

# British Society of Paediatric Dentistry: A Policy Document on the Dental Needs of Children

*This document was prepared by June Nunn, Peter Crawford, Jim Page and Gerry Winter. Policy documents produced by the BSPD represent a majority view, based on a consideration of currently available evidence. They are produced to provide guidance, with the clear intention that the policy be regularly reviewed and updated to take account of changing views and developments.*

## **Background**

In 1989 a working group of the British Paedodontic Society (now the British Society of Paediatric Dentistry) under the chairmanship of Professor John Murray produced a policy document on the dental needs of children in the United Kingdom [1], which was published in 1990. The intervening years have seen the implementation of recommendations made in a number of Government reports and papers. In the autumn of 1990 the 'new contract' [2] became a reality with radical changes to the way in which general dental services were to be provided. In the same year the Department of Health published 'Development of Community Dental Services, HC(89)2, dealing with the future role of the Community Dental Service in England and Wales [3]. Thus there has since 1989 been a major change in the way in which dental care for children has been provided within both the Community and General Dental Services.

In 1994 the results of the National Child Dental Health Survey in 1993 [4], and in 1995 the 1992/93 National Diet and Nutrition Survey of pre-school children, including the results of an oral health survey [5], were published.

From the trends in dental disease identified in these recent national dental surveys it is likely that without a more aggressive approach to the prevention and treatment of oral disease, the aims set in the Oral Health Strategy documents [6–9] for the UK will not be achieved in the short term for children, nor in the long term for adults.

If the adverse trends in oral health in children and young people are to be reversed, fundamental changes in the provision of primary dental care

for young people will be required. The most important of these are the setting of a realistic level of remuneration for general dental practitioners treating children in the NHS and assurance of an adequate supply of appropriately trained staff within the Community Dental Service. For the future, the recognition of Paediatric Dentistry in the Chief Dental Officer's report on Specialization in Dentistry, and the setting up of a Task Force for this Specialty, are vital developments in ensuring high-quality comprehensive oral health care for children and adolescents is readily available and accessible to all.

## **Child dental health in the 1990s**

### *The pre-school child*

The recent publication of the National Diet and Nutrition Survey undertaken on behalf of the Department of Health for pre-school children aged 1½–4½ years included an oral health survey [5]. Information was available from a sample of 1658 pre-school children from 100 districts in mainland UK. It was found that, overall, 17% of children in this age group had some caries experience, but particularly worrying was the observation that 83% of carious teeth were untreated.

The longest period of study of pre-school children in the UK has been carried out in Camden over nearly 30 years [10–12]. The 1986 Camden Survey had already suggested that the continuing improvement in the dental health of pre-school children had not occurred and that there had been a slight upturn in the caries prevalence. The results of the 1993/94 [13] study show once again that the burden of dental

caries falls most heavily on children from the most socio-economically disadvantaged groups of the population, i.e. families with unemployed fathers and families in some ethnic minority groups. These observations have since been confirmed amongst other 5-year-old children in different parts of the UK [14]. Significant improvement in the dental health of pre-school children is unlikely to occur in the foreseeable future without fluoridation of the nation's drinking water supplies where appropriate. To prevent the ravages of caries affecting successive generations of children, further efforts are required to ensure that the most recent recommendations contained in the COMA report on Weaning and the Weaning Diet [15] are emphasized sufficiently in local oral health promotion initiatives.

As far as treatment services are concerned, there is little indication that the introduction of a capitation system of payment for the dental care of children in the General Dental Service in 1990 has had a positive impact on the oral health of the youngest children; registrations within the GDS for the 0–2-year-olds is less than 20% across the UK.

Referrals of new patients to specialist centres for paediatric dental care as well as general anaesthesia rose by as much as 207% in some centres in the second year after the introduction of capitation [16].

#### *The school age child and adolescent*

The 1993 survey of child dental health [4] documented further, albeit inconsistent, change; although dental caries experience in the oldest children had declined to the extent that 63% of 15-year-olds had experienced caries in 1993 compared with 93% in 1983, the same could not be shown for the younger children. In 5-year-olds there was virtually no change in caries experience over the decade and the evidence from the most recently published BASCD survey of 5-year-old children has shown a deterioration over the period between 1989/90 and 1993/94 with an 11% increase in the *dmft*, a fall in the number of restorations and a 30% increase in untreated decay [14].

The national survey of children's dental health also recorded periodontal status, features of any malocclusion present, trauma to the dentition, developmental defects of enamel and dental erosion [4]. Disappointingly, there has been little measurable improvement in periodontal status, with still about half the children experiencing gingivitis and

approximately one-third of children having calculus present. Although there was a decline in the prevalence of trauma between 1983 and 1993, there has been (in the older children at least) a welcome increase in treatment provided, although still only one-third of traumatized teeth in this age group are treated. This needs to be seen against a background of a change in the way dental care was remunerated in the general dental services during the latter part of this period, when only trauma involving the pulp attracted a payment separate from the capitation fee. Considerable efforts were made for the 1993 survey to include as many features of malocclusion in the assessment in order that an index of orthodontic treatment need could be generated. Although it would appear from the data that more treatment is being provided, over 30% of children approach school-leaving age with untreated malocclusions.

Disquiet has been expressed [17] that the widespread use of fluoride dentifrices at 1000 ppm in young children has the potential to produce enamel mottling. The prevalence of enamel defects has not previously been assessed in a national survey but it was encouraging to see from the results that diffuse opacities – those defects most likely to be associated with excessive fluoride ingestion – were not the type of opacity most commonly recorded. The appropriate dosages for fluoride supplements together with the relevant type of toothpaste to be used in conjunction are published elsewhere [18]. Effort is needed to ensure that children are using these beneficial products correctly.

There is concern in the dental profession about the increasing prevalence of non-carious tooth surface loss, specifically dental erosion, in young people. This has been linked anecdotally to an increase in both the variety and frequency of consumption of soft drinks, paralleling the increase in volume of sales of such products in the recent past [19]. There is also evidence that gastro-oesophageal reflux, a source of intrinsic acid, occurs in children more commonly than was previously thought [20]. The national survey of children's dental health [4] was the opportunity to record the prevalence of dental erosion in young people and, like the survey of pre-school children [5] carried out at about the same time, documented significant levels of erosion in all age groups. In the former study, 34% of 14-year-olds had evidence of loss of enamel and dentine from the palatal surfaces of maxillary incisor teeth. In the latter survey, half the 3½–4½-year-olds had some

evidence of dental erosion on palatal surfaces of primary maxillary incisors.

It has to be borne in mind that the data from the national surveys represent mean figures which mask individual children with a high prevalence of disease. Missing too from these data are the hidden group of children and young people with significant physical, intellectual and other impairments who, on the evidence of the limited information in the literature [21], have made little if any improvement in their dental health over the period of the recent decennial national survey of children's dental health [4]. This group includes children who are at high risk of developing dental disease and who may also be placed at risk by its treatment.

#### **Scope for change: the general dental services**

The new contract in 1990, and specifically the capitation system for the care of the 0–18 age group, was designed to foster a more preventively orientated approach to the care of registered patients through continuity of care. One consequence of these changes was that the proportion of GDS funds paid for the care of children increased from 18% in 1989/90 to 24% in 1995/96.

In money terms this means that £174m spent in 1989/90 has grown to £313m 6 years later, an increase of 80%, during a time when the retail price index has increased by 26%. However, despite the evidence that more money is going towards the oral care of children, dentists (with few exceptions) feel that they are worse off under this form of contract. If capitation is to succeed, a complete change in practice philosophy is required, since, according to Guay: "In a service-based system, the treatment produced is a revenue centre and a source of profit. In a capitation-based system, treatment is a cost centre and a drain on profits" [22].

Although the introduction of capitation was supposed to encourage a move towards prevention and to reduce the emphasis on treatment, from the published data [4,5,14] it would appear to have succeeded only in the latter, to the detriment of oral health. The introduction of fees for restorations and extractions in 1996 may address this problem, but detracts from the real need, which is for preventive care to be more actively pursued.

Capitation, to whatever extent it may have been implemented, has the potential to work in areas where parents are highly motivated and dental disease

experience generally low. Any modification to the existing capitation system must acknowledge that investment has to be made in the younger age groups since it is for the under-6s that the foundations of prevention must be laid. Current remuneration for this age group does not recognize this. Comparison of capitation fees with average practice overheads will dictate that annually only about 5 minutes can be spent with the 0–2-year-olds and 10 minutes with the 3–5-year-olds [23]. Clearly this is a derisory amount of time to devote to this important task. If the appropriate advice on diet, oral hygiene and fluorides cannot be given to these age groups because it is uneconomic to do so, then an opportunity has been lost to recruit and maintain orally healthy children to the practice. Consideration needs to be given to the more widespread deployment of dental auxiliaries in the GDS, enabled to undertake simple oral procedures for young people. By these means a more cost-effective capitation system may be viable.

One of the problems that has always been of concern with regard to the care of children in the GDS is that of standards. Standards were originally made deliberately vague so as to maintain clinical freedom for the practitioner. This has resulted in a very wide interpretation of what is acceptable when treating children. The current definition of oral health in the GDS regulations is ambiguous, but the definition given in the Oral Health Strategy for England [6] encompasses what is presumably intended: "Oral health is a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well-being". With the now very clear move towards evidence-based medicine in all areas of the Health Service we need to move beyond this definition and to define clinical guidelines based on audited work. The British Society of Paediatric Dentistry would be keen to endorse this development in regard to oral care for children. For example, all the clinical research evidence over the last 20 years points to the superiority of pre-formed metal crowns as a restoration for primary molar teeth [24] yet very few are provided in the general dental services. Likewise, the provision of appropriate pulp therapy as an alternative to the removal of primary teeth is to be strongly endorsed.

For oral health care for the child and adolescent population of the UK to develop to the standard provided in many European countries and North

America, greater emphasis needs to be given to raising the standards and content of the teaching of Paediatric Dentistry within vocational training modules (this will be especially so with the advent of General Professional Training and the move to specialization); also, strenuous efforts have to be made to increase the number of consultants in Paediatric Dentistry. This will ensure that not only will specialist services be more equitably distributed and therefore accessible but that sufficient numbers of consultants will be available to provide training for the development of specialization in paediatric dentistry in the future. If the current poor distribution of consultants is to be addressed, recognition of the number of women in training and thus the need for flexibility in training programmes, as well as the availability of part time posts, is important.

### **The Community Dental Service**

When the first policy document appeared [1] the Community Dental Service (CDS) was in the throes of change. Following on the Department of Health Circular HC(89)2 the CDS [3], in many areas, has had to develop rapidly its safety-net function not least because of local unavailability of general dental services. Alongside this has been a contraction in the work-force within the Service so that, compared with 5 years ago, the number of clinical community dental officers has declined from 815 to 649. During a similar time period the number of hours devoted to the treatment of disabled adults in the CDS has risen from 66,140 to 122,462 [25]. The contraction in the workforce, particularly in areas of high disease where there was a demand for services from the normal school-child population, has denied many of the most vulnerable children a valued service. The inability of many users of the CDS to make the transition to the GDS [26] emphasizes the need to go on providing an effective safety-net service particularly when screening frequency in schools is much reduced compared to the time prior to publication of HC(89)2 [3]. A role for dental auxiliaries in the screening and recall of children, particularly for the reinforcement of preventive advice and care, should be explored and tested.

### **Recall intervals for children and adolescents**

To an extent the debate about appropriate intervals for the recall of young people in particular has been

overtaken by recent changes within the GDS. Capitation theoretically allows the clinician, having identified children at high risk from dental disease, greater freedom to see them at a frequency appropriate to their clinical need. However, if prevention is to be effective then clinicians need to be more, rather than less, vigilant. For example, radiographs, particularly for the detection of caries, should be taken as soon as the co-operation of the child allows but particularly in the pre-school age group for the high-risk child. It would be anticipated that bitewing radiographs should be taken at 2-yearly intervals unless there is evidence of caries on previous films, when the frequency may need to be 6-monthly to monitor activity. Radiographs at 6–7 years of age to detect developmental anomalies and ascertain the presence of permanent teeth would establish a useful baseline. A dental panoramic tomogram or bilateral oblique views, together with any necessary upper and lower occlusal views, are to be recommended [27].

What has emerged since the contractual changes in the GDS came into force is, according to the epidemiology being presented, some evidence of under-treatment and, by implication, an extension of recall intervals. Prevention and the early detection of oral disease are reliant on short recall intervals, particularly in the primary dentition where disease progresses more rapidly in a susceptible child. When adults recount unpleasant dental experiences in childhood, extractions and general anaesthesia are the episodes most often cited; the majority of these have been experienced before the age of 10 [28].

### **Recommendations**

1. Since dental caries remains the single most prevalent oral disease in children, fluoridation of the water supply must remain the primary objective of the oral health promotion policy of many districts as the most cost-effective means of reducing the burden of oral disease.

2. Changes to the way in which oral health care is provided for children and adolescents in the UK are largely based on the dental data collected in local and national surveys. It is vital to the monitoring of oral health in young people that these surveys continue.

3. A higher priority needs to be accorded to safeguarding the oral health of young people by a more aggressive preventive approach, thus avoiding

disease with unpleasant treatment consequences. Bad experiences of dental treatment in childhood have been shown to provide a barrier to regular attendance in adulthood.

4. The continuing professional training of *all* practitioners in Primary Dental Care needs to be integrated and strengthened to ensure the availability of efficient and effective oral care for children and adolescents.

5. The remuneration system in the GDS should be structured in such a way that it does not compromise the oral care of children and adolescents and emphasizes the importance of early prevention of oral disease.

6. The complementary role of the CDS should be developed and strengthened to ensure that children at 'high risk' maintain access to quality dental care.

7. The shortfall in the numbers of consultants in Paediatric Dentistry needs to be addressed because in Centres where consultants are in post there has been a dramatic increase in demand for care since 1990. Additional numbers of consultants will be needed to ensure the recruitment and provision of high-quality teaching of future specialists in paediatric dentistry.

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