Top tips for paediatric dentistry – Part 2: prevention and the whole team approach to primary care practice

By David Baldwin,[1] Anne Williams[2] and Ewen McColl[3]

When considering the management of paediatric dental patients in any dental setting, perhaps the most important component of any management plan, but that which is at greatest risk of being overlooked or given less importance, is prevention.

If the appropriate preventative practices aren't adopted by both the practitioner, and most importantly by the patient and their families, then the chance of developing new carious lesions remains high and any operative work provided has increased risk of failure.

PREVENTION

Caries risk assessment dependent preventative care

- Will depend on clinical and radiographic findings and caries risk status. Utilise *Delivering better oral health* (DBOH)[1] to help you shape your preventative management plan
- Set a recall interval based on the caries risk assessment. Children at no increased risk can be seen every six months while those at increased risk should be seen more than twice a year
- If the child has enamel defects, such as molar-incisor hypomineralisation (MIH), this also increases caries risk; discuss it with the parents and treatment plan accordingly.

Diet analysis and advice

Often, parental compliance and accuracy of diet diaries is poor. Use a 24-hour recall technique to ascertain the child's dietary habits over the last 24 hours. Tailor dietary advice to this:

- Drink water only between meals
- Aim for three regular meals per day
- No more than one snack per day
- Keep snacks to savoury foods such as cucumber/carrot/celery sticks, cheese and crackers.

Fluoride varnish application

- Should be applied to all at-risk teeth at each examination appointment, based on *DBOH* guidelines depending on caries risk and age
- Beware of risk of allergy to colophony-containing fluoride varnishes (linked to Elastoplast allergy), and that certain fluoride varnishes (casein-containing) are not suitable for individuals with milk protein allergy
- Dry and isolate the teeth well with cotton wool rolls before applying varnish
- Remember to advise avoidance of food/drink for approximately 30 minutes after application.

Toothpaste

- 1,000–1,450 ppm toothpaste should be advised depending on patient age and caries risk status
- Once ten years of age, if at increased risk of caries, prescribe 2,800 ppm toothpaste – use at least twice daily
- For all toothpastes, encourage all family members to spit out and not to rinse the mouth after use – you will be surprised at how many people simply wash away all the toothpaste after brushing
- Taste of toothpaste – if you have a patient who has sensory processing problems, is autistic, or simply doesn't like the strong ▸▸

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flavours of traditional toothpastes, remember that in addition to the many fluoride-containing 'berry flavour' toothpastes on the market that Oranurse produces a flavourless non-foaming fluoride-containing toothpaste: https://oranurse.co.uk/

- Fluoride-free alternatives – if parents wish to use a fluoride-free toothpaste, ask them to consider BiominC (https://biomin.co.uk/products/biominr-c-toothpaste) or Tooth Mousse (https://europe.gc.dental/en-GB/products/toothmousse)
- Remineralisation of teeth – MIH. Consider advising Tooth Mousse, which provides additional calcium and phosphate (CCP-ACP) or Biomin, which utilises glass silicates (ChloroCalciumPhosphoSilicate) to remineralise the teeth. But it is important to remember that CPP-ACP products are contraindicated in children who are allergic to milk protein due to the presence of casein
- Novamin-containing toothpaste can also be recommended which will help with the sensitivity.

Mouthwash

- If over seven years of age, consider the use of a fluoride mouthwash and advise that this is used at a separate time to brushing – ie when the child comes home from school.

Floss

- A 2017 systematic review[2] found only one study showing evidence of an association between the use of dental floss and proximal caries reduction in the primary dentition. However, they concluded the use of dental floss should never be discouraged, as habits acquired in childhood continue throughout adult life, with numerous oral and general health benefits.

Fissure sealants

- If at increased risk of caries
- Once first permanent molars have erupted sufficiently, they should be fissure sealed to prevent caries development
- Until effective moisture control becomes possible or if molars are only partially erupted, fluoride varnish can be applied to them
- Key areas to remember are the buccal grooves of lower molars and the occlusal palatal fissure and around the cusp of Carabelli on upper molars
- To allow full access to these areas, you may wish to use a flat plastic to gently reflect gingival margin. Ineffective moisture control is the most likely cause of sealant restoration failure. Use a cotton wool roll either side of lower molars held with non-dominant thumb and index finger. Use dry tips/dry guards to reflect buccal mucosa for upper molars
- Fissure sealants could and should be applied to any at-risk areas in individuals of increased caries risk, including fissures on primary molar teeth, premolars and second permanent molars.

Silver diamine fluoride

- Has been available since the 1960s but has not been used regularly in the UK until recently
- Rapidly being adopted into dental undergraduate teaching programmes across the UK
- Fluoride content is twice that of regular high-strength fluoride (44,800 ppm), silver compounds are antibacterial
- The British Society of Paediatric Dentistry has produced some important and useful guidance on its use: https://www.bspd.co.uk/Professionals/Resources
- Benefits:
  - Can help to arrest/slow progression of caries in combination with other preventative practices
  - Can potentially avoid further operative/interventive care or be used as part of a stabilisation phase of treatment prior to definitive treatment
  - Good minimally invasive technique

- Considerations:
  - Requires continued observation and monitoring if adopting a preventative-only approach
  - Not a suitable treatment option for pulpally involved teeth
  - Can be difficult to place on minimally cavitated interproximal lesions
  - Stains the carious lesions a dark black colour – potential parental compliance issues regarding post-treatment aesthetics
  - In the UK, it is licensed for treating sensitivity only. It is fully licensed for caries management in many countries around the world where it has been safely used for many years.

Involving your whole dental team in paediatric dentistry

Treating children can sometimes be quite daunting; it may be more suited to certain individuals within a practice and it is beneficial to recognise which team members are best placed to treat paediatric patients. Having child-friendly reception staff and a portion of the waiting room being child-friendly and dentally interactive can help to further acclimatise patients.

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The recent publication of Health Education England's (HEE's) Advancing Dental Care Review[3] highlighted the under-utilisation of dental therapists in general dental practice. By optimising the full scope of practice[4,5] of not only dental therapists, but also dental hygienists and dental nurses, it would allow dentists to focus on more complex treatments unique to their scope, whilst allowing the practice to be child-friendly.

Dental nurses can apply fluoride varnish either on prescription from a dentist or direct as part of a structured dental health programme.

Dental therapists working in NHS dental practices are able to carry out direct restorations on primary and secondary teeth, carry out pulpotomies on primary teeth, extract primary teeth, and place preformed crowns on primary teeth.

Dental therapists and hygienists working in NHS practices are able to obtain a detailed dental history from patients and evaluate their medical history, carry out a clinical examination within their competence, diagnose and treatment plan within their competence, prescribe radiographs, take, process, and interpret various film views used in general dental practice, plan the delivery of care for patients, apply fluoride varnish, and place fissure sealants. Additionally, dental therapists can develop skills to administer inhalation sedation.

The time saved by involving the entire dental team in paediatric dental care makes sense not just from a financial point of view, but also in allowing individual team members to excel at what they do best. ■

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FROM THE ARCHIVE

Foreword: The *British Dental Journal* 1880–1946

This foreword was written by Lilian Lindsay, then-President of the British Dental Association, in the *BDJ* in 1947, Volume 82.

Seated round a table in a small room at the old dental hospital in Leicester Square 67 years ago, a small committee of selected members discussed a great adventure. Though elderly their enthusiasm was that of youth, the light of victory was in their eyes; the foundation of the second pillar, a society, had been laid for the tripod forming a learned profession, the first pillar – that of the school – had been building for more than 20 years. These men possessed three great things, faith in the rightness of their venture, hope for its success and charity to provide the means, in that every member guaranteed one hundred pounds to pay for the third pillar of the tripod, a journal. The presentation of their report was received with dubiety by the Representative Board (newly constituted). Some of the members, being without the vision of their elders, moved an amendment savouring of the policy of 'Wait and See', not unjustified for there had been failures. Moreover the new society was 'animula, vagula' not yet 'blandula', therefore the risk was great, their numbers being but a seventieth part of the present membership of 7,000. Happily, the amendment was not carried, the *Monthly Review of Dental Surgery* was bought and became the official organ of the British Dental Association.

Looking back, the courage to launch such an adventure must have been great, for the region towards which they hoped to travel was unknown, and it was in every way a speculation of the outcome of which could only be surmised. They were not favoured like Moses with a height from which to contemplate the end of their task, they could only rely upon that faith and hope with which they started out. The men chosen as editors, Alfred Coleman and Joseph Walker, were trusted because they had already shown their worth.

The tradition set up by these original editors has been steadily maintained throughout the 67 years by a constant succession of able edifiers in more senses than one. It is only necessary to mention names such as Gaddes, Dolamore, Brookes and Matheson, men versed in all the phases of the Association and its varied interests, scientific, literary or political. They were leaders who shaped and guided opinion through their able management of the Journal.

After such a hopeful beginning the Journal has continued its progress through many changes and chances, its edification has been slow, but it has survived, among other mischances, the increasing violence of three major wars, shaking itself after each to start afresh with renewed vigour justifying the confidence in the future shown by those early pioneers. Once again the Journal faces change characteristically at a time when all people are looking forward to a new world in this New Year of 1947.

A return to the pre-war arrangement of a supplement for the publication of more domestic news will be welcome, as will the provision of more space for scientific matters – and for