



The Early Childhood Caries Conference— October 18–19, 1997

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The Early Childhood Caries Conference, held October 18–19, 1997 on the National Institutes of Health campus, was attended by more than 250 individuals from across the US and from 11 other countries. The genesis for this conference was a 1994 meeting at the Centers for Disease Control and Prevention that questioned the prevailing belief that inappropriate use of the bottle and high levels of oral infection with mutans streptococci were the sole etiologic factors of this condition. Such discussions have given impetus to replacing the "cause and effect" terms for caries in infants and toddlers with the phrase Early Childhood Caries which reflects a broader scope of the disease and a less certain understanding of its etiology.

The aims of the conference were to reexamine the current knowledge of Early Childhood Caries through critical reviews of the biological and psychosocial mechanisms, the public health implications, and the prevention, research, and policy needs. Through this forum of scientific review, the conference also assembled child health leaders to consider the dental research, prevention, and access issues for US preschool children. The initial funds for this conference were obtained from the American Academy of Pediatric Dentistry Foundation. Additional support was received from the American Dental Association Health Foundation, the American Society of Dentistry for Children, the American Association of Public Health Dentistry, the Centers for Disease Control and Prevention, the National Institute of Dental Research, the W.K. Kellogg Foundation, and the US Maternal and Child Health Bureau.

Although some issues generated consensus among the presenters and attendees, others were more controversial. There was broad agreement that dental caries is of epidemic proportions in many lower socioeconomic preschoolers in the US and developing countries and that dental caries is undertreated, both with respect to preventive and restorative approaches. Data was presented from an Arizona study showing that between 20–30% of 2-year-old children have dental caries, yet virtually none of these children have had dental care. There

was general accord that the prevalence, seriousness, and societal cost of ECCs have not diminished despite the declining worldwide rates of caries among school-aged children. Restorative treatment of this condition is expensive and difficult, with many children requiring general anesthesia or sedation.

There was consensus that more research is required to identify effective means of preventing and treating this disease. Evidence was presented that educating parents in preventive methods alone has little long-term effect in reducing the prevalence of this disease. Further data is necessary on preventive techniques, such as how to transform the educational interventions into long-lasting preventive behaviors, as is an examination of the effect of professional interventions, including applications of fluoride varnishes and antimicrobial agents to vulnerable populations. There was also general agreement that policies and protocols regarding ECC must be established to implement initial assessments, preventive techniques, and restorative procedures for affected children earlier than is currently recommended. Many current recommendations for the first dental visit are well after the disease has progressed, and dentists generally have not been trained to see and treat infants and toddlers.

While the combination of a child being infected with cariogenic bacteria and the frequent ingestion of sugar, either in the bottle or in solid foods, was not challenged as being the primary basis of the disease, other concepts such as enamel hypoplasia of primary teeth due to nutritional deficiencies during pregnancy or premature births also were suggested as important risk factors. The controversy regarding the potential cariogenicity of the most common bottle contents—milk and infant formulas—was a topic intensely discussed. Although several studies were presented showing that milk is less cariogenic than sucrose-containing liquids in the bottle, there was still strong sentiment that more human studies are necessary before such an important change in recommendation is made to the public. Another controversial topic was the potential cariogenicity of "at will" breast feeding. Case reports have associated pro-

longed or night time breast feeding and caries of the maxillary anterior teeth, but the possibility of cariogenic dietary practices other than breast feeding also need to be considered in these cases.

Perhaps the most debated issue at the conference was the name and definition for rampant caries in infants and toddlers. The term Early Childhood Caries—defined as one or more carious lesions involving maxillary anterior teeth in a child 3 years old or younger—was not acceptable to some of the attendees. It was argued that the terms baby bottle tooth decay and nursing caries are well recognized and easy to understand by the public, and therefore should not be abandoned.

In general, there was agreement among the attendees that dental caries in infants and toddlers takes place within the context of a broad social, cultural, and political environment that greatly influences the risk for and treatment of the disease. The ECC conference achieved its goal of reviewing the current understanding and significance of this problem. The conference will ultimately be successful if it becomes the springboard for the development of greater efforts to check this highly prevalent childhood disease.

(The complete conference proceedings will be published in an early 1998 issue of *Community Dentistry and Oral Epidemiology*.)

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