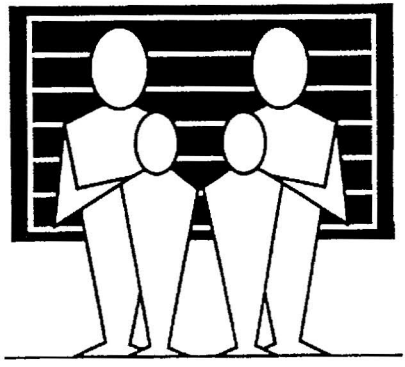
Equity and Access for Mothers and Children

Strategies from the Public Health Service Workshop on Oral Health of Mothers and Children



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In conjunction with:

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The report of the workshop was prepared at the University of Texas Health Science Center at San Antonio, Texas, by Jane E.M. Steffensen, R.D.H., M.P.H., and John P. Brown, B.D.Sc., M.S., Ph.D. of the Department of Community Dentistry, with graphic assistance from Ann Pressley, of the Office of Educational Communications.

INTRODUCTION

Workshop Purpose and Goals

A group of 125 nationally recognized health professionals and consumer advocates met on September 10–12, 1989, in Alexandria, Virginia, to address the oral health needs of mothers and children in the United States. A series of recommendations were formulated for public and private health organizations, agencies, and institutions, as well as local, State, and Federal Governments. The recommended strategies were developed following evaluation of commissioned background issue papers,* oral presentations, and the results of intensive discussion sessions. Dr. Audrey Manley, Deputy Assistant Secretary for Health, received the recommended strategies on behalf of the U.S. Public Health Service during the final plenary session.

The Public Health Service Workshop on the Oral Health of Mothers and Children provided an opportunity

- to focus attention on issues affecting maternal and child oral health;
- to solicit expert scientific, policy, and consumer opinion by invited participants on mechanisms for optimizing the oral health of children and mothers;
- to develop a set of strategies on meeting this challenge;
- to stimulate interest and increase support of organizations and individuals that can have an impact on decisions and opportunities in maternal and child oral health; and
- to widely disseminate the Workshop Report to agencies, organizations, health and human service providers, administrators, and the public.

*Steffensen Jane EM and Brown John P. (Editors). Background Issue Papers on Oral Health of Mothers and Children for USPHS Workshop. *J. Public Health Dent* Vol 50 No. 6 Special Issue 355-465.1990.

Preliminary Phases of Workshop

In August 1988, a consultants group of 18 health professionals met in San Antonio, Texas, to identify those pertinent issues affecting the oral health of children and mothers in the United States. One of the seven recommendations presented by this group was the need for a broad-based group to convene and propose solutions to address these multiple and diverse issues.

In the next year, a series of meetings took place to plan the Public Health Service Workshop on the Oral Health of Mothers and Children. Workshop participants were invited to represent a wide range of disciplines and organizations, including dental and other health professionals, policymakers, administrators, parents, and consumer advocates.

The Workshop Report

This report outlines the presentations and deliberations of the Public Health Service Workshop. The Executive Summary outlines issues and solutions to improve maternal and child oral health in the United States. The Summary of Recommendations provides a synopsis of the recommended strategies outlined by the work groups. In addition, excerpts from plenary session presentations and a detailed listing of problem statements and recommendations by each work group are included in this report.

Commissioned background issue papers were prepared prior to the workshop and will be forthcoming as a special issue of the *Journal of Public Health Dentistry* or another professional journal. These papers provide an indepth review and assessment of the issues affecting the oral health of children and mothers in the United States. The issues reviewed in the papers and discussed by the work groups included oral health status, contributing factors, oral health education, advocacy, integration of oral and general health, oral health policy, resources, standards, research, documentation, and evaluation.

EXECUTIVE SUMMARY

The Issues

National studies have heralded advances in oral health as rates of dental caries (tooth decay) and tooth loss have decreased during the past three decades. In contrast, recent national committees have reported the exceptional challenges affecting progress in the oral health of the Nation during the next decade. These reports indicate a need for a national focus to coordinate oral health efforts by reaching special and specific population groups and emphasizing oral disease prevention and oral health promotion.

Preventable oral diseases still afflict the majority of children and adults in our Nation, compromising their health and well-being. These detrimental conditions occur despite great developments and opportunities in knowledge, technology, and effective preventive methods. The availability of such advancements has not been universal and the utilization by professionals and consumers has not always been widespread.

Apart from the obvious impact of pain, suffering, and infection, oral diseases are now recognized to have a negative impact on self-image and quality of life. These in turn affect education, self-realization, employment, family finance, and the economy in general. Yet knowledge of oral disease prevention is not applied by many in our society.

Specific groups of children and adults continue to have higher levels of unmet oral health needs and increased rates of disease. Persons more seriously affected by oral diseases include those with other special health needs; those lacking access to prevention and routine care; those having low incomes and lacking education; those in certain racial,

cultural, and ethnic groups; and those in nonfluoridated communities.

Application of currently available preventive measures could substantially reduce oral diseases and lead to improved health in the United States. It is now possible to preserve the human dentition for a lifetime, but to meet such a goal, preventive measures must begin in infancy and continue throughout a lifetime. The primary issue is how to enhance the oral health of Americans by increasing the provision of preventive services.

Strategies need to be developed to maximize resources for preventive, educational, and therapeutic services to reach those persons with the highest risks and greatest unmet oral needs. The financial crisis in health care expenditures demands the coordination of local, State, and national efforts to plan, implement, and evaluate effective oral health strategies and programs. Oral health measures need to be integrated into family-centered, community-based health promotion and disease prevention services to ensure continued progress in oral health.

The Solutions

The recommendations outlined at the workshop can be categorized under the following five goal statements. The goals are:

- To improve public education interventions to increase knowledge and improve attitudes about oral disease prevention and oral health promotion;
- To expand professional education and promotion efforts to increase knowledge, improve attitudes, and skills about oral disease prevention and oral health promotion of providers, administrators, policymakers, and consumer advocates of health and human services;

- To develop coalitions to advocate and collaborate on oral disease prevention and oral health promotion issues;
- To strengthen the support for oral health policy in the health and human service system at the national, State, and local level by maximizing the administration of established policy, by including oral health in regulations, and by developing new legislation and appropriations; and
- To support coordinated data collection, evaluation, and research efforts to assess oral health status, behavioral and psychosocial factors, oral disease preventive methods, the provision of oral health services, and program operations.

The work groups recommended multiple strategies for the achievement of each of the stated goals.

The recommendations formulated by the work groups are summarized in the next chapter of this report.

WORKSHOP RECOMMENDATIONS

This is a summary of the recommendations outlined by the 10 work groups at the Public Health Workshop on the Oral Health of Mothers and Children. The recommendations are arranged under the following five headings:

1. Public Education
2. Professional Education
3. Coalitions, Advocacy, and Collaboration
4. Health Policy
5. Data Collection, Evaluation, and Research

The recommendations are diverse and no one agency or organization can achieve them alone; each will need to identify those recommendations which are most clearly applicable to their mission.

Public Education

To improve public education and to increase knowledge and improve attitudes about oral disease prevention and oral health promotion

Public oral health education campaigns need to be developed, implemented, and promoted through collaborative efforts by organizations and agencies within the private, public, and voluntary sectors.

Educational interventions should be planned, coordinated, and sequential. Effective oral health messages must be consistent with scientifically based research, culturally sensitive, and multilingual. Appropriate oral health education materials should be assessed, developed, and made available to public education programs. A central information center is needed to locate, evaluate, catalog, and distribute oral health education materials.

Public education campaigns should emphasize oral disease prevention and health promotion. The following messages should be highlighted in oral health education campaigns:

- effective ways to prevent oral diseases or conditions
- ways to access the oral health care system
- the importance of regular preventive oral health services for all children starting prenatally and extending through the adult years
- oral health needs of children, parents, and families
- appropriate expenditures for oral health services

Effective oral health education and promotion interventions are needed to target the following groups:

- clients of maternal and child health services
- students, consumers, and the general public
- parents, caregivers, families, young children, adolescents, and adults

Comprehensive school health education should be promoted at the national, State, and local levels. Curriculum guidelines should emphasize disease prevention and health promotion, including oral health. To be effective, comprehensive health education should target students in preschool, elementary, secondary, and college settings. Leadership for school health is needed at the Federal level through the establishment and support of the Office of Comprehensive School Health Education in the Department of Education.

Professional Education

To expand professional education and promotion efforts and to increase knowledge, improve attitudes, and skills about oral health promotion and oral disease prevention of providers, administrators, policymakers, and advocates of health and human services

Education programs—pre- and post-degree programs as well as continuing and inservice education—which prepare health and human service providers and administrators must:

1. Recruit culturally diverse students and educate culturally sensitive professionals
2. Incorporate interdisciplinary community-based services
3. Promote preparation in community health and emphasize use of effective preventive and treatment methods through didactic and clinical courses and extensive practical experience in community settings
4. Increase knowledge, attitudes, and skills regarding effective oral health promotion, education, oral disease prevention methods, and management of dental fear and anxiety

Post-degree education programs need to be available to prepare professionals with expertise in oral health education and promotion. These education programs should include courses and research in oral health education and promotion, and should encourage publication in professional journals.

A national network similar to the model of Regional Family Planning Training Centers, which would integrate preventive oral health services into existing health programs, needs to be developed for continuing and inservice education of providers and administrators. Minimum standards for continuing and inservice education for providers of various health and human services, including dental providers, need to be established to improve the overall health of clients.

Providers, administrators, and policymakers of oral health services include dental professionals as well as other health and human service professionals. Dentists, dental hygienists, dental assistants, physicians, nurses, nutritionists, dietitians, social workers, health educators, athletic coaches, teachers, health planners, policymakers, legislators, health and consumer advocates, management, and labor leaders all are key professionals who can promote oral disease prevention and oral health promotion.

Providers and administrators need to be encouraged to integrate effective oral health prevention and education into their daily professional practices of providing services to children, parents, and families through the use of the U.S. Preventive Services Task Force's *Guide to Clinical Preventive Services.*

Professional organizations should increase the awareness of health and human service professionals concerning the oral health needs of children, parents, and families not currently receiving oral health services.

Coalitions, Advocacy, and Collaboration

To develop coalitions to advocate and collaborate on oral disease prevention and oral health promotion issues

Linkages must be established among public, private, and voluntary agencies which plan, administer, and provide health and human services to children, parents, and families at the national, State, and local levels.

Networks and collaboration among health and human service providers, advocacy and voluntary groups, professional organizations, government agencies, and consumers need to be encouraged and enhanced by policymakers.

A national oral health coalition or task force should be created to represent consumers as well as national organizations and agencies which plan, set policy, support, manage, provide, pay for, and consume oral health services either as their primary service, or as a part of a broader health and human service mission. The purpose of this nongovernmental group would be to advocate and collaborate for the implementation of a national oral health policy for children, parents, and families.

Coalitions which are established should advance oral health and the prevention of oral disease by supporting issues outlined under three headings: Planning, networking, and education.

Planning

Encourage collaboration in planning and implementing comprehensive health and human service priorities, strategies, and programs. Encourage the integration of oral health with health and human service programs targeting children, parents, and families.

Advocate for community representation and participation in planning, implementing, and evaluating all oral health and human service programs for children, parents, and families.

Encourage the inclusion of oral health in Federal, State, and local Maternal and Child Health Plans.

Encourage an oral health focus in Federal, State, and local governments. Challenge the U.S. Public Health Service to continue and expand its leadership role regarding oral health.

Promote the adoption and implementation of current initiatives related to the oral health of children, parents, and families such as the Year 2000 Health Objectives for the Nation, *Model Standards: A Guide for Community Preventive Health Services*, U.S. Preventive Services Task Force's *Guide to Clinical Preventive Services*, and the American Dental Association ACCESS program.

Encourage the development and utilization of guidelines on minimal standards of oral health services for children and families.

Advocate for the appointment of dental professionals to policymaking positions in the private, public, and voluntary sectors.

Develop and support legislative initiatives for oral disease prevention and oral health promotion targeting children, parents, and families. Support, through advocacy, the establishment of regulatory and administrative policy regarding maternal and child oral health program strategies and priorities.

Urge all government, voluntary, nonprofit appropriating bodies and private industries to include oral health services in all health benefits packages and employee wellness programs.

Networking

Charge and challenge local, State, and national coalitions and networks to work toward improving Medicaid and Maternal and Child Health funding.

Help to establish incentives such as tax credits and loan repayment programs for providers willing to increase access to oral health services for children and mothers.

Encourage communication, improved coordination, and enhanced information sharing among Maternal and Child Health, Medicaid, and oral health programs at the Federal, State, and local government agency levels. The Chief Dental Officer, U.S. Public Health Service, should be encouraged to provide leadership and coordination for this initiative.

Promote the coordinated transfer of information and implementation of recommendations of this Public Health Service Workshop.

Maintain support for continued development of national, State, and local coalitions advocating oral health promotion and disease prevention. Ensure the continued support of consumer and advocacy groups endorsing oral health issues.

Promote the concept of primary health care including necessary oral health care as a universal right, just as education now is considered. Support programs that empower people to improve education, employment, affordable housing, child day care, and pay equity for women. As these problems are resolved, it is expected that oral health priorities will rise among at-risk groups.

Education

Promote education of national, State, and local policymakers regarding the importance of oral disease prevention and oral health promotion. Advocate for public education campaigns regarding the oral health needs of children, parents, and families.

Advocate for the coordination of effective oral health education and promotion campaigns combining voluntary, public, private, and media efforts to improve oral health at the community and individual level through public and professional education.

Encourage the use of community organization skills, program planning, and outreach programs as oral health education methods to increase the adoption of positive oral health knowledge, attitudes, and behaviors.

Assure that oral health education is integrated into all maternal and child health programs, clinical activities, and school health interventions.

Educate consumers to pursue oral health benefits as part of employee health and wellness programs.

Health Policy

> *To strengthen the support for oral health policy in the health and human service system at the national, State, and local levels by maximizing the administration of established policy, by including oral health in regulations, and by developing new legislation and appropriations*

Health policies related to the following recommendations can be introduced and executed through a variety of means, including legislation, the judicial process, interpretation and administration of regulations, and organizational policy implementation. This could occur at the national, State, or local level. The recommendations have been placed

under the headings where the change in health policy seems most likely.

The following health policies can be implemented best through legislative means:

1. **Increase oral health focus at the Federal level**
   a. Provide support for the Chief Dental Officer, U.S. Public Health Service, and reestablish an adequately staffed office with administrative and policy responsibility.
   b. Ensure oral health expertise and focus in all Regional Public Health Service Offices and establish oral health expertise in all Federal agencies responsible for oral health programs and services.
   c. Establish an external committee to advise the Secretary of Health and Human Services, the Assistant Secretary for Health, and the Chief Dental Officer regarding oral health policy.
   d. Call for documentation by the Office of Technology Assessment (OTA) regarding the current level of effectiveness of federally funded oral health programs in meeting the needs of children, parents, and families.

2. **Promote coordinated, comprehensive primary health services, including oral health**
   a. Develop standards for the minimal level of oral health services recommended for children, parents, and families, and other groups at risk for oral diseases.
   b. Include oral health services in all legislation for children with special health needs.
   c. Include persistent neglect of oral health needs within the definition of child abuse and neglect, as currently occurs in some States.
   d. Enact legislation for improved oral health planning and evaluation at the national, State and local levels.

3. **Increase access to oral health services**
   a. Provide universal coverage of primary health care. Include oral health coverage in any mandatory health insurance package or employee wellness program.

b. Provide tax credits for service providers, loan forgiveness for new graduates, and/or other incentives to health professionals for the provision of community-based oral health services to underserved and special populations.

c. Provide incentives to dental educational institutions and governmental health agencies for the provision of oral health services to special and underserved populations. Enhance dental professional pre-and post-degree educational programs in the provision of oral health services to targeted populations, through community-oriented primary health care programs.

d. Enact legislation at the State level requiring that all children entering preschool and school receive an oral health screening and be referred for prevention and treatment services.

e. Support and expand the National Health Service Corps to ensure dental personnel placement and oral health service provision in all public health programs. Encourage State programs to ensure the provision of oral health services.

The following health policies can be implemented best through regulatory means:

1. **Increase integration and collaboration of oral health services**

   a. Include oral health services as a component of Federal and State Maternal and Child Health Block Grant programs, and other block grants.

   b. Assure that oral health need assessments are included in Maternal and Child Health Block Grant requirements.

2. **Increase access to oral health services**

   a. Ensure adequate funding for all Maternal and Child Health Block Grant programs.

   b. Increase Head Start participation from 19 percent to 100 percent of the eligible population.

   c. Increase Medicaid reimbursement to adequate levels for oral health services.

   d. Mandate eligibility of all poor children, coverage of all federally allowable Medicaid services, and inclusion of primary oral services for all adult females in the Medicaid program.

e. Provide opportunities for near-poor working families (i.e., those at less than 200 percent of Federal poverty guidelines) to buy Medicaid coverage for an income-adjusted fee.

f. Fully utilize the existing skills and knowledge of dentists, dental hygienists, and other oral health service providers for more efficient and effective provision of services.

g. Develop more explicit regulations for current federally supported programs* relative to required minimum oral health service standards for children, parents, and families. These standards should be based on the Year 2000 Health Objectives for the Nation, and should provide guidance for eligibility, oral health education, preventive and treatment services, use of case management principles, followup and completion of care, recall protocols, etc.

Policy initiatives can be implemented best by maximizing the established regulations through the following administrative means:

1. Increase integration and collaboration of oral health services

a. Encourage and support initiatives to include oral health services in national, State, and local health proposals.

b. Establish minimum expectation guidelines for oral health components of State and local programs as part of guidance from the Maternal and Child Health Bureau for the Maternal and Child Health Block Grant.

c. Increase the oral health emphasis within Title V special projects of regional and national significance (SPRANS) grants with the integration of oral health services into comprehensive health services.

* Some of the federally funded programs include: Community Health Centers, Migrant Health Centers, Early and Periodic Screening Diagnosis and Treatment (EPSDT) programs, Medicaid, Head Start, Education of the Handicapped Act Amendments of 1986 (Public Law 99-457), Supplemental Food Program for Women, Infants and Children (WIC), Child Day Care Programs, Maternal and Child Health programs, Indian Health Service, Health Care for the Homeless, and health programs for persons with special health needs such as mental retardation, developmental disabilities, and mental illness.

d. Develop and fund Title V SPRANS grants to encourage integration of oral health education into training programs for non-dental maternal and child health professionals.

e. Include dental professionals in planning, evaluating, and implementing the Maternal and Child Health (MCH) Block Grant at the Federal, State, and local levels.

f. Assure that each State Maternal and Child Health Program has a full-time dental coordinator and an advisory committee including at least one dental professional.

g. Develop evaluation and monitoring objectives and standards for maternal and child oral health programs using the *Model Standards: A Guide for Community Prevention Health Services.*

h. Eliminate administrative barriers to increase the acceptability, availability, and accessibility of existing financial assistance programs such as Medicaid, the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program, Aid to Families with Dependent Children (AFDC), and third-party payment plans as a short-term strategy, while continuing to advocate for a comprehensive national health program.

i. Include oral health initiatives as part of demonstration projects for increasing participation by service providers in the Medicaid and EPSDT programs.

j. Support increased administrative efficiency which reduces administrative costs. Redirect these resources to the integrated provision of oral health services.

k. Promote the adoption of these Public Health Service Workshop recommendations at the national, State, and local levels by gaining the support and commitment of the U.S. Department of Health and Human Services.

2. **Increase coordination and integration of comprehensive health and human services at the provider/client level.**

   a. Promote case management principles in the provision of comprehensive health and human services and include the integration of oral health services.

   b. Encourage distribution and use of effective multilingual oral health education materials by dental, health, and human service professionals.

c. Locate oral health services at the same site as other health and human services to increase accessibility.

d. Reduce the barriers for providers and clients for more effective use of existing financial assistance programs including Medicaid and EPSDT.

Data Collection, Evaluation, and Research

To support coordinated data collection, evaluation, and research efforts to assess oral health status, behavioral and psychosocial factors, oral disease preventive methods, the provision of oral health services, and program operations

Oral health status monitoring and program operations evaluation

Ongoing capability is needed for collecting, assessing, organizing, and disseminating information relative to oral health status, outcomes, and program development at the national, State, and local levels. Data for children, parents, and families have been incomplete and sporadic. Psychosocial, economic, and other risk factors need to be reflected in data collection and analysis.

The use of standardized data collection, analysis, and information dissemination for policy making, program planning, and evaluation is critical and must be encouraged and supported at the national, State, local, and individual program levels. A collaborative system needs to be developed which is mutually beneficial to programs at all levels. Important findings from such an evaluation process should be made available to the maternal and child health and oral health leadership through regular dissemination and effective communication. Provisions need be included to ensure that oral health evaluation occurs and the findings are applied through program operations.

The Federal Government should provide leadership to encourage, support, and coordinate the establishment of a maternal and child oral health data base system for use at the national, State, and local levels.

Steps for establishment of a maternal and child oral health data base system include:

1. Identify existing data bases that are applicable to oral health objectives and strategies for the maternal and child population, such as those which identify and categorize specific population groups.

2. Assess the availability and usefulness of survey data from the census, Health Interview Survey, Health and Nutrition Examination Survey (HANES), oral health products distributions, and other surveys.
3. Identify, evaluate, and select survey instruments and questionnaires such as the World Health Organization (WHO) Pathfinder Survey to field test and then distribute for use. Modify and develop standardized guidelines and protocols for data collection, especially for collecting data on specific population groups (e.g., pregnant women, handicapped persons, and the like).
4. Develop a software program for the collection of key data.
5. Develop an interrelated planning mechanism for the identification of maternal and child oral health problems and strategies, priority determination, program implementation, and assignment of individual responsibility. Focus oral health program evaluation on assessment of outcomes, rather than on counts of client utilization.
6. Develop a standardized reporting format to facilitate voluntary and/or mandatory reporting from State Maternal and Child Health Directors to the Public Health Service.
7. Educate Maternal and Child Health personnel at the Federal, State, and local levels in data collection, analysis, information organization, and dissemination.

The Federal Government should convene a technical group composed of multidisciplinary health professionals, health and consumer advocates, oral health experts, system user groups, and maternal and child health program clients. The responsibilities of this group should include:

1. Reevaluating the present oral health indicators in light of changing oral health conditions;
2. Assisting in the development of evaluation methodologies for maternal and child oral health short-range and long-range goals; and
3. Advising the Federal Government on the establishment of a maternal and child oral health data base system.

Evaluation of systems for providing and financing oral health services

Conduct research on the integration of oral health services with general health services to determine successful models for the provision of services to different target groups.

Conduct research on alternative systems for the provision of oral health education, prevention, and treatment services to target populations in various locations such as child day care centers, schools, community centers, and worksites. Assess the effectiveness of culturally sensitive methods for increasing utilization of the oral health service system, including self-care and appropriate care-seeking behaviors.

Study the effects of alternative methods of financing oral health services on the utilization of services by specific populations. Include evaluation of the effectiveness of the Medicaid program in providing oral health services to eligible persons.

Evaluation and research of oral health and behavioral, psychosocial factors

Assess in various ethnic, cultural, and socioeconomic groups the influences, interactions, and risks of various psychological, social, and economic factors and selected oral conditions, both treated and untreated, in children, parents, and families. Assess factors which may transmit poor oral health from parents to their children.

(*Factors could include:* Self-esteem, economic independence or dependence, general health status, interpersonal relationships, family size, family structure, parenting skills, parent and child bonding, costs in time and money, peer acceptance, academic performance, cultural and ethnic characteristics, knowledge, attitudes, behaviors, and other psychosocial factors.

Oral conditions to be studied should include: Malocclusions, dental caries, missing teeth, periodontal diseases, halitosis, oral injuries, cleft lip and/or palate, and oral soft tissue lesions.)

Evaluate the effectiveness of oral health education and promotion interventions for children, parents, and families at the community and individual levels. Strengthen and improve existing data collection and evaluation of oral health education and promotion interventions by government, professional, and voluntary organizations, agencies, and institutions at the national, State, and local levels. Include the assessment of interdisciplinary oral health education and promotion and their effects on utilization of oral health services.

Assessment of oral health promotion and oral disease preventive methods

Conduct research on specific population groups with and without access to different oral disease prevention and oral health promotion interventions to determine the most effective methods of improving oral health. Interventions may include fluorides, dental sealants, education and promotion interventions, oral hygiene instruction, screening, referral, and treatment services.

Study the relations between oral health status and diseases generally by requiring the collection of oral health data to ongoing and future medical research and health projects.

Study the effects of inadequate diet and malnutrition upon oral diseases and the development of oral tissues.

Organization for research and evaluation

Convene a followup conference to this workshop within 2 years to evaluate progress toward improving the oral health of mothers and children.

Identify appropriate funding resources and encourage support of oral health research and evaluation by agencies, organizations, institutions, and foundations through governmental, voluntary, private, and industrial entities including, but not limited to, Title V SPRANS grants, National Institute of Dental Research (NIDR), Centers for Disease Control (CDC), Agency for Health Care Policy and Research (AHCPR), and Robert Wood Johnson Foundation (RWJ).

Encourage multidisciplinary, cross-cultural oral health research and evaluation. Encourage participation in oral health research and evaluation by government agencies, organizations, and university departments with diverse research interests such as health behavior, social work, public health, education, psychology, sociology, communication, anthropology, political science, public policy, law, business, ethics, allied health, nursing, medicine, and the like.

Proposed Formation of Groups

The work groups recommended the formation of the following three groups each with specific tasks:

1. **A national oral health coalition or task force** to represent consumers as well as national organizations and agencies. The purpose of this nongovernmental group would be to advocate and collaborate for the implementation of a national oral health policy for children, parents, and families.
2. **An external committee** to advise the Secretary of Health and Human Services, the Assistant Secretary for Health, and the Chief Dental Officer regarding oral health policy.
3. **A technical group** with the following responsibilities: (a) To reevaluate the present oral health indicators in light of changing oral health conditions, (b) to assist in the development of evaluation methodologies for maternal and child oral health short-range and long-range goals, and (c) to advise the Federal Government on the establishment of a maternal and child oral health data base system.

WORKSHOP PROCEEDINGS: PLENARY SESSION I

Past Successes and Future Challenges

Daniel F. Whiteside, D.D.S., M.P.H.
Chief Dental Officer
U.S. Public Health Service

I am pleased to welcome all of you to the opening session of the Public Health Service Workshop on the Oral Health of Mothers and Children. I trust that the earlier breakfast meetings with your work groups have allowed many of you to get acquainted—or reacquainted—and have put you in the right frame of mind for what I hope will be 2 very productive days of working meetings.

This is a conference that we in the Public Health Service have been pointing toward for more than a year, so I would like to spend a moment this morning to acknowledge some of the people and organizations that have helped make it possible. Fifteen national organizations—agencies of the Public Health Service, dental and dental public health groups, maternal and child health organizations and others—collaborated in planning the program and the topics we will address. You will find each of them acknowledged at greater length in your program materials. I thank them all.

Our friends at the University of Texas Health Science Center at San Antonio hosted a preliminary consultants meeting last August, and I would like to thank Ms. Jane Steffensen and Dr. John Brown of the Department of Community Dentistry there, as well as Dr. Ann Drum, the Public Health Service Dental Consultant in Region VI, for their efforts on our behalf. Thanks also to Dr. David Heppel of the Maternal and Child Health Bureau, who has been a principal in planning this meeting. Finally, I would like to say a special thank you to the Assistant Secretary for Health, Dr. James Mason, for designating this meeting a Public Health Service conference and lending the backing of his office to our deliberations. Dr. Mason has asked me to tell you that the Public Health Service will give your recommendations its most careful consideration.

It is especially appropriate that the Public Health Service (PHS) should sponsor a conference on the oral health of mothers and children this year. This year marks the 100th anniversary of the PHS Commissioned Corps and the 70th anniversary of its Dental Corps, so this year has been for us one of reflection on the past and rededication to the opportunities of the future.

Mothers and children and their dental health needs have been a focus of concern within the Public Health Service for many years. Even as the Dental Corps was being organized, other units of the Public Health Service already were conducting child hygiene studies that included attention to oral health needs. As early as 1920, PHS-sponsored "mouth hygiene" demonstrations in West Virginia and Delaware included school health surveys and lectures aimed at capturing the attention of school teachers.

From those modest beginnings, we have come a long way, as have our colleagues in the States, the schools, and the private practice of dentistry. We can all be proud of our accomplishments in service provision, public health practice, and research into the oral health needs of children. But we need to focus for the next two days on the many things that remain to be done. Half of our school-age children still experience dental caries, and about 20 percent probably experience 60 percent of all the decayed, missing, and filled teeth among these children. Fluoridated water supplies still are not available as broadly throughout our Nation as they should be. Too many children and adolescents live with untreated dental caries. Baby bottle tooth decay is a major problem in some areas, particularly along the United States–Mexican border. Periodontal diseases affect too large a proportion of our youth and young adults. Smoking among girls and young women and the use of smokeless tobacco among boys and young men are increasing. We see too many facial and oral injuries due to motor vehicle accidents, sports and recreational injuries, falls, and violence. I could go on, but you know these problems.

The shame and the opportunity is that most oral diseases and injuries are preventable, and those that occur are treatable. We have the knowledge and the technology; what we still need is the will and the organization to extend the progress we have made in oral health. Most of all, we need to focus our efforts on those groups that we know are at risk, such as:

1. Children living in nonfluoridated areas;
2. Those without access to preventive and primary oral health services;

3. Economically and socially disadvantaged mothers and children;
4. Children with special health needs (e.g., those who are handicapped or disabled), for whom oral health care may not be an integrated part of their overall health care; and
5. Those in racial, cultural, and ethnic groups who are known to have greater disease rates and be at greater risk.

You are an outstanding group, experts in dentistry, dental public health, and maternal and child health; service providers; educators; and advocates for child health. You have the opportunity to examine these problems today and tomorrow from virtually any angle you choose and to help us establish a national agenda for dealing with maternal and child oral health.

We know what the oral health problems are, but how do we best target our efforts, what short- and long-term strategies should we pursue, and how do we build the public-private alliances that will be necessary to accomplish the intermediate goals we are setting in our Year 2000 Health Objectives for the Nation and our eventual goal of eradicating oral diseases?

I trust you will give these topics your best thoughts during the next 2 days.

The Crisis That Confronts Our Children and Families

James P. Moran, Mayor of Alexandria, Virginia
Chairman, Human Development Policy Committee
National League of Cities

This is not going to be a fun, "feel good" speech. I cannot even bring myself to start with a joke.

The health of mothers and children is a very serious subject. In fact, no subject can be of more compelling concern to countries or to communities.

The Issue

From the moment a woman conceives, the way she is treated by her own mind and body, by the man or boy who made her pregnant, by her family, her circle of friends, and her government largely affects the way she will treat her offspring, and thus determines the fate of her child—whether that child will grow up to be a constructive or destructive member of society. A woman who is mistreated or neglected is increasingly likely to raise children who will spend much of their lives dependent on society or in conflict with society.

Collectively, the way a nation treats its mothers determines its fate. Nothing can be more destructive of a nation's purpose or its vitality, nothing that any outside force could ever inflict, than to raise a nation of children who feel unloved, are undernourished, and are susceptible to any message of restoration or even retribution.

Through neglect, benign indifference, and, I am afraid to admit, not-so-benign racism and classism, we have allowed the urban melting pots of our inner cities to become inflamed, fueled by broken dreams and fanned by injustice.

It is not that I fault this country for lacking compassion, but I do fault us for lacking good judgment. By the time the fires we are letting burn uncontrollably in our inner cities spread to our outer suburbs, it will be too late. We will wring our hands in frightened anguish and despair.

Am I being too dramatic? Well, I am now going to shower you with a mountain of statistics. While we are all entitled to our own set of opinions, we are not entitled to our own set of facts, and the facts speak for themselves. When the U.S. Conference of Mayors surveyed America's cities last year, every warning signal screamed out.

Let us set the context first, however. The last decade has been a time of unparalleled peace and prosperity. A time of peace when we have chosen to spend $300 billion dollars a year on military expenditures. A time of such unequaled wealth that the wealthiest made their money simply by moving money in stocks and bonds. A time when a nation with 5 percent of the world's population chose to consume more of the world's natural resources and unnatural luxuries than any other nation in world history. A time when the American people chose to tax and spend over a trillion dollars a year at the Federal level.

The Facts

During this time of financial profligacy and unparalleled prosperity, the number of families living in poverty increased by 17 percent, from 18 percent in 1979 to 21 percent in 1987, and the number of children living in poverty rose 16 percent, from 25.3 percent to 29.4 percent.

The rate of infant mortality averages 13 deaths per 1,000 live births with some of the largest inner cities showing rates in excess of 20 per 1,000, comparable only to the most depressed developing countries. By race, the white infant mortality rate is 10 per 1,000 live births, the black rate is twice that. Six percent of all white babies are born with unacceptably low birthweights, compared to 13 percent of all black babies. Again, the rate of black infants is twice the rate of white infants. Fifteen percent of all births occurred to teenage mothers, of whom three out of four were unmarried. Over 90 percent of black teenage births were out of wedlock. Of the 3.8 million 18-year-olds today, 700,000 across the country have already dropped out of school and an additional 700,000 cannot read their diplomas.

The highest predictor of unwed teenage pregnancy is whether the girl drops out of high school, and, yes, the majority of the 2.3 million teenage mothers are unemployed, on welfare, and likely to be dependant for the rest of their lives. Those in the bottom quintile in reading and math are nine times more likely to get pregnant than the average teenage girl. If you graduate from high school and can read your diploma (i.e., have at least a ninth grade level of knowledge), you are four times more likely to get married and raise a healthy family.

The Charge

The principal concern of cities and towns has traditionally been its physical infrastructure—roads, bridges, sewers, sanitation, and the like. In an extensive survey just conducted by the National League of Cities we find that emphasis has changed. We are now forced to focus on the social infrastructure—our families and children.

This may have something to do with the fact that 62 percent of the Federal funds that were going to cities and towns in 1980 have been cut by 1989. Much of this cut is attributable to the elimination of revenue sharing and housing assistance.

The elected officials across the country cite child care as the number one need for children from birth to 9 years, and from 9 to 19 years of age, substance abuse, teenage pregnancy, and educational failure (in that order) are their principal concerns. From the point of view of the family unit, the lack of affordable housing is overriding.

Seventy percent of these elected local officials say they have squeezed property taxes to the limit trying to make up for cuts in Federal assistance. But while the rich have gotten richer, the poor have gotten much poorer.

We are the only nation on earth where children comprise the largest segment of the poverty population. How do we break this cycle of poverty? Obviously, through the parents. But between 1973 and 1986, the average family with children—this includes all races and places—lost 24.4 percent in real earnings. This figure actually understates the critical nature of the problem, because housing costs have increased exponentially over this period of time. Whereas, families were expected to pay no more than 25 percent of their income on housing in 1973, most families now pay over 30 percent for housing costs and poor families pay 50 percent of their income for shelter.

Compounding the skyrocketing cost of housing is the added cost of day care, since to afford to live in many cities, nearly every adult has to be a wage earner. Custodial day care now costs $50–100 a week depending on the quality and supervision ratio.

As for women on welfare, welfare payments have remained static, with more restrictive income eligibility standards. The average family on welfare is receiving about 30 percent less in purchasing power from their monthly payment than they were 10 years ago.

The poverty rate for families without children is just 6 percent. The poverty rate for parents under 30 with children is 35 percent. Three-fourths of all black children with parents under age 25 are living in poverty today. What do we do?

Recommendations

To begin, we must start with the most vulnerable infants. The first step is to reduce infant mortality to a rate comparable to Japan's, which is half of our rate. Second, provide developmental day care, particularly for those whose parents cannot afford it. Third, improve schools by giving parents a choice of schools which their children can attend, but no choice regarding their involvement in their child's education. Fourth, retrain and reeducate the untrained and poorly educated and require literacy before early release from incarceration. Fifth, establish school-based health clinics, at least in urban school systems, that provide family planning and prenatal and postnatal care and instruction. Sixth, educate the public as to the crisis that confronts us.

Infant mortality

Use home health care paraprofessionals or volunteers to visit at-risk pregnant women at home. This has been very successful in Norfolk, Virginia.

Distribute a health handbook developed by doctors, hospitals, public health clinics, and public facilities to pregnant women so that they can compare their inoculation and doctor visit records. In this way, the women are encouraged to begin keeping a regular accounting of their parental responsibilities.

Co-locate services for pregnant women. Make toll-free referral and information telephone numbers widely publicized. Children should not be allowed to die for want of a relatively small cost of knowledge and preventive health care.

Developmental Day Care

When a child begins kindergarten and finds that he cannot understand the teacher, never mind answer the questions that other kids are so eager to answer, he does not tell himself this is because these other children have been emotionally nurtured and intellectually stimulated throughout the most formative years of their lives. Instead he

concludes that there is something inherently inferior about himself, and he begins to define himself as uncompetitive and unwanted in an educational environment. This perception is particularly damaging if the only children that know the answers are white and he is black or brown.

Class Division

America is becoming less a land where people can make it on their own and more a land where the social and economic status of children is dependent on the status of their parents. Middle and upper class parents who have owned a home over the last 20 years have been the beneficiaries of the real estate boom and thus can afford to help their children go to college and secure a home. College tuition of $15–20,000 a year is absolutely prohibitive for a moderate- or low-income family.

The forgotten half of the 21-year-old population without post high school education and training have seen any real hope for upward mobility precluded as their real earnings have dropped 42 percent from 1973 to 1986. Among black male dropouts, there has been a 61 percent decline from 1973 to 1986 in legitimate earned income. Increasingly, this gap has a racial overtone to it.

Whereas 51 percent of all white and 50 percent of all black and Hispanic high school graduates went on to college in 1978, in 1988, 56 percent of all white, 41 percent of all Hispanic, and 36 percent of all black high school graduates went on to college. One reason is the cut in Federal higher education grants and loans. Since 1980, public and private tuition has increased by 75 percent, while the number of Federal grants and loans has declined by 20 percent. The major cause of this gap, however, is the failure of our public school system, only 6 percent of which is funded by the Federal Government. After graduation from high school, 86 percent of whites are in higher education or employed, while 50 percent of blacks are unemployed or out of school. Minorities make up a majority of the public school students in 25 of the 26 largest U.S. cities.

The reason for this failure of educational achievement is not race: The reason is poverty. When poverty rates are controlled for black and white dropouts, the rates of school dropouts are equal. Regardless of race, youth from poor families are four times more likely to drop out of high school. Most of the 15 to 18 year olds today from families with incomes below the poverty line are in the lowest quintile for basic skills

in school. That is why, of the 72 million Americans over 17 years of age, one out of three lacks the basic reading and writing skills necessary for regular employment, and this number grows by a million each year.

This information is very scary, is it not?

Of the new entrants to the labor force between now and the 21st century, only 15 percent will be U.S.-born white males. Most new entrants will be minorities and immigrants. Three-fourths of the work force will be at levels one and two of six levels of verbal and writing skills, which will be enough for only 40 percent of the jobs available. By the year 2000, one-third of all school children will be minorities and over 40 percent will be living in poverty.

Lastly, we have to get the word out about what is happening to children and families in our cities and, in fact, across our country. We have to be prepared to have thoughtful discussions about it, and we as a nation have to take notice that our future is at stake.

Contemporary Policy Directions Concerning Maternal and Child Oral Health

Frederick G. Adams, D.D.S., M.P.H., F.A.C.D.
Commissioner, Connecticut State Department
of Health Services

It is a profound pleasure for me to have the opportunity to present this speech regarding oral health policy at this National Maternal and Child Oral Health Workshop. I say this because to my knowledge, I am the only dentist who is commissioner of a state health department in this Nation, and I am keenly aware of the debilitating consequences of one of the most rampant public health challenges of our time—that being oral disease and all of its sequelae which relate to morbidity and, indeed, mortality.

Over the past 4 decades, significant progress has been made in improving the oral health status of Americans. There has been a continued decline in the prevalence of edentulism (toothlessness). During the last 20 years, reductions in the prevalence of dental caries (tooth decay) in children has had a positive impact on the oral health of American children. But, despite these great achievements in improving oral health status and advances in knowledge, technology, and prevention, oral disease continues to affect a vast majority of Americans.

Why then is our Madison Avenue approach to publicity misleading the American public to think that the rate of dental diseases such as dental caries is so much on a down-swing that prevention and intervention are not called for as necessities? Is edentulism (toothlessness) becoming such a small problem in this Nation that we have concerns about the number of dentists as health providers we will need in the future?

Evidence indicates high incidences of disease and high levels of unmet needs among certain portions of the maternal and child population. The following groups are believed to be at higher risk of oral disease and to have greater unmet needs:

1. Those with special health needs;
2. Those in nonfluoridated areas;

3. Those without access to preventive and primary oral health services;
4. Those with educational and/or socioeconomic disadvantages; and
5. Those in certain racial, cultural, and ethnic groups.

It is shocking to learn that in 1989, according to the National Institute of Dental Research, 50 percent of all children still experience dental caries and thus disease of their permanent teeth. In a State survey conducted in Ohio, 58 percent of the children experienced dental caries in their permanent and primary dentition. The magnitude of the problem therefore is and should be of paramount public health importance. All of us in the public sector, as well as in the private sector, have a fiduciary responsibility to assess oral disease. We are challenged in our day and time to execute new and inventive models to prevent oral disease patterns from spiraling out of control in large segments of the population.

Obviously, in assessing policy related to the problem, we must consider activities of the Federal, State, and local health agencies and a variety of other groups, such as community health centers, family clinics, and voluntary agencies, which together constitute the public health system in the United States. There are a number of public oral health programs sponsored by government agencies in which all or part of the funds are provided by a government agency. In some programs, private health professionals provide health services which are paid for by financing mechanisms from a governmental agency. In other programs, the service system and the financing mechanism for the services both are funded by a government agency. Public oral health programs frequently incorporate a combination of government involvement from national, State, and local entities.

It is indeed a truism that oral health services provided by the private sector contribute significantly to the overall health care system in the United States. Traditionally, private practice of dentistry has been the principal method of providing care to this Nation. Clinical preventive and treatment services are the major components in today's private sector dental practice. Future trends in the provision of oral health services, however, will likely include private practice dentistry with alternative modes of delivery such as group practice, independent practice associations (IPAs), health maintenance organizations (HMOs), hospital dental departments, franchised dental practices, and public oral health programs.

If indeed an expansion of care for maternal and child oral health improvement is to be realized in the United States, there must be a

redefinition and delivery system refinement for the following programs: Medicaid (Title XIX); Early and Periodic Screening, Diagnosis and Treatment (EPSDT) programs; Community Health Centers; Migrant Health programs; Head Start; National Health Service Corps; Indian Health Service; and other programs. It is crystal clear to me that a new P.O.E.M. must be fashioned, which means in fact new and revitalized efforts of Planning, Organization, Execution, and Measurement for effectiveness. This must happen if a new leadership focus for the 1990s and proper preparation and positioning for the best possible maternal and child oral health system for the new millennium is to be realized.

Leadership is indeed power. Leadership is vision, and futurists are usually wrong. However, vision is essential to leadership. It should be understood that everyone has the potential for power. It is living energy, as a matter of fact. If the aforementioned holds true, then in my estimation it will take about 1 year to readapt a new, defined mission that will move maternal and child oral health needs into its proper public health priority position.

This forward movement should impel the U.S. Department of Health and Human Services (DHHS) to reorient its thinking. A well-organized, efficient oral health focus at DHHS is essential to provide the leadership, coordination, and support that is crucial to the success of any national oral health movement and improvement effort. A central focus is needed to coordinate dental activities, formulate policy, and serve as a contact point for non-Federal organizations. The many segments of the oral health care community—researchers, educators, practitioners, and full-time administrators—need to assume a participatory role in establishing and carrying out a new oral health agenda for the Nation. Toward that end, the excellent recommendations made by a study group in March 1989 concerning the oral health activities within the U.S. Department of Health and Human Services should be executed as follows:

1. Establish a focus for oral health activities in the U.S. Department of Health and Human Services (DHHS) with clearly visible administrative and policy responsibility;
2. Ensure that the individual serving as the focus for oral health activities in the U.S. Department of Health and Human Services (DHHS) is advised by a formally chartered committee; and
3. Establish a strong, clearly identified oral health presence in all U.S. Department of Health and Human Services (DHHS) agencies which regularly conduct oral health activities.

These recommendations should be mandated by law, and the Secretary of the U.S. Department of Health and Human Services (DHHS) should be charged by the Congress to develop and implement an organizational structure that will support these activities. Once again, it is my feeling that the study group which presented these recommendations in their report, entitled *Improving the Oral Health of the American People: Opportunity for Action,* should be commended for being right on target with the vision that is necessary to enhance the maternal and child oral health status in this Nation.

The development of an effective maternal and child oral health approach must be community based and must focus on oral health systems reducing high levels of oral disease and its resultant morbidity in the high-risk groups. This approach must be focused not only on urban centers of extreme need but also on equally poor conditions in rural areas in order to produce ultimately a comprehensive system that will have an impact on the health of the Nation. The process should include the following components:

1. It should be directed to maximizing the provision and coordination of appropriate oral health care services for community-based oral health care.
2. Aggressive oral health advocacy must be an integral function, attacking oral health problems such as inadequate access, ignorance about oral health improvement methods and abject poverty. Oral health advocacy must extend from the neighborhood level (i.e., block-to-block) to the institutional level (i.e., clinics and hospitals).
3. It should include aggressive identification of oral health problems through appropriate screening and detection, and oral health education and promotion activities at the neighborhood and community levels.
4. For the most serious identified maternal and child oral health problems, immediate referral to appropriate oral health services is required and needs to be readily available. Linkage to oral health care providers via existing and additional intake and case management staff must become the principal activity at this stage of the process.
5. The case management staff must ensure that appropriate and cost-effective services are provided on a timely basis, with adequate followup to prevent recurrence of the treated oral disease. This followthrough also helps provide information for the systematic evaluation of oral health outcomes. The goal must always be to reduce, over time, specifically identified oral health problems. The

effectiveness of the overall process is predicated on the early identification and evaluation of measurable indicators of progress.

6. The threads that link all of these components throughout the process are:

   a. Identification of existing resources;
   b. Communication;
   c. Cooperation;
   d. Collaboration; and
   e. Securing additional financing from the public and private sector, as appropriate. Thus, existing local, State, and Federal funds, as well as private dollars (i.e., corporations, foundations, charities, churches, and the like) must be aggressively targeted on an ongoing and systematic basis.

From my point of view, this constitutes the major policy recommendations which will propel oral health initiatives nationally.

In Connecticut, oral health has been integrated into maternal and child programs in the following areas:

1. Supplemental Food Programs for Women, Infants, and Children (WIC) support efforts to ameliorate the problem of baby bottle tooth decay (BBTD) through education and sensitizing nutrition staff to identify feeding disorders which may increase the risk of BBTD;
2. School-based health clinics have conducted health needs assessments and included oral services and dental clinics as resources allow;
3. State-subsidized day care centers are provided dental screening and referral services;
4. Head Start programs are provided technical assistance on oral health issues; and
5. Healthy Mothers, Healthy Babies Coalition, a public information program, provides oral health information to its constituents.

Now I realize that there has been a great deal of responsibility placed on the shoulders of the U.S. Department of Health and Human Services (DHHS), but I think that is where the responsibility should be placed. As a State health officer, I am pleased to say that I am positioned to commit full attention to the topic of maternal and child oral health and its problems as they exist currently and as they will be defined in years to come. It is clear to me that, at the State level, all State health depart-

ments have primary responsibilities in partnership with the U.S. Department of Health and Human Services (DHHS) to advance the aforementioned agenda.

Our war against oral disease is competing with a host of other compelling problems, such as infant mortality and morbidity, the HIV-AIDS epidemic, and other unmet needs of our most at-risk citizens. Those persons living in or close to poverty; citizens working in unsafe occupational environments; and citizens who, because of a combination of economic, social, cultural, and ethnic factors, experience exceptional depravation and increased risk for both acute and chronic illness, disease, and death are all in great need. The high risk of oral disease is part of this continuum.

We must move the agenda of oral health forward as a priority particularly as it relates children and mothers. To do so would be to fully realize that "human beings are more beautiful than flowers" and worthy of the significant investment required to tackle unmet oral needs, prevent disease, and promote health.

I thank you very much for your considerate attentiveness to some of the concerns about oral health that are on my mind as a State health officer.

Charge to Participants

Audrey Manley, M.D., M.P.H.
Deputy Assistant Secretary for Health
U.S. Public Health Service

I am indeed happy to be able to say good morning to you and to thank you for this invitation to join you during your 2 day conference here. I bring to you greetings on behalf of both the Secretary of Health and Human Services, Dr. Louis Sullivan, and the Assistant Secretary for Health, Dr. James Mason. I would like to say to Dr. Whiteside, Dr. Brown, Dr. Rossetti, Dr. Hutchins, and to the members of the workshop that I am pleased that you have gathered these 2 days to discuss the oral health of our mothers and children. Collectively, you represent a range of professional backgrounds and expertise. The fact that you are pooling your various talents to address our common concern, maternal and child oral health, promises to provide rich and rewarding guidance for our future efforts.

I believe that promoting oral health is important, but I strongly believe that promoting overall health and development is even more important. As we focus on specific needs of our children, we must remember to address those needs in the context of a system that is able to respond to all threats to their healthy growth and development. We are not here to promote a strategy to improve oral health that is unrelated to our efforts in physical, mental, and developmental health.

We know that it is possible to conduct mass fluoride mouth rinse or dental sealant programs for children, just as it is possible to establish mass immunization programs. We must recognize that these programs and the need to create them represent really an essential failure on our part. The failure has been to create and maintain a coherent comprehensive system of personal and public health care for all children and women of childbearing age. As we work together over the next 2 days to develop approaches to strengthen oral health care, we must be certain that these approaches will amplify the strengths of our existing health care system. Oral health is a significant component of an individual's overall sense of health and well-being. It has physical as well as psychological and social implications. Conversely, there are other aspects of physical and mental health which affect the individual's oral health status. We must therefore strive for solutions that will fit a coherent comprehensive maternal and child health program.

In recent decades, I am sure that you know better than I, we have made great strides in the oral health status of Americans, especially among children. These gains have been most dramatic in combating tooth decay. Strides have also been made in the areas of oral injury and periodontal disease prevention. And we are on the threshold of important developments concerning oral conditions such as congenital anomalies, cancer, and pain. Despite this growing list of accomplishments, the benefits of research and experience have not reached across our populations evenly. In some of the conditions where we have had the greatest impact, there are still many who suffer from oral disease. A number of tools for building on our accomplishments are already in hand. With them and with the new tools we can expect to develop, we should be able to continue our progress.

It is worth noting just a few of our maternal and child oral health gains. The data on dental caries are especially impressive. In 1986–1987, 50 percent of all U.S. children were free of tooth decay. Just 7 years before, only 37 percent had experienced no decay. This gain of 13 percent in such a relatively brief span of time continues and shows our progress in combating tooth decay. During the same 7-year period, the overall experience and prevalence of tooth decay decreased an impressive 36 percent. This is largely due to systemic fluoridation and dental sealants.

The magnitude of these strides in combating dental caries eclipses all other advances in dental health for mothers and children. There is at least one other area, however, of dramatic change. Since the advent of mandatory protective gear designed to avoid oral and facial injury, an estimated 100,000 to 200,000 fewer oral injuries have occurred annually in football. This is a graphic demonstration of a direct result of preventive efforts.

While we can feel proud of the progress just cited, we must also recognize its limits. We still face formidable problems, despite the gains achieved in tooth decay. Fifty percent of the children in the United States still experience dental caries in their permanent teeth. Equally problematic is the fact that periodontal disease is essentially endemic. Gingivitis affects over half of the adults, two-thirds of the youth, and more than one-third of the younger children. We are told that baby bottle tooth decay is still a public health challenge. This severe condition poses a major threat to children in their infancy. In some segments of the population, such as Native Americans, it affects a majority of the infants.

The oral health problems that confront the United States have a major impact on the Nation. In addition to causing discomfort, dysfunction,

and damage to tens of thousands of children, the accumulative national impact in terms of disability is substantial, as we are told that an estimated cost of oral health care in 1988 was $27 billion. Child oral health conditions can become adult oral disease. There is a kind of negative cycle that can operate, in which the child's problems continue into adulthood, becoming chronic conditions for mothers and others which then have their impact on children and on into the next generation.

Access to preventive care is characterized by marked unevenness across the U.S. population, and I am sure you know there are some subpopulations where conditions are much worse. This is especially true for minorities, migrants and the socioeconomically disadvantaged, those with special health needs, and those institutionalized. The lack of dental health insurance contributes to the risk for oral disease, and, again, high-risk subpopulations such as the disadvantaged and minorities are especially vulnerable.

Public resources clearly are a prime tool for seeking to bring more oral health services to high-risk populations, but the involvement of public resources alone is not enough. We must develop vital private-public partnerships which will use the strengths and talents of all components of the health care system to bring full advantage for all.

Over the next 2 days, we want your ideas on strategies and tactics for promoting preventive approaches to oral health care among health professionals and the public at large. We want to know how the word can be disseminated more effectively. How can knowledge be translated into action more rapidly? We want your input on these matters and we want your suggestions on how to facilitate greater integration between dental health and general health personnel. We want your recommendations on how to promote greater outreach to the underserved and all of the healing professions.

We must recognize that a healthy start for all children in our society is of vital interest to us all. We cannot be a first-class nation if we allow a generation of second-class citizens. We must have a nation of healthy, developmentally sound children if we are to have a healthy, developmentally sound nation. As we support our parents' generation, so our children will support us. If we avoid our responsibility to accord to our children the resources and support they need to prosper, then we not only harm them but we also harm ourselves. I am not here to tell you that the oral health of mothers and children is the critical variable in the equation that measures the strength of our Nation. I am here to tell you, however, that oral health, like infant mortality, is a measure of the value that a nation places on its mothers and children.

Today represents our first step toward a renewed commitment for improving oral health. During the course of this workshop, we need to develop a plan that will help us move forward. I expect that it will be difficult to do all of the things that your plan will outline. But unless we have a plan of action, there will be no progress. Together we must plan and work to make a difference.

I would like to wish you well in your deliberations over the next 2 days. Also, I would like to underscore what Dr. Adams has already said, that indeed the U.S. Public Health Service and the U.S. Department of Health and Human Services should and must provide the leadership in the oral health considerations for the 1990s. Thank you again for your invitation.

APPENDIX D
Selected Bibliography

Commissioned Background Issue Papers were prepared prior to the workshop and will be forthcoming as a supplemental issue of the *Journal of Public Health Dentistry* or another professional journal. These papers provide an in-depth review and assessment of the issues affecting the oral health of children and mothers in the United States. The issues reviewed in the papers and discussed by the work groups included oral health status, contributing factors, oral health education, advocacy, integration of oral and general health, oral health policy, resources, standards, research, documentation and evaluation.

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