



Northumberland

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Dental health of five-year-old children

This report provides detail about the oral health of five-year-old children in the area covered by Northumberland local authority. The full results of the 2015 National Dental Epidemiology Programme survey of five-year-old children are available at:

www.nwph.net/dentalhealth

The level of dental decay in five-year-old children is a useful indicator of the success of a range of programmes and services that aim to improve the general health and wellbeing of young children. In the public health outcomes framework¹ one of the indicators is the proportion of children aged five-years free from dental decay.

In the 2015 National Dental Epidemiology Programme survey, 443 children were sampled in Northumberland of whom 290 (65.9%) parental consent was provided to take part in the survey and were clinically examined at school by trained and calibrated examiners, who used the national standard method².

Figure 1: The average number of decayed, extracted or filled teeth (d_3mft) and the proportion of children affected by dental decay ($\% d_3mft > 0$) among five-year-old children in Northumberland compared with England and local authorities in the North East region.

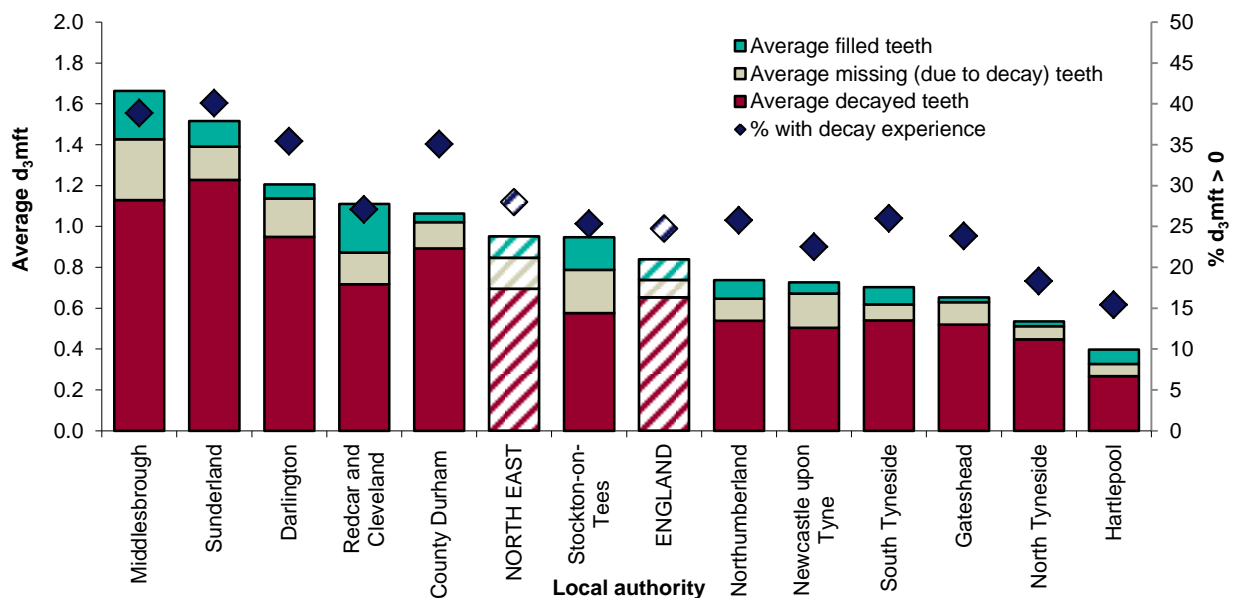


Table 1: The average number of decayed, missing (due to decay) or filled teeth (d₃mft), the proportion of children affected by dental decay along with the average d₃mft in those children with decay experience in Northumberland compared with England and local authorities in the North East region.

Local authority	Average d ₃ mft	% with decay experience	Average d ₃ mft in those with decay experience
Middlesbrough	1.7	38.8	4.3
Sunderland	1.5	40.1	3.8
Darlington	1.2	35.4	3.4
Redcar and Cleveland	1.1	27.1	4.1
County Durham	1.1	35.1	3.0
NORTH EAST	1.0	28.0	3.4
Stockton-on-Tees	0.9	25.3	3.7
ENGLAND	0.8	24.7	3.4
Northumberland	0.7	25.7	2.9
Newcastle upon Tyne	0.7	22.5	3.2
South Tyneside	0.7	26.0	2.7
Gateshead	0.7	23.8	2.7
North Tyneside	0.5	18.3	2.9
Hartlepool	0.4	15.4	2.6

Table 2: A range of measures of oral health among five-year-olds in Northumberland local authority compared with their statistical neighbours,ⁱ England and the North East.

	Northumberland local authority	Statistical neighbour within North East: North Tyneside local authority	Statistical neighbour comparator 1: East Riding of Yorkshire local authority	North East	England
Average d ₃ mft	0.7	0.5	0.6	1.0	0.8
% without decay experience	74.3%	81.7%	76.9%	72.0%	75.2%
% with decay experience	25.7%	18.3%	23.1%	28.0%	24.7%
Average d ₃ mft in those with decay experience	2.9	2.9	2.6	3.4	3.4
% with active decay	22.3%	17.3%	19.7%	24.3%	21.5%
% with experience of extraction ⁱⁱ	2.8%	1.6%	0.7%	3.7%	2.5%
% with dental abscess	2.3%	0.6%	0.8%	2.2%	1.4%
% with teeth decayed into pulp	5.2%	5.8%	1.9%	5.3%	3.6%
% with decay affecting incisors ⁱⁱⁱ	3.9%	3.2%	4.2%	6.2%	5.6%
% with high levels of plaque present on upper front teeth ^{iv}	3.9%	13.3%	1.0%	3.4%	1.7%

ⁱ generated by the Children's services statistical neighbour benchmarking tool, within the North East the comparator is "Very Close" and comparator 1 is "Very Close"³.

ⁱⁱ experience of extraction of one or more teeth on one or more occasions. The majority of children attending hospital for extractions have general anaesthetics for these procedures.

ⁱⁱⁱ decay involving one or more surfaces of upper anterior teeth. This pattern of decay is often linked with long term use of a feeding bottle with sugar-containing drinks.

^{iv} indicative of a non-brusher.

Figure 2: Prevalence of decay by Index of Multiple Deprivation 2015 quintiles for Northumberland local authority (including 95% confidence limits shown as black bars).

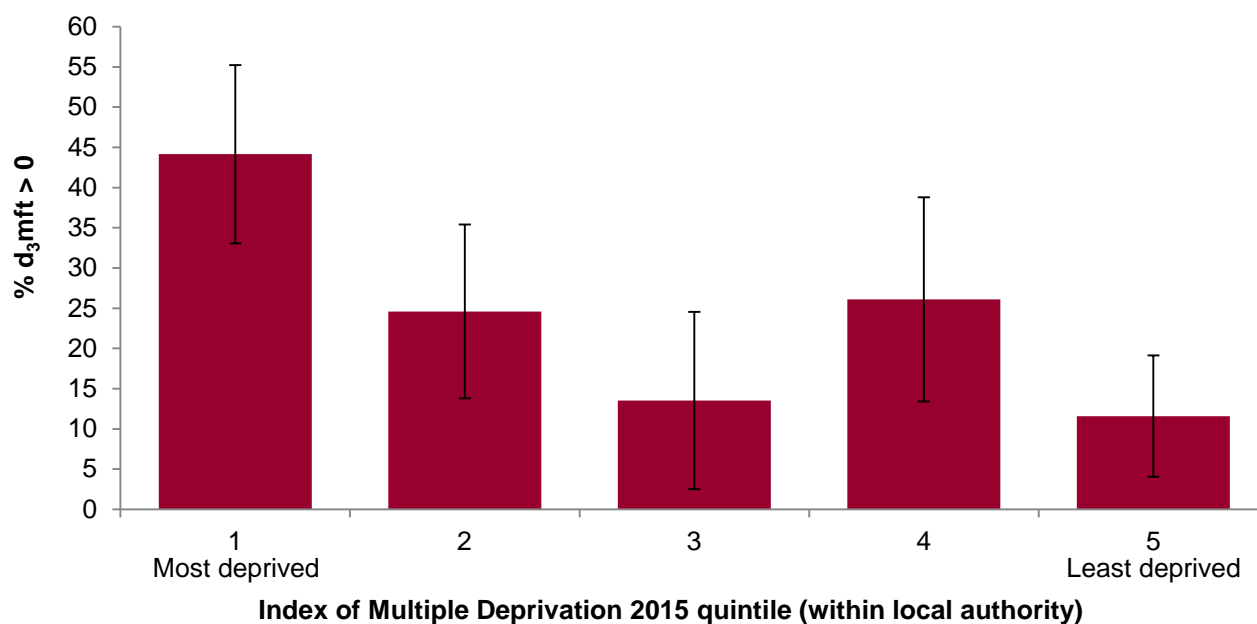


Table 3: Decay severity and prevalence by clusters in Northumberland local authority.

Cluster	Average d ₃ mft	% with decay experience	Average d ₃ mft in those with decay experience
Central	0.3	9.3	3.0
North	0.6	19.7	2.9
South East	1.0	32.7	3.0
West	Fewer than 15 examined		

Summary

In summary, Northumberland local authority has levels of decay that are lower than the average for England. The higher levels of decay experience are concentrated in the South East cluster. This indicates that efforts to improve oral health and reduce inequalities should be targeted at this area.

The prevalence of decay that is related to long term bottle use is lower than the national level.

If further local analysis is required, contact your local PHE Dental Epidemiology Coordinator: Kamini Shah, kamini.shah@phe.gov.uk

The small sample sizes in some areas mean it is not possible to provide information at ward level. Future surveys can be commissioned to provide samples large enough to facilitate local analysis.

In 2016 PHE published 'Commissioning High Quality Information to Support Oral Health Improvement: A toolkit about dental epidemiology for local authorities, commissioners and partners' to support commissioning of oral health surveys⁴.

References

1. Public Health England (2014). Public Health Outcomes Framework [Online]. Available at: www.gov.uk/government/collections/public-health-outcomes-framework [Accessed 11 August 2016].
2. Pine, C.M., Pitts, N.B. and Nugent, Z.J. (1997a). 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 co-ordinated dental epidemiology programme quality standard. Community Dental Health 14 (Supplement 1):18-29.
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4. Public Health England (2016). Commissioning high quality information to support oral health improvement. A toolkit about dental epidemiology for local authorities, commissioners and partners [Online]. Available at: www.nwph.net/dentalhealth/2016DentalEpidemiologytoolkit/Commissioning%20High%20Quality%20Information%20to%20Support%20Oral%20Health%20Improvement.pdf

More information is available at www.nwph.net/dentalhealth
Please send any enquiries to DentalPHIntelligence@phe.gov.uk

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