# **Creating Partnerships for Improving Oral Health of** Low-income Children

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Dental caries in primary teeth of children 5 years of age or younger is still one of the major health problems in the United States, especially for lowincome children (1). This largely preventable disease continues to affect many children in lower socioeconomic strata and many ethnic minorities. Poor oral health leads to chronic pain that affects a child's ability to chew food, thrive, and speak, as well as their psychological well-being. One of the measurable impacts of severe dental disease in young children is the general medical condition referred to as "failure to thrive." Reports of children with severe dental caries and inappropriately low body weight have been reversed after completing dental care (2).

A review of the current dental literature shows widely differing prevalence of dental caries for US populations-ranging from 1 percent to 38 percent in children 1-2 years of age and 5 percent to 56 percent in children 2-3 years of age (Table 1). These reports show clear disparities in dental caries prevalence with ethnicity, and Native American children experience dental caries to a much greater extent than any other population subgroup (3-10). Table 2 provides information on the prevalence of caries experience in children 3–5 years of age seen in Head Start centers. The percentage of preschool children in these program sites who have experienced tooth decay ranges from 22 to 100 percent (8,11-18). Not only do these children have high disease rates, but the small percentage of their decay that has been repaired suggests they have low rates of access to dental care. Clearly, preventing dental caries in federal programs serving families with pregnant women, infants, and toddlers would have a major impact on the health of a growing underserved population in the United States.

Head Start began in 1965 in the Office of Economic Opportunity and today is managed by the Department of Health and Human Services' (DHHS) Administration for Children and Families (ACF). Head Start and Early Head Start are comprehensive child development programs that serve children from birth to age 5, pregnant women, and their families. In fiscal 1998, Head Start provided services to over 800,000 children. In 1994 Early Head Start was established to provide services to low-income pregnant women and families with children from birth to 3 years of age. Children enrolled in Head Start or the Women, Infants, and Children (WIC) program must meet income eligibility guidelines and are generally from families under 185 percent of the federal poverty level. Approximately 55 percent of children in WIC programs and 65 percent in Head Start programs are enrolled in Medicaid. Many of the remaining children meet eligibility requirements for the State Child Health Insurance Program. All children enrolled in Head Start and Early Head Start receive comprehensive health services, including medical, dental, nutrition, and mental health services. Since the early 1990s, Head Start programs and parents have identified access to oral health services as their number one health concern. While children receive an oral health exami-

TABLE 1

Estimates of Caries Prevalence of Infants and Toddlers 12–36 Months of Age (Adapted from Douglass JM, et al. Community Dent Oral Epidemiology, in press)

| Year | Study (Ref)           | Course            | Caries Prevalence (%) |           |  |
|------|-----------------------|-------------------|-----------------------|-----------|--|
|      |                       | (Ethnicity)       | 12–23 mos             | 24-36 mos |  |
| 1957 | Wisan et al. (3)      | USA               |                       | 18        |  |
| 1964 | Tank & Storvik (4)    | USA (Caucasian)   | 1                     | 5         |  |
| 1969 | Hennon et al. (5)     | USA               | 8                     | 35        |  |
| 1974 | Conti et al. (6)      | USA (African-Am.) |                       | 28        |  |
| 1974 | Infante & Russell (7) | USA               | 2                     | 15        |  |
| 1994 | O'Sullivan et al. (8) | USA (Native Am.)  | 11                    | 44        |  |
| 1995 | Tsbouchi et al. (9)   | USA (Native Am.)  | 38                    | 56        |  |
| 1997 | Tang et al. (10)      | USA               | 8                     | 26        |  |

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| (Taupica nom Tang ), et al. 1 ubic meanin Reports 1777,112,517-23) |                                                |                                                                     |              |                     |                       |                |  |  |  |
|--------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------|--------------|---------------------|-----------------------|----------------|--|--|--|
| Year, Study, Reference                                             | Geographic Location                            | Population                                                          | Age<br>(Yrs) | n                   | Caries<br>Score       | %<br>d         |  |  |  |
| 1986, Parker & Fultz (11)                                          | Randomly selected sites in central & north. TX | Head Start                                                          |              | 276                 | <b>dft</b><br>2.44    | 39             |  |  |  |
| 1986, Johnsen et al. (12)                                          | Rural & city OH                                | Head Start                                                          | 3.5–5        | 1,310               | <b>deft</b><br>2.50   |                |  |  |  |
| 1989, Trubman et al. (13)                                          | All sites in MS                                | Head Start                                                          | 3<br>4       | 210<br>1.003        | dmft<br>1.34<br>2.58  | 55<br>52       |  |  |  |
|                                                                    |                                                |                                                                     | 5            | 950                 | 3.53<br>dfs           | 43             |  |  |  |
| 1990, Louie et al. (14)                                            | Randomly selected sites<br>in CA, HI, &        | Head Start (Micronesia)<br>Head Start (white)<br>Head Start (black) | 35<br>35     | 864<br>138          | 11.08<br>5.22         | 92<br>37       |  |  |  |
|                                                                    | MICTORESIA                                     | Head Start (Hispanic)                                               | 3-5<br>3-5   | 295                 | 3.66<br>6.62<br>dfs   | 48             |  |  |  |
| 1991, Tinanoff et al. (15)                                         | All sites in Hartford<br>(city) & New London   | Head Start (total)<br>Head Start (white)                            | 3–5<br>3–5   | 401<br>73           | 2.19<br>1.58          | 73<br>58       |  |  |  |
|                                                                    | County, CT                                     | Head Start (black)<br>Head Start (Hispanic)                         | 3–5<br>3–5   | 229<br>94           | 2.54<br>1.88          | 73<br>81       |  |  |  |
| 1992, Jones et al. (16)                                            | Randomly selected 37% of AK Head Start         | Head Start (Nat. Am.)<br>Head Start (non-Native                     | 35<br>35     | 381<br>163          | dmft<br>4.88<br>1.65  | 39<br>22       |  |  |  |
| 1992 Barnes et al. (17)                                            | children<br>Randomly selected 5%               | American)<br>Head Start (total)                                     | 3_5          | 825                 | <b>dfs</b><br>6 35    |                |  |  |  |
| 1), 21, Duilles et uil (1, )                                       | of sites in southwest-<br>ern states           | Head Start (white)<br>Head Start (black)                            | 3-5<br>3-5   | 221<br>409          | 6.30<br>5.14          |                |  |  |  |
|                                                                    |                                                | Head Start (Hispanic)<br>Head Start (Nat. Am.)                      | 3-5<br>3-5   | <b>44</b><br>151    | 5.65<br>11.63<br>dmft |                |  |  |  |
| 1994, O'Sullivan et al. (8)                                        | All Navajo reservation<br>sites in AZ          | Head Start (Navajo)                                                 | 3<br>4<br>5  | 320<br>1,385<br>298 | 4.54<br>5.95<br>6.62  | 37<br>27<br>22 |  |  |  |
| 1996, Douglass et al. (18)                                         | Whiteriver, AZ                                 | Head Start (Apache)                                                 | 4            | 127                 | <b>dmft</b><br>8.33   |                |  |  |  |

TABLE 2Estimates of Caries Prevalence of Children 3–5 Years of Age in Head Start Programs<br/>(Adapted from Tang J, et al. Public Health Reports 1997;112:319-29)

nation as required by the Head Start Program Performance Standards, the low number of dentists accepting Medicaid, long waiting time for appointments, and extensive travel time to appointments in rural areas are major barriers to these children receiving needed treatment.

The Special Supplemental Nutrition Program for Women, Infants, and Children is administered by the Food and Nutrition Service (FNS) of the US Department of Agriculture. WIC's goal is to improve the health of low-income pregnant women, new mothers, infants, and children up to age 5 years. The WIC program provides nutritious supplemental foods, nutrition education, and referrals to related health and social services. Historically, local agency WIC staffs have monitored the oral health of participants because oral health problems are included as WIC Nutrition Risk Criteria used to establish WIC eligibility. WIC local agencies have routinely provided nutrition and oral health care counseling for parents and guardians of infants and children. Many WIC local agencies have distributed free toothbrushes to all participants aged 1 to 5 years, and they have provided nutrition education contacts on dental health using videotapes, discussions, displays, and handout mate-

rials. In addition, WIC local agencies have improved the links between participants and the local dental community through referral and networking.

In the past few years, oral health issues in economically disadvantaged children have gained considerable interest. A 1997 conference at the National Institutes of Health greatly advanced understanding of early childhood caries (ECC), the term used for early and severe dental cavities in preschool children (19). In April 1999, a workshop at the National Institutes of Health continued to define and provide diagnostic criteria for dental caries in primary teeth (20). Additional federal attention regarding ECC and caries management in children will be derived from recent or upcoming national conferences or studies including: the NIH consensus development conference on caries interventions, the Agency for Healthcare Quality and Research review of the evidence for caries management, the US Surgeon General's Workshop and Conference on Children and Oral Health, and the first-ever Surgeon General's Report on Oral Health. Additionally, the Health Resources and Services Administration (HRSA) and Health Care Financing Administration (HCFA) developed a joint Oral Health Initiative in 1998 to address the oral health needs of children enrolled or eligible for the Medicaid and State Child Health Insurance Program (S-CHIP). Furthermore, the Food and Nutrition Service has developed and is implementing an FNS Oral/Dental Health Education Plan, which specifies strategies and activities to improve liaison with the oral/dental public health community, and to promote policy and educational initiatives aimed at improving the oral/dental health of WIC and other FNS program participants.

Together, these initiatives converge toward a burgeoning national focus on the oral health of children. With this background, it seemed evident to several federal agencies interested in oral health of underserved children, that a forum on the oral health of preschool children was necessary. Therefore, a Head Start Partners Oral Health Forum was convened on September 16–17, 1999, in Arlington, VA, under the sponsorship of Head Start, WIC, and the HRSA-HCFA Oral Health Initiative.

## The Head Start—WIC—HRSA— HCFA Forum on Early Childhood Oral Health

Forum attendees included Head Start parents, teachers, and administrators; regional and state dental consultants; regional and state Medicaid consultants; WIC state and local agency staff; and dental practitioners, scientists, researchers, and advocates. They met for two days to review and discuss the latest research and evidence-based oral health practices, and to develop strategies to implement these practices among preschool children.

The specific objectives of the forum

were:

 to develop strategies that increase collaboration at the federal, state, and local levels and improve oral health services for low-income children and families;

 to obtain feedback from participants on the usefulness and appropriateness of recommendations presented in evidentiary papers prepared for the conference on nutrition, access to care, and prevention and management of caries; and

• to determine the feasibility and cultural appropriateness of implementing recommendations at the local, state, and national levels, and to develop additional policies around early childhood oral health.

Prior to the forum, a planning committee commissioned papers on nutrition, access, and caries prevention and management from experts on these topics. These manuscripts provided a basis of scientific evidence for discussion and eased the gap between research and practice. These scientific papers were provided to all participants before the forum.

The one-and-a-half-day forum was organized around the three topic areas. Breakout groups were held after each major paper presentation. These breakout groups not only commented on the papers, but exchanged ideas and experiences. These discussions were recorded and subsequently provided to the authors for incorporation into the final papers presented in this volume.

#### **Outcomes of the Forum**

In general, the participants reported that the major paper presentations were valuable and allowed a more scientific discussion of the issues with a multidisciplinary audience. Parents and Head Start staff appreciated the opportunity to discuss the oral health needs of their children with practitioners and policy makers. Participants expressed interest in replicating the forum at regional, state, and local levels.

To make the information accessible and useful to early childhood workers in a variety of settings, the planners developed a strategy that includes publishing the papers and responses to the papers in a peer-reviewed journal, as well as rewriting the information gained from the conference in more "user-friendly" fact sheets and executive summaries on each topic. Furthermore, the agencies involved plan to disseminate the findings of the conference through guidelines published in a user-friendly format that target parents, caregivers, teachers, and professional staff.

#### Value of Collaboration

The forum planning group included individuals from four federal agencies and clearly demonstrated the value of collaboration. This collaboration allowed the convening of national, regional, state, and local leaders from various disciplines to consider the issues that are of paramount concern to teachers, parents, health providers, and policy makers. Only when such stakeholders come together to identify and promote innovative solutions to problems can progress be made toward eliminating oral health disparities and improving access to dental care. While Head Start and WIC provide direction through performance standards, written policies, guidance materials, and regulations, great flexibility remains in addressing creative strategies at the local level. This forum created the potential for a variety of stakeholders to come together to demonstrate a true collaborative effort and learning environment in which change can occur. This model could be duplicated at various levels and adapted to the unique needs of specific communities.

## **Future Goals**

Because of the success of this forum, it is anticipated that such a format will be replicated at regional, state, and local levels. Community conferences will allow greater attention to local problems and solutions. Community partnerships that include policy makers, funding authorities, dental providers, advocates, parents, teachers, and community members are essential to close the gap in health disparities of poor, vulnerable children and their access to oral health care services.

From the perspective of policy makers, we need legislation that will appropriate resources to provide services to young children and their families through public and private service delivery systems. More safety net programs, such as community-based and school-based dental clinics, as well as programs that persuade dental providers to work in underserved areas need adequate funding. Additionally, federal and state governments need creative incentives to stimulate private practice providers to participate in dental care for those children who are in Medicaid and S-CHIP. We must ensure that dental/medical "homes" exist for these underserved children and families.

From the dental practitioner's perspective, we need to focus on adequate reimbursement to engage a sufficient number of privately practicing dentists. Additional administrative delivery issues such as broken appointments and cultural barriers also need to be addressed.

From the perspective of advocates of Head Start and WIC, we need to create partnerships that can work together at the various federal, state, and local levels to create changes in the health care delivery and financing systems that increase access to oral health services for low-income families.

From the educator's perspective, we need to ensure that the information from these papers is made available to all dental and medical professionals through continuing education courses and that it is incorporated into dental school curricula.

From the perspective of parents and teachers, the information from the forum must be converted into a more reader-friendly format and disseminated widely through newsletters and brochures, educational clearinghouses, electronic media, and local meetings. Education is the first and necessary step in making changes in health behaviors. Finally, this collaborative effort can provide the spark for greater communication, deeper understanding and better integration among a number of disciplines joined in a common effort to eliminate oral diseases and health disparities among the children of this country and to increase access to care.

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