

Shifting Paradigms in Promoting Oral Health for Young Children

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Tooth decay remains the single most prevalent chronic disease of America's children, affecting 44 percent by age six (Dye et al. 2007). Grantmakers, government, and the professions have long focused energy and resources on getting children into dental care to repair the ravages of this preventable disease and to eliminate associated pain and infection. Yet far too little attention has been committed to stemming the flow of new disease through individual and community-level interventions. This article suggests ways that tooth decay can be reconceptualized as a chronic disease that can be prevented or controlled. It suggests a new paradigm for child oral health promotion that borrows heavily from pediatric medicine to incorporate concepts of risk assessment, individually tailored interventions, and long-term disease management.

THE PROBLEM

Early childhood caries (ECC) is well understood as a chronic, diet-dependent, infectious, and fluoride-mediated disease that can be managed through biological and behavioral interventions like those used to address asthma and diabetes. The prevalence of ECC is exacerbated by the disparity in availability of dental care with the most impacted children having the least access to dental care, and children at low risk receiving more intensive care than may be needed to ensure their oral health. Poor and low-income children are twice as likely to experience caries but also twice as likely to go without care as are children from higher income families (NIDCR 2000).

Current dental training, financing, and delivery systems promote a one-size-fits-all semiannual dental visit that generally begins too late for a disease that is established by age two. In contrast, new science-based approaches to prevent and manage dental disease in children incorporate early intervention by multiple people who come in contact with young children and their families (including non-dental and non-medical professionals), implementing differential intensities of intervention based on objectively assessed individual risk, and incorporating

a primary emphasis on health behavioral interventions.

A NEW APPROACH TO CHILDHOOD ORAL HEALTH

A new approach to childhood oral health includes five key components.

- **Perception:** A new public awareness about caries is needed. New parents need to be made aware that caries – the disease process that causes cavities – is established by age two; that it is infectious, chronic, and progressive; and that they can manage their child's risk for developing cavities through dietary control and judicious use of fluorides. With this awareness can come greater public demand for more information and an earlier start to dental care.
- **People:** Substantial engagement by nontraditional providers is needed, particularly those who interact most closely with families. Social workers, community health workers, health educators, child care providers, Head Start and WIC workers, as well as medical and dental providers, all have a role in raising awareness, improving oral health literacy, and ensuring early entry into a dental home.
- **Protocols:** New protocols for individual and population level interventions need to be developed. Currently, knowledge and evidence in effective prevention and management of dental caries have not been transferred to the benefit of underserved children who experience the greatest dental disease.
- **Payment Systems:** Additional experiments, demonstrations, replications, and other innovative efforts that exhibit how new interventions can be made to work for payers, practitioners, and families are needed.
- **Informatics Support:** Health information technology and health information exchange need to be fully incorporated so that nontraditional providers can funnel information to traditional providers, particularly when reparative care is needed.

HOW CDHP IS PROMOTING THIS NEW APPROACH

Children's Dental Health Project (CDHP) is committed to promoting this new paradigm of prevention and disease management to achieve equity in children's oral health through partnering, programs, and policymaking.

- **Partnering:** Our Maternal and Child Health Bureau-sponsored Alliance for Information on Maternal and Child Health (AIM) partnership, with Grantmakers In Health and others who represent health, government, and business organizations, provides invaluable opportunities to promote timely parental education, early engagement by non-dentists, maternal oral health access, adoption of the dental home, and risk assessment.
- **Policymaking:** CDHP advances policies that most directly address oral health disparities through state and federal policy. Examples include the new Children's Health Insurance Program (CHIP) requirements that new parents of young children in Medicaid and CHIP be advised of the risk for, and prevention of, ECC and that states report on CHIP dental performance. Additionally CDHP provides education, best practices, and scientific updates to policymakers on this topic.
- **Payment Alternatives:** CDHP works with states, payers, and professional organizations to incentivize new approaches, including pay-for-performance, interdisciplinary systems of care, centers of excellence, and provider education. CDHP also promotes Medicaid experimentation and innovation through state support and technical assistance.
- **Dissemination of Information from the Research Community:** CDHP widely disseminates science-based information to a broad base of partners. CDHP, in partnership with the New York Academy of Sciences and Columbia University, recently convened a national meeting on biobehavioral approaches to early childhood disease management (with a focus on dental caries). An [e-briefing report](#) of this meeting is available.

OPPORTUNITIES FOR PHILANTHROPY

There are many opportunities for funders to support and advance the types of programs that support this new paradigm in early childhood oral health. One excellent resource for funders is the summary report of the Surgeon General's Workshop on Children and Oral Health that made eight categorical recommendations to improving children's oral health (Edelstein 2002). Funders can support new models, and address gaps in knowledge and practice in the following areas:

- **Public Awareness:** CDHP has come to recognize the critical importance of "going public" with information on caries prevention and management, rather than exclusively advancing perinatal and children's oral health through health professions. Needed are comprehensive, nontraditional approaches directly providing information to the public on the nature, timing, and need for ECC prevention and management. Ideally these approaches will

empower caregivers and families to assume active roles in the prevention and management of dental disease.

- **Networking with Social Programs to Promote Oral Health:** Support is needed to address the gap between oral health systems and existing early childhood intervention programs (both health-related and through family social support programs). New models need to be developed and tested that integrate oral health into existing programs by educating, incentivizing, experimenting, and demonstrating that oral health promotion is not too arcane to be incorporated into such programs, in efficient and effective manners.
- **Promoting Professional Guidelines:** A great deal of work is needed to address the gap between professional oral health policies and current practices. For example, the American Academy of Pediatrics, the American Academy of Pediatric Dentistry, and the public health community endorse the "age one dental visit"; few dentists, however, accept very young patients. Needed are universal training and education programs for dental and non-dental providers on facilitating referral to care and providing care to infants and young children.
- **Engage Pediatric and Obstetric Communities:** Gaps also exist in coordination and integration of care among health professionals. This is evident between medical (pediatric and prenatal) and dental communities in referring and coordinating care for children and pregnant women. The New York State *Oral Health Care During Pregnancy and Early Childhood Practice Guidelines*, developed in 2006, are the first state guidelines to directly address perinatal oral health, yet they have not been widely adopted either by professional associations or by practitioners.

Dental caries in young children is a refreshingly solvable health problem that can benefit well from ongoing attention by the philanthropic community.

SOURCES

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