THE FACE OF A CHILD:
Surgeon General's Workshop and Conference on Children and Oral Health
Proceedings

Table of Contents

THE FACE OF A CHILD:
Surgeon General's Workshop and Conference on Children and Oral Health

Executive Summary

The Face of the Child: Surgeon General's Workshop and Conference on Children and Oral Health represent a turning point in our view of children's oral health. Starting with the findings of *Oral Health in America: A Report of the Surgeon General,* the two conferences considered oral health in the context of children's overall health and development, social and environmental circumstances, history and common values; and changes in demography, technology, science and the health system that will impact them.

Main Findings

Children's oral health is important to their overall health and well-being. Oral health cannot be considered separate from the rest of children's health and well-being, just as the mouth cannot be separated from the rest of the body. Children's oral health includes the structural and physiologic functions of teeth and the entire craniofacial complex. Like other aspects of children's health, oral health must be considered in the context of social, cultural and environmental factors. Oral diseases are common, and many of them – such as caries – can be prevented with early cost effective interventions. Despite the availability of such measures, and improvement in children's oral health in recent decades, many children still lack needed dental health care – more in fact, than lack medical care.

Dental and oral disorders can have a profound impact on children. These include the effects on growth, school attendance, medical complications of untreated oral disease, and economic/social outcomes. All children need oral health promotion and disease prevention as a part of comprehensive health care. Child specific definitions of medical necessity distinguish children's unique health needs stemming from their vulnerability, dependency, developmental trajectory, and disease spectrum. Such a definition is implicit in Medicaid Early and Periodic Screening, Diagnostic, and treatment (EPSDT) benefit, but is often not enforced. The State Children's Health Insurance Program (SCHIP) offers opportunities to improve children's access to oral health care as well, but the impact of this on access to dental care has not yet been evaluated.

Vulnerable populations have more disease. Children at highest risk of disease are those from low-income and minority families, and those with special health care needs (CSHCN). Children with craniofacial conditions highlight the importance of the face in daily interactions; special efforts are needed to elucidate their quality of life, and to promote their resilience and behavioral adaptation. Children with special health care needs have especial difficulties accessing dental providers. Reasons include the lack of dental professionals trained to see special populations, and/or accepting Medicaid clients. Neglected oral health care is costly for children, and those with special health care needs may suffer special complications due to their co-existing medical conditions. Particularly hard-to-reach populations living in geographically isolated areas or in poor social conditions require special initiatives, buy-in of the community and collaboration with existing services.

Children's lack of access to oral health care is an ethical problem many must consider. A wide variety of ethical arguments support basic health care for all children including oral health care. Professionals and others who see children's oral health needs have an obligation to speak out and advocate for change. Framing children's health care as the responsibility of parents alone is a barrier to the development of rational and compassionate policies for children's health care.

Solutions to children's oral health problems require the participation of many. Foremost among these are parents, who are in a position to practice home care, as well as interpret their children's needs and advocate for them in health and social systems. Other solutions, such as community-based prevention programs, require community collaborations, private-public partnerships, and coordination of federal-state-local resources by state and local public health programs.

Children's oral health care must emphasize early preventive care, family counseling and health promotion. Fluoride and sealants should be utilized more. Early preventive care should start in the prenatal period, and include anticipatory guidance and oral health education.

The separation of dentistry and medicine creates barriers to improving children's oral health. These two systems must strive to work closer together and explore areas for further integration and collaboration. New training paradigms are essential to this change and include: primary care providers and others working with young children (educators, school nurses, social workers) need training in oral health promotion and preventive counseling; increasing education of dental students in pediatric dentistry and child health, and in the care of vulnerable populations; increasing numbers of allied dental professionals and consider expanding their roles; develop integrated models of service delivery; and increase interdisciplinary research.

Special research efforts are needed to advance the evidence base in critical areas, including: research needed to address disparities in children's oral heath outcomes and access to care; the basis of oral and craniofacial health promotion and disease prevention, and preservation of quality of life. Educational and health services research and demonstration projects are needed to study how best to integrate oral health into training experiences of other health professionals. Research on vulnerable populations is especially needed, including children with special health care needs, and populations of diverse backgrounds and challenging circumstances. Studies can support advocacy efforts, target resources, and monitor program outcomes and quality of care.

Strategic message development is a critical part of public awareness and policy change. Such support is necessary to mount the energy and activism that addressing children's oral health will require.

Summary of Recommendations:

1. Start early, emphasize prevention, involve parents
2. Assure a sufficient workforce and public health capacity
3. Revamp health professional education
4. Integrate and innovate in science and all service delivery systems
5. Expand the knowledge base and transfer science
6. Develop strategic communication plans
7. Align policy with knowledge and children's needs

Overview and Introduction

Two conferences - a Surgeon General's Workshop and a Surgeon General's Conference - were held in conjunction with the preparation and release of *Oral Health in America: A Report of the Surgeon General.*[1] The *Surgeon General's Workshop,* held March 19 -21, 2000, in Washington, D.C., was an invitational meeting of 80 experts charged with developing an action plan. *The Face of the Child: Surgeon General's Conference on Children and Oral Health,* held in Washington, DC June 12-13, 2000, gathered more than 700 people from a broader constituency to consider the children's oral health and the Workshop recommendations from a broader perspective. Participants at the Workshop and Conference represented many perspectives including dentistry, medicine/pediatrics, nursing, education, law, ethics, history, government, research, parent and advocacy groups, and the private sector. The Surgeon General's Conference represented the efforts of some 80 collaborating agencies, organizations and academic institutions; close to 100 participating faculty; and 200 authors of abstracts.

Workshop goals:

The goals of the Workshop were to

- Review trends and issues shaping children's oral health
- Develop an action plan to improve disparities in children's oral health and access to care
- Present these findings at the Conference for public discussion and comment.

Conference goals:

The goals of the Conference were to:

- Highlight findings of the Surgeon General's Report on Oral Health
- Increase appreciation of the importance of oral health to overall health and well-being, and of the need to integrate oral health into policy, research, professional training, and medical care for children.
- Engage the child health and welfare community and the public in a discussion of the ethical, legal, historical and policy issues in children's health.
- Promote effective partnerships and community collaborations to eliminate disparities in children's oral health and access to care.

Publication of Workshop and Conference Products

The background papers commissioned for the Surgeon General's Workshop and Conference will be published separately in summer or early Fall 2001. Additional presentations/papers from the Surgeon General's Conference will appear on this website. Background ethics papers from the January 21, 2000 *Ethics in Oral Health seminar*, held in preparation for the Surgeon General's Conference in conjunction with National Center for Education in Maternal and Child Health under its grant from the Maternal and Child Health Bureau, the National Institute of Dental and Craniofacial Research and the Clinical Bioethics Center at the National Institutes of Health, appear in the April 2001 issue of the Journal of Medicine and Philosophy.

Children's Oral Health: Context and Background from *Oral Health in America: A Report of the Surgeon General* http://www.nidcr.nih.gov/sgr/sgr.htm[1]

Speakers and participants at the Workshop and Conference explored key findings from *Oral Health in America: A Report of the Surgeon General*. These findings underscore the importance of oral health for children's overall health and well-being. It is important because ***oral health is more than teeth***. Oral health includes all the sensory, digestive, respiratory, structural and emotional functions of teeth, oral cavity, and contiguous structures - collectively known as the craniofacial complex. The mouth is involved in systemic defense, and often mirrors other systemic problems such as immunologic disorders, infectious diseases, and nutritional deficiencies.

Oral health is important because ***dental and oral disorders are common in children***. Dental caries is the most common chronic disease of childhood, affecting about half of children by middle childhood, and over 80% by late adolescence.[2] Cleft lip and palate are among the most common birth defects. The head, face and mouth are often subject to injuries, including child abuse injuries. Periodontal disease and oral cancers can occur in youth who smoke or use tobacco products.

Fortunately, most dental diseases can be prevented. For example, ***dental caries can be prevented*** if intervention starts early. The caries process is initiated by bacteria that are passed from the mother to infant in the early years of life. This process can be prevented by a combination of community, professional, and individual measures including water fluoridation; application of topical fluorides and dental sealants; use of fluoride toothpastes, proper infant feeding practices, and diet.[3] Certain other oral and craniofacial problems may be prevented or ameliorated with early interventions as well.

Research demonstrates that ***oral and dental diseases have a significant impact on children and families.*** Children lose an estimated 52 million hours a year from school due to dental problems and related care. Untreated caries can be associated with growth problems in children and may result in costly emergency room visits and hospitalizations. Children with special health care needs suffer particular consequences from oral and craniofacial conditions, which can impact speech, hearing, and psychological outcomes. Many children suffer the pain and burden of preventable dental disease. Costs of dental health care account for approximately 30% of family out of pocket expenditures for children's health care. Children's oral health sets the stage for adult oral health and function. There are long-term psychosocial, economic and health consequences of oral and craniofacial disorders. Associations between chronic oral infections and other health problems, including diabetes, heart disease, and prematurity and low birth weight have also been reported.

Many Americans lack access to needed oral health care, including many infants and young children. For every child without medical insurance there are 2.6without dental insurance. Dental care is the most frequent unmet health need of children. [4] Low-income and minority children and those with special health care needs have greater access problems and poorer oral health outcomes. Fewer than 1in 5 Medicaid-eligible children received preventive dental care in one year reviewed (1993).[5] Hispanic, African American and American Indian children have

high levels of severity and untreated disease. The impact of these disparities and the preventable nature of oral diseases create a mandate to focus on the oral health of America's children.

The Surgeon General's Workshop

Background papers: Trends and issues shaping children's oral health. The Surgeon General's Workshop had the goal of developing an action-oriented agenda to eliminate disparities in children's oral health and access to dental care. In anticipation of the Workshop, eight background papers were commissioned that addressed key issues and trends shaping responses to children's oral health and access problems, including:

- Ethics
- Disparities in Oral Health and Access to Care
- Demographic and Social Trends Affecting the Health of American Children
- Dental Workforce Trends Affecting Oral Health Services for Children
- Children and Oral Health: Health Systems Considerations
- Science-based Trends Affecting the Oral Health of Children
- Strategic Communications in Oral Health
- Recommendations for Change from the Current State, Regional and National Initiatives.

These papers will be published separately.

Workshop Design: To develop the action-oriented agenda, participants were assigned to 6 different groups representing 6 different perspectives: Science, Dental Delivery Systems, Health Workers, Services Integration, Public Awareness, and Public Policy. Each group reviewed *values* that work for and against resolving these disparities; developed a focused *problem* statement; formulated a *goal;* identified a list of strategies or *programs* to meet this goal; and created a *message* that would capture the essence of their thinking and could be communicated effectively.

Statement of Values: Attendees articulated important underlying social and personal values that support strategies to improve children's oral health, in the belief that recommendations should be connected to deeply held beliefs. Values identified as most important included *equity* and *culture* (i.e., cultural sensitivity). The concept of equity is part of our shared American spirit and societal self-image. The concept of culture is about who we are as individuals. Other important values identified included *community and responsibility.* Children's oral health problems must be addressed within the context of their community; and the whole community must be involved, responsible, and accountable. Together these values reflected participants' belief that strategies should seek to assure equality of opportunity both at the level of society, and at the level of the individual child - within the context of his or her family and community. Strategies thus drawn should be family-centered and focused on the best interests of the child. These informal discussions echoed the themes and issues discussed in more depth at the Ethics and Oral Health seminar held in preparation for the Workshop and Conference. [6]

Results: The Workshop discussions were rich and varied. Many issues were raised, and potential strategies generated that were presented at the Conference for feedback. The Workshop and Conference outcomes have been combined in the final Conclusions and Recommendations section of this document.

The Surgeon General's Conference – Key Themes

The Conference covered a broader array of topics than the Workshop, ranging from the social impact of craniofacial conditions to the history of school dental clinics. These issues were discussed in a series of plenary and breakout sessions; and almost 200 abstracts were presented.[7] Key themes emerged from the Conference *reflecting this broad framing of children's oral health problems and access to care*:

1. FRAME CHILDREN'S ORAL HEALTH AS PART OF OVERALL HEALTH

- **Oral health is a part of overall health.** The mouth is part of the body: good oral health is necessary for optimal growth and development. Oral and craniofacial disorders have a significant health impact on children. Oral health care must be considered an integral part of health care for children.

- **Oral health care is an essential part of comprehensive health care for children.** Comprehensive health care for children is *health care necessary to promote health and normal growth and development; prevent diseases and secondary disabilities; and ameliorate existing conditions and disabilities*. Such a definition includes oral health care needed to promote oral health, prevent oral and dental disease and secondary disability, and treat existing problems. Implicit in this definition is the notion that child's health care must take account of the physical, developmental, cultural and environmental factors affecting children's health. This is a *child-specific definition of medical necessity.* Definitions of medical necessity determine which services insurers reimburse.

- **A child-specific definition of medical necessity calls for health services that *children* need - as opposed to adults.**[8, 9, 10] Children differ from adults in ways that affect their health needs. Children are more vulnerable than adults, and they lack the ability to communicate their health needs and advocate for themselves. They live in families, and depend on others for care and nurturance including access to health care. Children's constant developmental changes make them particularly susceptible to untreated disease and environmental influences, and they experience acute and chronic health conditions that are very different from those of adults. Yet children's position in the lifespan ensures maximal opportunities to prevent disease and promote health. Healthy growth and development of all body systems are necessary if children are to reach their adult potential. Finally, children are disproportionately disadvantaged by poverty in our society. These features compel us to take an approach to children's health care that includes elements of health and development and family context, and creates an integrated and seamless system of care that dissolves the arbitrary boundaries between medical and dental care.

2. FOCUS ON CHILDREN AT RISK: POOR CHILDREN, THOSE WITH SPECIAL HEALTH CARE NEEDS, AND OTHER HIGH RISK POPULATIONS

- **Medicaid EPSDT and SCHIP provide coverage for many poor children, but further policy changes are needed to address persistent disparities in access to care.** Since the majority of the poorest children have oral health coverage under Medicaid, this is a critical part of the "safety-net." A comprehensive, child-specific definition of medical necessity exists to a large measure in the Medicaid Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit of the Social Security Act. [11] If enforced, EPSDT is wide-ranging in scope. It includes periodic screening, health education and anticipatory guidance, and acute interventions for dental as well as medical problems, and outreach to eligible families to ensure access to needed services. Despite this statute, most states do not ensure that children receive dental services to which they are entitled under Medicaid EPSDT: and fewer than 1 in 5 Medicaid eligible children had a preventive dental visit in 1993.[5] Litigation efforts in some states have been partially successful in improving children's access to dental services under Medicaid, but further policy changes are needed to eliminate the disparities in poor children's access to care. Other lower-income children not qualifying for traditional Medicaid coverage may receive services through the State Child Health Insurance Program (SCHIP), another important link in the safety net. Oral health services in SCHIP plans are up to the discretion of individual states, but almost all states have some degree of oral health coverage.

- **Children with special health care needs (CSHCN) are at increased risk for problems with oral health and access to care.** Dental care is the most common unmet health need for CSHCN, who comprise approximately 18% of all children. [12] The oral health needs of this population have not received adequate attention. Co-existing medical conditions increase their risk of dental and craniofacial problems, including oral manifestations of systemic disease and/or required therapies (e.g., medications, immune suppression, and oral/ craniofacial surgeries). These children may also at greater risk for systemic health consequences from untreated caries. Moreover, systemic problems may require urgent attention, leading to chronic neglect of oral health. Ironically, the increasing evidence on oral-systemic health linkages makes oral health even more important for these children. These children need comprehensive health care that includes coverage for oral and craniofacial conditions.

  Children with craniofacial conditions highlight the vital role face plays in daily interactions. Children with congenital abnormalities (e.g., cleft-lip/palate) and acquired craniofacial conditions (e.g., burns and other facial trauma), demonstrate the vital role of craniofacial complex plays in speaking, hearing, communicating feelings, and mediating some of our most human experiences. Daily social interactions are often difficult for these children because of societal and cultural attitudes towards individuals with facial differences. Adequate support systems and resources can help these children flourish despite substantial challenges.

  Children with special health care needs have problems accessing oral health care. The lack of access to oral care is a major problem for families of children with craniofacial

conditions and other special health care needs. Because dental conditions are typically excluded from definitions of medical necessity, and dental insurance policies provide only limited benefits, many families with private insurance are unable to pay for important but costly oral therapies such as orthodontics, oral and maxillofacial surgeries, and dental implants.[a] Other families eligible for coverage under Medicaid may still encounter significant access problems. [5] Families of CSHCN are at increased risk for socio-economic difficulties.

There are not enough dental professionals trained to care for special populations. General undergraduate dental training in the care of CSHCN is minimal, and there are not sufficient pediatric dentists to meet all the needs of this population. Compounding this problem, dental services in children's hospitals (which serve as dental safety nets for CSHCN) are often under-funded and overwhelmed, with long waiting times for needed procedures. At the same time pediatric clinicians may be unaware of significant oral-systemic health linkages, and delay referring children for indicated oral health care.

Children with special health care needs require coordinated interdisciplinary team care. Another important health benefit for CSHCN that is often lacking is coverage for coordinated, interdisciplinary team care. [13] This is the recommended standard of care in the craniofacial community, [14] but is often difficult to ensure. Pediatric dentistry is now a required core discipline for new applications under the MCH-funded LEND (leadership education in neurodevelopmental disabilities and related disorders) training centers. All CSHCN including those with craniofacial conditions need interdisciplinary team care that includes oral health care.

Neglected oral care is costly for children, including those with special needs. Neglected oral care results in costly emergency room visits and surgical care. For CSHCN such neglect may result in additional complications and costs. Costs associated with these complications are not tracked as dental costs, and are difficult to estimate. Overall medical costs for CSHCN are high, as much as 2/3 of the overall pediatric health care dollar. [15] Dental and oral health costs for these children may also be substantial, underscoring the case for early intervention and prevention in this high-risk population.

- **Hard-to-reach populations can be targeted with community buy-in, and collaboration with existing programs.** Children at risk for poor oral health and access problems are often from low-income and/or minority groups, including Hispanic, African American, and other racial/ethnic populations. Not surprisingly, these children are disproportionately affected by other important child health problems including low birth weight, infant mortality, child abuse and other injuries, asthma, and HIV infection. Children at high risk for oral disease have often already been identified because of these other health and social problems, providing cost effective opportunities for piggy backing oral heath components onto other efforts. Opportunities for reaching these children and families can also be found in schools and day-care settings, Head Start/ Early Head Start centers, WIC programs, churches and religious groups, social service and other community-based organizations.

[a] Dental implants are needed by children congenitally absent teeth, such as children with ectodermal dysplasia.

Many vulnerable children are hard to reach because of geographic, language and cultural barriers, knowledge and attitudes towards oral health, and other social and economic factors. Eliminating health disparities for these children requires special strategies. These can be effective if carefully planned with community leaders, with attention to community-identified needs and relevant cultural issues. These projects generally require private-public partnerships for funding and successful buy-in by community agencies and other key stakeholders.

Particular subpopulations of U.S. children are at extremely high risk of oral disease, including those from American Indian/Alaskan Native groups, Pacific Islanders, and migrant farm worker families. Other children and adolescents who are at very high risk but have not been studied adequately include those in foster care, homeless shelters, the juvenile justice system, and immigrant and border populations. Special initiatives are needed to reach these children.

3. VIEW CHILDREN'S LACK OF ACCESS TO ORAL CARE AS AN ETHICAL PROBLEM

- **Ethical arguments support basic health care for all children including oral health care**. In preparation for *The Face of a Child*, leading bio-ethicists examined the issue of allocation of resources to children in the oral health context. There was a strong consensus that all children should have access to basic health care that should include oral care, because of the importance of health care (including oral health care) to ensuring equality of opportunity for all children; the availability of cost effective preventive measures (especially for oral health); children's vulnerability and dependency on adults for access to health care; and the importance of children to the future of society. All major theories of justice are consistent with provision of basic health care to all children. It is also unjust that children as a group have no entitlement to health care whereas the elderly do.

  Moreover, policies that reflect the intergenerational dependence of society, and view health care as a social good, serve the interests of adults as well as children. Older adults rely upon children growing into healthy and productive adults to support public programs that are important to the elderly - such as Medicare and Social Security. ***Consensus from a wide variety of ethical positions leads to the conclusion that when a society can afford to do so, it is unjust not to provide access to basic health care for all its children.***

  The current problematic distribution of health resources results from a system that approaches health care not as a social good, but as a commodity. Health care is not a simple commodity; preserving a system of care that rations by ability to pay and personal choice (i.e., market forces) is a moral choice, not an economic one. [16] Such a system of care disadvantages children in general, and their oral health needs in particular, because of children's poverty, the large numbers who lack dental insurance, and the discretionary view of oral health prevalent in society. It is not surprising that market forces have not created a system of affordable health care – including oral health care - for all.

One of the most fundamental barriers to ensuring health care for all children is the tendency to frame children's oral (and other) health problems in terms of parental responsibility, and not social policy. Parents have primary responsibility for care of their children, but poor families regardless of their best intentions cannot always afford or find adequate care for their children. Individual's stories - such as impact of growing up without oral health care related by one plenary speaker - capture important moral elements missing from more theoretical analyses. These narratives can help us overcome the perception that oral health care is not valued by poor families, or that they don't "deserve" to have help in providing this care for their children. Often poor parents' own experiences and dental fears are the greatest impediments for seeking care for their children. If parents lack knowledge or access to services, what responsibility do health professionals bear for this deficiency? We need a system that better supports parents who are doing the important work of raising the next generation of children - preserving life, fostering health and development, and training children for a place in society. ***Agreement from many practical and moral arguments can lead to a broad, non-partisan commitment to achieving rational and compassionate policies for children including universal health care.***

4. INCLUDE PARENTS AS PARTNERS IN THE HEALTH POLICY PROCESS.

Parents play key roles in the health of individual children and the community. Parents are the everyday experts on their children, interpreting health needs, accessing care, representing and advocating for their children in the health, social and educational systems. They provide valuable reality testing when it comes to interventions and therapies, and experience the consequences of the health decisions made for their children. Parents cope with a multitude of barriers to oral health care including poor accessibility of dental providers in many locales and high out of pocket costs of care. Above all, parents must have adequate information upon which to act. And they need supportive providers and systems of care. Ultimately every policy must be judged by its impact on the daily lives of children and families.

- **Parent-partnerships can address access problems and contribute to policy development**. Parents can bring a sense of the immediacy and reality of children's lives to the policy setting. They have an invaluable role to play in advocacy and in the setting of research and policy agendas. As examples, the National Foundation for Ectodermal Dysplasias has developed public-private partnerships to assist families in attaining dental implants for children born with missing or very underdeveloped teeth. Family Voices facilitated a national health questionnaire of families of children with special health care needs presented at the Conference; and the National Parents' Consortium on Maternal and Child Health (representing some 26 parent groups) held a pre-conference meeting, and delivered a message to Conference participants reiterating the importance of partnering with families, and called for specific measures including:

    - changes in laws to require equity and access to oral health care for all children and all families;
    - links from oral health to other health issues and integration of oral health services into schools, public health facilities, family clinics, and other social welfare and

health services;
- interdisciplinary research on oral health that includes a focus on health promotion and disease prevention;
- establishment of a national campaign on oral health that involves both parents and professionals;
- increases in the number of minority dental care professionals and the recruitment of dental professionals to practice in rural areas;
- reforms in Medicaid and other federal health programs to increase access to oral healthcare, and
- prioritization of oral health for funding and service development at the federal, state, and local levels.

5. EMPHASIZE HEALTH PROMOTION IN ORAL AND CRANIOFACIAL DISORDERS

An emphasis upon oral health promotion and disease prevention is essential for children, because they are at the beginning of the life span, and because clear, cost-effective oral preventive strategies exist. Achieving a reorientation away from disease and towards health promotion and disease prevention will require substantial changes in funding mechanisms, and education of health professionals and the public. An emphasis on health promotion and disease prevention is consistent with Healthy People 2010 objectives, and the World Health Organization definition of health as "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This broad definition of health applies to oral health as well.

- **Start oral health preventive care early**. Health professionals can help ensure that all children have a healthy start by focusing attention prenatally on maternal oral health, genetic risk factors and environmental exposures such as tobacco and alcohol, and folic acid. This is also an ideal time for counseling families about the importance of oral health, oral health care, and proper feeding techniques, including breast-feeding when possible. A health promotion and disease prevention agenda argues for integration of oral health with primary health care, where health promotion objectives can be continuously reiterated through out childhood and adolescence. The *Bright Futures* [17] health maintenance guidelines for children provide excellent guidance for incorporating oral health promotion into primary care.

- **Increase use of fluorides and sealants.** Water fluoridation and application of dental sealants are important examples of cost effective but very underutilized disease prevention measures. Less than two-thirds of US population has fluoridated water systems; only 23% of 8 year olds, and 15 % of 14 year olds year olds and children have any sealants on permanent molars. Other methods of promoting oral health include topical fluoride applications (especially in high risk populations), and regular use of fluoride containing dentifrices, and appropriate nutrition and feeding techniques with infants and young children.

- **Consider all the determinants of health outcomes.** Although access to care and preventive measures such as fluoride and sealants are important determinants of oral and craniofacial health outcomes, other important variables play significant roles, including genetic endowment, prenatal exposure, child and family behaviors and educational levels,

environmental and infectious exposures, and nutritional factors and psychosocial experiences. Optimal oral health promotion and disease prevention must consider these factors. Socioeconomic status, the single largest predictor of oral health outcomes, may interact with many of the variables listed above.

- **Promote resilience and behavioral adaptation in children and adolescents with craniofacial conditions.** Promoting optimal oral and craniofacial health also includes helping children and families survive difficult experiences such as a craniofacial birth defect or acquired facial deformity, by understanding and fostering resilience and behavioral adaptation. Resilience encompasses effective social and coping skills (behavioral resilience), reaffirmation of self-worth and positive outlook in the face of disfigurement or disability (cognitive resilience), and inner acceptance (emotional resilience). Behavioral and qualitative research is needed to help us understand how better to promote health and improve quality of life of children and families with oral and craniofacial conditions.

6. INTEGRATE ORAL HEALTH INTO OVERALL HEALTH IN PROFESSIONAL TRAINING AND SERVICE DELIVERY

- **The traditional separation of dentistry and medicine creates barriers to improving children's oral health and access to care.**[18] Dental and medical professionals lack sufficient depth in each other's disciplines to optimally promote patient health. Separate sites for professional training, continuing education, and service delivery make it difficult for medical and dental professionals to develop meaningful collaborations and share information, compromising patients' health outcomes. Separate service systems also contribute to problems in access and coordination of patient care, and lack of parity in finance mechanisms. Greater integration is needed to overcome all these barriers, and to foster the interdisciplinary research that is needed to address the complex problems in children's oral and craniofacial health care. The direction of greater integration of dentistry with medicine and the rest of the health system has been predicted and recommended by previous analyses.[19]

- **Training of primary care providers, dentists, and mid-level practitioners must better integrate oral health into overall health care for children.** Conference speakers and attendees identified a critical step towards greater integration as changes in professional training and continuing education for all health professionals, including attitudinal as well as course content changes.
  a. Primary care providers need training in preventive oral health promotion and disease prevention. Given the benefits of disease prevention, and the relatively few dentists available to treat infants and young children, priority should be placed on educating providers of primary pediatric care in oral health promotion and disease prevention. Such training should include the current science of disease transmission in caries and related opportunities for prevention including the appropriate use of fluorides and dental sealants; the recognition of oral and craniofacial conditions and their impact; the relationship between oral and craniofacial health and nutrition, speech, and oromotor function; the identification of oral manifestations of systemic disease, the systemic

impact of oral disease, and the oral health implications of common medical therapies. They need to appreciate the social and cultural correlates of dental disease, including family attitudes and knowledge concerning oral health, and the importance of appropriate anticipatory guidance. PCPs providers need to collaborate with dentists to create referral mechanisms for treatment of children under their care. They should view referrals for dental care as they would referrals to other physicians – and expect a report back. Likewise physicians should provide dental providers with relevant general health information to increase inter-professional communication and collaboration.

b. Dentists need enhanced training in pediatric dentistry, overall child health, and the care of vulnerable populations. The pre-doctoral dental school curriculum should be enhanced in the area of pediatric dentistry, since general dentists provide the majority of dental care for children. Children with the greatest dental needs are those from low-income and minority families, and those with special health care needs. Clinical experiences are needed to support trainees' education in these areas, and should stress cultural competency in provision of such care.

Undergraduate and graduate dental curricula should also be reviewed with respect to important child health topics related to child development, examination of infants and young children, oral manifestations of systemic conditions, recognition and reporting of child abuse injuries, and ethical and social issues in the care of young children. Dentists in training need to understand the complex behavioral and cultural factors influencing oral health disparities and gain sensitivity in the treatment needs of underserved populations. Finally, the technical emphasis of dental training needs to be reevaluated in the light of scientific evidence supporting medical (as opposed to surgical) management of common oral diseases, and the increased importance of oral-systemic health linkages. Given the short supply of pediatric dentists, additional training slots in this field should be created.

c. Review dental school applicant selection criteria. Dental educators may wish to consider characteristics that support the selection of program applicants with interest in meeting the needs of the underserved, and specifically sensitize students to these societal needs. Increasing diversity among health professional trainees is essential for better serving diverse populations. Training experiences for undergraduate and graduate dental trainees were discussed at the Conference that focused on WIC centers, Head Start programs, schools, migrant / and other community health centers, and pediatric clinics and wards in children's hospitals. There is a need to enhance the work force in public health dentistry and more career opportunities should be made available in this area.

d. Increase numbers of allied dental professionals, and consider expanded function roles. More dental hygienists and dental assistants should be trained to improve access to preventive oral health care services. Oral health counseling and simple preventive measures should be delegated to allied health (and primary care) providers to allow for maximally efficient use of pediatric and general dentists. The possibility of expanded roles for allied dental professionals should be considered. Examination of state dental practice laws can help determine the potential for allied dental professionals to work outside of direct dentist supervision, especially in dental provider shortage areas.

e. Educate allied health professionals and others working with children in oral health topics. Other professionals working with children and families (e.g., nutritionists, occupational/physical therapists, pharmacists, school nurses, teachers, social workers, child care workers) need to learn basic oral health information as part of child health

curricula. Often these individuals are on the front line when families ask questions, or when children present with symptoms of dental disease. It is important to include such professionals and workers when planning comprehensive approaches to improving children's oral health.

f. Emphasize health promotion and oral systemic health linkages for all trainees. Educational directives are needed to emphasize health promotion and oral systemic health linkages for all health professionals' training. This should include prevention (and cessation) of smoking and use of spit tobacco and alcohol, the role of folic acid in lowering risk of craniofacial birth defects, and the association of maternal oral disease with low birth weight and prematurity in pregnant women. Such education should particularly target youth and women of child-bearing age. These educational objectives will require enhanced communication and collaboration between professionals providing dental, obstetrical, pediatric and family care.

g. Resolve barriers to increased integration of dental and medical training. Barriers to greater integration discussed included concerns that dental schools will lose resources to medical schools within academic institutions; dentistry will be pulled increasingly into managed care models, or will lose uniqueness and separateness as a profession; or dental schools will lose support from alumni/ alumnae, or encounter opposition from the dental community. Major changes might be stressful for faculty, and perhaps costly at the outset; curricula and the extent to be covered in four years is another consideration. For the medical side overburdened curricula, stretched budgets and the lack of appreciation for oral health were cited. On the whole, increasing attention to oral health in medical training seems to raise fewer practical and conceptual objections than major shifts in dental education.

- **Develop integrated models of service delivery to better serve children and families.** Different service paradigms for achieving better integration of oral health care into overall health care for children were explored including dental and medical homes; a "health home" (containing medical, dental and potentially other health services); dental professionals in obstetrical and pediatric specialty and primary care clinics, and other models of co-located services. An important locus for integrated services could be managed health care plans, which are beginning to show improved rates of immunization and other preventive health care services for children enrolled under Medicaid and the State Children's Health Insurance Program (SCHIP). Integration of dental and other services has occurred at WIC centers, educational and other settings, etc. Coordinated interdisciplinary team care for children with craniofacial conditions was presented as a long-standing model for CSHCN that integrates oral health care, and often leads to collaborative training and research efforts. No single model emerged as the only solution to the need for better integrating oral health into overall health services, but the need for more demonstration projects aimed at achieving integration was clear. Innovative efforts to enhance service integration and improve access to care should also consider use of dental hygienists, nurse practitioners, and other mid-level practitioners.

Address barriers to greater participation by primary care medical practitioners in oral health care. Barriers identified included a lack of training in oral health; failure to appreciate the importance of oral health; concern over safety/efficacy of some preventive oral heath interventions; overloaded clinical schedules; a lack of dentists to refer to; and reimbursement

issues. Successful examples of pediatricians incorporating anticipatory guidance and preventive oral health care into primary care for young children were discussed. Financial barriers often limited integration in other service settings.

- **Academic health centers can help promote interdisciplinary collaborations in service, research and training to meet the needs of changing communities.** The greater academic health center can also help redirect health professional activities from discipline-based treatment of individuals, to more cross disciplinary and community-oriented, culturally competent clinical care, research, and education. Academic health centers can help advocate for a continual move to health promotion and disease prevention for individuals and in communities, and for reimbursement for these kinds of services. Cognizant of changing demographics, these centers can focus service, training and research efforts to more appropriately meet the future needs of communities. Such efforts will help increase public support for academic institutions, and promote development of the public-private partnerships necessary to address complex problems such as disparities in children's oral health and access to care.

7. ELIMINATE DISPARITIES IN CHILDREN'S ORAL HEALTH WITH PUBLIC-PRIVATE PARTNERSHIPS AND COMMUNITY COLLABORATIONS

Effective strategies will be embedded in the context of children's overall health and development, their family and community environments, and the other systems impacting their lives. Particular strategies must build upon existing science and pull together private and public and social systems serving children.

- **More intensified, culturally-competent partnering is needed to address children's oral health and access problems.** Conference speakers and participants gave many examples of successful projects and partnerships. Specific guidelines were highlighted for developing community coalitions[20] and for focusing on important oral health efforts such as dental sealant programs, fluoridation campaigns, etc.[21] Participants were made aware of the Grantmakers in Health http://www.gih.org/ [22] list of funding opportunities for groups working on oral health initiatives. Many examples of community efforts were presented including, among others:

  - Case management to assist high risk families in accessing needed dental services
  - Dental society projects to: ensure every child has a "dental home" from birth; or screen children at school entry
  - Dental hygiene programs' outreach projects to WIC, schools, and other community sites
  - Lay health workers in hard-to-reach populations
  - Mobile vans for dental screening and treatment in select communities
  - Oral health coalitions at local and state levels
  - Oral health care in residential settings care (schools for the deaf, blind)
  - Oral health education in neurodevelopmental preschools
  - Oral health education curricula in schools involving school nurses,
  - Partnerships involving children and the elderly

- Partnerships with insurance industry participation
- School programs involving dental screening and sealants
- Special Olympics dental screening and treatment programs
- Tele-screening for children with craniofacial anomalies

- **Federal partnerships are helping promote children's oral health and access to care**:

A ***Department of Health Oral Health Initiative*** (approved on March 7, 2000) has been developed to raise awareness of oral health disparities among low-income and vulnerable populations of children and their families, and to improve access to oral health care in safety nets and the private sector. A Public-Private Partnership on Children and Oral Health has been formed, to gather information about the various activities in the public and private sector supporting the goals of (1) Promoting awareness about pediatric oral health; (2) Building oral health infrastructure including workforce numbers, competency, diversity distribution, and public health capacity; (3) Addressing recognized barriers to care including Medicaid reimbursement rates and administrative barriers; and (4) Building the science base to improve primary prevention. This follow-up project is cataloguing and facilitating communication exchange between the 7 key sectors including federal agencies, state organizations, grant-makers, business, professions, academics, the public.

Develop a National Oral Health Plan. Working collaboratively on such a plan, as suggested by the Surgeon General's Report[1] would improve quality of life and eliminate health disparities by facilitating collaborations among individuals, health care providers, communities and policymakers at all levels of society. Principal components of the plan, being developed by the Federal Coordinating Committee on Oral Health, guided by Healthy People 2010 Objectives and the Surgeon General's Report, are to:

1. Change perceptions about oral health and disease (public, policymakers, health providers)
2. Accelerate building and application of science and evidence base to improve oral health
3. Build effective health infrastructure that meets the oral heath needs of all Americans
4. Remove known barriers between people and oral health services.

The *Health Care Financing Administration (HCFA) Oral Health Initiative* emphasizes 1) strengthening public and private oral health delivery systems; 2) enhancing collaboration among agencies of the Department of Health and Human Services (DHHS) in order to maximize the effectiveness of dental care in Medicaid and State Children's Health Insurance Programs (SCHIP); 3) encouraging public-private partnering; and 4) stressing the application of scientific advances to the practice of dentistry to reduce disease burden. The initiative includes, within HRSA, promoting oral health integration across all HRSA bureaus; stressing oral health performance measures; addressing workforce problems in the Bureau of Health professions; involving special offices of Rural Health, Minority Health, and Managed Care in dental issues; funding programs unique to children with HIV/AIDS (who have substantial oral consequences); and providing direct service to 4 million children through community and migrant health centers. The initiative also strives to provide states with technical assistance and support to enable them to improve their dental prevention and services programs through, for example, the conduct of "State Dental Summits," and similar collaborative stake holder meetings designed to stimulate major policy change.

The ***Centers for Disease Control and Prevention*** is developing both community-based interventions and projects to enhance oral health care, especially for children, in Medicaid and other managed care plans.[23]

Federal agencies partnering to sponsor this conference and related activities in oral health include, the Administration for Children and Families (Head Start), Administration on Developmental Disabilities, Agency for Health Care Research and Quality, the Centers for Disease Control and Prevention, Food and Drug Administration, HCFA, HRSA, Indian Health Service, National Institutes of Health, and US Department of Agriculture. Federal resources were magnified by collaboration with many private groups and organizations.

8. INCREASE THE EVIDENCE BASE AND TRANSFER OF SCIENCE FOR CHILDREN'S ORAL AND CRANIOFACIAL HEALTH

- **There are important unanswered questions in the area of children's oral health.** Questions of **basic science** must be answered, such as genetic and molecular mechanisms in oral and craniofacial growth and development and the aberrations present in disease processes, as well as important questions about oral-systemic health interactions. Where they is science which is directly relevant to clinical care – such as the medical management of dental caries *before* cavities require surgical treatment - efforts must be mounted to quickly and effectively translate science into practice. New diagnostic methods are needed (risk assessment, markers for susceptibility, and physical (non-radiological) techniques.

- **Addressing access and oral health disparities in children requires an emphasis on epidemiological, clinical, behavioral and health services questions**. Research is needed to address causal factors in caries development in various ethnic subgroups, and the means to achieve primary prevention of caries and periodontal disease in these populations. A child-oriented health services research agenda is needed that is responsive to the characteristics of children, including developmental and environmental factors. Longitudinal studies and measurement of quality of life are needed. There is a need to move beyond provider- driven "decayed, missing and filled surfaces/ tooth" index. Additional research is also needed for targeted and hard-to-reach populations including children in foster care, those in the juvenile justice system, and the homeless.

- **Different ways of integrating oral health into training experiences and service delivery systems must be studied.** Educational research and demonstration projects are needed to understand how to best integrate children's oral health into professional training, and oral health services into other health services. Education research should also be directed at oral health education programs in school settings. Community level collaborations should monitor outcomes and effectiveness of projects.

- **Research on oral health of special populations is urgently needed.** Initiatives are needed to address health disparities in children with disabilities and other special needs. There is a current lack of evidence-based knowledge on the interaction of oral disease and the various complex health conditions of childhood, as well as optimal ways to

deliver health services to these children. ***New epidemiology, health services, basic, clinical and related social sciences research agendas focused on these populations are needed, especially those emphasizing prevention and health promotion***. Work is needed on the distribution of unmet oral health needs among children with special health care needs, the impact of these unmet health needs and oral health problems on other aspects of child health and functioning, and the impact of policy changes in improving access.

- **More outcome studies and quality of care research is needed clinically, and for legal and advocacy efforts in children's oral health.** Health services and outcomes research also raise particular ethical issues related to the nature of the research questions, the methods for data collection, and the use of children as subjects, which must also be studied.

- **The interaction of oral health and nutritional factors should be further studied,** including the role of specific nutrients (such as calcium and folic acid), the interrelationship with the childhood obesity epidemic, and behavioral and socio-cultural factors influencing food choices.

- **Barriers to the development of research agendas in critical areas must be addressed.** These include a lack of sufficient financial resources allocated to children's oral and craniofacial health, and a shortage of qualified investigators. Potential strategies to bolster research resources include an increase in public-private collaborations, and partnering with existing projects. It is also critical to change perceptions of the public and policymakers to as to the significance of children's oral health to their well-being and future adult health.

9. INCREASE PUBLIC AWARENESS OF THE IMPORTANCE OF CHILDREN'S ORAL HEALTH WITH STRATEGIC COMMUNICATION: BEYOND COSMETICS

- **Strategic message development is a key part of public awareness and policy change.** Lessons from new research in this field are that effective messages will be those that emphasize the importance of oral health for overall health and well-being in children and the adults they will become; and the availability of cost effective interventions. Messages that imply parents are to blame are counterproductive, as they lead to the impression that policy change is not needed – even when financial and system barriers to care are substantial. The public is generally opposed to insurers parceling out the body into parts and not covering certain kinds of care, including eyeglasses, hearing aids, mental health, and oral health related problems. A surprising finding is that persons other than dentists may make better spokespersons for children's dental care; potential spokespersons include pediatricians and school nurses. Since the public has few preconceptions in the area of children's oral health now, it will be important to provide consistent information and messages as the level of awareness of these issues rises. When the public thinks of oral health care they often consider it cosmetic, emphasizing the need to re-link oral care with health care.

10. TAKE HISTORICAL LESSONS ABOUT CHILDREN'S ORAL HEALTH TO HEART

- **Public perceptions of oral health can be traced historically through advertisements. (see Appendix, Prescott)** Early in the 20th century oral health is depicted as an important part of general health. As can be seen from a series of illustrations, this notion gradually changes to an emphasis upon the cosmetic characteristics of teeth. [24] Therefore, an analysis of advertisements for dental products can be used as a window into major trends in the messages about children's oral health that were transmitted to the American public since the early twentieth century.
- **School health clinics were successful when they were supported by the health professions and the public. (see Appendix, Meckel)** In the 1920's school health clinics served dental needs of poor and working families' children. These clinics came into being and survived as long as they did because they met four criteria essential to public health programs aimed at children. These criteria ensured them political, professional, and popular support; without this support school clinics eventually disappeared. First, the clinics had a clearly understood utility, at a time when oral health was viewed as part of health ("hygiene") and important to educational efficiency. Second, especially when they provided relief for painful dental conditions, they supplied services that parents could easily understand as benefiting their children. Third, in furnishing services not only to the poor but also to the working and even middle classes, they built a constituency large enough to guarantee social and political support. Fourth, they had relationship of enlightened self-interest with the dental profession whose support and lack of opposition was essential. Initially these clinics met the needs of oral health care providers – by providing entry level jobs during the Depression and when dental professionals were establishing themselves. As the profession became more successful in private practice in the post-war years, support for the school health clinics dwindled, and they eventually closed.
- **Implications for the present**. The historical perspective supports current communications research findings that children's oral health issues must be re-linked to overall health and taken beyond cosmetics. Second, a large enough constituency must be developed (through strategic communications and other means) to ensure political and popular support for policy change. And third, public policy on behalf of children must be developed with input and support from the dental and medical professions.

Conclusions and Recommendations*:*

The causes of disparities in children's oral health and access to care are many and complex, and substantial efforts will be required to eliminate these disparities. *The Face of a Child* represented the first large gathering of many communities of interest to discuss oral health in as broad context as possible, review findings of the Surgeon General's Report on Oral Health and the Surgeon General's Workshop on Oral Health, and suggest potential strategies for overcoming barriers to care and improving oral health outcomes. Key ideas from and potential policy changes can be distilled from the discussions held at the Workshop and Conference. Underlying these are strong moral arguments that support all groups responsible for the children's health and well being working together towards these common goals. Embedded in these arguments are the ideas that:

- society has an obligation to ensure that all children have basic health care
- oral health care must be part of that basic health care
- adults must advocate for children's health – including oral health - because of children's vulnerability, dependency, and importance to the future of society.

Strategies to achieve these goals should be developed from many vantage points. Asking *what best serves the child* will ensure the child and family remain the center of discussions.

Solutions to children's oral health problems will always be partial in a society that does not find a strategy for ensuring health coverage for all children all of the time. Automatic eligibility for comprehensive health care for children (including oral health care) would be the most powerful remedy to this problem. Conclusions and recommendations drawn from the Workshop and Conference include:

START EARLY, EMPHASIZE PREVENTION, INVOLVE PARENTS

1. **To prevent oral disease children must be reached early**. Ideally, parents should be reached when they are expectant. Caregivers' own oral heath needs and perceptions should be addressed at these times. Improving the oral health status of pregnant women helps underscore the importance of good oral care for their children, and provides an opportunity to discuss prevention of caries later. Such interventions can decrease the likelihood of transmitting cariogenic organisms, and may lower risk of low birth weight.

2. **An inter-professional recommendation** should be endorsed that promotes the importance of oral health by advancing an oral and dental assessment and care at age one.

3. **Oral health promotion must become a part of primary care**. Almost all infants and children are seen in primary care providers' offices where oral health promotion, anticipatory guidance, preventive oral health care, and appropriate dental referrals can begin. Risk assessment should be used to tailor care and referrals. Increased communication and collaboration between primary care and dental providers is needed to accomplish this.

4. **Water fluoridation** should be strongly encouraged and prioritized as primary prevention at community, state and national levels. This is a critical measure for children

who may not be accessing other preventive dental care. Dental sealants and topical fluorides are also effective, underused preventive strategies.

ASSURE A SUFFICIENT WORK FORCE AND PUBLIC HEALTH CAPACITY

5. **The number of dentists trained to treat children must increase**. Training additional pediatric dentists and public health dentists, and enhancing the undergraduate and graduate pediatric experiences of general dentists will help this problem.

6. **The numbers of allied professionals should be increased** to improve access to oral health counseling and preventive services. Maximally efficient use must be made of pediatric dentists, given the unmet need for pediatric dental care. Oral health counseling and simple preventive measures could be delegated to allied health professionals (and primary care providers). New provider models should be explored, especially where severe access problems exist.

7. **Ensure diversity of the workforce** to meet the needs of a changing population with special recruitment efforts such as loan-forgiveness programs, outreach to high school and undergraduate students, summer research/service opportunities, career day experiences, etc.

8. **Increase primary care provider involvement in oral health** to increase the pool of professionals available to promote oral health and intervene in oral disease.

9. **Improve the capacity of public health programs** to perform essential services, such as identifying community health problems, and developing policies and plans that support individual and community efforts to link people with personal and population-based services.

REVAMP HEALTH PROFESSIONAL and HEALTH EDUCATION

10. **Changes in medical education are needed urgently.** Undergraduate and graduate medical education, accreditation standards, and CME requirements must reflect the need to train medical professionals who understand the benefits of oral health, especially those providing pediatric, obstetrical, and family health care.

11. **Oral health competencies could be assured with a common core curriculum** for all health professionals caring for children. Develop risk assessment methods that are individualized, standardized, and adaptable for use by a variety of child health care providers and tailor treatment protocols to levels of individual risk.

12. **Involve all who work with children.** School nurses, educators, social workers, childcare workers, and others involved with the health and well-being of infants and children also need oral health education. Such information should be included in accreditation requirements, practice guidelines, and performance evaluations.

13. Dental education programs must prepare students to address societal needs by providing experience with low-income, minority, and special populations, including in community settings. An ethical and attitudinal shift and curricular changes will be needed to support a commitment to serving the needs of such populations. A special emphasis upon recruiting and training minority providers, faculty, and researchers is needed.

14. **Greater integration of dental, medical and other health professional education is needed** to promote interdisciplinary learning and understanding. Collaborative educational, research and service activities are needed to advance the oral health of children.

15. **Target oral health education** for K-6 health curricula.

INTEGRATE AND INNOVATE IN SERVICE DELIVERY

16. **Expand/explore innovative service delivery models** that integrate dental, medical and other health, educational and social services to better serve families and ensure coordination and communication among providers (e.g., at WIC Centers, Head Start programs, school, after-school and day care programs; neurodevelopmental preschools; Children's Hospitals, private practice settings, etc.)

17. **Promote interdisciplinary team based models of care for** all children with special health care needs that include oral health professionals.

EXPAND THE KNOWLEDGE BASE AND TRANSFER SCIENCE

18. **Coordinated oral and craniofacial research agendas should be developed** that address important areas in basic, clinical, health services, epidemiological areas, needed to reduce disparities in children's oral and craniofacial health and access to care. This should include research on educating professionals and the public in oral health.

19. **The translation of current science into practice must be emphasized**. Preventing children's oral health problems rests on current scientific evidence on the transmissibility of pathogenic organisms, and the need for medical (as opposed to surgical) management early before the caries process results in irreversible caries.

20. **Develop priorities** among many possible research areas. Address limited research resources by considering increasing private-publicly funded research programs, and collaborating with existing projects to add oral health components.

DEVELOP STRATEGIC COMMUNICATION PLANS

21. **Pubic awareness and communication strategies are essential**. All the above will require support from the public and policy makers and designation of resources. Public awareness must evolve to public engagement. Message crafting will be critical.

22. **Develop a National Oral Health Plan.** The Surgeon General has called for a national oral health plan to eliminate disparities in oral health and access to care for all Americans, especially children, who hold the antecedents to adult health. Such a plan will pull together all key stakeholders and ensure continued dialogue on improving children's oral health outcomes and access to care.

23. **Policy changes are urgently needed** to encourage service to underserved populations, address educational changes needed in health professional education, and assure that public health agencies have the capacity to provide essential public health services. Many strategies are possible, including loan forgiveness; GME funding for dental education, parity in Medicaid fees; other tax, payment or loan incentives; licensure change to encourage provider mobility, and acceptance of new service responsibilities.

24. **To support the above recommendations, consideration should be given to the following potential policy changes** that were discussed at the Workshop and Conference:

Federal

- Loan forgiveness for dental providers who serve in disadvantaged communities
- Graduate medical education funding ear-marked for dental graduate trainees
- Federal incentives for state Medicaid programs prioritizing oral health services
- Federal accountability of state Medicaid programs for access to oral health services
- Require an oral health component to all WIC and other programs serving infants and young children (as is already the case in Head Start and Early Head Start)
- Leverage integration of oral-general health in research initiatives and grant applications
- Increase dental services in federally funded community and migrant health centers
- Financial incentives for fluoridating community water supplies
- Reimbursement for health promotion/ disease prevention anticipatory guidance

State

- Hold state Medicaid program and legislatures accountable for adequate financial support of Medicaid and SCHIP dental programs;
- Consider revamping Medicaid administration, case management, and enabling services and make sure all who are eligible know of it.
- Hold state Medicaid programs accountable to certain practice guidelines and oral health performance measures, as in such Bright Futures or EPSDT
- Ensure continuous enrollment for children under Medicaid which has been proven to improve access to care
- Hold insurance companies accountable for covering all organ systems of the body
- Utilize definitions of medical necessity specific for children that include oral health care and other components of comprehensive care: require all insurers covering children to cover such care

- Leverage the organizational capacity of Medicaid, SHIP and other managed care to improve basic screening and preventive oral health measures. As permitted by professional practice laws, managed health care and primary care case management systems could integrate oral health screening, education and preventive care into primary pediatric care. Medicaid agencies and other institutional purchases could use contract specifications to purchase appropriate services and hold plans and providers accountable. [25]
- Examine state health professional practice laws and consider modifying to permit mid-level practitioners and primary care physicians to provide oral health counseling and simple preventive measures such as fluoride varnishes not under direct supervision of a dentist
- Monitor oral health in the child welfare system
- Require oral health component in services for CSHCN (through Title V agencies)
- Monitor use of dental sealants through Title V agencies
- Develop state-level legislation supporting water fluoridation
- Increase number of school nurses and include oral health in certification requirements
- Promote/mandate school prevention, education, screening and referral programs, and establish performance measures for such efforts
- Require oral health promotion standards for those providing day care for infants and young children (accreditation standards)

Local

- Consider dental case management models for difficult to reach populations
- Develop local coalitions to support water fluoridation and other community based collaborations to address disparities in children's oral health and access to care
- Encourage development of new practice models for dental, medical and other health providers

---

[1] U.S. Department of Health and Human Services. *Oral Health in America: A report of the Surgeon General-Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000. p 1; 5-6. http://www.nidcr.nih.gov/sgr/sgr.htm.

[2] US Public Health Service. *Healthy People 2000 Progress Report on Oral Health.* Washington, DC: US Department of Health and Human Services, 1995.

[3] US Preventive Services Task Force, 1996; 2nd edition
http://cpmcnet.columbia.edu/texts/gcps/gcps0071.html

[4] Newacheck PW, Hughes DC, Hung YY, Wong S, Stoddard JJ. The unmet health needs of America's children. *Pediatrics*. 2000; 105 (4 pt 2):989-997.

[5] Office of the Inspector General. *Children's Dental Services Under Medicaid: Access and Utilization.* San Francisco, CA: US Department of Health and Human Services, 1996.

[6] Kopelman L. M., ed. Do children get their fair share of health and dental care? *Journal of Medicine and Philosophy*, April 2001; 26 (2) in press.

[7] *The Face of a Child: Surgeon General's Conference on Children and Oral Health*, June 12-13, 2000, Washington, DC http://www.nidcr.nih.gov/sgr/children/children.htm

[8] Wehr E, Jameson EJ. Beyond health benefits: The importance of a pediatric standard in private insurance contracts to ensuring health care access for children. *The Future of Children*. 1994; 4:115-133.

[9] Stein, Ruth K. 1997. Health Care for Children: United Hospital Fund, New York

[10] Ireys, H., Wehr, E., & Cooke, R. (1999). Defining medical necessity: Strategies for promoting access to quality care for persons with developmental disabilities, mental retardation, and other special health care needs. Baltimore, Maryland: The National Policy Center for Children with Special Health Care Needs, School of Hygiene and Public Health, The Johns Hopkins University

[11] Social Security Act. Section 1905(r).

[12] Newacheck P, McManus M, Fox HB, Hung Y, Halfon N. Access to health care for children with special health care needs. *Pediatrics* 2000; 105: 760-766

[13] Surgeon General's Report on Children with Special Health Care Needs, 1985.

[14] American Cleft Palate-Craniofacial Association. 1993. Parameters for the Evaluation and Treatment of patients with Cleft Lip/Palate or other Craniofacial Anomalies. Cleft Palate-Craniofacial Journal, Vol. 30 (Suppl)

[15] Neff JM, Anderson G. 1995. Protecting children with chronic illness in a competitive marketplace, J Am Med Assoc; 274:1866-1869.

[16] Kopelman L. M., and M.G. Palumbo. 1997. The US Health care system: inefficient and unfair to children. *Am J. Law Med*. 23(2): 317-337.

[17] Bright Futures in Practice: Oral Health http://www.brightfutures.org/oralhealth/index.html

[18] Mouradian WE, Wehr E, and Crall JJ. Disparities in children's oral health and access to care. *JAMA* Nov 22/29, 2000; 284 (20): 2625-2631.

[19] Field MJ. Ed. *Dental Education at the Crossroads: Challenges and Change*. Washington, DC: National Academy Press, 1995:3-4. Institute of Medicine: Committee on the Future of Dental Education.

[20] Washington state guide for building oral health coalitions are available from NCEMCH, Oral Health Resource Center, 2000 15th St. North, Suite 701, Arlington, VA 22201-7802; (703) 524-9335 or www.ncemch.org

[21] http://www.healthysmilesforwi.org provides sealant programs guidelines from Wisconsin; http://fluoride.oralhealth.org/ for fluoridation information.

[22] Grantmakers in Health: http://www.gih.org/

[23] Center for Health Services Research and Policy. Sample purchasing specifications for Medicaid pediatric dental and oral health services. March 2000. Available at http://www.gwu.edu/~chsrp/

[24] These six illustrations are available from http://scriptorium.lib.duke.edu/adaccess/

1. "Nine Out of Ten Children" (1919) Ad # BH2412;
2. "American Teeth Impress our British Allies" (1918) Ad # BH2407;
3. "You Don't Have to Coax Them to Use It." (1918) Ad # BH2402;
4. "Shall They Suffer" (1922) Ad # BH2338;
5. "Society Girl Robbed" (1934) Ad # BH2168;
6. "She's Everybody's Babysitter . . . But Nobody's Baby" (1951) Ad # BH2376.

These illustrations are from the Ad*Access On-Line Project, John W. Hartman Center for Sales, Advertising & Marketing History, Duke University Rare Book, Manuscript, and Special Collections Library, http://scriptorium.lib.duke.edu/adaccess/

[25] Center for Health Services Research and Policy. Sample purchasing specifications for Medicaid pediatric dental and oral health services. March 2000. Available at http://www.gwu.edu/~chsrp/