Response to Kanellis: Caries Risk Assessment and Prevention, Strategies for Head Start, Early Head Start, and WIC

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Dr. Kanellis has prepared a comprehensive overview of the strategies for identifying children at high risk for dental decay and the scientifically proven approaches for preventing tooth decay in these children (1). The following comments are meant to encourage further thought, discussion, and possibly provide some encouragement for the implementation of innovative approaches that have not been fully explored in the dental field.

One of his recommendations is that US federal programs for low-income infants and children (Head Start, Early Head Start, and Special Supplemental Food Program for Women, Infants, and Children) expand their involvement in promoting oral health on site and in the community. Such involvement could have enormous potential to improve both access to needed dental services and the oral health status of young disadvantaged children (2). Delivery of preventive measures to children at high risk for dental caries who lack access to preventive dental care through the private practice sector is much needed. Not surprisingly, Healthy People 2010 objectives include expanding the proportion of school-based health centers with an oral health component (3). Increasingly, school-based programs are being viewed as an effective way to improve access to health and social support services for vulnerable populations (4).

Providing school-based and/or school-linked oral health services also was a recommendation at the national conference "Building Partnerships to Improve Children's Access to Medicaid Oral Health Services" (5). Additionally, the section of Children's Oral Health of the progress review of Healthy People 2000 Oral Health Objectives focused on school-based oral health prevention programs. Examples sited included the Ohio school sealant programs and Connecticut's school-based health care models, which integrated oral health (6). The challenge now is to extend these successful programs to programs that can affect the oral health of preschool-aged children.

Head Start performance standards currently include, in addition to the assurance and performance of preventive dental services and treatment, important health promotion elements. These elements pertain to collaboration and communication among parents and staff for optimal child health outcomes; involving parents in the promotion of their children's dental health education programs; promoting preventive health care for all family members; and promoting health advocacy within Head Start families and communities (7). Therefore, the groundwork is prepared for oral health promotion that can have an impact on these hard-to-reach groups. Frameworks designed to be "participatory" in nature allow choices from the family members to improve their health (8,9). With the better understanding of early detection and reversal of initial carious lesion as described by Dr. Kanellis, performance standards could be revisited to incorporate dental preventive measures in conjunction with these important health promotion strategies.

Dr. Kanellis recommended that parents as well as other health professionals be taught to screen infants and preschool children to assess caries risk, using readily available educational resources, such as the "Lift-the-Lip" training video. It is indeed fundamental to enlist parents as active partners in any prevention program for their families, to teach them to be advocates within their communities and peer promoters for their neighbors and relatives. Great success has been achieved in other fields using health promotion strategies (10). Also, parental incentives have increased participation in immunization programs (6,11,12).

Both the context of such educational messages as well as the method used to engage the target population will have an impact on their usefulness (13). Today, health promotion is recognized as a viable method for the prevention of diseases (14). As suggested by Slavkin (15), educational interventions combined with regular preventive care can go a long way in helping to prevent dental caries in preschool children. Unfortunately, it is true that few successful outcomes from oral health promotion programs have been reported. The lack of investment in these programs, however, may be a factor (16).

It is time to invest in oral health promotion programs tailored to specific populations, such as WIC and the Head Start programs. The national conference "Building Partnerships to Improve Children's Access to Medicaid Oral Health Services" included a recommendation to solve problems at the local community level by encouraging "local ownership" of the problems and solutions (5). A few dental health promotion programs have had positive results. Partnerships with other health professionals and parents have improved compliance and achieved oral health improvements (6,17), presenting parents with choices of activities have resolved dental care problems (6,18), and incorporating oral health into primary health care and schools' curricula has reportedly increased access to dental care (6,19). A recent community-based oral health

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promotion program achieved wide community participation (including volunteer participation of local private dentists), developed additional community resources, and demonstrated a substantial interest in oral health matters by individuals and agencies in the community (20). Furthermore, the community participatory approach was effective in addressing oral health concerns in a community not reached by traditional dental care and health promotion initiatives (20).

These health promotion approaches in combination with the scientifically validated oral health prevention interventions reviewed by Dr. Kanellis are likely to make a difference in high-risk child populations. Daily toothbrushing with fluoridated toothpaste is considered as the most effective means to prevent dental caries (21). Fluoridated toothpaste, when applied regularly, facilitates exposure to low levels of fluoride in the oral cavity, which is now regarded as the optimal method for fluoride action in caries control. Recent studies have shown impressive caries reductions when fluoride toothpaste was used in a routine program for young children (22,23). This strategy can be easily implemented in Head Start, Early Head Start, and WIC settings.

It is unfortunate that fluoride varnishes are not used more broadly in the United States. Enough evidence exists to use them in public health programs. They are as effective as fluoride gels when applied semiannually (24) and have already been used to reverse tooth decalcification at US WIC centers (25). Fluoride varnishes could be part of the oral health programs for WIC and Head Start. As stated in Dr. Kanellis's review, fluoride varnishes are ideally suited for pediatric dental care because of ease of application, low potential for ingestion, and because they can be applied in community settings. Furthermore, fluoride varnishes are useful in both smooth surface as well as pit and fissure sites—a particular asset for recently erupted molars at risk that are not ready for sealant application.

With regard to the usage of the antimicrobial chlorhexidine for the control of cariogenic bacterial levels in children and their caretakers, more data are now available showing that there is a significant association between caries and bacterial levels in young children (26). The application of chlorhexidine solutions may be a viable therapy to prevent caries in high-risk preschool children in community settings, simply applied using a cotton swab (27).

I must comment on the difficulties in finding dentists to administer preventive and restorative services for these preschool populations. Dr. Kanellis rightly points out that it is difficult to find dentists willing to examine and treat children younger than 3 years of age. Even though previously uninsured children are getting dental insurance coverage through the State Children's Health Insurance Program enacted as part of the Balanced Budget Act of 1997, this barrier still persists. The 1996 Institute of Medicine report on the future of dental education examined the issue of dental human resources and found no compelling evidence to warrant recommendations to modify current dental school enrollment. However, to relieve the lack of dental providers for certain segments of the population, they suggested securing community outreach activities, including those undertaken by dental school students and faculty, increasing the numbers of advanced general dentistry postgraduate training programs, and increasing the numbers of dentists serving in the National Service Corps, which links financial assistance to work in underserved areas (28)

The conference "Building Partnerships to Improve Children's Access to Medicaid Oral Health Services" similarly suggested that opportunities be provided for dental students to become more familiar with the experiences of Medicaid families, to enhance the effectiveness of safety net providers (e.g., school health programs, dental schools, community health centers, and the National Health Service Corps), and to develop a dental workforce that is able to develop new practices (5). More generalists with appropriate training in behavior management techniques and strategies for the successful treatment of young children could increase treatment for underserved children in communitybased, school, or preschool settings. In addition, the productive use of allied dental personnel could help build human resources to administer on-site preventive programs.

Dr. Kanellis also reviewed the state-

of-the-art methods of caries risk assessment. Because we now know how to screen for high-risk children, detect disease early, and reverse the carious process, perhaps performance standards for the federal children's programs should include:

• on-site early oral health promotion/prevention programs with parental participation;

• directives to incorporate oral health promotion programs into federal programs, such as WIC, that currently do not have a formal oral health component (29);

• group (or individual) "primary care case management" programs (5) with opportunities for oral health preservation by dental providers;

• incorporation of oral health services—starting with early screenings—in all federal primary care programs (30).

Although "dental care for children is the responsibility of each community and state" (6), it has been recognized that, in reality, federal agencies and programs such as Head Start, Early Head Start, and WIC need to collaborate with many other partners to resolve the problems of children's access to oral health (5). Until collaboration and creative partnerships occur, we may not see change in the oral health of our children. Therefore, broad-based cooperative efforts such as this Head Start Forum, are the first steps to address the issues of dental caries prevention and access to oral health services for children in Head Start, Early Head Start, and WIC. Next, funding is essential for demonstration projects, as discussed in this Head Start Forum, that determine the cost, effectiveness, and feasibility of on-site preventive strategies. The ultimate goal of all these efforts should be the widespread implementation of valid and practical oral health preventive schemes.

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UNIVERSITY OF ROCHESTER ORAL DISEASE EPIDEMIOLOGY/ORAL HEALTH SERVICES RESEARCH

The University of Rochester announces an opening for an epidemiologist to conduct health services research in the Department of Dentistry in conjunction with the Department of Community and Preventive Medicine. The Department of Dentistry is expanding its research program to explore the delivery and outcomes of dental and craniofacial health services. We are seeking an ambitious candidate to coordinate and conduct health services research for oral conditions that impact on quality of life and disease management modalities that reduce morbidity. Particular emphasis is placed on research pertaining to the use of and access to oral health services and the relationship between service use and outcomes. The ideal candidate will possess skills that will foster development of a collaborative research program that encompasses a variety of activities and interests in dental and craniofacial health services. The focus of the research program will be to serve as a resource for expertise related to the development of systematic reviews, program evaluation planning, and data analysis. Exciting opportunities are available for an individual with expertise in epidemiology, health services research, biostatistics, health economics, or survey research. A PhD or equivalent training and experience and background in oral health research are desirable, but not required. Excellent communication, interpersonal, and quantitative skills are essential. Interested candidates should send a curriculum vitae and the names of three references to Dr. Cyril Meyerowitz, Professor and Chair, Department of Dentistry, University of Rochester, 625 Elmwood Avenue, Box 683, Rochester, NY 14620. Tel.: (716) 275-5688.