

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.

The abstracts on this page have been chosen and edited by Paul Hellyer

The population approach to topical fluoride

Cost-effectiveness of caries-preventive fluoride varnish applications in clinic settings among patients of low, moderate and high risk

Schwendicke F, Splieth CH, Thomson WM *et al.* *Community Dent Oral Epidemiol* 2018; **46**: 8–16

Application of fluoride varnish targeted at high risk individuals may be more cost effective.

The cost of providing 7.184 million topical fluoride applications to children and adolescents in German clinics in 2014 was €83 million. The unit cost per application was €11.46. Using computer modelling and simulation, a cohort of children aged 6 and above were 'followed' over their lifetime. The potential costs of providing treatment for carious surfaces, including initial restoration, and possible sequelae, including endodontics and crowns, were estimated from both the public and private fee lists used in Germany.

Comparing the cost effectiveness in low, medium and high caries risk groups with the regular application of varnish and no varnish, the study found that in the low risk group, applying fluoride varnish was twice as costly and only marginally more effective than no varnish. Application in medium and high risk groups was more cost effective. Costs could be reduced by applying fluoride in cheaper, non-clinic settings, and that application could be considered for high risk groups only.

DOI: 10.1038/sj.bdj.2018.194

A Europe-wide lifetime study

Childhood socioeconomic conditions and teeth in older adulthood: Evidence from SHARE wave 5

Listl S, Broadbent JM, Thomson JM *et al.* *Community Dent Oral Epidemiol* 2018; **46**: 78–87

Poor social conditions in childhood may have implications for dental health throughout life.

Data was collected from 41,560 respondents aged 50+ across 14 European countries plus Israel. Respondents were asked to recall information from their childhood – whether there were more or less than 26 books in the home, how many rooms per occupant and their standard of living in comparison to their peers, as well as current dental attendance, self-rated health and a measurement of grip strength to assess frailty. A measure of educational attainment was also recorded and respondents were also asked how many teeth they had lost.

Fewer retained teeth were associated with poorer social circumstances in youth, lesser educational attainment and fewer books in the home. Those reporting good general health in the present retained more teeth than those recording poorer health, as did those with the highest income. These should not be represented as causal relationships but that these results do confirm the findings of previous researchers.

DOI: 10.1038/sj.bdj.2018.196

Are school based OHE projects effective?

Effectiveness of oral health education on oral hygiene and dental caries in schoolchildren: Systematic review and meta-analysis

Stein C, Lopes Santos NM, Hilgert JB, Hugo FN. *Community Dent Oral Epidemiol* 2018; **46**: 30–37

Analysis of recently published research appears to show only short-term improvements in plaque indices.

Oral health education interventions by dental care professionals (dentists, hygienists, dental nurses) in schools include supervised tooth brushing, giving dietary information and advice about oral hygiene and dental diseases. Using the Cochrane methodology, this meta-analysis examined relevant literature from the past 20 years (updating a similar review published in 1996) to assess the effectiveness of such interventions.

Twelve studies were found to fit the criteria used, and were included in a qualitative analysis but because of differences in reporting methods, only six could be used in the quantitative meta-analysis. Studies varied in length between 6 months and 3 years. Studies using caries as an outcome showed conflicting results, but most of those based on plaque index indicated some improvement over the study periods. The interventions used, based largely on information transfer, may be more effective if organised 'according to children's development period' and include more active engagement with families.

DOI: 10.1038/sj.bdj.2018.195

The cost effectiveness of fissure sealants

Economic evaluation of dental sealants: A systematic literature review

Akinlotan M, Chen B, Fontanilla TM, Chen Fan V. *Community Dent Oral Epidemiol* 2018; **46**: 38–46

Caries risk assessment and the venue for placement may be relevant.

Only 13 papers were identified for this meta-analysis of the cost effectiveness of fissure sealants to prevent, or reduce the incidence of, dental caries. The lack of sufficient numbers and of consistent outcome measures were major hindrances to comparison between studies. The authors recognise that cost effectiveness of sealant placement is a narrow measure of effectiveness, limited as it is to immediate benefits to teeth. There is no recognition of the longer term health gains, such as a reduction in the need for emergency dental care and increased school attendance, and its impact on overall health and life span.

Despite these limitations the studies show that 'always sealing primary molars appeared to be the most effective strategy, whereas risk-based sealing was the optimal strategy with differing caries risk'. Sealants delivered in a school setting were as effective as those delivered in a clinic setting.

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