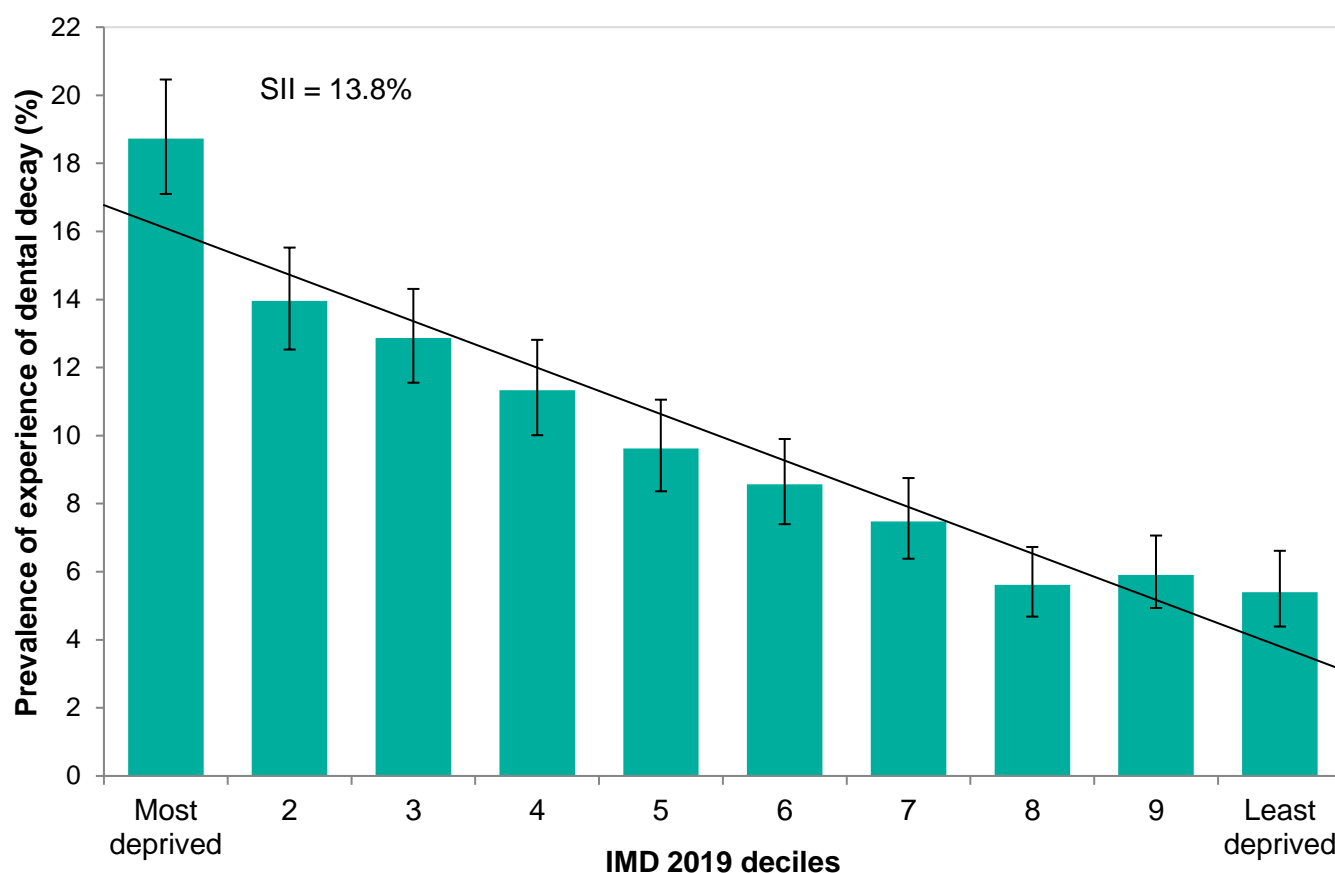
Figure 16: Prevalence of experience of dental decay in 3-year-olds in England, 2020 by national Index of Multiple Deprivation (IMD) 2019 quintiles.



Note: error bars represent 95% confidence limits.

The gradient in the difference of prevalence of a disease or condition across people living in the most deprived and the least deprived areas of the country is called the slope index of inequality (SII) and is a measure of absolute inequalities. In 2020 the slope index of inequality for the prevalence of experience of dental decay in 3-year-olds was 13.8% (Figure 17). This means that already by age 3-years oral health inequalities were evident. In the most deprived areas of the country the prevalence of experience of dental decay was 13.8% more than in the least deprived areas. This was similar to the previous survey in 2013, when the slope index was 14.4%.

Figure 17: Slope index of inequality in the prevalence of experience of dental decay in 3-year-olds in England, 2020.

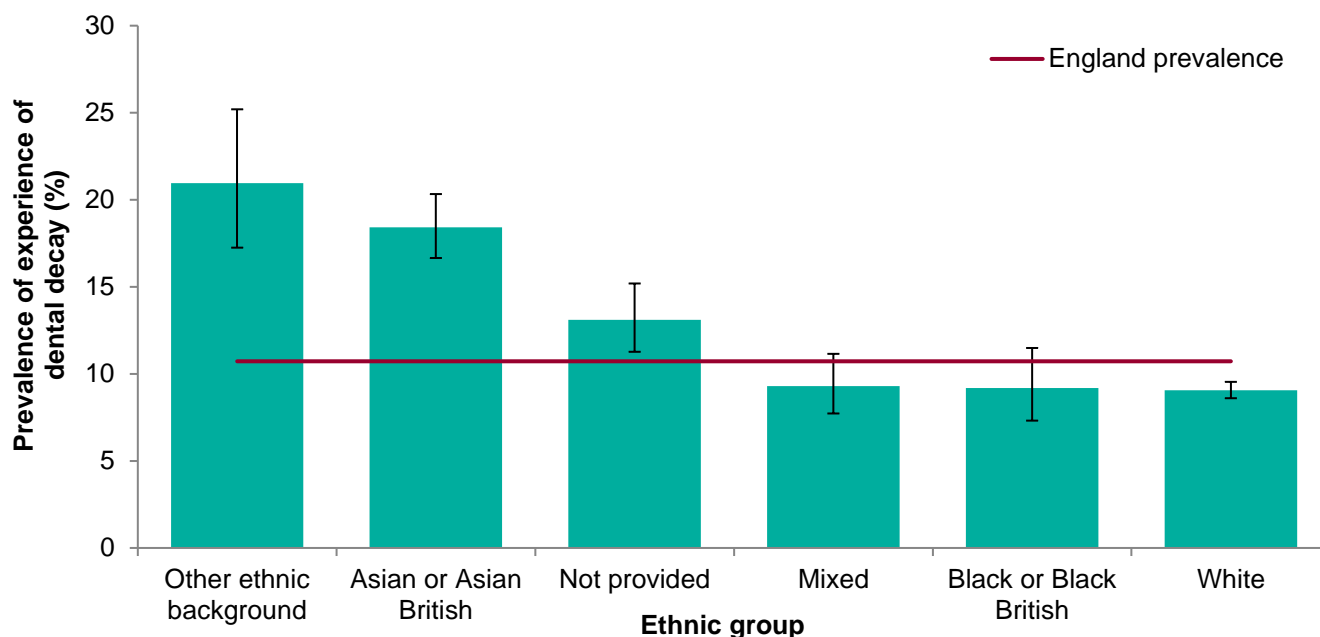


Note: error bars represent 95% confidence limits.

Prevalence and severity of experience of dental decay in 3-year-olds by ethnic group

The highest prevalence of experience of dental decay was found in 3-year-olds from the Other ethnic group (20.9%). This was closely followed by Asian or Asian British (18.4%). The lowest prevalence of experience of dental decay was found in the White ethnic group (9.1%) (Figure 18).

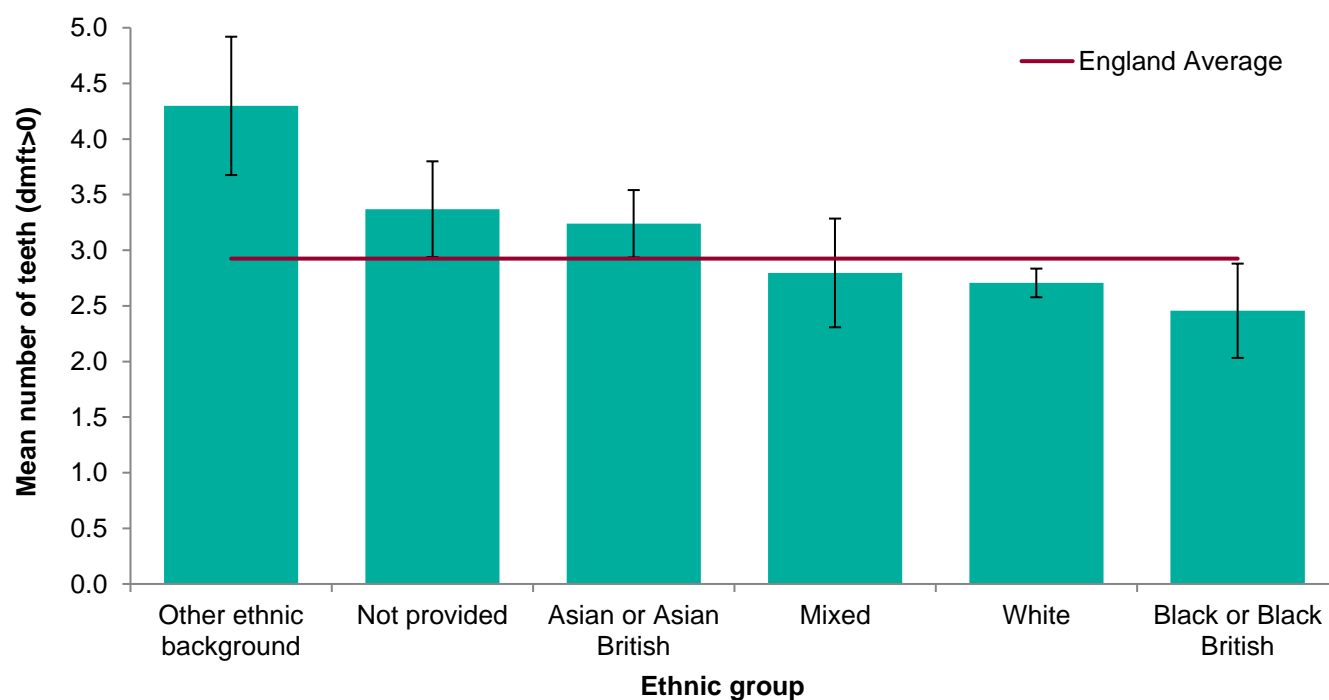
Figure 18: Prevalence of experience of dental decay in 3-year-olds in England by ethnic group, 2020.



Note: error bars represent 95% confidence limits.

Among those children with any experience of dental decay, children from the Other ethnic group had on average more teeth with decay experience (4.3 teeth) than children from any of the other ethnic groups (Figure 19).

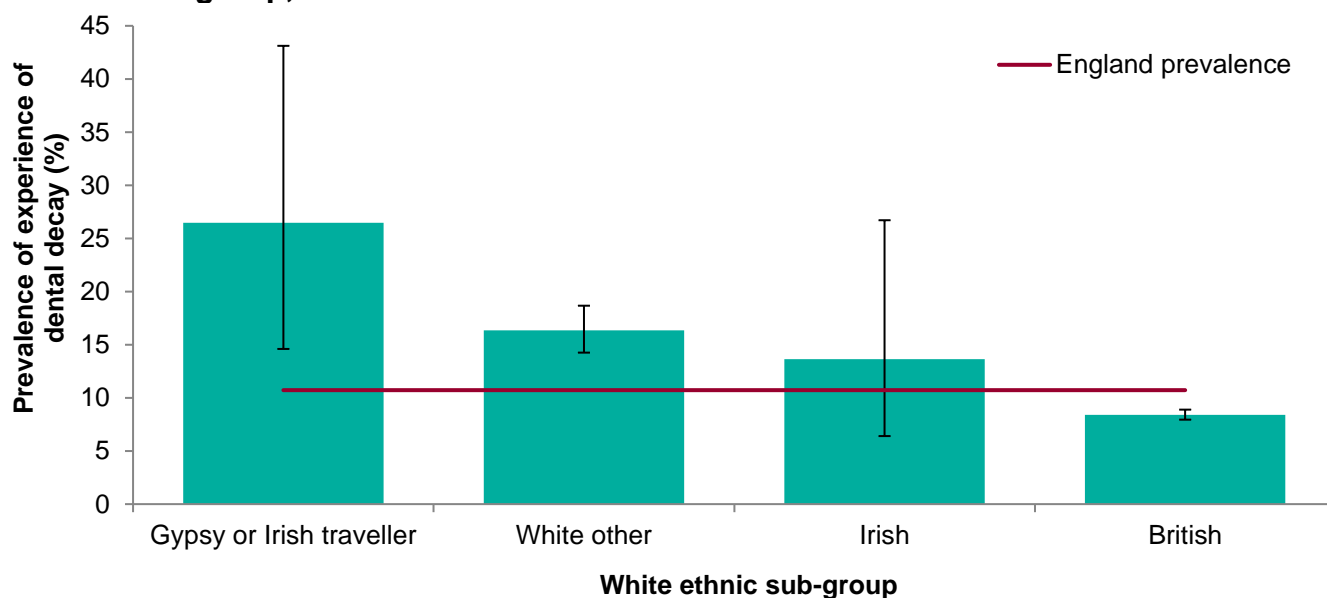
Figure 19: Mean number of teeth with experience of dental decay among 3-year-olds with any experience of dental decay in England by ethnic group, 2020.



Note: error bars represent 95% confidence limits.

Within ethnic groups, in the White group, children from Gypsy or Irish traveller (26.5%) and White other (16.3%) ethnic groups had a greater prevalence of experience of dental decay than children from the White British ethnic group (8.4%) (Figure 20).

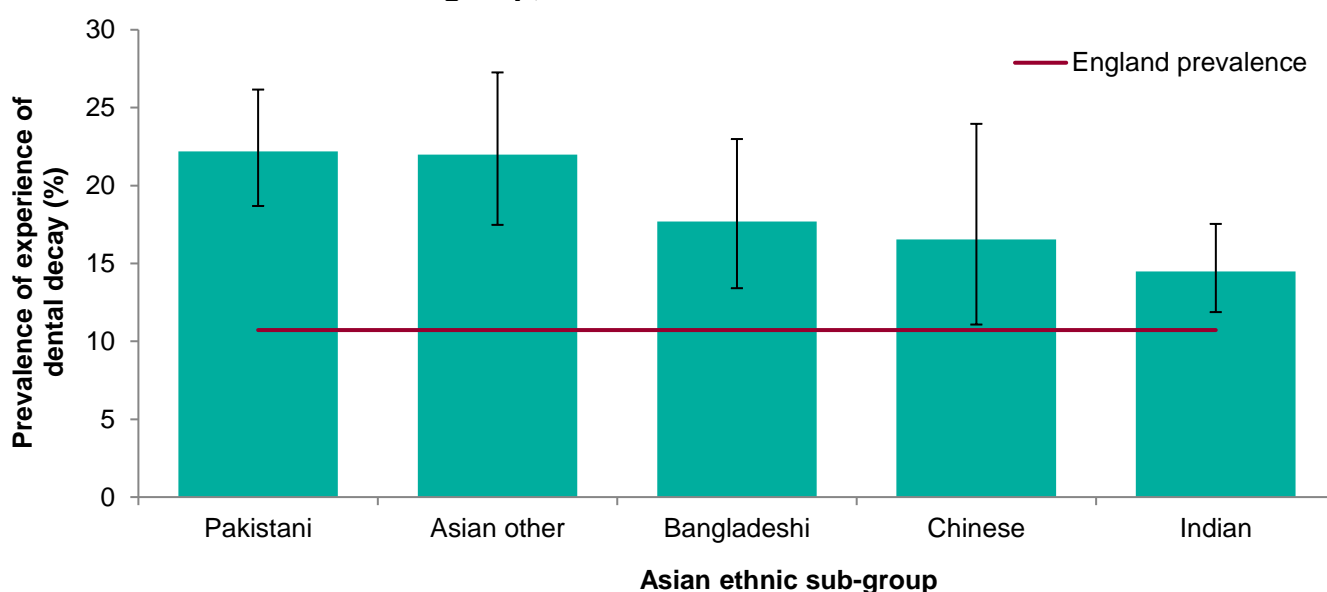
Figure 20: Prevalence of experience of dental decay in 3-year-olds in England within the White ethnic group, 2020.



Note: error bars represent 95% confidence limits.

In the Asian ethnic group, children from the Pakistani ethnic group (22.2%) had a greater prevalence of experience of dental decay than children from the Indian group (14.5%) (Figure 21).

Figure 21: Prevalence of experience of dental decay in 3-year-olds in England within the Asian or Asian British ethnic group, 2020.



Note: error bars represent 95% confidence limits.

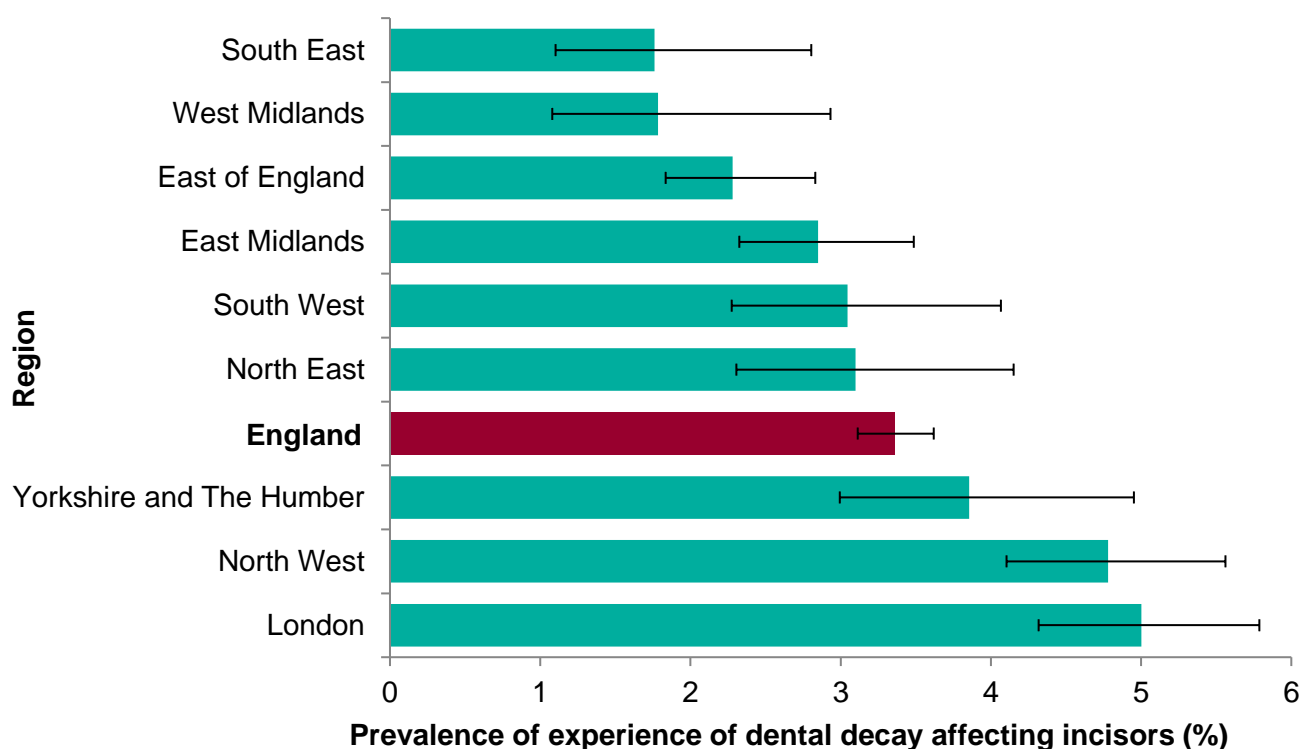
There were no significant variations in prevalence of experience of dental decay within the Black or Black British, Mixed and Other ethnic groups.

Prevalence of experience of dental decay of incisor teeth

The prevalence of experience of dental decay of incisor teeth was 3.4% in England and varied by region. London (5.0%) and the North West (4.8%) had the highest prevalence. The West Midlands and the South East had the lowest prevalence (1.8%) (Figure 22).

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 (16).

Figure 22: Prevalence of experience of dental decay affecting incisor teeth in 3-year-olds in England by region, 2020.

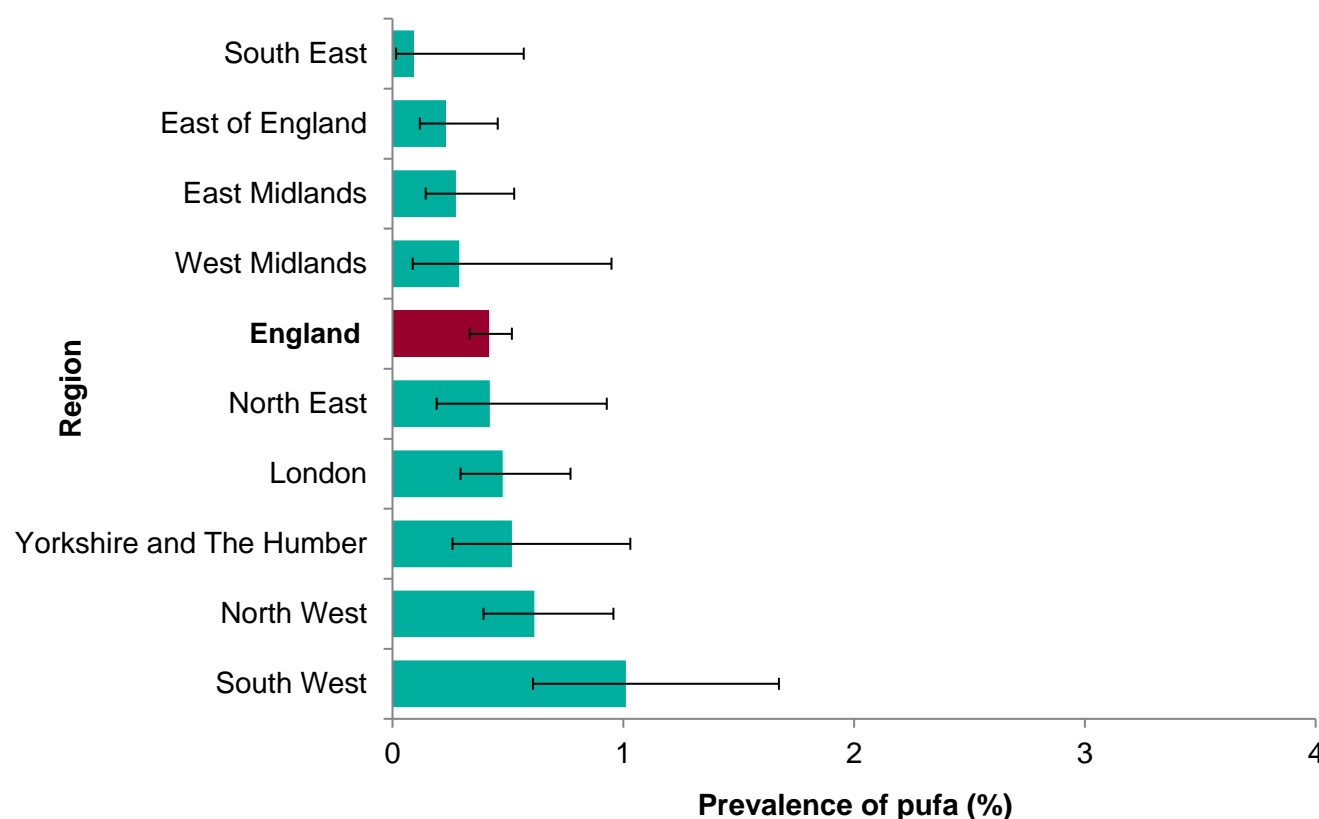


Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

Children with pufa signs at the time of the examination

The pufa index measures the clinical consequences of advanced tooth decay. Across England 0.4% of 3-year-olds had one or more pufa signs. The prevalence was 1.0% or less across all regions (Figure 23).

Figure 23: Prevalence of pufa in 3-year-olds in England by region, 2020.

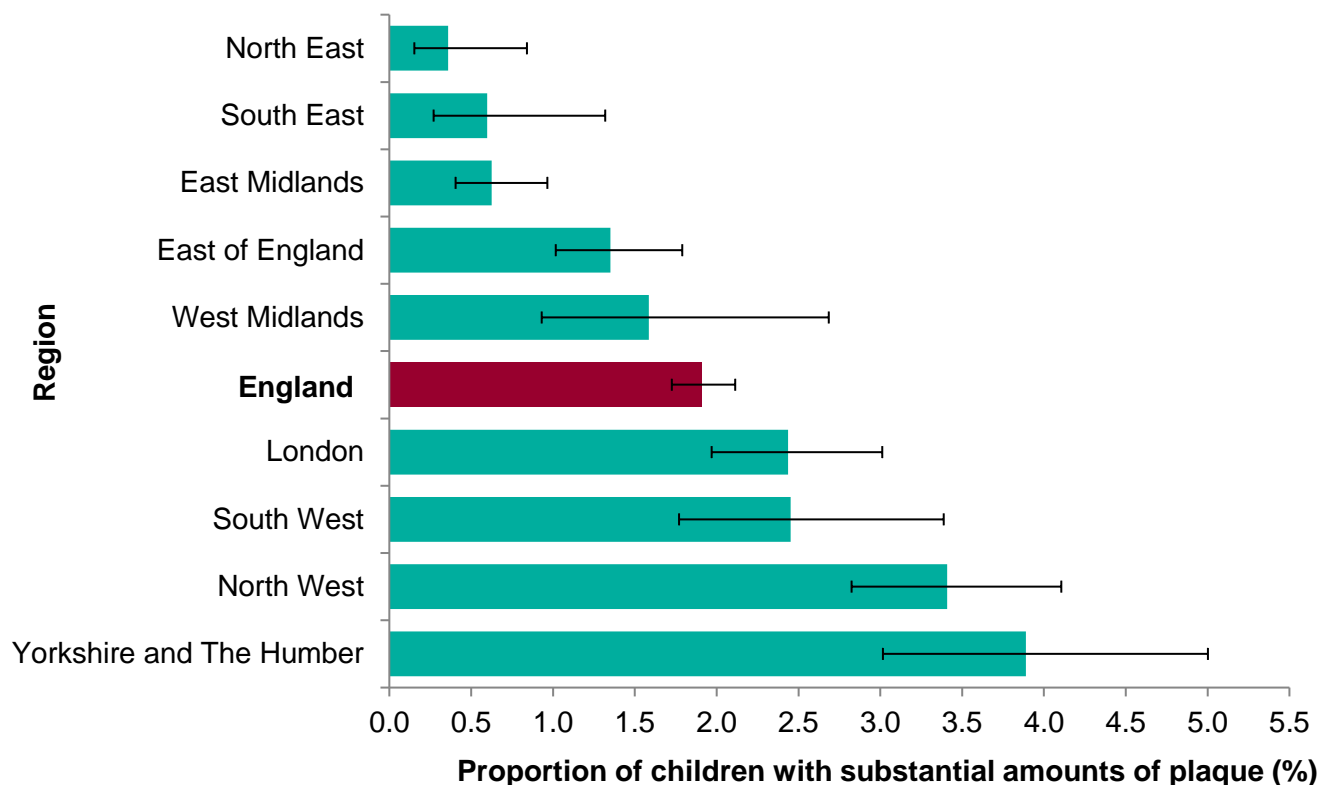


Note: data missing for three-quarters of the local authority areas in the South East region; error bars represent 95% confidence limits.

Prevalence of substantial amounts of plaque in 3-year-olds

Plaque was recorded at 3 different levels: substantial, visible or none. The presence of substantial amounts of plaque compared with visible or no plaque is a consequence of poor oral hygiene and provides a proxy measure of children whose teeth are brushed poorly or rarely. A substantial amount of plaque was recorded for 1.9% of children overall in England, ranging from 0.4% in the North East to 3.9% in Yorkshire and The Humber (Figure 24).

Figure 24: Prevalence of substantial amounts of plaque in 3-year-olds in England by region, 2020.



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

Comparisons with previous 3-year-old survey

This is the second national survey undertaken for this group in England. The first was completed in 2013, also by PHE (1). The same methods for consent to participate in the surveys and application of weighting to the data were used in both surveys. The limitations of the data mean that subnational comparisons should be undertaken with great caution where participation rates between the surveys is markedly different. At a national level the data was broadly representative in terms of deprivation and ethnicity and of a large sample size which gives more confidence to national comparisons.

The findings indicate that the oral health of 3-year-olds did not change significantly from 2013 to 2020 in terms of prevalence (11.7% and 10.7% respectively), severity of experience of dental decay in all children (0.4 and 0.3) and severity of experience of dental decay in those children with any decay experience (3.1 and 2.9 teeth). The prevalence of experience of dental decay of incisor teeth was also similar across the 2 surveys (3.9% and 3.4%) as was the severity of untreated dental decay in those children with any decay experience (2.7 and 2.6 teeth) and the care index (4.0% and 4.4%). The slope index of inequality was also similar across the 2 surveys (13.8% and 14.4%).

Implications of results

Limitations of the survey

This is the second survey of 3-year-olds across England. The numbers of children examined were markedly lower than in 2013 due to both COVID-19 and 20% of upper tier local authorities opting not to commission the survey. While the survey had over 19,000 participants, there were both geographical gaps in the data and the majority of areas did not achieve the minimum sample size. This disproportionately affected the south east and north west regions. However, nationally the sample was largely reflective of the 3-year-old population in terms of deprivation and ethnicity.

A further limitation was that the survey did not recruit from the entire population of 3-year-olds. Identifying children who did not attend private and state funded nurseries, nursery classes attached to schools and playgroup was not possible. The likelihood of bias from this is acknowledged but cannot be measured as reliable estimates for the numbers of children outwith the sites included in this survey are unavailable.

As with other National Dental Epidemiology Programme surveys, this survey employed positive consent. Positive consent has been shown to adversely affect participation rates and consent rates may be lower in those with higher levels of dental decay experience and those living in more deprived areas. Both of these factors could contribute to underestimation of severity and prevalence of dental decay experience. However, it is difficult to model the data to control for the effect of positive consent (17).

The survey only measured experience of dental decay at the threshold of visually obvious dentinal decay. This is a later stage of decay where intervention would involve filling or removing the tooth. Identification of children with earlier stage decay, which was amenable to arrest or reversal, could allow more effective targeted prevention to avoid the development of dentinal decay that may require more aggressive intervention.

Variation and inequality

As with other age groups (18), there was inequitable distribution of experience of dental decay and 3-year-olds living in the most deprived areas of the country were almost 3 times as likely to have experienced decay than those living in the least deprived areas. Three-year-olds in the most deprived areas were also more likely to have more severe decay.

It is noteworthy that across England, experience of dental decay was already apparent in more than 1 in 10 children by the age of 3-years, and up to 1 in 4 children in some areas. Those children with experience of decay had on average 3 affected teeth.

Putting this information to use

Good oral health is fundamental to ensure good general health and wellbeing. Poorer oral health in young children can result in pain and infection and lead to difficulties with eating, sleeping, playing and socialising. There are also significant costs on society associated with oral diseases, not least the costs of hospital admissions for tooth extractions. Dental decay is one of the most common causes of hospital admission in young children. These impacts and costs are mostly avoidable as dental decay is a preventable disease.

Of the 3-year-olds participating in the survey, 10.7% already had experience of dental decay. Of these children 7.2% had one or more teeth extracted. Removal of decayed teeth, usually due to pain, will often require hospital admission and general anaesthesia. Longer term consequences are that children who have decay at an early age are likely to go on to develop dental decay in their permanent teeth and to enter a lifetime cycle of repair, which may lead to eventual tooth loss (19). A further study has shown that 40% of children with dentinal decay went on to experience tooth ache and infection (20). The strong link between dental decay and deprivation is well established. 'The impacts of poor oral health disproportionately affect the most vulnerable and socially disadvantaged individuals and groups in society. These differences in oral health across population groups do not occur by chance, nor are they inevitable. Oral diseases are largely preventable and therefore are avoidable. Reducing these oral health inequalities is a matter of social justice and ethical imperative' (15 p8).

The cause of dental decay is well understood and is related to the frequent exposure of teeth to fermentable carbohydrates, most commonly through eating and drinking sugary snacks and drinks (21). In this young age group the impact of infant feeding and weaning is of particular note. High frequency of consumption of sugar-containing food and drink is also a contributory factor to other issues of public health concern in children, for example, childhood obesity.

Recommendations advocate that the amount and frequency of consumption of foods and drinks that contain free sugars should be reduced and to avoid sugar containing foods and drinks at bedtime (22). Also from six months of age infants should be introduced to drinking from a free-flow cup, and from age one year feeding from a bottle should be discouraged (21). There is also abundant evidence that increasing fluoride availability to individuals and communities is effective at reducing dental decay (3) (21). The government set out a commitment in the prevention green paper to consult on a new school tooth brushing scheme and support water fluoridation (23).

Local authorities, which have a responsibility to improve oral health, may use this information to develop joint strategic needs assessments to plan and commission oral health improvement interventions to address the needs of their populations. PHE and the National Institute for Health and Care Excellence have published documents to support local authorities in these activities (3) (4) (5) (6) (7).

NHS England and NHS Improvement may use this information in oral health needs assessments to inform the commissioning of oral healthcare services.

Local authorities may also wish to seek dental public health advice with regard to commissioning of specific surveys or larger samples using this method to evaluate their interventions and gain more detailed information about the oral health of their populations.

Accessing further data

Cleaned and verified copies of the raw, anonymised data will be available to dental epidemiology coordinators. This will enable them and their colleagues working in PHE centres to make maximum use of their data if further analysis is required for local use.

Local authority personnel can apply to become a super-user and access the raw, anonymised data for specific purposes following the steps below.

1. Local authority requestor to send an email to DentalPHIntelligence@phe.gov.uk providing the following information:
 - a. name of individual to be allocated as 'super user'
 - b. local Authority
 - c. contact details
2. The nominated super-user will be contacted by a member of the national dental public health team who will send a data sharing agreement for signing.
3. Once the signed agreement has been received and authorised, the super-user will be sent their (anonymised) data along with a set of analysis guidance notes.

Any other data requests that are for national data or complex queries should be emailed to DentalPHIntelligence@phe.gov.uk

References

1. Public Health England (2014). [Oral health survey of three-year-old children 2013: A report on the prevalence and severity of dental decay](#)
2. HM Government (2012). Health and Social Care Act 2012. London, The Stationery Office
3. Public Health England. [Local authorities improving oral health: commissioning better oral health for children and young people: an evidence-informed toolkit for local authorities \(2013\)](#)
4. Public Health England (2016). [Improving oral health: a toolkit to support commissioning of supervised toothbrushing programmes in early years and school settings](#)
5. Public Health England (2016). [Improving the oral health of children: cost effective commissioning](#)
6. Public Health England (2019). [Improving oral health: a community water fluoridation toolkit for local authorities](#)
7. National Institute for Health and Care Excellence (2014). [Oral health: approaches for local authorities and their partners to improve the oral health of their communities](#)
8. Pine CM, Pitts NB and Nugent ZJ (1997). British Association for the Study of Community Dentistry (BASCD) guidance on sampling for surveys of child dental health. A BASCD coordinated dental epidemiology programme quality standard. Community Dental Health 14 Suppl 1, 10–17
9. Pine CM, Pitts NB and Nugent ZJ (1997). British Association for the Study of Community Dentistry (BASCD) guidance on the statistical aspects of training and calibration of examiners for surveys of child dental health. A BASCD coordinated dental epidemiology programme quality standard. Community Dental Health 14 Suppl 1, 18–29
10. Pitts NB, Evans DJ and Pine CM (1997). British Association for the Study of Community Dentistry (BASCD) diagnostic criteria for caries prevalence surveys-1996/97. Community Dental Health 14 Suppl 1, 6–9

11. HM Government (2012). The NHS Bodies and Local Authorities (Partnership Arrangements, Care Trusts, Public Health and Local Healthwatch) Regulations 2012 No. 3094
12. Public Health England (2019). [Oral health survey of 3-year-old children 2019 to 2020: national protocol](#)
13. Ministry of Housing Communities and Local Government (2019). [English indices of deprivation 2019](#)
14. Pitts NB, Carter NL, Tsakos G (2018). The Brussels Statement on the Future Need for Caries Epidemiology and Surveillance in Europe. *Community Dental Health* 35 (2): 66
15. Public Health England (2021). [Inequalities in oral health in England](#)
16. Scientific Advisory Committee on Nutrition (2018). [Feeding in the First year of Life](#). London, The Stationery Office
17. Davies GM, Robinson M, Neville J and Burnside G (2014). Investigation of bias related to non-return of consent for a dental epidemiological survey of caries among five-year-olds. *Community Dental Health* 31 (1): 21-26
18. Public Health England (2019). [National Dental Epidemiology Programme for England: oral health survey of five-year-old children 2019](#)
19. Hall-Scullin E, Whitehead H, Milsom K, Tickle M, Su T-L and Walsh T (2017). Longitudinal Study of Caries Development from Childhood to Adolescence. *Journal of Dental Research* 96 (7):762-767
20. Maguire A, Clarkson JE, Douglas GV, Ryan V, Homer T, Marshman Z, McColl E, Wilson N, Vale L, Robertson M, Abouhajar A, Holmes RD, Freeman R, Chadwick B, Deery C, Wong F and Innes NP (2020). [Best-practice prevention alone or with conventional or biological caries management for 3 to 7-year-olds: the FiCTION three-arm RCT](#). *Health Technology Assessment* 24(1):1-174
21. Public Health England (2017). [Delivering better oral health: an evidence-based toolkit for prevention](#)
22. Scientific Advisory Committee on Nutrition (2015). [Carbohydrates and health](#). London, The Stationery Office

23. Department of Health and Social Care (2019). [Advancing our health: prevention in the 2020s](#)

Appendix A. National Dental Epidemiology Programme for England, Oral Health Survey of 3-year-olds 2020, upper-tier local authority

Public Health England		LA did not visit any nurseries due to Covid-19 LA did not participate in survey Based on fewer than 30 volunteers with decay experience										
Region	Upper-Tier LA Code	Upper-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
Country	E92000001	England	44 (19,479)	0.3	0.3	10.7	2.9	2.6	0.2	3.4	1.9	0.4
East Midlands	E06000015	Derby	53 (160)	0.4	0.3	12.6	3.4	2.5	0.4	1.7	0.0	0.0
	E10000007	Derbyshire ³	37 (171)	0.1	0.1	5.6	1.4	1.1	0.3	1.1	0.0	0.0
	E06000016	Leicester	38 (286)	0.5	0.4	16.1	3.0	2.8	0.1	7.2	1.2	0.5
	E10000018	Leicestershire ⁴	38 (942)	0.2	0.2	8.5	2.7	2.3	0.2	2.4	0.5	0.3
	E10000019	Lincolnshire ⁵	80 (571)	0.2	0.1	6.4	3.3	2.3	0.5	1.9	0.0	0.3
	E10000021	Northamptonshire ⁶	37 (346)	0.2	0.2	8.4	2.4	2.1	0.3	0.9	0.0	0.0
	E06000018	Nottingham	78 (54)	0.2	0.2	8.7	Data suppressed			5.2	3.5	1.7
	E10000024	Nottinghamshire	62 (610)	0.2	0.2	9.3	2.4	2.1	0.2	2.4	1.7	0.0
	E06000017	Rutland	29 (39)	0.3	0.3	8.4	Data suppressed			8.4	0.0	0.0
East of England	E06000055	Bedford	Unavailable (122)	0.3	0.3	12.2	2.5	2.5	0.0	4.1	0.0	0.0
	E10000003	Cambridgeshire ⁷	72 (307)	0.1	0.1	1.7	3.4	3.4	0.0	0.5	0.2	0.2
	E06000056	Central Bedfordshire	Unavailable (120)	0.2	0.2	6.4	3.0	2.7	0.0	3.9	0.0	0.0
	E10000012	Essex ⁸	79 (1,134)	0.3	0.2	8.3	3.1	2.7	0.3	2.8	3.5	0.3
	E10000015	Hertfordshire ⁹	56 (313)	0.1	0.1	3.9	2.2	2.2	0.0	1.8	0.6	0.3
	E06000032	Luton	Unavailable (66)	0.8	0.8	20.8	4.1	4.0	0.0	7.6	2.0	2.0
	E10000020	Norfolk ¹⁰	54 (679)	0.2	0.2	6.2	3.6	3.2	0.2	2.4	0.0	0.0

¹ Calculated from figures reported by fieldwork teams; Unavailable indicates no figures were reported by fieldwork teams

² Calculated from data analysed

³ Excludes Derbyshire Dales; High Peak; North East Derbyshire; South Derbyshire

⁴ Excludes Melton; North West Leicestershire

⁵ Excludes Lincoln; South Holland; South Kesteven; West Lindsey

⁶ Excludes Daventry; East Northamptonshire; Northampton; South Northamptonshire; Wellingborough

⁷ Excludes East Cambridgeshire; Fenland

⁸ Excludes Brentwood; Tendring

⁹ Excludes East Hertfordshire; Hertsmere; St Albans; Stevenage; Three Rivers; Welwyn Hatfield

¹⁰ Excludes South Norfolk

Oral health survey of 3-year-old children 2020: a report on the prevalence and severity of dental decay

Public Health
England

LA did not visit any nurseries due to Covid-19
LA did not participate in survey
Based on fewer than 30 volunteers with decay experience

Region	Upper-Tier LA Code	Upper-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
East of England	E06000031	Peterborough	78 (188)	0.2	0.2	7.2	3.2	2.5	0.5	3.8	0.0	0.0
	E06000033	Southend-on-Sea	73 (69)	0.3	0.3	12.6	2.1	2.1	0.0	3.4	1.5	0.0
	E10000029	Suffolk	58 (487)	0.1	0.1	4.8	1.9	1.7	0.2	0.8	0.4	0.2
	E06000034	Thurrock										
London	E09000002	Barking and Dagenham	Unavailable (71)	0.5	0.4	15.6	3.2	2.5	0.0	7.0	4.2	0.0
	E09000003	Barnet	Unavailable (156)	0.5	0.5	12.9	4.2	3.8	0.2	4.8	0.6	1.8
	E09000004	Bexley	65 (49)	0.7	0.7	19.7	3.3	3.3	0.0	8.6	10.4	0.0
	E09000005	Brent	Unavailable (84)	0.8	0.7	19.6	4.1	3.5	0.0	7.4	5.6	3.3
	E09000006	Bromley	48 (119)	0.2	0.2	10.8	1.9	1.5	0.2	1.8	1.6	0.0
	E09000007	Camden	Unavailable (54)	0.1	0.1	4.9	Data suppressed			0.0	0.0	0.0
	E09000001	City of London										
	E09000008	Croydon	55 (59)	0.4	0.4	14.9	2.3	2.3	0.0	8.4	0.0	0.0
	E09000009	Ealing	Unavailable (91)	0.5	0.5	18.1	3.0	3.0	0.0	10.5	7.0	0.0
	E09000010	Enfield	Unavailable (84)	0.6	0.6	15.9	4.1	3.9	0.0	9.3	8.4	0.0
	E09000011	Greenwich	51 (60)	0.4	0.3	15.2	2.8	1.9	0.7	2.2	5.5	0.9
	E09000012	Hackney	Unavailable (37)	0.3	0.3	8.5	Data suppressed			5.3	5.3	0.0
	E09000013	Hammersmith and Fulham	63 (144)	0.3	0.3	10.5	2.8	2.8	0.0	2.8	0.0	1.6
	E09000014	Haringey	Unavailable (53)	0.8	0.8	16.1	4.7	4.7	0.0	7.0	5.9	0.0
	E09000015	Harrow	Unavailable (51)	0.4	0.4	12.4	3.3	3.3	0.0	4.8	0.0	0.0
	E09000016	Havering	Unavailable (193)	0.3	0.2	7.4	3.8	3.3	0.4	3.2	0.4	0.0
	E09000017	Hillingdon										
	E09000018	Hounslow	Unavailable (63)	0.5	0.5	18.3	2.8	2.6	0.0	9.6	3.4	0.0
	E09000019	Islington	Unavailable (87)	0.3	0.3	10.2	2.6	2.5	0.0	5.7	0.0	0.0
	E09000020	Kensington and Chelsea	51 (30)	0.4	0.4	20.2	2.2	2.1	0.1	9.6	0.0	0.0
	E09000021	Kingston upon Thames	72 (258)	0.3	0.2	7.5	4.0	2.9	0.6	3.8	0.0	0.0
	E09000022	Lambeth	55 (95)	0.3	0.2	9.1	2.8	2.0	0.7	4.4	0.0	0.0
	E09000023	Lewisham	66 (176)	0.3	0.2	10.7	2.5	1.9	0.5	1.8	0.3	0.0
	E09000024	Merton	64 (219)	0.3	0.3	11.0	2.9	2.7	0.2	4.2	0.3	0.0
	E09000025	Newham	Unavailable (249)	0.6	0.5	18.1	3.2	2.9	0.1	8.2	8.6	2.2
	E09000026	Redbridge	Unavailable (56)	0.6	0.6	19.8	3.1	2.8	0.1	9.4	0.0	0.0
	E09000027	Richmond upon Thames	73 (125)	0.1	0.1	4.5	2.3	2.3	0.0	1.5	0.8	1.2
	E09000028	Southwark	77 (77)	0.2	0.1	6.6	2.6	2.0	0.0	1.7	0.0	0.0
	E09000029	Sutton	63 (172)	0.2	0.2	8.2	2.2	2.2	0.0	3.1	0.6	0.0
	E09000030	Tower Hamlets	Unavailable (118)	0.3	0.3	15.4	1.8	1.6	0.1	1.7	5.5	0.0
	E09000031	Waltham Forest	Unavailable (183)	0.6	0.6	18.7	3.1	3.0	0.0	8.9	2.0	0.0
	E09000032	Wandsworth	65 (125)	0.2	0.2	9.6	2.1	2.1	0.1	3.2	0.0	0.0
	E09000033	Westminster	56 (43)	0.3	0.3	7.3	3.4	3.4	0.0	2.7	0.0	0.0

Oral health survey of 3-year-old children 2020: a report on the prevalence and severity of dental decay

Public Health England		LA did not visit any nurseries due to Covid-19 LA did not participate in survey Based on fewer than 30 volunteers with decay experience										
Region	Upper-Tier LA Code	Upper-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
North East	E06000047	County Durham	87 (90)	0.4	0.2	11.5	3.1	2.1	0.4	4.4	2.7	0.0
	E06000005	Darlington	71 (219)	0.2	0.2	7.8	2.5	2.3	0.2	2.4	0.3	0.0
	E08000037	Gateshead	88 (120)	0.4	0.3	18.4	2.0	1.8	0.0	3.1	0.0	0.0
	E06000001	Hartlepool	41 (278)	0.2	0.1	8.5	2.4	1.7	0.6	1.9	0.0	0.4
	E06000002	Middlesbrough	39 (105)	0.7	0.6	14.9	4.9	4.0	0.7	7.6	0.0	0.0
	E08000021	Newcastle upon Tyne	Unavailable (35)	0.1	0.1	7.8	Data suppressed			0.0	0.0	0.0
	E08000022	North Tyneside	43 (51)	0.6	0.5	16.3	3.7	3.4	0.2	6.1	2.0	2.0
	E06000057	Northumberland	34 (65)	0.1	0.1	6.4	Data suppressed			2.5	0.0	0.0
	E06000003	Redcar and Cleveland										
	E08000023	South Tyneside	75 (130)	0.2	0.2	9.9	2.3	2.2	0.0	1.5	1.5	0.7
North West	E06000004	Stockton-on-Tees	55 (152)	0.2	0.1	6.6	2.7	2.2	0.3	3.5	0.0	0.0
	E08000024	Sunderland	80 (131)	0.8	0.8	21.7	3.7	3.5	0.1	4.9	0.0	1.8
	E06000008	Blackburn with Darwen										
	E06000009	Blackpool ¹¹	Unavailable (220)	0.7	0.6	20.0	3.3	3.1	0.1	6.6	11.1	Unavailable
	E08000001	Bolton										
	E08000002	Bury	52 (152)	0.3	0.3	12.4	2.3	2.1	0.2	3.0	0.5	0.0
	E06000049	Cheshire East										
	E06000050	Cheshire West and Chester										
	E10000006	Cumbria	53 (1,008)	0.3	0.3	10.7	2.7	2.4	0.3	2.3	0.6	0.3
	E06000006	Halton										
	E08000011	Knowsley										
	E10000017	Lancashire ¹²	47 (1,153)	0.3	0.3	10.9	3.1	3.0	0.0	4.8	7.6	0.2
	E08000012	Liverpool										
	E08000003	Manchester	52 (52)	0.8	0.8	21.3	3.6	3.6	0.0	17.5	0.0	0.0
	E08000004	Oldham	53 (140)	0.7	0.6	17.2	3.8	3.5	0.0	7.6	0.0	1.6
	E08000005	Rochdale										
	E08000006	Salford	78 (179)	0.6	0.6	27.5	2.4	2.3	0.0	5.0	2.1	3.8
	E08000014	Sefton										
	E08000013	St. Helens										
	E08000007	Stockport	52 (49)	0.3	0.3	6.3	4.1	4.1	0.0	6.3	0.9	0.0
	E08000008	Tameside	53 (58)	0.4	0.4	17.0	2.2	2.2	0.0	4.9	0.0	0.0
	E08000009	Trafford	43 (40)	0.2	0.1	14.4	Data suppressed			2.3	5.7	0.0
	E06000007	Warrington										
	E08000010	Wigan	56 (233)	0.5	0.4	12.0	3.9	3.3	0.6	4.9	0.0	0.4
	E08000015	Wirral										

¹¹ Data collected in academic year 2018-2019, no pufa collected

¹² Excludes Lancaster, Rossendale; West Lancashire

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Public Health England		LA did not visit any nurseries due to Covid-19 LA did not participate in survey Based on fewer than 30 volunteers with decay experience										
Region	Upper-Tier LA Code	Upper-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
South East	E06000036	Bracknell Forest										
	E06000043	Brighton and Hove	57 (117)	0.1	0.1	6.6	1.5	1.3	0.0	0.0	0.0	0.0
	E06000060	Buckinghamshire	72 (168)	0.3	0.3	12.2	2.6	2.2	0.3	3.7	1.5	0.5
	E10000011	East Sussex										
	E10000014	Hampshire										
	E06000046	Isle of Wight										
	E10000016	Kent ¹³	Unavailable (323)	0.3	0.2	7.9	3.4	2.9	0.3	1.9	0.0	0.0
	E06000035	Medway										
	E06000042	Milton Keynes	Unavailable (48)	0.1	0.1	7.6	Data suppressed			0.0	0.0	0.0
	E10000025	Oxfordshire ¹⁴	37 (243)	0.2	0.1	8.6	2.2	1.4	0.7	1.0	0.4	0.0
	E06000044	Portsmouth										
	E06000038	Reading										
	E06000039	Slough										
	E06000045	Southampton										
	E10000030	Surrey										
	E06000037	West Berkshire										
	E10000032	West Sussex										
	E06000040	Windsor and Maidenhead										
	E06000041	Wokingham										
South West	E06000022	Bath and North East Somerset	4 (20)									
	E06000058	Bournemouth Christchurch and Poole										
	E06000023	Bristol, City of	18 (108)	0.6	0.5	8.8	Data suppressed			4.9	2.7	2.5
	E06000052	Cornwall	56 (149)	0.4	0.4	20.5	2.2	2.1	0.0	2.0	3.8	0.5
	E10000008	Devon ¹⁵	50 (208)	0.3	0.3	11.9	2.7	2.7	0.0	3.7	0.0	0.0
	E06000059	Dorset										
	E10000013	Gloucestershire	39 (360)	0.4	0.4	12.2	3.3	2.9	0.2	4.6	6.4	1.5
	E06000053	Isles of Scilly										
	E06000024	North Somerset	4 (28)									
	E06000026	Plymouth	66 (33)	0.2	0.2	20.1	Data suppressed			0.0	0.0	0.0
	E10000027	Somerset	7 (268)	0.2	0.2	10.0	2.3	2.0	0.1	1.8	0.0	2.2
	E06000025	South Gloucestershire	17 (100)	0.1	0.1	5.1	Data suppressed			1.0	0.0	0.0
	E06000030	Swindon										
	E06000027	Torbay	Unavailable (142)	0.6	0.4	22.5	2.5	2.0	0.2	5.8	2.7	0.7
	E06000054	Wiltshire	32 (20)									

¹³ Data for Gravesham and Thanet ONLY

¹⁴ Excludes Cherwell; Oxford

¹⁵ Excludes East Devon; Mid Devon; South Hams; Torridge; West Devon

Oral health survey of 3-year-old children 2020: a report on the prevalence and severity of dental decay

		LA did not visit any nurseries due to Covid-19 LA did not participate in survey Based on fewer than 30 volunteers with decay experience										
Region	Upper-Tier LA Code	Upper-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
West Midlands	E08000025	Birmingham										
	E08000026	Coventry										
	E08000027	Dudley										
	E06000019	Herefordshire, County of	2 (37)	0.3	0.3	19.4	1.6	1.5	0.0	3.1	0.0	0.0
	E08000028	Sandwell										
	E06000051	Shropshire	56 (96)	0.1	0.1	4.9	Data suppressed			0.9	0.0	0.0
	E08000029	Solihull										
	E10000028	Staffordshire ¹⁶	76 (415)	0.1	0.1	6.5	2.2	1.9	0.1	0.7	0.8	0.0
	E06000021	Stoke-on-Trent	92 (169)	0.4	0.4	14.7	2.8	2.4	0.4	3.8	3.7	1.1
	E06000020	Telford and Wrekin	36 (40)	0.5	0.0	5.9	Data suppressed			0.0	0.0	0.0
	E08000030	Walsall										
	E10000031	Warwickshire ¹⁷	59 (66)	0.1	0.1	10.0	1.2	1.2	0.0	0.0	1.5	0.0
	E08000031	Wolverhampton										
	E10000034	Worcestershire										
Yorkshire and the Humber	E08000016	Barnsley	55 (32)	0.2	0.2	10.8	Data suppressed			5.4	0.0	0.0
	E08000032	Bradford	62 (169)	0.5	0.5	16.1	3.4	3.2	0.1	6.1	0.0	0.0
	E08000033	Calderdale	23 (55)	0.1	0.1	2.8	Data suppressed			0.0	0.0	0.0
	E08000017	Doncaster										
	E06000011	East Riding of Yorkshire										
	E06000010	Kingston upon Hull, City of										
	E08000034	Kirklees										
	E08000035	Leeds	36 (238)	0.4	0.3	15.1	2.7	2.1	0.4	3.9	0.3	0.0
	E06000012	North East Lincolnshire	68 (62)	0.7	0.4	21.1	3.2	1.8	1.3	4.1	0.0	0.0
	E06000013	North Lincolnshire	56 (165)	1.1	1.0	26.2	4.1	3.7	0.4	7.7	29.4	0.7
	E10000023	North Yorkshire	74 (460)	0.2	0.1	9.8	1.8	1.5	0.1	0.8	0.5	1.5
	E08000018	Rotherham	60 (182)	0.4	0.4	16.2	2.4	2.3	0.0	4.7	1.1	0.0
	E08000019	Sheffield	59 (83)	0.0	0.0	0.9	Data suppressed			0.0	0.0	0.4
	E08000036	Wakefield	15 (39)	0.3	0.1	21.7	Data suppressed			4.8	0.0	0.0
	E06000014	York										

¹⁶ Excludes Lichfield; South Staffordshire; Staffordshire Moorlands; Tamworth

¹⁷ Data for North Warwickshire and Warwick ONLY

Oral health survey of 3-year-old children 2020: a report on the prevalence and severity of dental decay

Public Health
England

LA did not visit any nurseries due to Covid-19
LA did not participate in survey
Based on fewer than 30 volunteers with decay experience

Region	Upper-Tier LA Code	Upper-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
Regions	E12000001	North East ¹⁸	56 (1,378)	0.3	0.3	10.4	3.1	2.6	0.3	3.1	0.4	0.4
	E12000002	North West ¹⁹	52 (3,307)	0.4	0.4	13.7	3.0	2.8	0.1	4.8	3.4	0.6
	E12000003	Yorkshire and The Humber ²⁰	51 (1,504)	0.4	0.4	14.7	2.9	2.6	0.2	3.9	3.9	0.5
	E12000004	East Midlands	47 (3,179)	0.3	0.2	9.7	2.8	2.4	0.3	2.8	0.6	0.3
	E12000005	West Midlands ²¹	24 (829)	0.3	0.2	10.7	2.4	2.0	0.4	1.8	1.6	0.3
	E12000006	East of England ²²	65 (3,488)	0.2	0.2	6.7	3.0	2.7	0.2	2.3	1.3	0.2
	E12000007	London ²³	62 (3,394)	0.4	0.4	12.6	3.1	2.8	0.1	5.0	2.4	0.5
	E12000008	South East ²⁴	48 (963)	0.2	0.2	8.2	2.7	2.1	0.4	1.8	0.6	0.1
	E12000009	South West ²⁵	16 (1,437)	0.3	0.3	11.8	2.7	2.4	0.1	3.0	2.5	1.0
Country	E92000001	England	44 (19,479)	0.3	0.3	10.7	2.9	2.6	0.2	3.4	1.9	0.4

¹⁸ Excludes Redcar & Cleveland

¹⁹ Excludes Blackburn with Darwen; Bolton; Rochdale; All Cheshire & Merseyside LAs. Blackpool data included collected 2018-19.

²⁰ Excludes Doncaster; East Riding of Yorkshire; Kingston Upon Hull; Kirklees; York

²¹ Excludes Birmingham; Coventry; Dudley; Sandwell; Solihull; Walsall; Wolverhampton; Worcestershire

²² Excludes Thurrock

²³ Excludes City of London; Hillingdon

²⁴ Excludes Bracknell Forest; East Sussex; Hampshire; Isle of Wight; Medway; Portsmouth; Reading; Slough; Southampton; Surrey; West Berkshire; West Sussex; Windsor & Maidenhead; Wokingham

²⁵ Excludes Bournemouth, Christchurch and Poole; Dorset; Isles of Scilly; Swindon

Appendix B. National Dental Epidemiology Programme for England, Oral Health Survey of 3-year-olds 2020, lower-tier local authority

Public Health England	LA did not visit any nurseries due to Covid-19											
	LA did not participate in survey											
	Based on fewer than 30 volunteers with decay experience											
Region	Lower-Tier LA Code	Lower-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
Country	E92000001	England	44 (19,479)	0.3	0.3	10.7	2.9	2.6	0.2	3.4	1.9	0.4
East Midlands	E07000032	Amber Valley	32 (87)	0.1	0.1	5.2	Data suppressed			0.8	0.0	0.0
	E07000170	Ashfield	Unavailable (42)	0.1	0.0	4.3	Data suppressed			1.5	0.0	0.0
	E07000171	Bassetlaw	46 (123)	0.2	0.1	7.3	2.4	1.6	0.8	1.5	0.0	0.0
	E07000129	Blaby	37 (200)	0.2	0.2	8.5	2.3	1.9	0.1	2.6	0.5	0.0
	E07000033	Bolsover	40 (9)									
	E07000136	Boston	81 (199)	0.5	0.3	13.5	3.4	2.2	0.8	4.4	0.0	0.9
	E07000172	Broxtowe	58 (72)	0.1	0.1	4.8	Data suppressed			0.0	0.0	0.0
	E07000130	Charnwood	40 (275)	0.2	0.2	6.1	3.3	2.8	0.3	2.0	0.0	1.0
	E07000034	Chesterfield	66 (31)	0.0	0.0	2.4	Data suppressed			2.4	0.0	0.0
	E07000150	Corby	37 (242)	0.3	0.2	11.6	2.2	2.0	0.2	0.8	0.0	0.0
	E07000151	Daventry										
	E06000015	Derby	53 (160)	0.4	0.3	12.6	3.4	2.5	0.4	1.7	0.0	0.0
	E07000035	Derbyshire Dales										
	E07000137	East Lindsey	80 (163)	0.1	0.1	2.7	Data suppressed			0.0	0.0	0.0
	E07000152	East Northamptonshire										
	E07000036	Erewash	38 (27)									
	E07000173	Gedling	78 (154)	0.3	0.2	14.3	2.0	1.7	0.1	3.8	2.4	0.0
	E07000131	Harborough	35 (155)	0.2	0.1	8.9	1.7	1.1	0.6	0.7	1.2	0.0
	E07000037	High Peak										
	E07000132	Hinckley and Bosworth	37 (123)	0.2	0.2	6.2	3.2	3.1	0.1	2.0	0.0	0.0
	E07000153	Kettering	36 (91)	0.2	0.1	4.0	Data suppressed			1.0	0.0	0.0
	E06000016	Leicester	38 (286)	0.5	0.4	16.1	3.0	2.8	0.1	7.2	1.2	0.5
	E07000138	Lincoln										
	E07000174	Mansfield	52 (97)	0.4	0.4	11.2	3.3	3.3	0.0	2.6	5.0	0.0
	E07000133	Melton										
	E07000175	Newark and Sherwood	74 (90)	0.1	0.1	5.9	Data suppressed			0.8	0.0	0.0
	E07000038	North East Derbyshire										
	E07000139	North Kesteven	78 (180)	0.1	0.1	3.8	Data suppressed			1.4	0.0	0.0

¹ Calculated from figures reported by fieldwork teams; Unavailable indicates no figures were reported by fieldwork teams

² Calculated from data analysed

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Public Health England	LA did not visit any nurseries due to Covid-19											
	LA did not participate in survey											
	Based on fewer than 30 volunteers with decay experience											
Region	Lower-Tier LA Code	Lower-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year- old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year- old children with pufa
East Midlands	E07000134	North West Leicestershire										
	E07000154	Northampton										
	E06000018	Nottingham	78 (54)	0.2	0.2	8.7	Data suppressed			5.2	3.5	1.7
	E07000135	Oadby and Wigston	40 (181)	0.4	0.3	12.0	3.0	2.5	0.2	3.9	1.1	0.0
	E07000176	Rushcliffe	82 (32)	0.0	0.0	0.0	Data suppressed			0.0	0.0	0.0
	E06000017	Rutland	29 (39)	0.3	0.3	8.4	Data suppressed			8.4	0.0	0.0
	E07000039	South Derbyshire										
	E07000140	South Holland										
	E07000141	South Kesteven										
	E07000155	South Northamptonshire										
East of England	E07000156	Wellingborough										
	E07000142	West Lindsey										
	E07000200	Babergh	50 (95)	0.1	0.0	4.3	Data suppressed			0.0	0.7	0.0
	E07000066	Basildon	74 (172)	0.3	0.3	9.3	3.3	3.1	0.1	3.7	2.7	0.8
	E06000055	Bedford	Unavailable (122)	0.3	0.3	12.2	2.5	2.5	0.0	4.1	0.0	0.0
	E07000067	Braintree	90 (131)	0.2	0.1	5.3	4.6	2.6	1.6	0.8	2.1	0.0
	E07000143	Breckland	73 (180)	0.2	0.2	3.7	4.9	4.2	0.0	0.9	0.0	0.0
	E07000068	Brentwood										
	E07000144	Broadland	98 (197)	0.0	0.0	1.5	Data suppressed			0.5	0.0	0.0
	E07000095	Broxbourne	47 (75)	0.2	0.2	7.8	Data suppressed			2.6	0.9	0.0
	E07000008	Cambridge	65 (98)	0.1	0.1	2.8	Data suppressed			1.0	0.0	0.0
	E07000069	Castle Point	70 (24)									
	E06000056	Central Bedfordshire	Unavailable (120)	0.2	0.2	6.4	3.0	2.7	0.0	3.9	0.0	0.0
	E07000070	Chelmsford	80 (147)	0.2	0.1	5.0	3.4	3.0	0.0	2.9	3.8	0.0
	E07000071	Colchester	88 (72)	0.2	0.1	10.0	1.9	1.5	0.4	1.5	2.3	0.0
	E07000096	Dacorum	62 (124)	0.1	0.1	3.0	Data suppressed			1.5	0.0	0.0
	E07000009	East Cambridgeshire										
	E07000242	East Hertfordshire										
	E07000244	East Suffolk	47 (118)	0.1	0.1	3.8	2.0	2.0	0.0	0.5	0.0	0.0
	E07000072	Epping Forest	69 (7)									
	E07000010	Fenland										
	E07000145	Great Yarmouth	19 (48)	0.3	0.3	20.9	1.6	1.6	0.0	7.2	0.0	0.0
	E07000073	Harlow	76 (169)	0.6	0.6	17.9	3.5	3.1	0.4	6.7	8.1	1.8
	E07000098	Hertsmere										
	E07000011	Huntingdonshire	93 (79)	0.0	0.0	0.9	Data suppressed			0.0	0.9	0.0
	E07000202	Ipswich	60 (166)	0.1	0.1	3.7	2.6	2.2	0.2	0.6	0.6	0.6
	E07000146	King's Lynn and West Norfolk	24 (59)	0.9	0.8	14.9	5.8	5.7	0.1	7.9	0.0	0.0

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East of England	E06000032	Luton	Unavailable (66)	0.8	0.8	20.8	4.1	4.0	0.0	7.6	2.0	2.0
	E07000074	Maldon	84 (230)	0.1	0.1	5.1	2.1	1.9	0.2	1.0	0.4	0.0
	E07000203	Mid Suffolk	60 (17)									
	E07000099	North Hertfordshire	54 (83)	0.0	0.0	3.2	Data suppressed			1.3	1.3	0.9
	E07000147	North Norfolk	57 (142)	0.2	0.2	4.2	5.5	4.1	1.2	0.8	0.0	0.0
	E07000148	Norwich ³	0 (39)	0.0	0.0	0.0	Data suppressed			0.0	0.0	0.0
	E06000031	Peterborough	78 (188)	0.2	0.2	7.2	3.2	2.5	0.5	3.8	0.0	0.0
	E07000075	Rochford	67 (76)	0.1	0.1	4.6	Data suppressed			2.3	4.4	0.0
	E07000012	South Cambridgeshire	67 (124)	0.1	0.1	1.6	Data suppressed			0.9	0.0	0.7
	E07000149	South Norfolk										
	E06000033	Southend-on-Sea	73 (69)	0.3	0.3	12.6	2.1	2.1	0.0	3.4	1.5	0.0
	E07000240	St Albans										
	E07000243	Stevenage										
	E07000076	Tendring										
	E07000102	Three Rivers										
	E06000034	Thurrock										
	E07000077	Uttlesford	78 (98)	0.2	0.2	7.1	2.4	2.4	0.0	2.0	5.1	0.0
	E07000103	Watford	87 (13)									
	E07000241	Welwyn Hatfield										
	E07000245	West Suffolk	90 (91)	0.1	0.1	8.0	1.5	1.5	0.0	1.5	0.0	0.0
London	E09000002	Barking and Dagenham	Unavailable (71)	0.5	0.4	15.6	3.2	2.5	0.0	7.0	4.2	0.0
	E09000003	Barnet	Unavailable (156)	0.5	0.5	12.9	4.2	3.8	0.2	4.8	0.6	1.8
	E09000004	Bexley	65 (49)	0.7	0.7	19.7	3.3	3.3	0.0	8.6	10.4	0.0
	E09000005	Brent	Unavailable (84)	0.8	0.7	19.6	4.1	3.5	0.0	7.4	5.6	3.3
	E09000006	Bromley	48 (119)	0.2	0.2	10.8	1.9	1.5	0.2	1.8	1.6	0.0
	E09000007	Camden	Unavailable (54)	0.1	0.1	4.9	Data suppressed			0.0	0.0	0.0
	E09000001	City of London										
	E09000008	Croydon	55 (59)	0.4	0.4	14.9	2.3	2.3	0.0	8.4	0.0	0.0
	E09000009	Ealing	Unavailable (91)	0.5	0.5	18.1	3.0	3.0	0.0	10.5	7.0	0.0
	E09000010	Enfield	Unavailable (84)	0.6	0.6	15.9	4.1	3.9	0.0	9.3	8.4	0.0
	E09000011	Greenwich	51 (60)	0.4	0.3	15.2	2.8	1.9	0.7	2.2	5.5	0.9
	E09000012	Hackney	Unavailable (37)	0.3	0.3	8.5	Data suppressed			5.3	5.3	0.0
	E09000013	Hammersmith and Fulham	63 (144)	0.3	0.3	10.5	2.8	2.8	0.0	2.8	0.0	1.6
	E09000014	Haringey	Unavailable (53)	0.8	0.8	16.1	4.7	4.7	0.0	7.0	5.9	0.0
	E09000015	Harrow	Unavailable (51)	0.4	0.4	12.4	3.3	3.3	0.0	4.8	0.0	0.0

³ No sites visited but sufficient number of 3-year-old residents examined

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London	E09000016	Havering	Unavailable (193)	0.3	0.2	7.4	3.8	3.3	0.4	3.2	0.4	0.0
	E09000017	Hillingdon										
	E09000018	Hounslow	Unavailable (63)	0.5	0.5	18.3	2.8	2.6	0.0	9.6	3.4	0.0
	E09000019	Islington	Unavailable (87)	0.3	0.3	10.2	2.6	2.5	0.0	5.7	0.0	0.0
	E09000020	Kensington and Chelsea	51 (30)	0.4	0.4	20.2	2.2	2.1	0.1	9.6	0.0	0.0
	E09000021	Kingston upon Thames	72 (258)	0.3	0.2	7.5	4.0	2.9	0.6	3.8	0.0	0.0
	E09000022	Lambeth	55 (95)	0.3	0.2	9.1	2.8	2.0	0.7	4.4	0.0	0.0
	E09000023	Lewisham	66 (176)	0.3	0.2	10.7	2.5	1.9	0.5	1.8	0.3	0.0
	E09000024	Merton	64 (219)	0.3	0.3	11.0	2.9	2.7	0.2	4.2	0.3	0.0
	E09000025	Newham	Unavailable (249)	0.6	0.5	18.1	3.2	2.9	0.1	8.2	8.6	2.2
	E09000026	Redbridge	Unavailable (56)	0.6	0.6	19.8	3.1	2.8	0.1	9.4	0.0	0.0
	E09000027	Richmond upon Thames	73 (125)	0.1	0.1	4.5	2.3	2.3	0.0	1.5	0.8	1.2
	E09000028	Southwark	77 (77)	0.2	0.1	6.6	2.6	2.0	0.0	1.7	0.0	0.0
	E09000029	Sutton	63 (172)	0.2	0.2	8.2	2.2	2.2	0.0	3.1	0.6	0.0
	E09000030	Tower Hamlets	Unavailable (118)	0.3	0.3	15.4	1.8	1.6	0.1	1.7	5.5	0.0
	E09000031	Waltham Forest	Unavailable (183)	0.6	0.6	18.7	3.1	3.0	0.0	8.9	2.0	0.0
	E09000032	Wandsworth	65 (125)	0.2	0.2	9.6	2.1	2.1	0.1	3.2	0.0	0.0
	E09000033	Westminster	56 (43)	0.3	0.3	7.3	3.4	3.4	0.0	2.7	0.0	0.0
North East	E06000047	County Durham	87 (90)	0.4	0.2	11.5	3.1	2.1	0.4	4.4	2.7	0.0
	E06000005	Darlington	71 (219)	0.2	0.2	7.8	2.5	2.3	0.2	2.4	0.3	0.0
	E08000037	Gateshead	88 (120)	0.4	0.3	18.4	2.0	1.8	0.0	3.1	0.0	0.0
	E06000001	Hartlepool	41 (278)	0.2	0.1	8.5	2.4	1.7	0.6	1.9	0.0	0.4
	E06000002	Middlesbrough	39 (105)	0.7	0.6	14.9	4.9	4.0	0.7	7.6	0.0	0.0
	E08000021	Newcastle upon Tyne	Unavailable (35)	0.1	0.1	7.8	Data suppressed			0.0	0.0	0.0
	E08000022	North Tyneside	43 (51)	0.6	0.5	16.3	3.7	3.4	0.2	6.1	2.0	2.0
	E06000057	Northumberland	34 (65)	0.1	0.1	6.4	Data suppressed			2.5	0.0	0.0
	E06000003	Redcar and Cleveland										
	E08000023	South Tyneside	75 (130)	0.2	0.2	9.9	2.3	2.2	0.0	1.5	1.5	0.7
	E06000004	Stockton-on-Tees	55 (152)	0.2	0.1	6.6	2.7	2.2	0.3	3.5	0.0	0.0
	E08000024	Sunderland	80 (131)	0.8	0.8	21.7	3.7	3.5	0.1	4.9	0.0	1.8
North West	E07000026	Allerdale	48 (110)	0.3	0.3	6.3	4.0	4.0	0.0	1.1	5.2	0.0
	E07000027	Barrow-in-Furness	65 (285)	0.4	0.4	15.6	2.7	2.4	0.3	4.3	0.4	0.4
	E06000008	Blackburn with Darwen										
	E06000009	Blackpool ⁴	Unavailable (220)	0.7	0.6	20.0	3.3	3.1	0.1	6.6	11.1	Unavailable

⁴ Data collected in academic year 2018-2019, no pufa collected

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North West	E08000001	Bolton										
	E07000117	Burnley	41 (49)	1.0	0.9	22.7	4.2	4.0	0.0	17.5	7.3	0.0
	E08000002	Bury	52 (152)	0.3	0.3	12.4	2.3	2.1	0.2	3.0	0.5	0.0
	E07000028	Carlisle	42 (228)	0.4	0.3	13.4	2.9	2.1	0.8	2.7	0.0	0.3
	E06000049	Cheshire East										
	E06000050	Cheshire West and Chester										
	E07000118	Chorley	50 (170)	0.2	0.2	8.8	2.2	2.2	0.0	1.2	7.6	0.0
	E07000029	Copeland	60 (89)	0.2	0.2	6.3	Data suppressed			0.0	0.0	1.6
	E07000030	Eden	48 (124)	0.1	0.1	8.0	1.6	1.6	0.0	1.3	0.0	0.0
	E07000119	Fylde	48 (105)	0.1	0.1	7.2	1.2	1.2	0.0	0.8	6.0	0.0
	E06000006	Halton										
	E07000120	Hyndburn	59 (44)	0.6	0.6	16.4	3.7	3.7	0.0	13.7	13.7	2.7
	E08000011	Knowsley										
	E07000121	Lancaster										
	E08000012	Liverpool										
	E08000003	Manchester	52 (52)	0.8	0.8	21.3	3.6	3.6	0.0	17.5	0.0	0.0
	E08000004	Oldham	53 (140)	0.7	0.6	17.2	3.8	3.5	0.0	7.6	0.0	1.6
	E07000122	Pendle	43 (223)	0.5	0.5	14.7	3.5	3.3	0.1	7.6	8.7	0.0
	E07000123	Preston	46 (231)	0.4	0.4	12.5	3.0	3.0	0.0	4.1	8.4	0.0
	E07000124	Ribble Valley	32 (14)									
	E08000005	Rochdale										
	E07000125	Rossendale										
	E08000006	Salford	78 (179)	0.6	0.6	27.5	2.4	2.3	0.0	5.0	2.1	3.8
	E08000014	Sefton										
	E07000031	South Lakeland	62 (172)	0.3	0.3	9.6	3.3	2.9	0.1	2.3	0.0	0.0
	E07000126	South Ribble	55 (205)	0.1	0.1	7.2	1.8	1.8	0.0	0.9	3.6	0.4
	E08000013	St. Helens										
	E08000007	Stockport	52 (49)	0.3	0.3	6.3	4.1	4.1	0.0	6.3	0.9	0.0
	E08000008	Tameside	53 (58)	0.4	0.4	17.0	2.2	2.2	0.0	4.9	0.0	0.0
	E08000009	Trafford	43 (40)	0.2	0.1	14.4	Data suppressed			2.3	5.7	0.0
	E06000007	Warrington										
	E07000127	West Lancashire										
	E08000010	Wigan	56 (233)	0.5	0.4	12.0	3.9	3.3	0.6	4.9	0.0	0.4
	E08000015	Wirral										
	E07000128	Wyre	39 (97)	0.2	0.2	7.5	2.3	2.3	0.0	4.0	8.2	0.0

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South East	E07000223	Adur										
	E07000224	Arun										
	E07000105	Ashford										
	E07000084	Basingstoke and Deane										
	E06000036	Bracknell Forest										
	E06000043	Brighton and Hove	57 (117)	0.1	0.1	6.6	1.5	1.3	0.0	0.0	0.0	0.0
	E06000060	Buckinghamshire	72 (168)	0.3	0.3	12.2	2.6	2.2	0.3	3.7	1.5	0.5
	E07000106	Canterbury										
	E07000177	Cherwell										
	E07000225	Chichester										
	E07000226	Crawley										
	E07000107	Dartford										
	E07000108	Dover										
	E07000085	East Hampshire										
	E07000061	Eastbourne										
	E07000086	Eastleigh										
	E07000207	Elmbridge										
	E07000208	Epsom and Ewell										
	E07000087	Fareham										
	E07000112	Folkestone & Hythe										
	E07000088	Gosport										
	E07000109	Gravesham	Unavailable (131)	0.4	0.3	14.5	2.6	2.1	0.3	3.2	0.0	0.0
	E07000209	Guildford										
	E07000089	Hart										
	E07000062	Hastings										
	E07000090	Havant										
	E07000227	Horsham										
	E06000046	Isle of Wight										
	E07000063	Lewes										
	E07000110	Maidstone										
	E06000035	Medway										
	E07000228	Mid Sussex										
	E06000042	Milton Keynes	Unavailable (48)	0.1	0.1	7.6	Data suppressed			0.0	0.0	0.0
	E07000210	Mole Valley										
	E07000091	New Forest										
	E07000178	Oxford										
	E06000044	Portsmouth										
	E06000038	Reading										

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South East	E07000211	Reigate and Banstead										
	E07000064	Rother										
	E07000212	Runnymede										
	E07000092	Rushmoor										
	E07000111	Sevenoaks										
	E06000039	Slough										
	E07000179	South Oxfordshire	37 (49)	0.1	0.1	5.5	Data suppressed			0.0	0.0	0.0
	E06000045	Southampton										
	E07000213	Spelthorne										
	E07000214	Surrey Heath										
	E07000113	Swale										
	E07000215	Tandridge										
	E07000093	Test Valley										
	E07000114	Thanet	Unavailable (154)	0.2	0.2	4.2	4.9	4.0	0.4	1.3	0.0	0.0
	E07000115	Tonbridge and Malling										
	E07000116	Tunbridge Wells										
	E07000180	Vale of White Horse	36 (168)	0.2	0.1	7.7	2.1	1.4	0.3	1.8	0.6	0.0
	E07000216	Waverley										
	E07000065	Wealden										
	E06000037	West Berkshire										
	E07000181	West Oxfordshire	41 (23)									
	E07000094	Winchester										
	E06000040	Windsor and Maidenhead										
	E07000217	Woking										
	E06000041	Wokingham										
	E07000229	Worthing										
South West	E06000022	Bath and North East Somerset	4 (20)									
	E06000058	Bournemouth Christchurch and Poole										
	E06000023	Bristol, City of	18 (108)	0.6	0.5	8.8	Data suppressed			4.9	2.7	2.5
	E07000078	Cheltenham	33 (71)	1.1	1.0	17.0	6.2	5.9	0.4	12.3	0.0	0.0
	E06000052	Cornwall	56 (149)	0.4	0.4	20.5	2.2	2.1	0.0	2.0	3.8	0.5
	E07000079	Cotswold	63 (20)									
	E06000059	Dorset										
	E07000040	East Devon										
	E07000041	Exeter	56 (85)	0.3	0.3	12.3	2.2	2.2	0.0	2.3	0.0	0.0
	E07000080	Forest of Dean	40 (76)	0.3	0.2	15.4	1.8	1.6	0.0	1.1	9.6	1.1
	E07000081	Gloucester	35 (76)	0.5	0.5	17.5	3.1	2.9	0.0	3.2	21.0	0.0

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South West	E06000053	Isles of Scilly										
	E07000187	Mendip	13 (114)	0.2	0.1	8.7	1.8	1.7	0.0	0.8	0.0	2.8
	E07000042	Mid Devon										
	E07000043	North Devon	43 (53)	0.3	0.3	6.5		Data suppressed		4.2	0.0	0.0
	E06000024	North Somerset	4 (28)									
	E06000026	Plymouth	66 (33)	0.2	0.2	20.1		Data suppressed		0.0	0.0	0.0
	E07000188	Sedgemoor	6 (59)	0.2	0.2	10.3	2.4	2.0	0.2	4.1	0.0	2.1
	E07000246	Somerset West and Taunton	7 (78)	0.4	0.4	10.6	3.7	3.3	0.0	3.0	0.0	1.2
	E06000025	South Gloucestershire	17 (100)	0.1	0.1	5.1		Data suppressed		1.0	0.0	0.0
	E07000044	South Hams										
	E07000189	South Somerset	1 (17)									
	E07000082	Stroud	38 (42)	0.2	0.2	8.5		Data suppressed		6.1	0.0	8.5
	E06000030	Swindon										
	E07000045	Teignbridge	Unavailable (62)	0.3	0.3	11.0	2.8	2.8	0.0	3.4	0.0	0.0
	E07000083	Tewkesbury	40 (75)	0.4	0.3	9.0	4.6	3.3	0.7	5.1	1.0	0.0
	E06000027	Torbay	Unavailable (142)	0.6	0.4	22.5	2.5	2.0	0.2	5.8	2.7	0.7
	E07000046	Torridge										
	E07000047	West Devon										
	E06000054	Wiltshire	32 (20)									
West Midlands	E08000025	Birmingham										
	E07000234	Bromsgrove										
	E07000192	Cannock Chase	58 (37)	0.0	0.0	0.0		Data suppressed		0.0	0.0	0.0
	E08000026	Coventry										
	E08000027	Dudley										
	E07000193	East Staffordshire	75 (70)	0.0	0.0	0.0		Data suppressed		0.0	0.0	0.0
	E06000019	Herefordshire, County of	2 (37)	0.3	0.3	19.4	1.6	1.5	0.0	3.1	0.0	0.0
	E07000194	Lichfield										
	E07000235	Malvern Hills										
	E07000195	Newcastle-under-Lyme	77 (211)	0.2	0.2	10.5	1.8	1.5	0.1	0.9	1.5	0.0
	E07000218	North Warwickshire	57 (21)									
	E07000219	Nuneaton and Bedworth										
	E07000236	Redditch										
	E07000220	Rugby										
	E08000028	Sandwell										
	E06000051	Shropshire	56 (96)	0.1	0.1	4.9		Data suppressed		0.9	0.0	0.0
	E08000029	Solihull										
	E07000196	South Staffordshire										

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West Midlands	E07000197	Stafford	85 (88)	0.1	0.1	4.7	Data suppressed			0.9	0.0	0.0
	E07000198	Staffordshire Moorlands										
	E06000021	Stoke-on-Trent	92 (169)	0.4	0.4	14.7	2.8	2.4	0.4	3.8	3.7	1.1
	E07000221	Stratford-on-Avon										
	E07000199	Tamworth										
	E06000020	Telford and Wrekin	36 (40)	0.5	0.0	5.9	Data suppressed			0.0	0.0	0.0
	E08000030	Walsall										
	E07000222	Warwick	61 (30)	0.1	0.1	5.1	Data suppressed			0.0	0.0	0.0
	E08000031	Wolverhampton										
	E07000237	Worcester										
	E07000238	Wychavon										
	E07000239	Wyre Forest										
Yorkshire and the Humber	E08000016	Barnsley	55 (32)	0.2	0.2	10.8	Data suppressed			5.4	0.0	0.0
	E08000032	Bradford	62 (169)	0.5	0.5	16.1	3.4	3.2	0.1	6.1	0.0	0.0
	E08000033	Calderdale	23 (55)	0.1	0.1	2.8	Data suppressed			0.0	0.0	0.0
	E07000163	Craven	68 (63)	0.4	0.3	21.0	1.8	1.6	0.0	3.1	0.0	0.0
	E08000017	Doncaster										
	E06000011	East Riding of Yorkshire										
	E07000164	Hambleton	77 (65)	0.2	0.2	11.1	1.7	1.7	0.0	0.0	0.0	7.4
	E07000165	Harrogate	81 (84)	0.2	0.1	7.2	Data suppressed			1.6	1.6	0.0
	E06000010	Kingston upon Hull, City of										
	E08000034	Kirklees										
	E08000035	Leeds	36 (238)	0.4	0.3	15.1	2.7	2.1	0.4	3.9	0.3	0.0
	E06000012	North East Lincolnshire	68 (62)	0.7	0.4	21.1	3.2	1.8	1.3	4.1	0.0	0.0
	E06000013	North Lincolnshire	56 (165)	1.1	1.0	26.2	4.1	3.7	0.4	7.7	29.4	0.7
	E07000166	Richmondshire	79 (88)	0.1	0.1	5.5	Data suppressed			0.0	0.0	3.9
	E08000018	Rotherham	60 (182)	0.4	0.4	16.2	2.4	2.3	0.0	4.7	1.1	0.0
	E07000167	Ryedale	74 (57)	0.1	0.1	11.4	1.2	0.6	0.3	0.0	1.7	0.0
	E07000168	Scarborough	68 (65)	0.2	0.1	6.9	2.3	2.2	0.0	1.2	0.0	0.0
	E07000169	Selby	70 (38)	0.1	0.0	3.5	Data suppressed			0.0	0.0	0.0
	E08000019	Sheffield	59 (83)	0.0	0.0	0.9	Data suppressed			0.0	0.0	0.4
	E08000036	Wakefield	15 (39)	0.3	0.1	21.7	Data suppressed			4.8	0.0	0.0
	E06000014	York										

Oral health survey of 3-year-old children 2020: a report on the prevalence and severity of dental decay

Public Health England

LA did not visit any nurseries due to Covid-19

LA did not participate in survey

Based on fewer than 30 volunteers with decay experience

Region	Lower-Tier LA Code	Lower-Tier LA Name	Approximate % of consent sought examined ¹ (number examined ²)	Mean number of teeth with experience of dental decay in those examined	Mean number of teeth with untreated dental decay in those examined	% of 3-year-old children with experience of dental decay	Mean number of teeth with experience of dental decay in those with decay experience	Mean number of teeth with untreated dental decay in those with decay experience	Mean number of teeth missing due to decay in those with decay experience	% of 3-year-old children with experience of dental decay affecting incisor teeth	% of 3-year-old children with substantial amounts of plaque visible	% of 3-year-old children with pufa
Regions	E12000001	North East ⁵	56 (1,378)	0.3	0.3	10.4	3.1	2.6	0.3	3.1	0.4	0.4
	E12000002	North West ⁶	52 (3,307)	0.4	0.4	13.7	3.0	2.8	0.1	4.8	3.4	0.6
	E12000003	Yorkshire and The Humber ⁷	51 (1,504)	0.4	0.4	14.7	2.9	2.6	0.2	3.9	3.9	0.5
	E12000004	East Midlands	47 (3,179)	0.3	0.2	9.7	2.8	2.4	0.3	2.8	0.6	0.3
	E12000005	West Midlands ⁸	24 (829)	0.3	0.2	10.7	2.4	2.0	0.4	1.8	1.6	0.3
	E12000006	East of England ⁹	65 (3,488)	0.2	0.2	6.7	3.0	2.7	0.2	2.3	1.3	0.2
	E12000007	London ¹⁰	62 (3,394)	0.4	0.4	12.6	3.1	2.8	0.1	5.0	2.4	0.5
	E12000008	South East ¹¹	48 (963)	0.2	0.2	8.2	2.7	2.1	0.4	1.8	0.6	0.1
	E12000009	South West ¹²	16 (1,437)	0.3	0.3	11.8	2.7	2.4	0.1	3.0	2.5	1.0
Country	E92000001	England	44 (19,479)	0.3	0.3	10.7	2.9	2.6	0.2	3.4	1.9	0.4

⁵ Excludes Redcar & Cleveland

⁶ Excludes Blackburn with Darwen; Bolton; Rochdale; All Cheshire & Merseyside LAs. Blackpool data included collected 2018-19.

⁷ Excludes Doncaster; East Riding of Yorkshire; Kingston Upon Hull; Kirklees; York

⁸ Excludes Birmingham; Coventry; Dudley; Sandwell; Solihull; Walsall; Wolverhampton; Worcestershire

⁹ Excludes Thurrock

¹⁰ Excludes City of London; Hillingdon

¹¹ Excludes Bracknell Forest; East Sussex; Hampshire; Isle of Wight; Medway; Portsmouth; Reading; Slough; Southampton; Surrey; West Berkshire; West Sussex; Windsor & Maidenhead; Wokingham

¹² Excludes Bournemouth, Christchurch and Poole; Dorset; Isles of Scilly; Swindon

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000

www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk)

www.facebook.com/PublicHealthEngland

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Prepared by: National Dental Public Health Team and Edward Sinclair
For queries relating to this document, please contact: Enquiries@phe.gov.uk

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