

# A survey of caries in 3-year-olds in Greater Manchester

*Caries among 3-year-olds in Greater Manchester* by G. M. Davies, F. A. Blinkhorn and J. T. Duxbury  
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## Objective

To measure the prevalence of caries, including nursing caries, amongst 3-year-old children in three districts of Greater Manchester in the North West of England.

## Design

A cross-sectional survey of 762 randomly selected 3-year-old children using the dmft and dmfs indices. Three definitions of nursing caries were used in order to assess the varying prevalence of the disease according to which definition was applied.

## Subjects

Children, aged 36–48 months, attending day nurseries, playgroups and nurseries attached to primary schools were examined by three trained examiners under standardised conditions in three health districts in Greater Manchester. A random selection process was used to produce a quota sample to reflect the balance of childcare provision in each district.

## Results

The overall proportion of children affected by general caries was 32%. The mean dmft score was 1.4 (sd = 2.8) and the mean dmfs was 2.8 (sd = 7.3). There were significant differences across the three districts. The prevalence of nursing caries varied widely when differing definitions of types were applied; 1.6% of the children had nursing caries according to the narrow definition,

7.2% showed the wider definition type and 9.8% had nursing caries of the broadest definition. In total 19% of children had caries which affected their upper incisors. Children of Asian origin had the highest levels of nursing and overall caries.

## Conclusions

Caries is a widespread problem in some very young children in the districts involved. Caries of upper anterior teeth contributes significantly to the overall level of caries in each of the localities in question. The prevalence of nursing caries is highly dependent on the case definition used.

## In Brief

- Caries among young children is still a problem in parts of Greater Manchester. This paper reports a recent survey which shows that for some children caries establishes itself very early on. The severity among many 3-year-olds exceeds the target set for 5-year-olds
- Only by addressing the problems of caries in very early childhood can serious reductions be made to caries levels in pre-school children
- This paper acknowledges that a variety of case definitions are used to describe cases of nursing caries

## Comment

This paper highlights two major issues. First, it shows clearly the high prevalence of caries in young children in Manchester. In one of the three districts included almost half of the 3-year-old children in the sample had some caries experience, an estimate reminiscent of values seen in countries much less well developed than the UK. It could also be seen that, as in the past, children from some Asian groups suffered disproportionately high levels of disease. This finding has been reported in the past,<sup>1</sup> but the study offered no evidence to suggest that the disadvantage suffered by this minority ethnic group was being resolved. Findings like these in primary teeth are in stark contrast to the optimistic picture often presented with regard to caries in the permanent dentition.

The second issue highlighted was methodological. The paper effectively demonstrates the variety of definitions and nomenclature used for rampant caries and shows how these differences may have affected estimates of prevalence and made direct comparisons between studies problematic.

Other authors have defined differing patterns of disease in primary teeth in the past.<sup>2,3</sup> It is tempting to speculate, as the authors have done, on the differing feeding and weaning practices which may have contributed to caries affecting different sites and teeth but the wide variation in apparent susceptibility and the many factors acting in caries aetiology make this a difficult exercise.

The authors have provided a valuable piece of the jigsaw of knowledge about oral health in young children.

The levels of disease seen offer no grounds for complacency.

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- 1 Bedi R. Ethnic indicators of dental health for young Asian schoolchildren resident in areas of multiple deprivation. *Br Dent J* 1989; 166: 33 1-334.
- 2 Poulsen S, Horowitz H S. An evaluation of a hierarchical method of describing the pattern of dental caries attack. *Community Dent Oral Epidemiol* 1974; 2: 7-11.
- 3 Douglass J M, Wei Y, Zhang B H, Tinanoff N. Dental caries in preschool Beijing and Connecticut children as described by caries analysis system. *Community Dent Oral Epidemiol* 1994; 22: 94-99.