

Fluoride varnish: our only hope?

Outcomes and costs of pre-school and school-based fluoride varnish pilots

Br Dent J 2017; **222**: 591–594; <http://dx.doi.org/10.1038/sj.bdj.2017.360>

I guess it is human nature to seek the easiest option available; the course of least resistance and maximum benefit for the effort expended. It might explain why politicians have consistently ducked the issue of fluoridation of water supplies; it might explain why parents 'give up' the fight against reducing sugar consumption for their children; it might explain why we arguably cling to the hope that the application of fluoride varnish (FV) will be the saving grace of the scandal of childhood caries, which continues, seemingly unabated, in the UK.

This paper attempts to bring some pragmatic context and data to the vexed question of whether or not the regular application of FV to the teeth of young children is a cost effective method of reducing caries. The authors are clear that this was not a study on the effectiveness of FV applications, which according to systematic reviews are effective. What the study does indicate explicitly is that intensive efforts were needed to secure and maintain participation making this 'an expensive intervention which may be difficult to sustain for the long term.' These efforts cost approximately £88 per child per year, the bulk of which consisted of staff costs reflecting the resource-intensive nature of the intervention.

While one positive side effect of the programme was an increase in the number



© CASEY/ISTOCK/Getty Images Plus

of children attending for dental care, the downside was that over the intervention period there was also an increase in caries experience. Swings and roundabouts. Significantly, the authors come to the conclusion that there is a need to improve diets as well as increase fluoride availability and that ultimately oral health improvement programmes need to be part of a holistic approach.

All of this reaffirms the view that there is no one way and no easy solution to the problem of caries in children. If anything it also provides support for much wider action and activity in

society if we are ever to effectively tackle this issue. The moves to introduce financial penalties for inappropriate dietary choices in the form of sugar tax may indicate the start of this willingness. However, these are also small steps and equally questionable in their long-term effectiveness. One of the areas covered by this study was Southampton, whose leaders have been trying to implement water fluoridation against the odds of the campaigns by anti-fluoridationists. What a sad reflection and probably a cumulative misuse of £88 per child per year.

By Stephen Hancocks

Author Q&A

with Sarah Buckingham
*Oxfordshire Salaried
Primary Care Dental
Service*



Why is your work important?

Topical fluoride varnish applications have been shown to be effective in reducing dental decay but children have to attend regularly to benefit. Community programmes are seen as a way of enabling this intervention to be delivered to all children, including those who do not attend regularly. Previous discussions have focused just on delivering the applications. Our work focuses on the challenges

and costs of delivering the programme in its entirety, including highlighting the large resource needed to achieve and maintain participation in the programme. Our findings also add to the available evidence that increased awareness and engagement on oral health can lead to increased dental attendance, at least in the short term. This information may be useful to commissioners who are considering investment in this type of community oral health initiative.

What was the biggest challenge in carrying out your study?

Securing commitment and resources for a programme that lasted 2-3 years, particularly in a changing health system, was the biggest challenge. This was only achieved through much joint working and the first task was to develop successful business cases for all areas. This was

followed by ongoing collaboration to ensure that the programme was sustained for the entire duration, to maximise outcomes for all participating children and identify useful learning.

What are your next steps?

We are sharing our findings with local commissioners to support future commissioning decisions. We are also keen to contribute our experience to any local or national discussions so that our work can benefit wider decision-making with regard to child dental health and dental attendance. If support and funding was available, we would be interested in a follow-up study to assess if the increased dental attendance was maintained or improved further after the end of the intervention, as well as the reasons behind it. ■