

Patient, organization, and system level influences on the prevention and management of caries

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Background

Although largely preventable, dental caries is a widespread, costly, and seemingly intractable public health problem:

- Dental caries is the most common chronic disease of childhood^{1,2}
- Every year, 19% of children with caries will have an unscheduled visit to the dentist because of toothache; 11% will need an extraction³
- There are pronounced disparities in the prevalence and burden of caries by relative deprivation along the social gradient, these disparities persist across the lifespan^{4,5}
- Dental caries impact overall wellbeing, quality of life, and attendance at school and work^{1,3}

Caries prevalence among children in Scotland has decreased over the past decade, meeting national targets of 60% of children in Primary 1 (64.7%) and Primary 7 (69.4%) with no signs of visible decay⁶.

Although caries prevalence is improving, it remains high and disparities persist across Scottish Index of Multiple Deprivation groupings with children in highest deprivation areas bearing the heaviest burden of decay⁶.

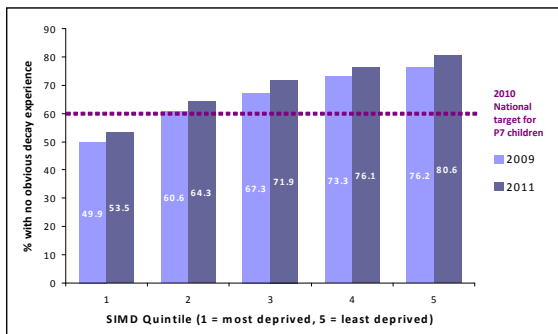


Table 1: NDIP Scotland, Proportion of Primary 7 children with no obvious decay by SIMD for 2011⁶

Service Initiatives

Initiatives including the Scottish Government Childsmile programme and the Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance for *Prevention and Management of Dental Caries in Children*, have sought to support and further these oral health gains.

Overview

Despite implementation of Childsmile and the publication of SDCEP evidence-based guidance and recommendations, there is evidence of inappropriate variation in the delivery of care to prevent and manage caries⁷. Diagnostic analyses suggest variations in care are associated not only with dentist behaviour, but factors at the patient, practice, and policy levels as well⁷.

This study uses TRiADS' practical, evaluative framework⁸ to assess the use and integration of guidance in general dental practice, identify factors influencing the delivery of recommended care, and strengthen the implementation of Childsmile and SDCEP guidance in primary care.

Aims

The aim of the TRiADS-Prevention and Management of Caries study (TRiADS-PMC) is to identify patient, practice, and policy (including educational) factors influencing the delivery of recommended care for the prevention and management of dental caries in primary dental care.



Methods

TRiADS-PMC is a mixed methods study using postal survey, routinely collected data, dental practice observation, dental team member interviews, and patient focus groups. Data collected will be integrated into a conceptual framework describing facilitators and barriers to guidance implementation in practice. The framework will be reviewed by a key stakeholder workgroup (patients, practitioners, policy makers, researchers, service coordinators, public health, education, etc) and used to identify strategies for further improving caries prevention and management. The end product will be a series of consensus recommendations for future research.

The primary study outcomes are practice level:

- Record caries risk assessment in health record
- Base recall interval on caries risk assessment
- Apply fluoride varnish twice a year for children over 2 years old
- Place preventive fissure sealants
- Demonstrate oral hygiene (e.g. tooth brushing)
- Take bitewing radiographs when needed

Outcomes

Factors that emerge over the course of this study, will be used to identify and prioritize targeted interventions to further strengthen caries prevention and management.

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