



Derbyshire

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Oral health of 5-year-old children

This profile describes the oral health of 5-year-olds living in Derbyshire. It uses data from the National Dental Epidemiology Programme 2019 survey of 5-year-old children¹.

The profile is designed to help local government and health services improve the oral health and wellbeing of children and tackle health inequalities.

In Derbyshire 1,302 5-year-olds (approximately 53.9% of those sampled) were examined at school by trained and calibrated examiners using the national standard method².

Figure 1: Prevalence of experience of dental decay and mean number of teeth with experience of dental decay in 5-year-olds in Derbyshire, other local authorities in the East Midlands and England.

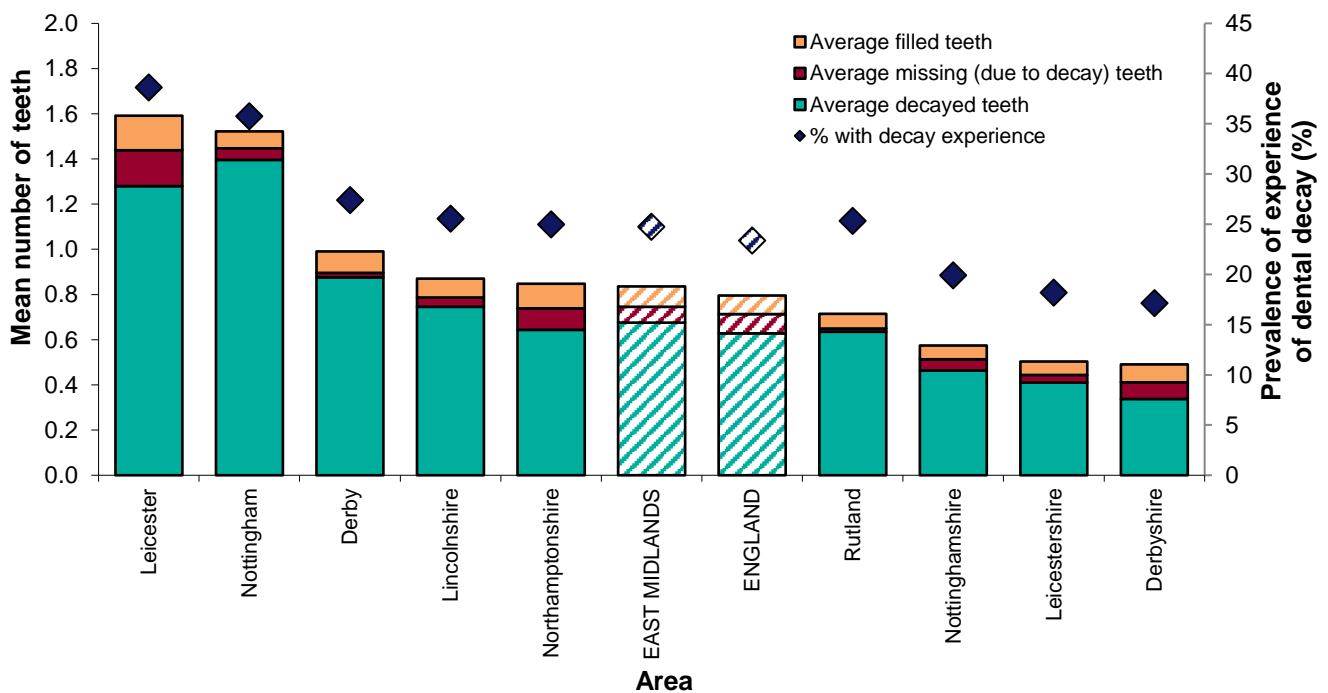


Table 1: Experience of dental decay in 5-year-olds in Derbyshire, other local authorities in the East Midlands and England.

Local authority	Prevalence of experience of dental decay (%)	Mean number of teeth with experience of dental decay in all examined children n (95% confidence intervals)	Mean number of teeth with experience of dental decay in children with any decay experience n (95% confidence intervals)
Leicester	38.6	1.6 (1.42 – 1.76)	4.1 (3.81 – 4.44)
Nottingham	35.8	1.5 (1.11 – 1.93)	4.3 (3.45 – 5.06)
Derby	27.4	1.0 (0.55 – 1.43)	3.6 (2.45 – 4.78)
Lincolnshire	25.5	0.9 (0.78 – 0.96)	3.4 (3.16 – 3.65)
Northamptonshire	25.0	0.8 (0.76 – 0.94)	3.4 (3.15 – 3.64)
East Midlands	24.7	0.8 (0.80 – 0.88)	3.4 (3.26 – 3.49)
England	23.4	0.8 (0.78 – 0.81)	3.4 (3.36 – 3.44)
Rutland	25.3	0.7 (0.53 – 0.90)	2.8 (2.39 – 3.25)
Nottinghamshire	19.9	0.6 (0.49 – 0.65)	2.9 (2.61 – 3.16)
Leicestershire	18.2	0.5 (0.44 – 0.57)	2.8 (2.52 – 3.02)
Derbyshire	17.1	0.5 (0.41 – 0.57)	2.9 (2.56 – 3.17)

Table 2. Measures of oral health among 5-year-olds in Derbyshire, it's statistical neighbours,ⁱ the East Midlands and England.

	Derbyshire	Statistical neighbour within East Midlands: Nottinghamshire	Statistical neighbour comparator 1: Nottinghamshire	East Midlands	England
Prevalence of experience of dental decay	17.1%	19.9%	19.9%	24.7%	23.4%
Mean number of teeth with experience of dental decay	0.5	0.6	0.6	0.8	0.8
Mean number of teeth with experience of decay in those with experience of dental decay	2.9	2.9	2.9	3.4	3.4
Mean number of decayed teeth in those with experience of dental decay	2.0	2.3	2.3	2.7	2.7
Proportion with active decay	12.8%	17.3%	17.3%	21.7%	20.4%
Proportion with experience of tooth extraction ⁱⁱ	1.8%	1.6%	1.6%	1.8%	2.2%
Proportion with dental abscess	0.5%	2.0%	2.0%	1.6%	1.0%
Proportion with teeth decayed into pulp	2.0%	2.3%	2.3%	4.1%	3.3%
Proportion with decay affecting incisors ⁱⁱⁱ	2.0%	4.1%	4.1%	4.6%	5.2%
Proportion with high levels of plaque present on upper front teeth ^{iv}	0.4%	0.2%	0.2%	0.4%	1.2%

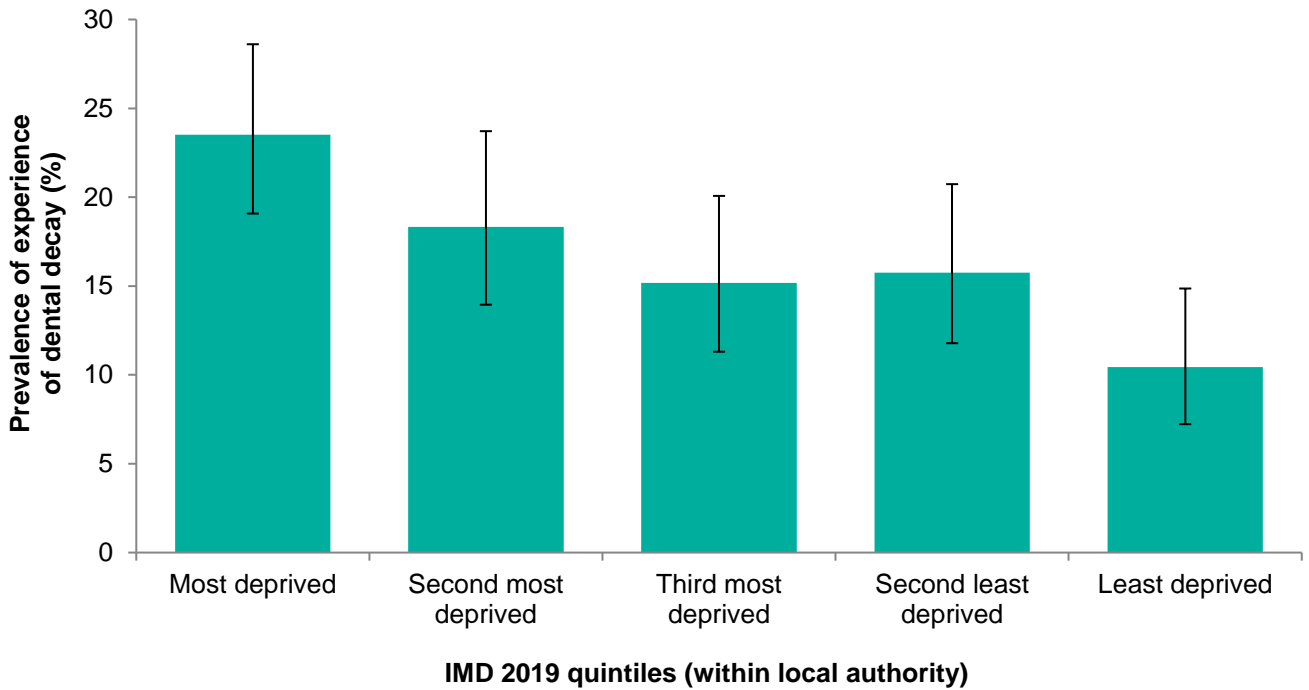
ⁱ generated by the children's services statistical neighbour benchmarking tool, the neighbour within the East Midlands has "extremely close" comparator characteristics and the national neighbour 1 has "extremely close" comparator characteristics³.

ⁱⁱ experience of extraction of one or more teeth on one or more occasions.

ⁱⁱⁱ dental decay involving one or more surfaces of upper anterior teeth.

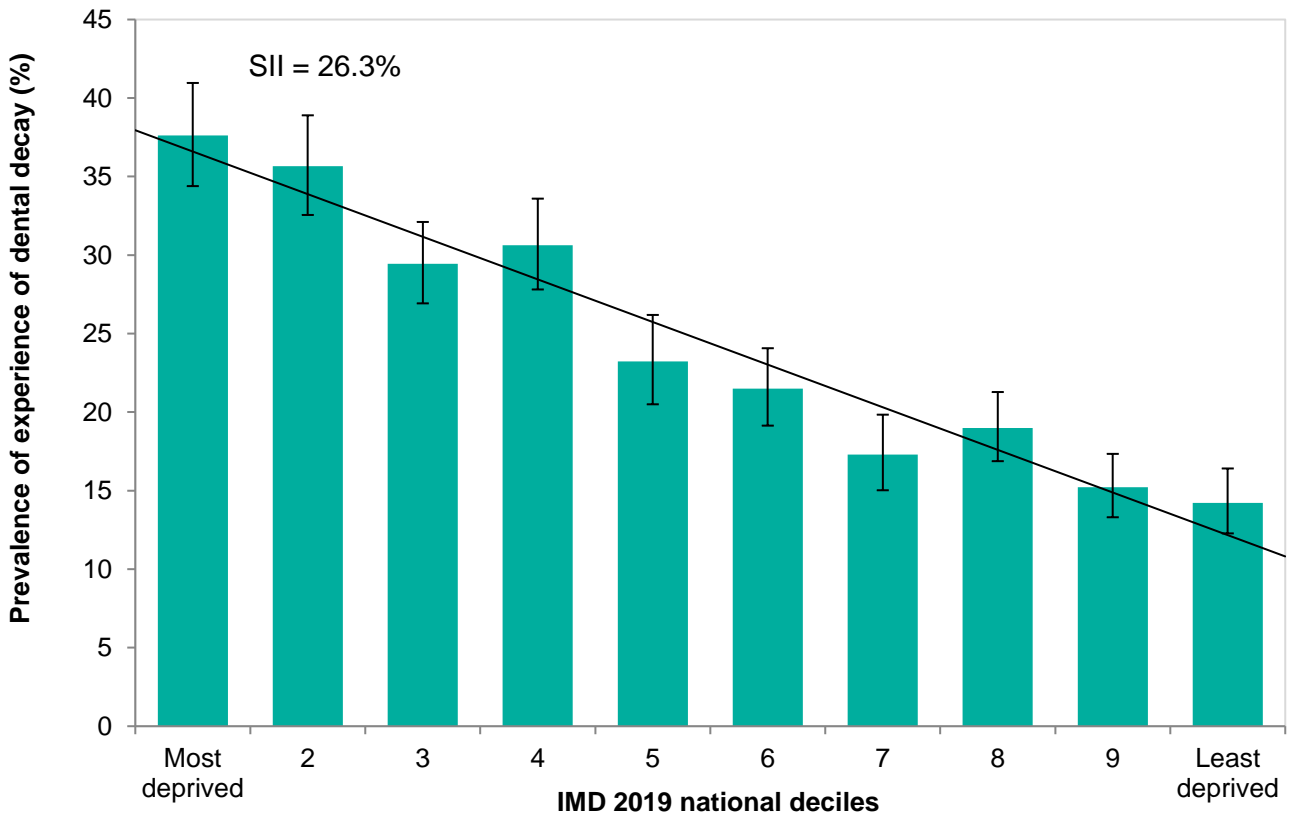
^{iv} indicative of poor tooth brushing habits.

Figure 2: Prevalence of experience of dental decay in 5-year-olds in Derbyshire, by local authority Index of Multiple Deprivation (IMD) 2019 quintiles.



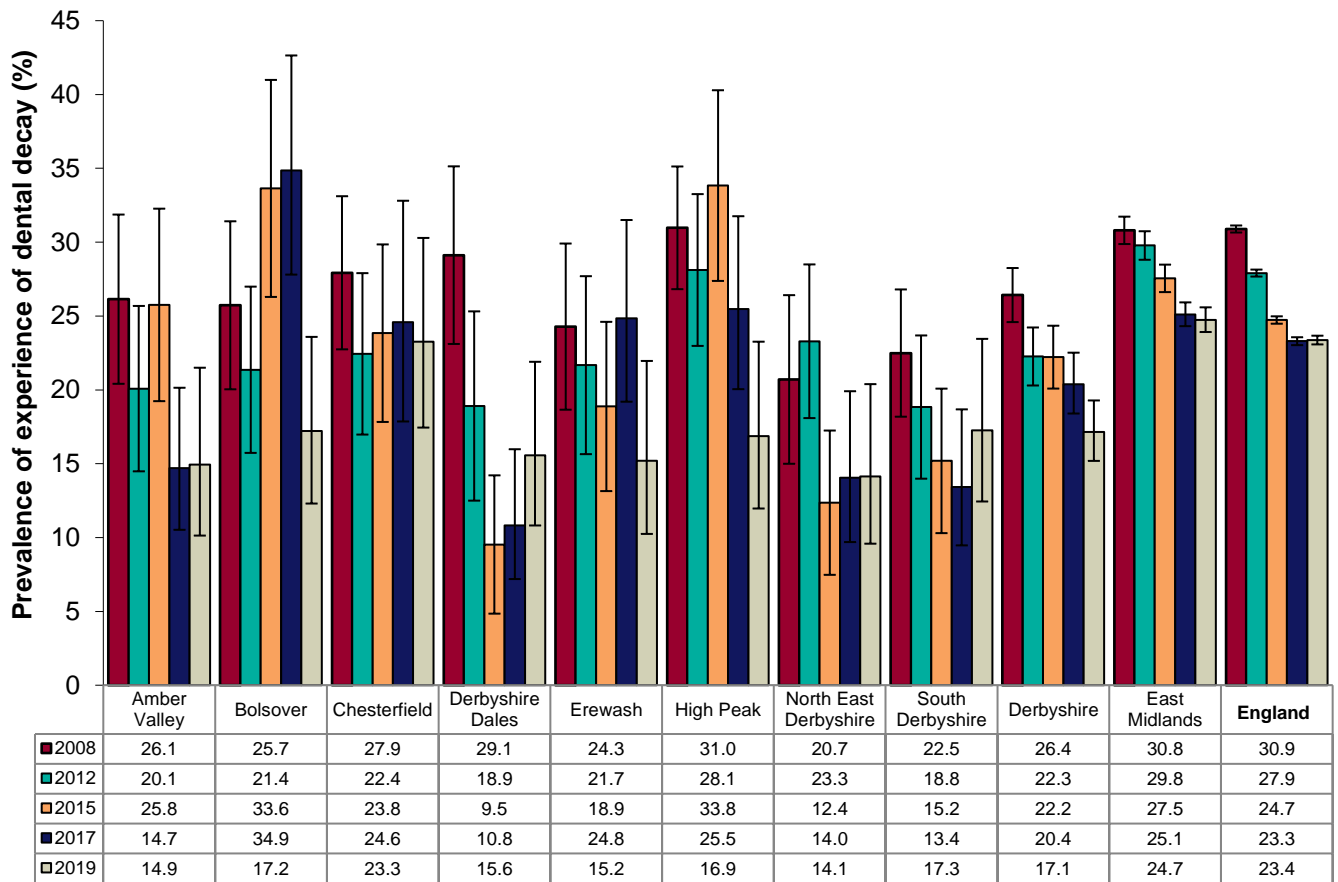
Error bars represent 95% confidence limits

Figure 3: Slope index of inequality in the prevalence of experience of dental decay in 5-year-olds in the East Midlands.



Error bars represent 95% confidence limits

Figure 4: Prevalence of experience of dental decay in 5-year-olds in Derbyshire local authorities, the East Midlands and England, by year.

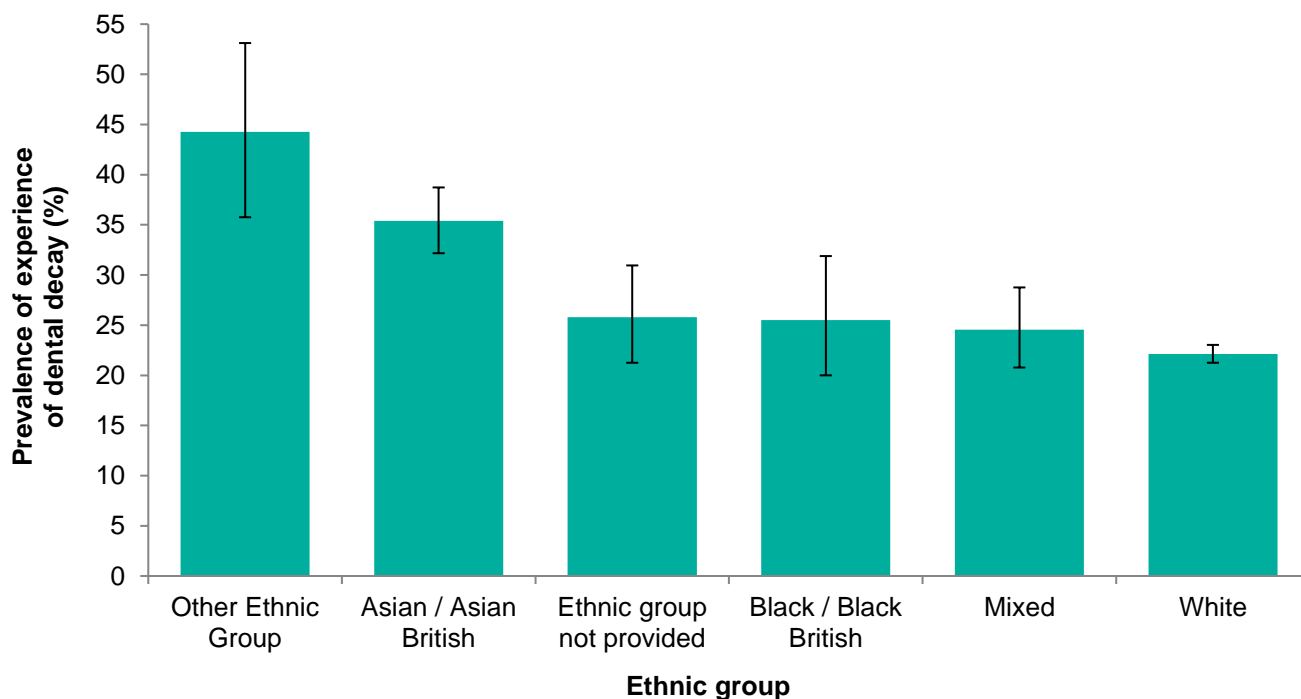


Error bars represent 95% confidence limits

Table 3: Experience of dental decay in 5-year-olds in the East Midlands, by ethnic group.

Ethnic group	Number of children examined (N)	Prevalence of experience of dental decay (%)	Mean number of teeth with experience of dental decay among children with any experience of dental decay n (95% CI)	Prevalence of dental decay affecting incisors (%)
Other ethnic background	122	44.3	4.6 (3.67 – 5.59)	12.3
Asian/Asian British	814	35.4	3.9 (3.53 – 4.27)	11.5
Not provided	310	25.8	3.3 (2.73 – 3.80)	5.2
Black/Black British	204	25.5	3.6 (2.84 – 4.36)	7.4
Mixed	444	24.5	2.9 (2.38 – 3.34)	3.8
White	8,355	22.1	3.2 (3.10 - 3.35)	3.5
East Midlands	10,249	24.7	3.4 (3.26 – 3.49)	4.6

Figure 5: Prevalence of experience of dental decay in 5-year-olds in the East Midlands, by ethnic group.



Error bars represent 95% confidence limits

Figure 6: Prevalence of experience of dental decay in 5-year-olds in Derbyshire, by lower-tier local authority.

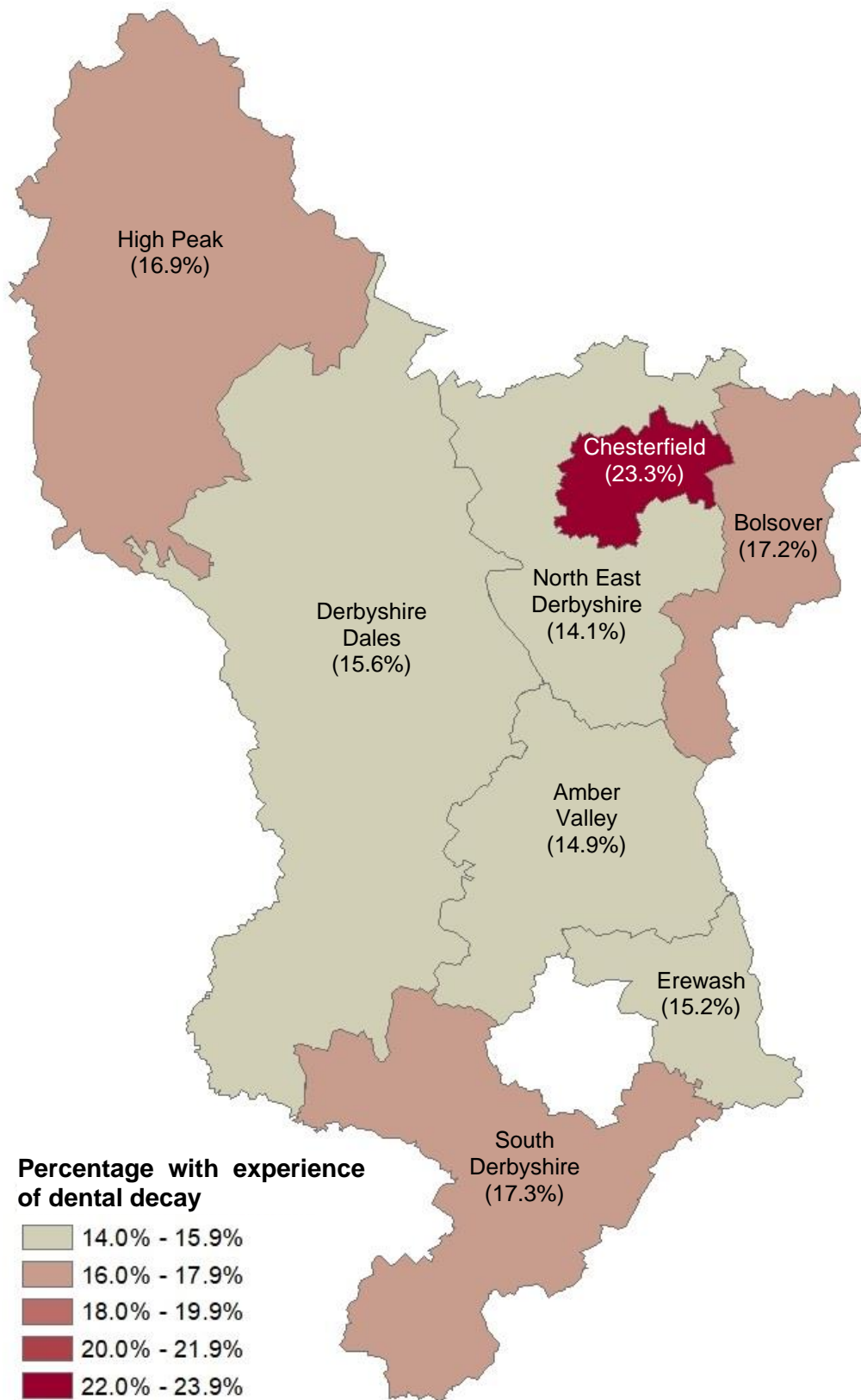


Figure 7: Prevalence of experience of dental decay in 5-year-olds in Bolsover, by middle layer super output area.

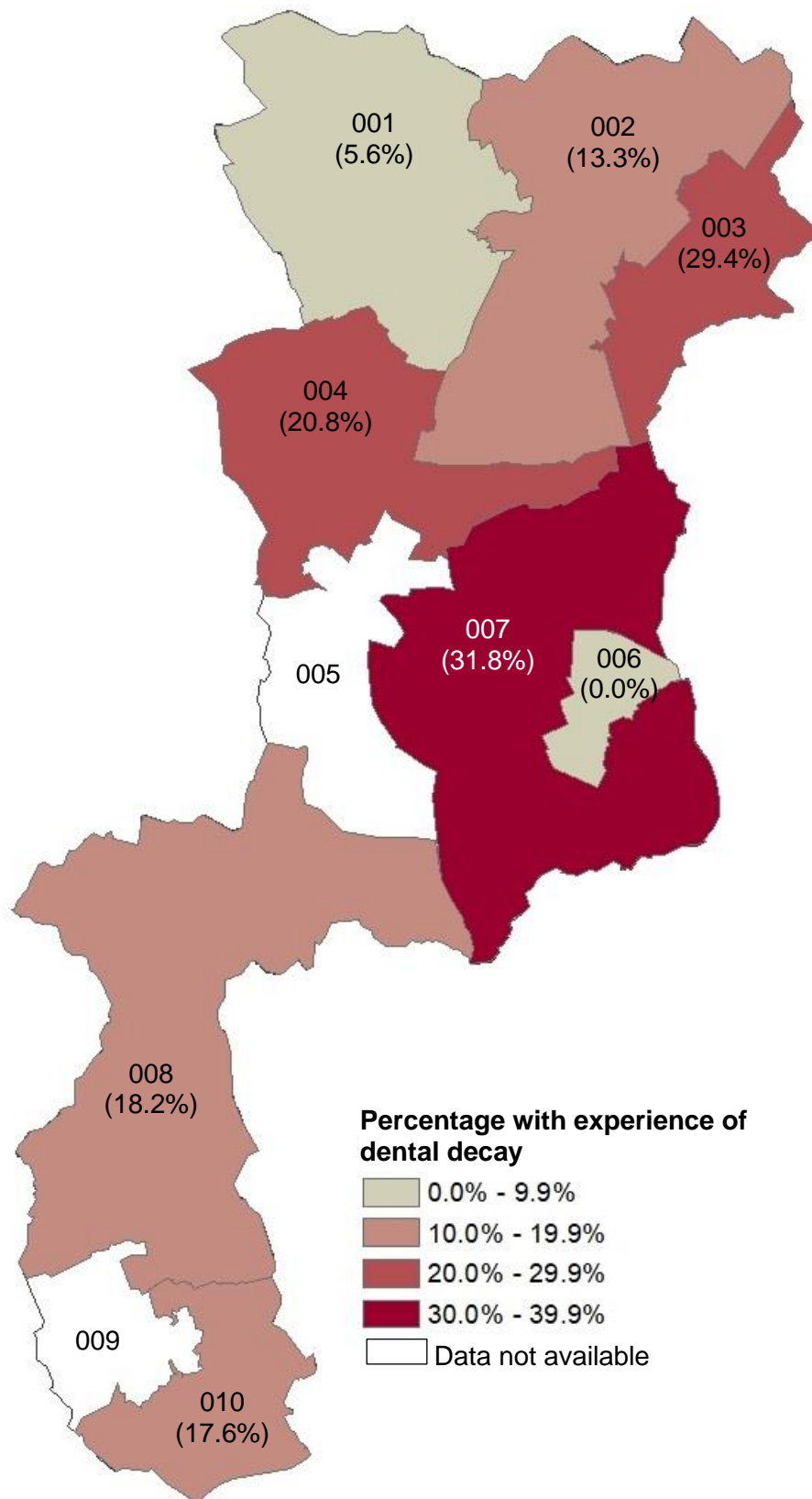


Table 4: Prevalence and severity of experience of dental decay in 5-year-olds in Derbyshire, by electoral divisions.

Electoral division	Prevalence of experience of dental decay (%)	Mean number of teeth with experience of dental decay in all examined children n (95% CI)
Alfreton and Somercotes ED	15.4	0.4 (0.06 - 0.66)
Alport and Derwent ED	12.5	0.6 (0.00 - 1.44)
Ashbourne ED	13.8	0.3 (0.00 - 0.62)
Aston ED	24.0	1.1 (0.23 - 1.93)
Bakewell ED	14.3	0.4 (0.00 - 0.71)
Barlborough and Clowne ED	11.5	0.3 (0.00 - 0.77)
Belper ED	No data available	
Birdholme ED	11.8	0.3 (0.00 - 0.76)
Bolsover North ED	20.9	0.4 (0.13 - 0.67)
Bolsover South ED	7.4	0.1 (0.00 - 0.27)
Boythorpe and Brampton South ED	18.8	0.3 (0.00 - 0.70)
Breadsall and West Hallam ED	14.3	0.1 (0.00 - 0.30)
Breaston ED	No data available	
Brimington ED	22.2	0.3 (0.01 - 0.54)
Buxton North and East ED	29.0	1.2 (0.31 - 2.14)
Buxton West ED	4.2	0.1 (0.00 - 0.25)
Chapel and Hope Valley ED	18.5	0.7 (0.00 - 1.57)
Clay Cross North ED	14.3	0.5 (0.02 - 0.94)
Clay Cross South ED	No data available	
Derwent Valley ED	17.2	0.4 (0.04 - 0.86)
Dovedale ED	No data available	
Dronfield East ED	18.2	0.3 (0.01 - 0.54)
Dronfield West and Walton ED	No data available	
Duffield and Belper South ED	10.0	0.5 (0.00 - 1.09)
Eckington and Killamarsh ED	10.0	0.2 (0.00 - 0.57)
Etherow ED	No data available	
Etwall and Repton ED	No data available	
Glossop and Charlesworth ED	12.5	0.3 (0.00 - 0.59)
Greater Heanor ED	No data available	
Heanor Central ED	No data available	
Hilton ED	5.6	0.3 (0.00 - 0.99)
Horsley ED	No data available	
Ilkeston East ED	22.7	0.8 (0.01 - 1.63)
Ilkeston South ED	8.7	0.2 (0.00 - 0.44)
Ilkeston West ED	0.0	0.0
Linton ED	11.8	0.4 (0.00 - 0.86)
Long Eaton ED	No data available	
Loundsley Green and Newbold ED	No data available	

Electoral division	Prevalence of experience of dental decay (%)	Mean number of teeth with experience of dental decay in all examined children n (95% CI)
Matlock ED	9.1	0.2 (0.00 - 0.46)
Melbourne ED	28.6	1.0 (0.21 - 1.70)
New Mills ED	17.1	0.2 (0.05 - 0.41)
Petersham ED	13.3	0.3 (0.00 - 0.86)
Ripley East and Codnor ED	21.4	0.6 (0.08 - 1.06)
Ripley West and Heage ED	10.5	0.3 (0.00 - 0.74)
Sandiacre ED	No data available	
Sawley ED	27.8	0.9 (0.00 - 1.99)
Shirebrook and Pleasley ED	21.4	0.6 (0.00 - 1.15)
South Normanton and Pinxton ED	20.0	0.5 (0.00 - 1.06)
Spire ED	No data available	
St. Mary's ED	21.1	0.8 (0.00 - 1.77)
Staveley ED	36.4	0.5 (0.19 - 0.81)
Staveley North and Whittington ED	25.7	0.7 (0.18 - 1.13)
Sutton ED	8.3	0.1 (0.00 - 0.30)
Swadlincote Central ED	6.1	0.2 (0.00 - 0.39)
Swadlincote North ED	13.0	0.3 (0.00 - 0.57)
Swadlincote South ED	25.7	0.7 (0.11 - 1.26)
Tibshelf ED	15.4	0.4 (0.00 - 0.81)
Walton and West ED	No data available	
Whaley Bridge ED	26.3	0.8 (0.05 - 1.53)
Wingerworth and Shirland ED	18.2	1.0 (0.03 - 1.88)
Wirksworth ED	18.6	1.1 (0.25 - 1.98)

Summary

In Derbyshire average levels of dental decay are lower than the average for England, however, within Derbyshire there are areas where there are higher than average levels of experience of dental decay. At lower-tier local authority level, children living in Chesterfield have the highest levels of experience of dental decay. Within the electoral divisions, the highest levels of experience of dental decay are in Staveley.

Future surveys could be commissioned to provide larger samples to facilitate local analysis. Commissioning High Quality Information to Support Oral Health Improvement: A toolkit about dental epidemiology for local authorities, commissioners and partners is available to support the commissioning of oral health surveys⁴.

Public health interventions can improve child oral health at a local level. Local authorities improving oral health: commissioning better oral health for children and young people is

available to support local authorities to commission oral health improvement programmes for children and young people aged up to 19 years⁵.

If further local analysis is required, please contact the national dental public health team:
DentalPHIntelligence@phe.gov.uk

References

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