



Title	Clinical Effectiveness and Cost Effectiveness of Routine Dental Checks: A Systematic Review and Economic Evaluation
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Aim

1) How effective and cost effective are routine dental checks in improving quality of life and reducing morbidity of dental caries and periodontal disease in children and adults? 2) How effective and cost effective is it to reduce morbidity and mortality from oral cancer in adults?

Conclusions and results

The information included 29 studies in 25 articles. The studies were poorly reported, heterogeneous, and largely not generalizable to the UK. The effects of different dental check frequencies on outcome measures in deciduous, mixed, or permanent dentition were not consistent. Many studies reported an increase in decay, a decrease in teeth, and a decrease in fillings with less frequent dental checks in permanent dentition. In periodontal disease, one study associated decreased attachment with less frequent dental checks (uncertain statistical significance). The effect of dental check frequencies was inconsistent for all other periodontal outcomes. In oral cancer, a study suggests that dental check intervals less than 12 months do not affect tumor size at diagnosis. One study reports that dental check intervals exceeding 12 months may significantly increase the stage and size of tumors at diagnosis. One study showed significant association between increasing dental check frequency and the perception that oral health affects quality of life. Cost-effectiveness analyses were inconclusive. No cost-effectiveness studies were based on UK data and practice. Five resource impact studies appeared to be consistent; less frequent dental checks (7 to 24 months) were associated with reduced assessment and treatment, with little evidence of adverse effects on dental health. The full report presents decision analysis modeling of the cost effectiveness of dental checks of differing frequency on dental caries.

Recommendations

Little evidence supports or refutes the practice of encouraging 6-month dental checks in adults and children.

Decision analysis modeling suggests that longer (more than 6-month) dental check intervals, rather than shortening the current interval, would be more cost effective regarding dental caries. The model demonstrates that cost effectiveness varies according to caries risk. Hence, consideration should be given to whether a population recall policy or a recall policy based on an individual's risk of caries would be more appropriate.

Methods

The search strategy for primary studies was designed to identify controlled trials and observational studies (no language restrictions) in electronic bibliographic databases, internet sites, contact with experts, citation checks, and a search of the Cochrane Oral Health Group's specialized register of controlled trials. A Markov decision analysis modeling exercise based on UK data was undertaken for the outcome dental caries.

Further research/reviews required

Further primary research is needed on the role of the dental check and its effectiveness in different oral diseases.