

WHO Expert Consultation on Public Health Intervention against **Early Childhood Caries**

REPORT OF A MEETING

Bangkok, Thailand, 26–28 January 2016

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Abbreviations and acronyms

AAPD	American Academy of Pediatric Dentistry
AAP	American Academy of Pediatrics
ART	Atraumatic Restorative Treatment
ECC	Early Childhood Caries
ICD	International Classification of Diseases and related health problems
ICDAS	International Caries Detection and Assessment System
ITR	Interim Therapeutic Restorations
ppm	Part per million
SIDS	Sudden Infant Death Syndrome
SMART	Simplified and Modified Atraumatic Restorative Treatment
UNICEF	United Nations Children’s Fund
WHO	World Health Organization

Executive summary

The global epidemiology of early childhood caries (ECC) has demonstrated the prevalence of caries in preschool children in both developed and developing countries. ECC is a public health problem, with more severity in communities of low socioeconomic status where mostly untreated caries have a major impact on the general health and quality of life of infants and toddlers. Nevertheless, ECC is preventable through correct management of common risk factors, and by following WHO's recommendations for infant feeding and reduced intake of free sugars – especially in complementary foods for young children. Strategies for management of ECC include all levels of prevention as early as possible, starting with tooth brushing with fluoride toothpaste and modification of sociobehavioural factors.

Primary prevention – covering promotion of healthy behaviours and appropriate fluoride use – will be the key to ECC management. Prevention of ECC should be integrated into existing primary health care programmes, especially those for maternal and child health. Health promotion aimed at pregnant women, new mothers and primary caregivers should raise concerns at the common risk factors of ECC by emphasizing WHO's recommendations on breastfeeding until six months of age, no added sugars for complementary feeding up to two years, and after that limited free sugars intake in accordance with the WHO guideline. Primary caregivers should be trained to provide a proper tooth brushing with the right amount of fluoride toothpaste from the first primary tooth eruption, followed by early detection of early lesions of caries during the vaccination period within primary care. Management of ECC should be part of the curriculum for all health professionals who promote the health of infants and toddlers in society. Moreover, a health policy should be developed to include affordable and effective fluoride toothpaste, a non-sugar complementary diet, a healthy environment and community fluoride administration.

Secondary prevention of ECC should focus on the early detection of carious lesions. Therefore, ECC – as well as severe ECC – should be clearly defined. Not only dental personnel but also other health professionals and even mothers should be trained to detect the early signs of carious lesions. Oral health check-up records should be integrated into the child's health profile at the child health clinic during the vaccination period and when the child has general health examinations. Diet counselling, proper bottle-feeding, and especially limited free sugars intake should be regularly emphasized during the periodic visits to the child health clinic. Application of fluoride varnish on early carious lesions, such as white spot lesions, by trained personnel is recommended, as are sealants with glass ionomer cement on non-cavitated lesions. Parents and caregivers should be actively and routinely involved in the dietary and oral hygiene practices of their children.

Tertiary prevention of ECC aims to reduce the negative impact of the untreated frank, open cavity and improve the quality of life of children by avoiding unnecessary extraction and restoration functions. Silver diamine fluoride or fluoride varnish can stop dentine carious lesions. However, atraumatic restorative treatment/simplified modified ART/interim therapeutic restoration (ART/SMART/ITR) is an alternative option, with glass ionomer cement as the material of choice for tertiary prevention. If ECC are left untreated, extensive treatment will soon be required. Depending on the child's behaviour and cooperation, in serious cases the child's rehabilitation may need to be done under general anesthesia by skilled professionals in appropriate facilities. For this, more resources are needed and the cost of such treatment would be higher than primary and secondary prevention.

WHO Global Consultation on Early Childhood Caries brought together staff from WHO headquarters and regional offices with representatives of WHO collaborating centres for oral health, international experts and rapporteurs. Participants agreed on a set of recommendations for a future action plan on ECC, as follows:

- Propose the definition of ECC to WHO (ICD-11).
- Include the three-year-old age group as one of the index ages recommended for population surveys in the next edition of WHO's *Oral health surveys: basic methods*.
- Detect early carious lesions for early prevention, such as initial (white spot lesions), moderate (non-cavitated lesions) and extensive (frank, open cavities).
- Advocate the importance of primary teeth to mothers and the community by raising concern for the impact of ECC on the quality of life of young children.
- Emphasize ECC within oral health education and interprofessional education with other health professions.
- Integrate ECC within the primary health care approach, such as well-child clinics or during the childhood vaccination period.
- Apply WHO recommendations for infant feeding for the prevention of ECC.
- Use the common risk factors approach, such as emphasizing limited free sugars intake in accordance with WHO recommendations, for control of ECC together with child obesity.
- Provide a training package for dental and non-dental personnel, including appropriate management for all three levels of prevention of ECC.
- Confirm the use of community fluoride administration – such as water, milk or salt – as primary prevention of ECC.
- Use fluoride varnish and sealants with glass ionomer cement as secondary prevention for ECC.
- Support silver fluoride and ART/SMART/ITR with glass ionomer cement as an alternative procedure for tertiary prevention of ECC.
- Promote evaluation, surveillance and research for cost-effectiveness and consequences of prevention of ECC in different communities.

However, public health measures for controlling ECC will depend on the local or domestic situation and

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