

Developing Guideline for Caries Prevention and Management by Caries Risk Assessment for Pre-school Children using ADAPTE Process and Delphi Consensus

Gillian HM Lee ^{1*}, Colman McGrath ², Cynthia KY Yiu ¹

¹ Paediatric Dentistry & Orthodontics; ² Dental Public Health, Faculty of Dentistry, The University of Hong Kong, Hong Kong, China



Introduction

- One in two pre-school children have caries in Hong Kong and for the most part, they remain untreated
- Dental treatment received by pre-school children with caries in Hong Kong is sub-optimal
- Wide variation in the care and treatment approach to pre-school children with caries exists among dental practitioners
- Clinical practice guideline assist clinical decision making and promote optimal, evidence-based and equitable patient care
- Provision of a guideline for caries prevention and management by caries risk assessment for pre-school children is needed in Hong Kong
- **ADAPTE process** ADAPTE Collaboration 2009; Fervers et al. 2011
 - a systematic approach for adapting guidelines produced in one setting to be used in a different cultural context
 - reduces substantial time, expertise and resources required for guideline development
- **Delphi consensus** Dalkey & Helmer 1963; Cramer et al. 2008
 - an interactive consensus approach that aims to reach group consensus from individual expert opinion
 - suitable for topics with dissenting opinions, uncertainty or absence of evidence

Aim

- To develop an evidence-based clinical practice guideline for caries prevention and management by caries risk assessment for pre-school children in Hong Kong

Material and methods

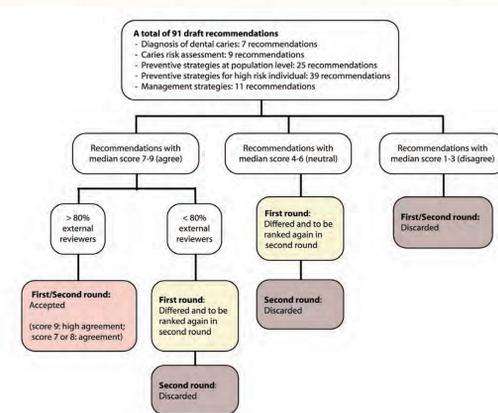
ADAPTE process

- consists of 3 main phases, each with a set of modules

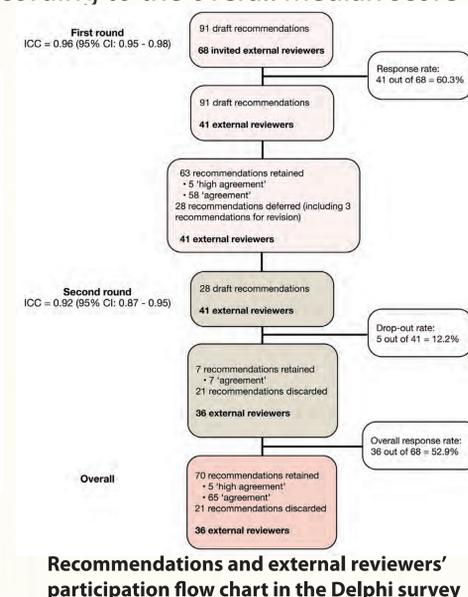
Phases	Tasks	Details
Set up Phase	Prepare for ADAPTE Process	• preparation
Adaptation Phase	Define health questions	• established the scope and key questions
	Search and screen guidelines	• guideline clearinghouses and internet sources searched for systematic reviews and guidelines related to the topic • twenty non-duplicate guidelines, protocols or policy statements were identified • eleven guidelines were retained after screening
	Assess guidelines	• a panel group with 4 teaching members from Paediatric Dentistry, Faculty of Dentistry, HKU, was set up • panel members assessed the 11 retrieved guidelines using AGREE II , a generic instrument to assess the guideline development process and its report • AGREE II scores of each guideline tabulated and evaluated
Finalisation Phase	Design and select guidelines	• three source guidelines were selected: - AAPD 2011 - Irish Oral Health Services Guideline Initiative 2009 - SIGN 2005 • recommendations compared and updated with current best evidence from literature • adapted/adopted recommendations drafted with reference to acceptability and applicability of local context
	Draft guideline report	• consultation draft of the adapted guideline was produced
	External review	• draft was external reviewed by Delphi consensus
Finalisation Phase	Plan for future review and update	• draft guideline and recommendations revised to incorporate feedback from external reviewers where necessary
	Produce final guideline	• final guideline was produced

Delphi consensus

- for the external review process in the Finalisation phase of ADAPTE
- in collaboration with the **Hong Kong Society of Paediatric Dentistry (HKSPD)**
- all 68 ordinary and associate members of HKSPD were invited by e-mail to be an external reviewer who:
 - received an **e-copy** of the consultation draft of the adapted guideline
 - completed an **internet-based structured questionnaire** about their view on the draft (strength & weakness, applicability / impact to their practice etc.)
 - participated in a **two-round internet-based Delphi consensus process** that aimed to collect opinions to establish consensus recommendations
 - rated their agreement with each of the 91 preliminary recommendations using a nine-point Likert scale (1 = strongly disagree, 9 = strongly agree)
 - process was repeated in second round, in which reviewers' ratings to each recommendation in round 1 were combined and also provided anonymously to all participants
 - recommendations were classified according to the overall median score and ratings percentages



Classification of recommendations according to the overall median score and percentage of ratings by external reviewers in the first and second round of Delphi survey



Recommendations and external reviewers' participation flow chart in the Delphi survey

Results

- A total of 70 recommendations were retained (5 reached high consensus, 65 reached consensus); and 21 recommendations were discarded
- A guideline for caries prevention and management by caries risk assessment for pre-school children in Hong Kong was produced

Conclusions

- **ADAPTE process** and **Delphi consensus** enhance efficiency in developing high-quality clinical practice guideline
- A guideline for caries prevention and management by caries risk assessment for pre-school children with consensus evidence-based recommendations was developed using ADAPTE process and Delphi consensus in Hong Kong
- The guidelines can be implemented and adopted by Hong Kong dental practitioners (and elsewhere)

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Correspondance to: Dr Gillian Lee, e-mail: lee.gillian@gmail.com