



G I H

FILLING THE GAP:

STRATEGIES FOR IMPROVING ORAL HEALTH

ISSUE BRIEF NO. 10

BASED

ON A

GRANTMAKERS

IN HEALTH

ISSUE DIALOGUE

WASHINGTON, DC

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Foreword

As part of its continuing mission to serve trustees and staff of health foundations and corporate giving programs, Grantmakers In Health (GIH) convened, with the Children's Dental Health Project (CDHP), a select group of grantmakers and national experts who have made a major commitment to improving oral health. This Issue Dialogue – held on May 16, 2001, in Washington, DC – explored current challenges related to oral health in the United States, and highlighted public and private sector initiatives to overcome these challenges. The roundtable also illustrated current activities and future opportunities for foundations in the area of oral health.

This Issue Brief synthesizes key points from the day's discussion with a background paper previously prepared for Issue Dialogue participants. It includes quantitative and qualitative information on oral health as well as profiles of public sector, private sector, and grantmaker strategies for promoting improvements.

Special thanks are due to those who participated in the Issue Dialogue but especially to moderators, presenters, and discussants: Burton L. Edelstein, executive director, Children's Dental Health Project; Tracy Garland, executive director, Washington Dental Service Foundation; Shelly Gehshan, program director, National Conference of State Legislatures; Michael Helgeson, CEO, Apple Tree Dental; Lauren LeRoy, president and CEO, Grantmakers In Health; William Maas, director, Division of Oral Health, Centers for Disease Control

and Prevention; Kim Moore, president, United Methodist Health Ministry Fund; Jane Pearson, associate director of programs, St. Luke's Health Initiatives; Sally Richardson, associate vice president and executive director, Center for Healthcare Policy and Research, Robert C. Byrd Health Sciences Center, West Virginia University; Beatriz B. Roppe, director of health promotion, Colaborativo SABER; Joel Rosenquist, program associate, The Robert Wood Johnson Foundation; Henrie Treadwell, program director, W.K. Kellogg Foundation; and Karen Voci, vice president for special projects, The Rhode Island Foundation.

Malcolm Williams of GIH's staff planned the program and wrote the initial background paper with editorial assistance from Anne Schwartz. Larry Stepnick of The Severyn Group, Inc. skillfully synthesized the background paper with key points made at the meeting. Lauren LeRoy and Leslie Whitlinger also contributed to the final report. GIH gratefully acknowledges the advice and editorial assistance of Burton Edelstein of the Children's Dental Health Project.

This program was made possible through the support of the St. Luke's Health Initiatives, Sierra Health Foundation, the United Methodist Health Ministry Fund, and Washington Dental Service Foundation to whom GIH extends its thanks and appreciation. Funding was also provided through a cooperative agreement with the federal Health Resources and Services Administration.

About GIH

Grantmakers In Health (GIH) is a nonprofit, educational organization dedicated to helping foundations and corporate giving programs improve the nation's health. Its mission is to foster communication and collaboration among grantmakers and others, and to help strengthen the grantmaking community's knowledge, skills, and effectiveness. Formally launched in 1982, GIH is known today as the professional home for health grantmakers, and a resource for grantmakers and others seeking expertise and information on the field of health philanthropy.

GIH generates and disseminates information about health issues and grantmaking strategies that work in health by offering issue-focused forums, workshops, and large annual meetings; publications; continuing education and training; technical assistance; consultation on programmatic and operational issues; and by conducting studies of health philanthropy. Additionally, the organization brokers professional relationships and connects health grantmakers with each other as well as with others whose work has important implications for health. It also develops targeted programs and activities, and provides customized services on request to individual funders. Core programs include:

- **Resource Center on Health Philanthropy.** The Resource Center monitors the activities of health grantmakers and synthesizes lessons

learned from their work. At its heart are staff with backgrounds in philanthropy and health whose expertise can help grantmakers get the information they need and an electronic database that assists them in this effort.

- **The Support Center for Health Foundations.** Established in 1997 to respond to the needs of the growing number of foundations formed from conversions of nonprofit hospitals and health plans, the Support Center now provides hands-on training, strategic guidance, and customized programs on foundation operations to organizations at any stage of development.
- **Building Bridges with Policymakers.** GIH helps grantmakers understand the importance of policy to their work and the roles they can play in informing and shaping public policy. It also works to enhance policymakers' understanding of health philanthropy and identifies opportunities for collaboration between philanthropy and government.

GIH is a 501(c)(3) organization, receiving core and program support from more than 175 funders annually.

About



The Children's Dental Health Project (CDHP) is a nonprofit organization that promotes public and clinical policies to improve health and increase access to comprehensive dental care for children and other vulnerable populations by engaging and empowering policymakers, health care providers, and advocates.

CDHP uniquely combines the strengths of a think tank, an advocacy organization, and strategic consultant to benefit all children and other vulnerable populations. As a think tank, CDHP offers technical assistance and objective analytic research services dealing with program evaluation, primary data analyses, study consultation, continuing professional education, and legislative testimony. As an advocacy organization, CDHP collaborates with state and federal legislators, governmental agencies, and private health and dental organizations on the development of joint projects, meetings, legislative proposals, and study consultations to shape and promote policies that benefit children and all vulnerable populations. As a strategic consultant, CDHP collaborates with legislators, gov-

ernmental and private organizations, and individuals to enable them to effectively navigate the political process.

CDHP would like to acknowledge the support of the W.K. Kellogg Foundation for its ongoing programs.

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Introduction

Oral health is a critical component of overall health and well-being. Diseases of the mouth can reduce the quality of life for those who are afflicted, damaging the ability to speak, chew, and swallow; can cause significant acute and chronic pain resulting in lost work and school days; and can contribute to low self-esteem with implications for success at school and work.

Although scientific and medical advancements over the last hundred years have dramatically improved health and health care, the health care system remains imperfect, and improvements have not been equitably shared by everyone. Oral health reflects these disparities. Tooth decay (caries) is a leading childhood disease, and diseases of the mouth continue at high rates among low-income populations and racial and ethnic minorities. Because the two most common diseases of the mouth – caries and periodontal disease – are progressive throughout life, millions of older Americans also have serious oral health problems.

There are also problems unique to the delivery of dental care that contribute to poor oral health. Dental care has remained largely separate from the overall health care system. The dental care safety net has a poor foundation: Oral health services are less often covered by private insurance, publicly provided insurance is inadequate to meet the needs of the most vulnerable populations, fewer providers are available to serve the poor, and community-based preventive and treatment programs are not widely available. Additionally, millions of Americans still do not have access to one of the most important advances in disease prevention: fluoridated water.

The problems of oral health and dental care, however, are not insurmountable. Improvements can be made by raising awareness of these issues among the public and policymakers; building the workforce, programs, and facilities to address underserved populations; removing recognized cultural, logistic, and administrative barriers to care; and promoting new strategies to prevent and manage oral diseases. Additionally, efforts to effectively integrate oral health promotion and dental care into existing health care, social service, and educational programs for high-risk populations are keys to eliminating ongoing suffering from preventable conditions.

The release of *Oral Health in America: A Report of the Surgeon General* in June 2000, the U.S. Surgeon General's first report on the topic, was an important step toward improving oral health. The report documents the growing oral health crisis in America and outlines a framework for addressing it. It has also increased public awareness of the importance of oral health to overall health, and sparked interest in both the public and private sectors in addressing the issue.

Such compelling evidence on the need for action led Grantmakers In Health (GIH) and the Children's Dental Health Project (CDHP) to convene *Filling the Gap: Strategies for Improving Oral Health* to stimulate greater interest among foundations in this important issue. It brought together grantmakers, policymakers, and other experts to highlight successful strategies, to discuss the various aspects of improving the delivery of dental care, and to help grantmakers determine their organization's role with respect to oral health funding.

This Issue Brief synthesizes information from a background paper written in preparation for

the Issue Dialogue with the presentations and discussions that took place at the meeting. While recognizing the prevalence of bacterial infections and oral cancers, and the potentially devastating consequences of hereditary conditions such as cleft lip and palate, this report does not focus on one disease or condition. Instead it focuses on the systemic problems of dental health care that lead to poor oral health status in many subpopulations.

The Issue Brief is organized into two sections. The first provides important background information on oral disease, including a review of the burden of disease for society's most vulnerable populations (children, the elderly, minorities, and low-income families), and identification of the unique factors that contribute to the oral health crisis.

The second section illustrates a number of strategies for improving oral health. It begins by presenting a conceptual framework that categorizes various interventions into three distinct types of efforts – those aimed at improving oral health status, those focused on increasing access to dental care, and those oriented toward improving and maximizing the impact of public policy. Lastly, the current activities of federal and state governments, as well as those of the private and nonprofit sectors, including foundations, are highlighted.

Oral Disease

The mouth is not only a structure where various diseases occur, but it is also a mirror of the health of the rest of the body. The most prevalent problems that arise in the mouth, caries and periodontal disease, can be attributed to bacterial infections. When left untreated, they can damage teeth and their adjacent structures. These common conditions can lead to serious infections of the jaw and other attendant areas of the head and face.

The consequences of even common oral disease are significant. Untreated disease can result in:

- functional problems, such as difficulty eating, speaking, or attending to learning;
- pain, which in turn causes distraction and dysfunction;
- problems in growth and development, including failure to thrive among toddlers because of poor nutrition;
- problems with social behavior, as oral health problems are linked to low self-esteem, teen delinquency, and adolescent pregnancy;
- lost school and work days; and
- systemic health effects, including problems in the head and neck, cardiovascular disease, aggravation of diabetes, and perhaps significant contribution to preterm birth and associated low birthweights (NIDCR 2000).

A Preventable Condition

Common diseases of the mouth such as caries and periodontal infections are largely preventable through low-cost and low-tech interventions. Fluoride in its various forms is particularly effective in combating dental caries. In fact, the introduction of fluoride into public water supplies has been hailed as one of the most profound achievements in public health during the 20th century. Fluoridated water has substantially decreased the number of people

ORAL HEALTH AND OVERALL HEALTH

The relationship between diseases of the mouth and other illnesses is not completely clear, but associations have been documented. For example, infections in the lungs and heart have been linked to bacterial infections in the mouth, which can be transferred to other structures of the body. When bacteria travels from the mouth into the bloodstream, conditions such as pneumonia and infective endocarditis can arise. Conversely, illness elsewhere in the body can lead to problems in the oral cavity. HIV, for example, can destroy the body's immune system, leaving the mouth vulnerable to conditions such as oral candidiasis (raised fungal lesions). In fact, oral candidiasis is often the first sign of HIV infection in normally healthy adults. In addition, treatments for illnesses such as cancer tend to weaken many of the body's systems, including the structures of the mouth, which can lead to more serious mouth conditions (NIDCR 2000).

with tooth decay and has helped a generation of Americans maintain their teeth for a lifetime.

At the turn of the last century, most people could expect to lose all of their teeth (a condition called edentulism) by the age of 45.

Today, nearly 50 years after the introduction of fluoridated water supplies and other prevention strategies, most Americans can expect to keep all of their teeth throughout life (NIDCR 2000).

Along with fluoride, there are other methods of prevention. Personal health behaviors – including consistent and effective oral hygiene practices; positive eating patterns; and regular professional care, including teeth cleaning and application of sealants – are also key factors for preventing caries and the initiation and progression of periodontal disease.

Overall Burden of Disease

Although oral health status is improving across the population as a whole, millions of Americans, young and old, suffer from conditions such as tooth decay, periodontal disease, oral cancers, and oro-facial trauma that can be minimized through control of risk factors. In fact, the Surgeon General's report documents a number of disturbing trends in the burden of

oral diseases. Severe periodontal disease, in which the gum detaches from the tooth, affects about 14 percent of adults between 45 and 54. In addition, 22 percent of all adults reported some form of oral facial pain in the past six months. As a result of these problems, adults lose more than 164 million hours of work each year (NIDCR 2000).

The burden of disease, however, is concentrated in the most vulnerable populations including the elderly, children, and minorities. Oral health problems are particularly severe among low-income populations.

Children's Oral Health

Children carry a disproportionate burden of untreated dental disease. Dental caries is the most common chronic childhood disease, affecting 18 percent of 2- to 4-year-olds, more than half of children between 5 and 9, and 61 percent of 17-year-olds (HHS 2000b). In 1996, only 42 percent of all children and 15 percent of low-income preschoolers obtained professional care (Edelstein et al. 2000).

While inattention to oral health is responsible for some of the problems children face, developmental problems and injuries add to the bur-

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have too much dento-
oro-craniofacial disease
that is consequential yet
largely preventable.*

BURTON EDELSTEIN,
CHILDREN'S DENTAL
HEALTH PROJECT,
MAY 2001

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den. Developmental problems including cleft lip, cleft palate, and other craniofacial developmental disturbances create a significant life-challenge for affected children and their families. Injuries to the head, mouth, and neck are common in children and are a major public health problem. Prevention efforts to reduce injury can significantly reduce oral health problems.

Focusing on the oral health status of children is important for several reasons. Without attention to oral health, the quality of life of children will suffer. Untreated dental caries lead to pain, interference with eating, overuse of the emergency room, poor self-esteem, and lost school time. Concentrating on prevention at an early age can also help alleviate oral diseases in adults.

Oral Health Among the Elderly

Poor oral health is a significant problem among the 39 million elderly Americans. Among adults 65 to 74 years old, 23 percent have severe periodontal disease, and about 30 percent of adults 65 and older are edentulous. Oral cancers are also a significant problem later in life. About 30,000 Americans, mostly elderly, are diagnosed with oral cancers and 8,000 die of these diseases each year (NIDCR 2000). The impact of oral disease in the elderly will only increase over time, as the number of this group is projected to double to 70 million by 2030 (U.S. Census Bureau 2001a).

There are a variety of reasons for oral problems among the elderly. Poor dental care throughout life can lead to severe dental problems in old age. As people age they also develop other health conditions, such as diabetes, that can exacerbate existing oral diseases or create new problems. In addition, many prescription and over-the-counter medications taken by the elderly have at least one oral side effect, such as dry mouth, which can increase the risk of oral disease. As a result, oral health diagnosis and

care planning for elderly individuals are more complex.

Nursing homes are a particular concern. About 5 percent of Americans 65 and older live in long-term care facilities. Overall, these facilities have serious problems in maintaining the oral health of their residents. They may lack the right equipment, or staff may be inexperienced in handling geriatric oral health problems. In addition, residents may have other health conditions that can complicate dental care. Moreover, it may be impossible for a frail, elderly individual to travel off-site for dental care (Helgeson 2001).

Dental care for the frail elderly represents a particular concern. Most of these individuals are homebound or live in nursing homes. Unfortunately, the frail elderly face a significant number of barriers to appropriate dental care. Dental care facilities are generally inadequate for this population, as they often do not allow access for patients in wheelchairs, and staff are not properly trained to care for frail, elderly patients. Many frail, elderly individuals lack the financial resources to pay for care on their own, yet public insurance provides little coverage. Finally, many of the frail elderly lack appropriate knowledge and expectations with respect to oral health. They may believe that tooth loss is inevitable. Dental and medical professionals may reinforce these beliefs, although attitudes are changing rapidly.

Oral Health in Minorities

Disparities in health among minorities have been well documented. In general, African Americans, Hispanics, Asian or Pacific Islanders, and American Indian or Alaska Natives have poorer health and shorter lives than whites. So it is no surprise that minorities also have the poorest oral health. For some minority groups, the greater prevalence of diabetes, poor nutrition, and poor health behav-

APPLE TREE DENTAL: ADDRESSING THE DENTAL HEALTH NEEDS OF THE FRAIL ELDERLY

The frail elderly are among the most difficult populations to serve. One organization, Apple Tree Dental – a nonprofit, private sector organization located in Minneapolis, Minnesota – is developing innovative ways of reaching this population.

A critical component of Apple Tree's approach is its conscious effort to engage the community. Apple Tree is run by an interdisciplinary board of directors made up of key constituents, including both dental professionals and other individuals with the means and influence to change public policy. Apple Tree is financed through the government, the private sector, and the nonprofit sector, including grants from foundations.¹ It is a privately managed organization that strives to provide accountable programs for serving the frail elderly within a rationally defined service area that is not limited to the artificial boundaries of a state or county.

The core of Apple Tree's services is an innovative delivery system that includes four full-service mobile dental offices that provide care to 90 nursing homes and to rural communities surrounding Minneapolis. The equipment is delivered to the site the evening before, allowing the clinic to be ready for operation early the next morning. The dental staff is freed to concentrate on dentistry; productivity levels are as high as in a traditional office. The mobile nature of the office allows for much greater efficiency (and hence lower per unit costs) than if offices were placed in each nursing home. The quality of care also has the potential to be much better, as it would be prohibitively expensive to duplicate the level of services offered in the mobile clinic at each site.

Patients enjoy the experience as well. Not only is care provided close to home, but the experience is very similar to what they would receive in a private office.

The mobile clinic has been so successful that Apple Tree is working on a “next-generation” model that they hope will rival or exceed the facilities found in a private office.

iors such as smoking and alcohol abuse can exacerbate other oral health problems and create new ones.

The oral health problems of minorities will only increase as the minority population grows. Recent census data reveal that the population growth of minorities is outpacing previous expectations. Today, minorities make up about 25 percent of the population. Hispanics surpassed African Americans as the largest minor-

ity group for the first time in 2000, beating earlier predictions by five years (U.S. Census Bureau 2001b).

Disparities in oral health among minorities begin early in life. As a result, minority children are placed at an increased risk for developing problems. For American Indian or Alaska Native children with poor oral health, the quality of life effects are devastating: one out of three report missing school, one out of four

¹Foundations funding Apple Tree Dental include the Bemis Company Foundation, Otto Bremer Foundation, Bush Foundation, Cargill Foundation, Moses Cone-Wesley Long Community Health Foundation, Dakota Medical Foundation, Deluxe Corporation Foundation, Edwards Memorial Trust, Fargo-Moorhead Area Foundation, Frechette Family Trust, General Mills Foundation, The Robert Wood Johnson Foundation, 3M Foundation, Mardag Foundation, The Medtronic Foundation, The Minneapolis Foundation, Minnesota Mutual Foundation, Oral Health America Foundation, E.M. Pearson Foundation, The Prudential Foundation, and The James R. Thorpe Foundation.

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*You cannot find an ethical
 argument that does not
 support prioritizing children's
 health care, even in a time of
 dwindling resources.*

WENDY MOURADIAN,
 NATIONAL INSTITUTE
 OF DENTAL AND
 CRANIOFACIAL RESEARCH,
 MAY 2001

avoid laughing or smiling, and one out of five avoid meeting other people because of the way their teeth look (NIDCR 2000).

Dental caries is common among minority children. A review of recent studies found that:

- Mexican-American children between 12 and 23 months are more likely to experience dental caries than are children in other racial or ethnic groups;
- 24 percent of non-Hispanic, black children two to four years old experience dental caries compared to 15 percent of an identical group of whites, while Mexican-American children in the same age group are more likely to have dental caries in their primary teeth (treated or untreated) than are either white or black children;
- Asian or Pacific Islander children within the Head Start program had the highest prevalence of early childhood caries in 1993 and 1994;²
- 71 percent of Asian or Pacific Islander children between six and eight in California had untreated dental caries, with a significant proportion requiring urgent dental treatment; and
- American Indian children six to eight years old have twice the rate of dental caries of other groups, and the rate of untreated dental decay in this age group is often two to three times higher than that for whites (NIDCR 2000).

Oral health disparities among minorities affect adults as well as young children. African Americans are more likely than whites to have untreated dental caries or missing teeth, and have the highest incidence rate of oral and pharyngeal cancers in the United States. In addition, between 1989 and 1995, the five-year

survival rate for oral cancer among blacks was 34 percent – substantially lower than the 56 percent figure for whites. American Indian or Alaska Native populations have much greater rates of dental caries and periodontal disease in all age groups than the general population. Fewer Mexican-American adolescents are free of dental caries than are either black or white children, and the nasopharyngeal cancer incidence and mortality rates among Chinese and Vietnamese populations are higher than those of other groups (NIDCR 2000).

Socioeconomic Status

Socioeconomic factors such as income and education also play an important role in oral health. While the role that poverty and low educational attainment play in reducing health status is not unique to dental care, their contribution to poor oral health deserves discussion.

Income, in fact, is a major determinant of oral health status. Children and adults in low-income families have the greatest oral health problems and receive the least amount of care. Compared to children who are not poor, low-income children are twice as likely to experience caries and twice as likely to go without care (NIDCR 2000). Low-income children under the age of 19 account for 80 percent of childhood tooth decay (Reforming States Group 1999). Similarly, half of the decayed teeth of low-income adults have never been filled, and one-third of low-income adults 35 and older are edentulous (NIDCR 2000).

Race and poverty combine to create further problems. Among Mexican Americans, for example, individuals in families with annual incomes of less than \$20,000 are over three times more likely to have untreated decay and

²Early childhood caries, previously known as baby bottle tooth decay, affects toddlers and preschoolers by destroying the front teeth first and progressing to the back.

greater than four times more likely to have severely decayed teeth than are their higher income counterparts (NIDCR 2000).

Education is also an important determinant of oral health. Those without a high-school education have lower rates of dental visits and higher levels of periodontal disease than their more educated counterparts. Those with less education are also less likely to have medical and dental insurance (NIDCR 2000).

Factors Affecting Oral Health

A variety of factors contribute to the poor state of oral health in the nation. Oral health status is affected by financing, access to services, and individual knowledge and behavior regarding appropriate care. There are serious barriers to care in publicly provided insurance programs. The number of providers is declining, creating a shortage of qualified dentists in some areas, particularly among specialty care providers and minority practitioners. Although fluoridation has been successfully implemented in many communities, more than 100 million Americans still do not have access to water containing enough fluoride to protect their teeth. Because the system for financing and delivering dental care has evolved separately from the medical care system, there are also barriers that arise from care coordination between primary care medical and dental providers.

Separate Financing and Care Delivery

Unlike the medical care system, dental care consists primarily of general practitioners in small or solo practice. Among all dentists, about 94 percent work in the private sector, 92 percent practice alone or with one other dentist, and 80 percent are generalists. Compared to physicians, dentists do not contract as widely with third-party payers or other providers and rarely utilize hospitals or other common facilities (Crall and Edelstein 2001). Only about one-third of dentists participate in any type of managed-care program, typically nonrisk, modest discount plans (Reforming States Group 1999).

Insurance coverage for dental care is also less common and provided separately from that of medical care. Only about half of the U.S. population has third-party dental coverage (Edel-

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*Because the dental safety net
is so small and fragile,
improvements in access must
engage the broad network of
private dental practitioners in
order to be widely effective.*

BURTON EDELSTEIN,
CHILDREN'S DENTAL
HEALTH PROJECT,
MAY 2001

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stein 2001a). Employer-based insurance, while generally comprehensive in service coverage, typically provides higher benefits for preventive than repair services, involves significant out-of-pocket costs, and puts annual and lifetime limits on total benefits (Crall and Edelstein 2001). More than 108 million Americans are without dental coverage (Oral Health America 2000). This includes 23 million of the nation's 72 million children (NIDCR 2000). In addition, publicly provided health insurance offers little relief from gaps in coverage. Medicaid does not offer comprehensive dental coverage for adults; fewer than half of state Medicaid programs offer both emergency and basic coverage (GAO 2000). Medicare, the primary source of insurance coverage for the elderly, does not cover routine dental care such as cleanings, fillings, tooth extractions, or dentures (HCFA 2001).

The safety net for comprehensive dental care is small and fragmented. Unlike the medical safety net, there are few public health facilities that provide comprehensive dental care. Less than half of community and migrant health centers provide any dental services (Edelstein 2001b). Even though the nation's 55 dental schools operate free or reduced-cost clinics, there are not enough schools to provide for the dental care needs of every community. School-based and school-linked health programs are less likely to provide dental care than medical care, and local health department clinics are less likely to provide dental services than general pediatric services (Association of Maternal and Child Health Programs 1999). While community hospital emergency rooms constitute the backbone of the medical safety net for urgent care, they often only provide palliative care to those who present with acute dental symptoms.

Barriers to Care in Public Insurance Programs

Medicaid and the State Children's Health Insurance Program (SCHIP) are the major

sources of financing of dental care for low-income adults and children. Each offers comprehensive dental benefits for children. Under the Medicaid Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) program, all states must provide comprehensive dental coverage to children, including emergency, preventive, diagnostic, restorative, and more complex care when required. Also under EPSDT, state Medicaid programs must provide dental examinations and pay for indicated treatment regardless of whether the treatment is otherwise covered under the state Medicaid plan. SCHIP was created in 1997 to extend health insurance to low-income children living in families that are not eligible for Medicaid. Although there is no requirement that states offer comprehensive dental benefits under SCHIP (unless a state chooses to expand its Medicaid program), all but one SCHIP program do so (GAO 2000).

Although both programs offer comprehensive coverage, they have not reached the majority of covered children with dental care needs. Several factors restrict access to care for children in Medicaid and SCHIP, including low rates of utilization, provider participation, and enrollment.

Utilization of dental services in public insurance programs is low. Children covered under Medicaid do not visit dentists as frequently as their higher-income counterparts. According to data provided by the Centers for Medicare and Medicaid Services (CMS) (formerly the Health Care Financing Administration), between 1992 and 1999, only 21 percent of children enrolled in Medicaid, on average, obtained even a single dental visit in a year (Edelstein 2001b).

Low enrollment also contributes to poor oral health among children. In 1996, approximately 4.7 million children who were eligible for Medicaid were not enrolled in the program.

In 1999, only 13 percent of the 10 million children eligible for SCHIP were enrolled (NIDCR 2000).

Another barrier to improving dental care under publicly funded insurance is the low participation in public programs by dentists. In general, these programs have been characterized as underfinanced, burdensome, and at variance with contemporary dental practice guidelines. Participation in Medicaid programs often places extreme administrative burdens on dentists, including the use of unique claim forms, prior authorization requirements, and cumbersome eligibility verification (Reforming States Group 1999). Low payment rates are also a concern for dentists. In general, Medicaid pays significantly less than other payers for dental services.

The attitudes of dentists toward Medicaid patients also affects participation and contributes directly to limited dental access of low-income populations. Dentists may shy away from Medicaid patients for a variety of reasons. Low-income patients may be perceived as less educated about the use of prevention methods and less compliant with professional recommendations. They may have difficulty making and keeping appointments because of a lack of access to child care and transportation. In addition, many low-income patients seek medical treatment in emergency rooms and health centers where appointments are not necessary and therefore may be less accustomed to systems that rely on fixed appointment times. Missed appointments are particularly troubling to dentists because they are costly to small practices. Unlike medical practices, dentists generally perform surgical or rehabilitative care in their offices and cannot fill missed appointments with waiting patients (Gehshan et al. 2001).

The Dental Workforce

Another major problem in dental care delivery stems from current dental workforce trends. The dentist-to-population ratio is in decline and the absolute number of dentists is expected to get smaller as the number of retiring dentists exceeds the number of new graduates. Dentists are also maldistributed within the U.S. population, and rural sites are increasingly lacking dental providers. Providers are at the core of the dental health care safety net, but few dentists are trained in pediatric and geriatric dentistry, and the already low minority dentist population is shrinking (NIDCR 2000).

Currently, there are few alternatives for addressing the nation's dental workforce problems. The timeline for training additional dentists is very long and there are fewer opportunities for engaging midlevel practitioners in order to increase access than in medicine. Registered dental hygienists are trained to provide only preventive services to patients. In a handful of states, expanded function dental assistants (EFDAs), work chairside with dentists to provide some aspects of restorative care and thereby increase the dentists' productivity. Thus, there is not a midlevel dental provider analogous to the nurse practitioner or physician's assistant, and little consideration has been given in policy or professional circles to creating such a new professional role.

A number of efforts are also under way to explore how physicians and nurses can be enlisted to improve preventive counseling, risk assessment, coordinated referrals to dental care, and even some basic preventive treatments. Dentists, however, often oppose expanding the role that other providers play in diagnosing and treating dental disease and express concern about their training and competence to do so without further fragmenting care. They also raise concerns that expanding the role of other

providers could reduce practice opportunities for dentists.

While it is not clear whether the nation is approaching a shortage of dentists overall, recent data show that the number of dentists is shrinking relative to the population. Between 1985 and 1996, the dentist-to-population ratio dropped by 23 percent in the United States. This ratio may continue to slide in the future, as the number of enrollees in dental school declined between 1975 and 1997 (Bureau of Health Professions 2001). Perhaps most critical today, the American Dental Education

Association reports that there are an estimated 400 full-time dental faculty vacancies in the nation's dental schools (Haden et al. 2000).

These declines came as a result of several changes in dental education during the 1970s. In 1976, a report published by the Carnegie Council on Policy Studies in Higher Education suggested that the increase in the supply of physicians over the 1960s was not eliminating geographic health disparities. While the report was not directed toward dental education, Congress nevertheless responded by reducing support for health professions training overall

USING NONDENTISTS TO INCREASE ACCESS

The Issue Dialogue included a healthy debate on the merits of using nondentists to increase access to dental services. One approach is to use general medical providers – pediatricians, primary care providers, nurse practitioners, and others – to take on responsibility for certain aspects of dental care, ranging from education to actual provision of services. Wendy Mouradian, M.D., Chair of the U.S. Surgeon General's Conference on Children and Oral Health, suggested that it was an “easy sell” to get pediatricians and primary care providers interested in oral health, as the vast majority believe it is part of their job. Yet the average pediatrician has had less than two hours of training in oral health. Preliminary data from the state of North Carolina suggest that limited additional training can be effective in preparing providers to make appropriate assessments of when children need more specialized care.

Another strategy being promoted is the use of expanded function dental assistants (EFDAs), who increase dentists' productivity by working chairside with dentists in providing a patient's restorative dental care. Although EFDAs cannot function independently because they cannot perform the full range of techniques to complete any one dental service – such as injecting local anesthesia or cutting teeth – anecdotal evidence suggests that, where used, they have shown promise in helping to substantially expand productivity. Some states recognize EFDAs while others do not.

Foundations may be in a position to play an important role in encouraging the use of nondentists to address provider shortages. Foundations can convene key stakeholders in a local area to determine the appropriate role for general medical providers, social service agencies, educators, and others to promote coordinated programs and policy changes to support access innovations.

As Dr. Mouradian noted, “This is a walk that we have to take together. It's a model of shared responsibility for children's oral health among all professionals. If we put the child and family first, we won't get into a shooting match that ‘this is my scope of practice’ or ‘that's your scope of practice,’ but instead we'll focus on what makes sense and do it together.”

including dental education (IOM 1995). In response to a potential oversupply of dentists, states in the 1980s also reduced their support of dental schools (Gehshan et al. 2001). As a result, between 1985 and 1995, six dental schools closed which together had enrollments equivalent to 20 average-sized schools (IOM 1995). At the same time, many schools reduced class sizes in response to the cessation of federal support (Valachovic 1999).

There are also too few providers to serve special populations. Only 2.5 percent of all dentists are trained in pediatric dentistry (Crall and Edelstein 2001). Pediatric dentistry is a specialty that requires two years of postdoctoral training and practice. Because pediatric programs must deal with many of the same pressures facing overall dental education, and because there was a transient belief among dental educators that the problem of childhood caries had been eliminated, the number of new pediatric dentistry students declined during the 1980s and early 1990s (Crall and Edelstein 2001). Although there have been some encouraging increases in pediatric dental students recently, the numbers still fall far short of the need for these specialists. In addition, more than 25 percent of dental schools have no geriatric clinical component, meaning that relatively few dental students have an opportunity to practice with elderly patients (Helgeson 2001).

Finally, there is a lack of diversity among dental providers. The proportion of underrepresented minority dentists (African American, Hispanic, or Native American) is far smaller than their proportion of the population. In 1996, only 12 percent of the population of active dentists were underrepresented minorities. Low minority representation among dentists is particularly acute within the American Indian and Alaska Native communities, where there is one dentist for every 35,000 members of the population.

The already low number of minority dentists is also dwindling at a time when a large number of minority dentists are nearing retirement age. Compounding this is the fact that over the last two decades, less than 10 percent of total dental school enrollment has been comprised of underrepresented minorities (Brown et al. 2000).

This shortage of minority providers has important implications for the care of minority patients. Minorities often prefer to receive treatment from members of their own ethnic group, as these practitioners are better able to meet their cultural needs and increase their comfort level with the health care system. In fact, approximately 62 percent of African-American dentists' patients are African American and about 46 percent of Hispanic dentists' patients are Hispanic (Brown et al. 2000).

Lack of Access to Fluoridated Water

Access to fluoridated water is another important component of promoting dental health. The positive benefits of fluoride are well documented. Fluoride not only reduces the incidence of dental caries, but it can also reverse the progression of cavities. Moreover, the per capita cost of water fluoridation over an entire lifetime can be less than the cost of one dental filling, making fluoridation a cost-effective method of preventing dental disease (NIDCR 2000).

Despite the effectiveness of fluoridation, however, 108 million Americans do not have access to fluoridated water. Of the 50 largest U.S. cities in 1996, there were 7 that did not have a water fluoridation system. In 1992, only 21 states met the Healthy People 2010 goal of having 75 percent of each state's population on public water systems served by a fluoridated water supply. Altogether, 40 percent of the population reside in communities that have

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*The per capita cost of water
 fluoridation over an entire
 lifetime can be less than the
 cost of one dental filling.*

suboptimal levels of fluoride in the communal water supply (NIDCR 2000).

One of the barriers to fluoridating many community water supplies is a small but vocal movement against water fluoridation. Opponents believe that fluoridated water can cause cancer, bone fracture, Down's syndrome, heart disease, kidney damage, lesions on the brain, or increased levels of lead in children's blood. Their opposition has led some local policy-makers to reconsider use of fluoridated water supplies to prevent tooth decay, despite the National Institutes of Health's statement that there is no credible scientific evidence to link fluoridated water to these conditions (NIDCR 2001).

Individual Behavior

Behavior and lifestyle can be major contributors to oral health. Daily oral hygiene, proper diet and nutrition, and avoidance of substance abuse all play an important role in the condition of the mouth. Healthy behaviors – in combination with regular brushing, rinsing with fluoride mouthwashes, and flossing – can prevent the buildup of tooth-decaying bacteria in the mouth and reduce the risk of oral cancers. Unfortunately, however, a lack of knowledge combined with high levels of smoking, alcohol use, and poor nutritional habits have had a negative impact on oral health.

Lack of Knowledge

Knowledge about key risk factors and their relationship to oral health is low. In 1990, less than half of individuals between 18 and 24 understood that fluoridated water was a valuable prevention method. In 1994, only 7 percent of respondents in one study correctly identified fluoride as the most effective prevention method. Only about 32 percent had heard of dental sealants, and, of that group, only 75 percent understood that they are a method of prevention (NIDCR 2000).

Smoking and Use of Alcohol

Tobacco use is a leading risk factor for periodontal diseases. Tobacco and alcohol can also work alone or synergistically to increase the risk of oral and pharyngeal cancers. Heavy smoking and drinking over a long period of time are thought to account for 75 percent to 90 percent of all oral and pharyngeal cancers in the United States (NIDCR 2000). Despite the availability of smoking cessation tools, large-scale public education efforts, and increased attention to underage tobacco use, millions of Americans continue to smoke and use smokeless tobacco (CDC 2001). Recent data suggest that minorities are particularly likely to smoke. Among men, the prevalence of smoking in the past month for American Indian or Alaska Natives is more than twice that for whites (NCHS 1999). The percentage of women who reported smoking during pregnancy in 1997 was also highest among American Indian and Alaska Natives (NIDA 1998).

Poor Nutrition and Eating Habits

Poor nutrition impairs the normal growth, development, and maintenance of the body's tissues and organs. It also reduces the ability of the body to heal itself. A healthy diet includes the consumption of an appropriate amount of fruits, vegetables, and grains, and deriving relatively few calories from fat. Americans, however, have poor eating habits. Between 1994 and 1996, among all Americans two years and older:

- 67 percent derived more than 30 percent of their daily calories from fats, with 64 percent consuming more than 10 percent of daily calories from saturated fat;
- only 3 percent consumed at least three daily servings of vegetables;
- only 7 percent consumed at least six daily servings of grain products; and
- 72 percent consumed less than the recommended two daily servings of fruit (HHS 2000a).

Poor nutrition is a particularly acute problem for expectant and new mothers, as maternal health and health behaviors can have a direct impact on the oral health of children. Poor nutrition in mothers during pregnancy can affect, among other things, the child's tooth size, time of tooth eruption, salivary gland function, saliva composition, and susceptibility to dental caries. Children are born free of caries-causing bacteria and are not able to harbor these organisms until teeth are present in the mouth. Infants and toddlers obtain these organisms most commonly from their mothers who transmit them from their own mouths by direct transfer of saliva, from activities such as sharing spoons or licking-off pacifiers (NIDCR 2000). Parents are also often unaware that allowing children to sleep with a bottle containing anything other than pure water can support rampant tooth decay.

Other Behaviors

Other behaviors that affect oral health include habitual grinding and clenching of teeth, and injuries to the head, mouth, and teeth. These too can be prevented through a variety of methods including use of safety equipment, such as helmets and teeth guards during sports, behavioral modification, or use of teeth guards during sleep.

Strategies for Improving Oral Health

As the evidence shows, poor oral health affects all members of society. But the problems of oral health are solvable. The factors that influence oral health are well known: access to care, fluoridation, availability of providers, and individual behavior. By concentrating efforts on the needs of the most vulnerable populations and working toward eliminating the systemic problems in the delivery of dental services, the public and private sector – including foundations – can make a difference. This section highlights the current activities of federal and state governments, and of private organizations within the for-profit and nonprofit sectors. It also discusses potential areas for expanding these activities. The next section highlights potential roles that foundations can play in improving oral health.

A Conceptual Framework for Developing and Evaluating Strategies

In formulating and evaluating potential strategies for improvement, it is important to keep in mind the various goals that foundations and other organizations may develop with respect to oral health. At the Issue Dialogue, several potential goals were outlined:

- improving oral health status,
- increasing access to dental care, and
- improving public policy.

It is also important to keep in mind that while each of these goals is important, there is a great deal of interdependence among them. Dental care, for example, represents one determinant of oral health status. Appropriate policy, for its

SOMETIMES THE IDYLIC IS ONLY A VENEER

Burton Edelstein, D.D.S., M.P.H., shared his perspective on how his life as a dentist has changed since he began his practice in 1975. The story is a microcosm of how the world of dentistry in general has changed, and of the specific challenges that the profession currently faces in improving oral health for the population at large.

"I lived much of my life very happily without business travel, hotel meeting rooms, legislators, public officials, managed-care vendors, reams of paper, and even, to the best of my knowledge, grantmakers ... And the epicenter of the universe most days was located at the blue pediatric dental chair in the middle of the main operatory of my dental office at 190 Hemstead Street, New London, Connecticut, or you might say, Anywhere, USA. The epicenter was populated by an inner circle of only four people: a child, a parent, a dental assistant, and me. And it was my show, my often-exhilarating opportunity and challenge to make it all come out happy.

The calendar pages flipped, sometimes slowly, sometimes quickly, from 1975 to 1996, but the drama and the joy never changed. It had order, productivity, growth, income, and personal engagement. It was what I'd like to think was doing well by doing good. It was maybe a little complacent, but it certainly wasn't Groundhog Day.

Let's go revisit those 21 years. Another way to look at it is that sometimes the idyllic is only a veneer. Over time the onslaught of disease – mostly preventable disease at that – increased dramatically, as the number of kids to whom I said "buena muchacha" instead of "good girl" rose significantly. AIDS gave us a scare, and we started wrapping ourselves in latex and scrubs. It got harder and harder – and more and more expensive – to find and hire associate dentists. More kids showed up with Medicaid cards than ever, and our Medicaid collections eroded as dramatically as our cost of care increased and our colleagues in the community dropped out of the program. The town became designated a health professional shortage area (HPSA), and a new community health center developed a small but ultimately inefficient and understaffed dental program that we in private practice finally staffed to help the kids.

Mandatory Medicaid managed care came along, and more of our colleagues quit. Journals boasted of new science and gave us all kinds of hope about managing and treating disease and integrating with our primary care medical colleagues, but gave us no clue at all about how to do it. The costs shifted more and more forcing those with insurance, in effect, to pay for the care of the uninsured. And we finally started to acknowledge that the epicenter, or at least the place that drives and shapes our epicenter, that blue chair, might lie even beyond our front office door."

part, can lead to improved oral health status through enhanced access to dental care, improved public education, and enhanced dental infrastructure. Improving oral health status, however, depends on more than improving access to dental care; preventive efforts such as fluoridated water are also important. In turn, access to dental care and public health measures

that foster prevention are directly influenced by policy decisions. To that end, some organizations can work with policymakers to build and disseminate information and knowledge, and to ensure that dental and medical care providers are aware of the latest science. While few individual organizations are likely to be able to achieve all three goals alone, each must be tack-

led collectively in order to effectively promote improvements in oral health.

Current Federal Initiatives

Several agencies within the U.S. Department of Health and Human Services (HHS) are actively addressing oral health. Their activities generally focus on broadening understanding of the importance of oral health to overall health, direct care and services, and research.

Broadening Understanding

In an effort to increase awareness of oral health issues and to create momentum for action, the Office of the Surgeon General and the National Institute on Dental and Craniofacial Research (NIDCR) led work on the first-ever Surgeon General's Report on Oral Health. The report, released in June 2000, identifies oral health problems as a silent epidemic and calls for a national effort to improve oral health among all Americans. The report also calls for a national partnership to provide opportunities for individuals, communities, and the health professions to work together to maintain and improve the nation's oral health. The report makes a number of recommendations on the areas of most need. These include:

- enhancing the public's understanding of the meaning of oral health and the relationship of the mouth to the rest of the body,
- raising the awareness of the importance of oral health among policymakers to create effective policy and programs that will improve oral health,
- expanding research to determine the populations most at risk for serious oral health conditions,
- accelerating the application of research findings into targeted and effective disease prevention programs,
- building an effective health infrastructure to meet the oral health needs of all Americans

and to integrate oral health effectively into overall health, and

- removing known barriers to oral health services.

The U.S. Surgeon General has also convened an expert invitational workshop and a large public conference on children and their oral health in order to bring attention to the impact of oral health on health and well-being and to promote action steps to eliminate disparities in oral health status.

In an effort to coordinate federal and nonfederal activities, HHS, under former Secretary Donna Shalala, convened an Oral Health Leadership Task Force to raise awareness of disparities in oral health care and to develop a plan for action among these different sectors. The task force includes representatives of foundations such as The Robert Wood Johnson Foundation, the W.K. Kellogg Foundation, the Milbank Memorial Fund, The Pew Charitable Trusts, and the Washington Dental Service Foundation; private businesses; the health professions; academics; and state governments. GIH is also a member.

Another federal program, *Healthy People*, brings together national, state, and local government agencies; nonprofit, voluntary, and professional organizations; businesses; communities; and individuals to improve health, longevity, and quality of life. This program, administered by the Office of Disease Prevention and Health Promotion in the Office of Public Health and Science, monitors the progress of the United States in meeting the goals in each health area of *Healthy People 2010*. The goals for oral health not only seek to reduce the incidence of oral disease, but are also focused on improving dental care utilization, expanding public health interventions, and increasing opportunities for care in the public sector, as follows.

Reducing the Incidence of Oral Disease

Lower the proportion of:

- deaths due to oropharyngeal cancer;
- children and adolescents who have experienced dental caries in their primary or permanent teeth;
- children, adolescents, and adults with untreated dental decay; and
- older adults who have had all their natural teeth extracted.

Improving Dental Care Utilization Among Select Populations

Increase the number of:

- persons with diabetes who have at least an annual dental examination;
- adults who, in the past 12 months, report having had an examination to detect oral and pharyngeal cancers;
- children who have received dental sealants on their molar teeth; and
- children, adults, and long-term care residents who receive dental care each year.

Expanding Public Health Interventions and Opportunities for Care

Increase the proportion of:

- public and private schools that require use of appropriate head, face, eye, and mouth protection for students participating in school-sponsored physical activities;
- the U.S. population served by fluoridated water systems;
- local health departments that have established culturally appropriate and linguistically competent community health promotion and disease prevention programs;
- school-based health centers with an oral health component; and
- local health departments and community-based health centers, including community,

migrant, and homeless health centers, that have an oral health component.

Direct Care and Services to Populations

Within HHS, the Health Resources and Services Administration (HRSA) and CMS have begun a collaboration to eliminate disparities in access to oral health care and to improve oral health through the Oral Health Initiative.

Working together, the two agencies intend to significantly improve the oral health of vulnerable children by:

- strengthening the public and private oral health delivery systems,
- enhancing collaboration among HHS agencies to maximize the effectiveness of the dental components of Medicaid and SCHIP, and
- encouraging the application of scientific advances to the practice of dentistry in order to reduce disease burden.

To accomplish this, HRSA and CMS will coordinate dental health activities and, as appropriate, internal agency missions, initiatives, and programs to enhance access to appropriate, coordinated, quality oral health services that improve health status. The agencies will also partner with public agencies, dental professionals, and educational and advocacy organizations to catalyze interest around oral health and develop cooperative and comprehensive action plans that enhance access to dental care and improve oral health. The HRSA and CMS joint initiative will also promote the application of dental science and technology towards reducing and managing common oral diseases.

The Centers for Disease Control and Prevention (CDC) have primary responsibility for supporting state- and community-based programs to prevent oral disease, enhancing monitoring of oral health, fostering applied research to enhance oral disease prevention in community settings, and promoting oral health nation-

wide. The CDC is working with various partners to extend proven preventive measures for oral diseases and conditions and is helping to implement programs at the state and local level. The goal is to strengthen the states' capacity to plan, implement, and evaluate oral disease prevention/health promotion programs, particularly those targeted at special populations. For example, in its efforts to encourage the effective use of fluoride, the CDC has provided national leadership in assessing the appropriate use of various forms of fluoride, improving the quality of community water fluoridation, and extending this preventive measure to new communities. Current CDC activities in this area include:

- providing grants to 10 states and an American Indian tribe for assisting with community water fluoridation systems,
- designing and implementing a national Web-based data management system to help states monitor the quality of fluoridation in their community water systems,
- disseminating recommendations for appropriate population-based strategies for the use of fluorides,
- examining the role of water fluoridation in ensuring appropriate fluoride exposure, and
- collaborating with other federal agencies to implement the Public Health Service's National Fluoride Plan to Promote Oral Health.

The CDC also promotes the use of dental sealants through support and technical assistance to states and linkages with other federal agencies. In addition, it is working with a consortium of organizations within the public and private sector to develop a national program to prevent oral and pharyngeal cancers and to promote early detection and treatment.

One proven strategy for identifying and treating children at high risk for dental disease is

through school-based programs that support linkages with health care professionals and other dental partners in the community. With fiscal year 2001 funding, the CDC is supporting education agencies in four states (Maine, Rhode Island, South Carolina, and Wisconsin) to develop and implement models for improving access to oral health education, prevention, and treatment services (e.g., use of dental sealants) for school-aged children who are at high risk for oral disease. The CDC will evaluate the applicability of these models for other states.

Another area of concern for the CDC is guiding infection control in dentistry. Infection control in the dental care environment remains essential to ensuring the public's safety and retaining its confidence. In the 13 years since the CDC published its first guidelines, infection control practices in dentistry have dramatically improved. Nevertheless, the potential for disease transmission during visits to the dentist continues to arouse intense public interest and media scrutiny. To minimize this potential, the CDC assesses the risks of infectious disease transmission, updates guidelines to minimize those risks, investigates disease outbreaks and environmental hazards in the dental setting, and identifies emerging problems.

Finally, the CDC is working with the Association of State and Territorial Dental Directors to enhance the resources and expertise needed at the state and local levels to assess oral health needs and implement preventive programs. Going forward, CDC may have opportunities to add oral health components to its 23 Prevention Research Centers, which support community-based applied research into areas of prevention.

The Indian Health Service (IHS) is the U.S. Public Health Service agency responsible for addressing the comprehensive health needs of

more than one million American Indians and Alaska Natives. This task is complicated by the broad cultural, economic, and geographic diversity of the groups served. As a result, health programs must be individually designed to address the needs of each community. Presently, IHS and tribally managed dental programs operate in more than 230 hospitals and clinics in 33 states. The dental programs of IHS strive to prevent dental disease and to limit the growth of existing disease through organized prevention programs and active clinical programs.

Research

A variety of federal research activities related to oral health are under way. The Agency for Healthcare Research and Quality, for example, is the lead agency charged with supporting research designed to improve the quality of health care, reduce its cost, and broaden access to essential services. Some of its activities related to oral health include:

- supporting the University of North Carolina evidence-based practice center to synthesize research on critical dental and oral health issues,
- working with NIDCR to explore opportunities for expanding the field of dental health services research by improving training opportunities,
- providing a grant to the University of Maryland to evaluate adult Maryland Medicaid patients' patterns of hospital emergency department use for the treatment of mouth pain and infections associated with teeth and periodontal tissue, and
- studying the national Medical Expenditure Panel Survey to identify disparities in children's use of dental services, types of services provided, expenditures, and insurance coverage.

The CDC is also engaged in a number of important research initiatives. It is helping state and local health departments collect, analyze, and disseminate data specific to their areas and to implement new approaches to oral disease surveillance through The National Oral Health Surveillance System. This new system is designed to link oral health data from separate surveillance systems, including the Behavioral Risk Factor Surveillance System, the Pregnancy Risk Assessment Monitoring System, state oral health surveys, and other data sources. Another CDC tool is the recently enhanced annual State Dental Program Synopsis, which collects information on demographics, dental program activities, dental public health capacity, and funding. These data enable states and communities to track progress towards *Healthy People 2010* oral health objectives, and to target limited resources to those at highest risk for dental disease.

In addition, the CDC is supporting a National Oral Health Research Network, which joins forces with dental schools, professional organizations, schools of public health, and NIDCR to apply public health tools to improve oral health outcomes. The research network is housed within the CDC's university-based Prevention Research Centers. In 2000, the CDC supported nine projects to improve public health practice related to oral health at the community level.

The NIDCR supports a wide range of research activities that address disparities in oral health. These involve supporting grants and research supplements directed toward understanding the reasons for health disparities and developing a national oral health curriculum for young children. As a part of this effort, NIDCR has supported the development of four regional centers on minority oral health.

The NIDCR is also implementing a plan to address gaps in knowledge about health disparities and raise the level of oral and general health of all disadvantaged groups. The three-part initiative focuses on research, research capacity, and information dissemination as a means of understanding and addressing health disparities, building a more diverse workforce, and expediting the adoption of research advances by the public and by health care providers.

The research component of the health disparities plan calls first for improved research approaches on the oral health of vulnerable populations. Areas of research will focus on diseases such as dental caries, periodontal diseases and their complications, oral and pharyngeal cancers, and craniofacial injuries. The plan also calls for a translation and integration of information available from basic studies into effective public health measures to ensure that individuals from populations exhibiting oral health disparities can access the most appropriate and effective oral health care available. Efforts will be undertaken to raise the level of understanding of oral health on the part of the public, policymakers, and other health professionals.

The second component of the plan, which focuses on building research capacity, will aim to expand diversity in the oral health workforce through new and existing training and career development mechanisms. It also will seek inclusion of individuals from all racial/ethnic, gender, and age groups in clinical trials, which is critical to the development of effective interventions for improving health. The final element of the plan addresses education and outreach. Here the NIDCR will work to disseminate research advances to ensure their adoption and acceptance by the public, health care providers, educators, and policymakers,

and to promote the use of evidence-based approaches.

Already NIDCR has two strategies in place to support the health disparities plan. The first, a request for applications for Centers for Research to Reduce Oral Health Disparities, was issued September 30, 1999. In September 2001, centers were established at four schools: Boston University; New York University; the University of California, San Francisco; and the University of Washington. The centers will focus on children and their caregivers; conduct research in craniofacial, oral, and dental health disparities; and design interventions to reduce these disparities. The centers also expand opportunities for scientists in underrepresented groups. The second strategy is a collaborative effort between NIDCR and the CDC to jointly fund a data coordinating center that will consolidate craniofacial, oral, and dental health and disease data from multiple sources.

NIDCR also supports the National Oral Health Information Clearinghouse (NOHIC), which produces and distributes patient and professional education materials, including fact sheets, brochures, and information packets. NOHIC also sponsors the Oral Health Database, which includes bibliographic citations and abstracts.

The NIDCR/CDC collaboration makes clear that federal agencies are able to work together on research activities. Another example of joint research comes from the formation of a partnership in 1999 between Head Start, HRSA, the Health Care Financing Administration (now CMS), and the Women, Infant, and Children's food and nutrition program (WIC). In an effort to improve the oral health status of young children, the partnership commissioned three scientific papers to examine the current understanding of oral health practice, and to

recommend guidelines related to nutrition and oral health, prevention of caries, and access to care.

The Maternal and Child Health (MCH) Bureau at HRSA also supports policy research focused on the oral health of children. The National Oral Health Policy Center (NOHPC), located at Columbia University, is comprised of a group that includes pediatric dentists, a pediatrician, a social worker, a health services researcher, a medical writer, and a socio-medical scientist. This team conducts state- and national-level research on oral health, unmet dental treatment needs, dental access, services integration, and program evaluation. The NOHPC conducts studies with other MCH policy centers to consider the relationship between maternal oral health and pregnancy outcomes as well as oral health outcomes. Through a series of demonstration projects, HRSA and CMS are also conducting research on the prevention and management of early childhood caries.

Suggestions for Expanding Federal Activities

Some oral health experts have suggested that the role of the federal government in improving oral health be expanded to include other strategies and activities, such as the following:

- reducing the administrative burden on consumers and providers who participate in publicly financed health insurance;
- expanding coverage for dental services for adults in Medicaid;
- improving coverage for the elderly in Medicare;
- improving the efficacy of these programs by adopting standard case management approaches; and
- developing information systems that enhance accountability and provide feedback to purchasers, providers, and policymakers.

It has also been suggested that the federal government should consider developing and implementing community-wide strategies to

DISPARITIES IN UNDERSTANDING AMONG POLICYMAKERS

Dr. Edelstein of the Children's Dental Health Project suggested that oral health and dental care are not given adequate attention by federal and state policymakers. To support this view, he cites the following disparities between oral health and medical care.

- Unmet dental needs are three times those of medical care, yet dental care attracts much less attention from policymakers.
- Asthma is typically cited as the most common childhood disease, yet it is five times less common than tooth decay.
- Insurance for general medical care is 2.5 times more prevalent than is insurance for dental care, yet attention to the issue of the uninsured tends to focus on medical care.
- Dental care accounts for 20 percent of health care expenditures for children overall, but for only 2 percent to 3 percent of EPSDT required services.
- Four times as many Medicaid children obtain a medical visit as a dental visit, and care coordination and support services are less commonly available for dental care.

improve oral health. These can include increasing the role of safety-net providers through community health centers, schools, Head Start, and other federal programs such as WIC to prevent oral health problems.

A Review of State Activities

This section reviews the spectrum of potential activities that an individual state may be involved in with respect to oral health; highlights a few specific initiatives of selected states that are active in the area; and presents the potential improvements. States are already employing a number of strategies to improve oral health including encouraging providers to participate in Medicaid and engaging primary care and other health professionals in assessing and preventing dental disease, among others.

Encouraging Providers to Participate in Medicaid and SCHIP

States have used a variety of methods to attract more dentists to Medicaid and SCHIP including raising payment rates, easing administrative burdens, and conducting outreach efforts.

Five states – Alabama, Delaware, Georgia, Indiana, and South Carolina – have elected to raise Medicaid rates significantly with an attendant, rapid increase in children’s access to and use of dental services (Edelstein 2001b). In all, 23 states have raised payment rates for their Medicaid program over the last two years, 4 have raised rates for their SCHIP program, and 7 states have raised payment rates for both programs (Gehshan et al. 2001).

Methods to ease the administrative burden of participating in public insurance programs have been adopted by 21 states (Gehshan et al. 2001). For example, in addition to raising the payment rates for dentists, the state of Indiana’s Office of Medicaid Policy and Planning has

made significant strides in its administration of Medicaid by reducing the turnaround time for dental claim data entry and payments, removing all prior authorization requirements for dental procedures, and improving communications with dental providers concerning coverage policies. In the year after the implementation of these changes, about 20 percent more dentists participated in the Indiana Medicaid program (Tobler 1999).

Recognizing that payment rates were not the only barrier to dentists’ participation in Medicaid, South Carolina developed a new program to create a dental home for Medicaid participants. The objectives of the program are to improve the continuity of care, increase access, and ensure participation by dentists. Dentists who also participate in the dental home program receive higher payment rates. But in a novel approach, the state demanded a quid pro quo from the state dental association, which agreed to launch a promotional campaign aimed at encouraging its members to participate in Medicaid (Tobler 1999).

Finally, a number of states are engaged in outreach efforts to attract more dentists to participate in Medicaid. Some of the strategies used include informing dentists, through dental associations, about important improvements in their programs; making presentations at dental schools and dental societies; and placing promotions in dental journals. Seven states have formed task forces to identify and implement solutions to the oral health crisis. These task forces have members from professional and provider organizations, advocacy groups, state dental societies, legislators, health plans, and dental schools (Gehshan et al. 2001).

THE MERITS OF RAISING PAYMENT RATES

Efforts to increase dentists' participation in the Medicaid program by boosting payment rates have met with mixed results. Not surprisingly, in areas that have a significant shortage of dental providers, such as West Virginia and North Dakota, rate increases have had – or likely would have – little impact. West Virginia's program also failed because the state government's limited resources allowed it to raise rates to only 30 percent of "reasonable and customary" charges.

But in areas with a larger number of dentists, the approach can work. By significantly raising rates, Michigan increased utilization of Medicaid services from 18 percent to 34 percent of enrollees within eight months of the program's inception, and achieved 85 percent utilization in its SCHIP. Other states – including Alabama, Delaware, Indiana, and South Carolina – have also had some success in attracting the participation of dentists by raising payments.

However, even in markets with a large number of providers, raising payment rates in isolation may not be enough to encourage participation in the program. Dental providers shy away from Medicaid not only because of low payments, but also because of other issues, including the administrative difficulties of participating. Thus it might make sense to combine any increase in payment with other efforts to increase the efficiency of the program from the dentists' perspective. The state of Indiana was quite successful in using this approach. Another approach is to borrow a lesson from South Carolina by tying the increase in rates to a commitment by the state dental association to promote participation among its members.

Engaging Primary Care and Other Providers

In West Virginia, the state government and university are working in partnership with the federal government (through funding from HRSA) to train dental professionals, primary care physicians, nurse practitioners, and physician assistants to promote early dental care, and to identify potential problems in young children. Because West Virginia has relatively few dentists – especially in rural areas – the emphasis has been on using primary care providers as a first line of defense in promoting oral health. They are also looking to these providers to educate parents on the importance of good oral health, including not only regular dental care, but also good nutrition, feeding practices, and caring for teeth (including use of fluoride).

Phase I of the project, which was just completed, involved the development of materials to train these providers. Under Phase II, which began in July 2001, these materials will be

tested in 4 of 17 community health clinics located in the poorest parts of the state. Phase III will evaluate the intervention, with the ultimate goal of expanding the program to all 17 federal/rural health centers.

A second example comes from North Carolina, which received a Medicaid waiver that allowed it to create a separate payment code for primary care providers to conduct dental assessments, make referrals to dentists if needed, and conduct follow-up to ensure that appointments are kept. A separate code was also established for use of dental varnish where appropriate.

The West Virginia and North Carolina examples represent an important approach to addressing oral health problems – the use of general medical professionals to assess dental disease and work with parents to prevent disease in children. West Virginia suffers from an acute shortage of dentists, especially pediatric

dentists (with only 13 across the entire state). In many rural areas, the population is too small to support a full-time dental practice. In fact, nearly one in three children in West Virginia has never seen a dentist.

Thus, in addition to trying to boost the supply of dentists, the West Virginia state government looked to take advantage of existing infrastructure – namely, the 110 community health centers already in place across the state – that serves as a provider network for low-income individuals. The state government in North Carolina went a step further by creating financial incentives for existing primary care providers to address oral health issues. Looking ahead, the state of West Virginia also hopes to include a dental rotation for those individuals training to become primary care physicians in rural and other areas. It is hoped that this rotation can go a long way toward integrating dental disease prevention and primary care.

Other states are experimenting with changing the supervision and payment requirements for dental hygienists to give them the ability to practice more independently. Although still a very controversial subject, some states see expanding opportunities for hygienists as an important step in preventing dental disease in vulnerable populations (Gehshan et al. 2001).

Other State Initiatives and Approaches

Some states have embarked on other initiatives designed to improve oral health. For example, the state of Nevada, under the leadership of Senator Raymond Rawson, created a new dental school to increase the number of oral health practitioners. Maine created a toll-free hotline to assist residents in accessing dental services.

Along with the programs of individual states, associations catering to state government officials are serving as leading sources of informa-

tion on oral health issues. The National Governors Association’s Center for Best Practices and the National Conference of State Legislatures, for example, have sponsored several three-day retreats for senior state-level policymakers. These policymakers included representatives of the governors’ offices, senior health officials, Medicaid officials, oral health officials, dental educators, and dental society leaders. Participants worked within state groups to develop short- and long-term action plans to improve dental care access for children.

Suggestions for Improving State Programs in Oral Health

Building on the approaches outlined above, several suggestions have been made for improving the three state-run programs with the greatest potential to improve oral health: Medicaid, SCHIP, and the Title V Maternal and Child Health Block Grant Program.

Medicaid and SCHIP are two important dental safety-net programs that offer access to dental care through insurance. The Reforming States Group – a voluntary association of leaders in health policy and state government that was organized in 1992 by the Milbank Memorial Fund – released a report in 1999 on state-financed children’s oral health. The report suggests that public insurance can be improved using several strategies:

- early and ongoing risk assessment and disease management,
- market-based fee-for-service payment to dentists, and
- administrative oversight that is proportional to the intensity of treatment needs and services (Reforming States Group 1999).

The Title V Maternal and Child Health Block Grant Program is a categorical grant program designed to provide a foundation for improving

THE ROLE OF STATES

During the Issue Dialogue, Shelly Gehshan of the National Conference of State Legislatures (NCSL) discussed a variety of areas where states can become involved in oral health as well as raising the likely barriers to doing so.

- **Expanding dental benefits within the Medicaid and SCHIP programs.** Most legislators will not look favorably upon additional mandates to provide coverage for adults, but they may be persuaded to create a package of dental benefits for low-income individuals that is similar to what they have for state employees. In good economic times, states may be more likely to add benefits, but they may have to cut back during an economic downturn. In addition, legislators in many states view the Medicaid program with skepticism, as it costs a great deal of money and gives them less flexibility than they would like; states already have difficulty providing the dental services that are mandated for children enrolled in Medicaid. Every state but one has at least some dental benefits in their non-Medicaid SCHIP programs. For this reason, many states are reluctant to expand dental benefits.
- **Raising payment rates within the Medicaid and SCHIP programs.** Few if any states can afford to raise rates to levels that might attract a meaningful number of additional providers to the program. States also cannot afford to offer meaningfully higher rates in programs that cover a large portion of the population. In fact, the primary reason that some states have been able to raise rates in the SCHIP program is because so few children are enrolled compared to Medicaid.
- **Regulating scope of practice, supervision, and licensing.** States have responsibility for regulating scope of practice, licensure, and defining the appropriate supervision requirements for different types of dental health care providers, like hygienists. Not surprisingly, this is a contentious area, as it typically involves disagreements among respected groups representing different types of practitioners. Legislators find dentistry to be among the hardest to regulate appropriately. Most legislators prefer not to proactively make these types of decisions, but would rather let the different groups “battle it out on their own” and come to some sort of consensus on the appropriate supervision requirements. At the same time, many state legislators do not know about the potential of midlevel providers to expand dentists’ capacity to treat patients or opportunities for preventive services among vulnerable populations; if they did, they might be willing to change regulations accordingly. Those that do also realize that most members of the dental profession are apprehensive about these types of changes. Thus, the best approach is likely to work within the dental community to come to some sort of consensus on the appropriate role for these providers, and then to take an acceptable proposal to the state legislature for consideration.
- **Strengthening service delivery.** States serve as the provider of last resort for low-income residents. Historically they have sought to buy these services from the private sector through public insurance programs. A few states also have loan forgiveness programs designed to encourage dentists to practice in low-income and/or rural areas, as does the federal government. Looking ahead, however, some states are becoming frustrated with strategies that rely on private sector providers and are instead contemplating setting up their own dental delivery networks through public clinics and community health centers.
- **Increasing patient education.** A handful of states have attempted to develop materials that explain to patients their rights and responsibilities with respect to oral health. Because this type of effort requires a significant amount of resources, states are looking for partners to assist.
- **Reducing administrative burdens.** In an effort to encourage providers to participate in Medicaid and SCHIP, some states are beginning to use electronic billing, toll-free telephone lines, and shorter application forms. More states are likely to follow suit in the future.
- **Promoting water fluoridation.** A small but vocal and influential antifluoride lobby exists. State legislators would like to see a similarly vocal lobby form to promote the benefits of fluoridation. They also need a toolkit that can help them to respond to the opposition.

the health of mothers and children. Suggestions for improving the program include:

- integrating the provision and promotion of dental health services into all aspects of maternal and child health programs,
- training private and public health care practitioners about the oral health needs of children,
- increasing the number and quality of federally funded dental clinics,
- improving outreach to eligible women and children,
- developing and applying appropriate standards of care,
- collaborating with dental public health programs and the private dental delivery system to raise awareness of oral health needs of children, and
- allocating appropriate resources to treat high-risk children (Association of Maternal and Child Health Programs 1999).

Several participants at the Issue Dialogue also noted that many state policymakers don't see the link between good oral health and other issues, such as educational achievement and health care costs. Improving oral health programs within the states will require educating state policymakers about the importance of oral health, and that by committing funds to it, costs elsewhere in the state's budget (e.g., health care costs in prison and in Medicaid) can be reduced.

Private Sector Activities

The private sector is also engaged in strategies to improve oral health, as is clear from the activities of several large companies. Crest, Colgate-Palmolive, and McDonald's have separately developed initiatives to improve the individual care of teeth, raise awareness in the general public about the importance of proper dental care, and improve access to care.

In response to the release of the Surgeon General's report, Crest sponsored *Healthy Smiles 2010*, a national outreach program designed to address the disparity in the oral health status of low-income children and their families. The program aims to provide education, oral care tools, and increased access to dental professionals for 50 million children and their families over the next 10 years. The components of the program include:

- creating oral health care education and access programs for children and their families at Boys & Girls Clubs across the nation,
- partnering with some dental schools to bring dental professionals to select communities that have significant needs,
- producing public service campaigns to help increase awareness that oral health is integral to overall health,
- partnering with organizations working to address the health needs of at-risk and underserved children and their families, and
- applying proceeds from the sale of Crest toward programs that help improve the state of oral health in America.

Since 1991, the Colgate-Palmolive Company has sponsored the *Colgate Bright Smiles, Bright Futures Global Oral Health Education Program*. This program, which focuses on education and prevention, provides a variety of materials including videos, storybooks, sing-along-songs, computer CD-ROMs, and interactive activities for use in both the classroom and at home. It has reached more than 46 million children in 80 countries by forging partnerships among governments, dental professionals, education professionals, schools, and communities. In 2000, Colgate launched the first-ever online school curriculum as part of this initiative.

Colgate has also teamed with America's Promise to deliver dental care and information to children at risk for diseases of the mouth.

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I think a lot of the work we're doing comes down to a moral imperative. But we have learned that a moral imperative will not expand the crowd in this room.

KIM MOORE,
UNITED METHODIST
HEALTH MINISTRY FUND,
MAY 2001

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Colgate Bright Smiles, Bright Futures Volunteer Partnership is a three-year initiative designed to meet the oral health needs of millions of children who lack dental insurance and fail to receive dental care. The program recruits dentists and dental hygienists to volunteer their services in community organizations for the care of children in need of dental services. To date, more than 2,500 professionals have volunteered to provide education and preventive treatment.

McDonald's sponsors its charity work through the Ronald McDonald House Charities (RMHC). RMHC recently launched the *Ronald McDonald Care Mobile* initiative, an effort to provide access to health care for underserved children through mobile clinics. The mobile clinics began serving communities across the United States and in Buenos Aires, Argentina, in 2000. Working with local hospitals and health systems, the clinics will provide education on prevention as well as medical and dental services.

By sending Ronald McDonald Care Mobile clinics to accessible locations like schools, churches, and community centers, RMHC's outreach effort is expected to improve the health of thousands of children who would otherwise receive little or no health care services. Each unit houses two patient examination rooms (that offer prenatal care and other routine exams), a laboratory, a reception area, and space for medical records. Some units include a booth for hearing screenings, while others offer a dental hygiene room.

RMHC also sponsors the *Ronald McDonald House Charities/UNCF The College Fund Health and Medical Scholars Program*. Founded in 1995, the program provides up to 10, two-year, full-tuition scholarships to competitively selected minority college sophomores pursuing degrees in the premedical, health care, and health science fields of study at UNCF member

colleges and universities. The program also awards one-year scholarships of \$1,000 to applicants not selected for the full-tuition scholarship. Since its inception, the program has awarded \$1.3 million in scholarships to more than 300 students.

Roles for Foundations

Foundations have an important and unique role to play in promoting oral health improvement in America. Not only can foundations offer substantial financial resources, but their leaders have the potential to take a long-term view on the problems of oral health. Foundations are also often viewed as respected, unbiased advocates for health improvement, and, as a result, they are in a unique position to bring together the key stakeholders that are necessary to promote fundamental change.

Foundations can invest in oral health in several ways, not the least of which is to support the activities of the public and private sector which were highlighted earlier in this report. Equally importantly, however, foundations can also play a more active, direct role in improving oral health through a variety of activities. These include:

- education, outreach, and advocacy;
- direct delivery of services;
- improving access to care;
- addressing the dental care workforce;
- water fluoridation; and
- research, policy analysis, and dissemination.

Several foundations and corporate giving programs have begun to develop creative approaches to addressing oral health concerns. Each, in its own way, approaches the oral health problem differently. Some focus on specific populations such as children, the elderly, and low-income families; others focus on strategies such as preventing the occurrence of dental diseases and the treatment of existing disease. Some large foundations have the resources to tackle multiple issues that affect oral health,

while other, smaller organizations tend to focus their efforts on one or several areas.

What follows are descriptions of a selection of foundation programs that concentrate on oral health, organized by area of activity. As a result, the activities of individual foundations that are involved in multiple programs will be profiled in several sections.

Education, Outreach, and Advocacy

Foundations can play an important role in educating the general public and policymakers on a variety of issues related to oral health, including the importance of prevention and primary oral health care. This work often involves supporting demonstrations on primary prevention and dental disease management that apply new research to dental care, and/or influencing individual behavior with respect to good oral hygiene and the various factors that affect it, including diet and nutrition, substance abuse, dental care, and injuries.

One example of this type of public education campaign comes from Washington state, where a coalition of community leaders, advocates, dentists, and other health care professionals was formed to create a public climate conducive to policy change. Citizens' Watch for Kids Oral Health works to ensure that policy proposals to improve children's oral health are more likely to be understood and supported by both the public and policymakers. The Washington Dental Service Foundation and The David and Lucile Packard Foundation support this campaign, known as *Watch Your Mouth*. The Human Service Policy Center serves as a locus for the campaign with partner organizations – the Children's Alliance, Washington Dental Service Foundation, and the Frameworks Institute.

The campaign was launched in January 2001 with the immediate goal of raising awareness of

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*You can run mobile vans
around the state until the
cows come home. You need
to create demand among the
public in order for things to
be truly different. A public
problem simply doesn't exist
until enough people with
enough clout in society say
it does.*

TRACY GARLAND,
WASHINGTON DENTAL
SERVICE FOUNDATION,
MAY 2001

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the importance of oral health to overall health and well-being. In the longer term, the goals of the campaign are to ensure that:

- oral health is seen as both a policy and personal responsibility issue;
- responsibility for improving oral health is assigned beyond parents;
- people are more focused on systemic solutions rather than parent education alone;
- preventive services exist across health, education, and childcare domains; and
- the health needs of low-income children are made a priority.

The program's roots can be found in the Surgeon General's report, which the oral health community in Washington state viewed as a once-in-a-lifetime opportunity to raise awareness of the problem. The campaign attempts to reframe the issue through a comprehensive, research-driven communications program designed to recruit new people to oral health advocacy; to create broad visibility for children's oral health solutions; and to create a policy agenda for Washington state that includes prevention services for all children, education and payment of primary care professionals, and expansion of fluoridation. Thus far, the \$550,000 investment in the first year of the program has paid off, as the campaign has generated sustained media interest and visibility through the use of a set of new spokespersons who are confident and competent in taking the message to the public. The coalition even found an unexpected opportunity to partner with the Office of the Superintendent of Public Instruction, which is pushing for new legislation that would require oral health screening before school entry. Polling suggests that significant progress has been made in moving oral health to the front burner. The campaign has

resulted in more people agreeing with the following statements:

- Poor oral health leads to other health problems.
- I have heard about oral health as a policy issue.
- I support fluoride protection for all.
- Employers should be given incentives to provide dental insurance.
- There should be early detection in schools.
- There should be incentives for dentists to practice in underserved areas.

Based on these early successes, the plan is to use this program as a pilot for eventual nationwide deployment.

Other approaches to outreach, education, and advocacy can be seen in the following examples.

- Anthem Blue Cross and Blue Shield Foundation, a corporate foundation based in Colorado, funded the *Shining Smiles* initiative. Launched in 1999, *Shining Smiles* focuses on educating the public and policymakers on children's dental health issues. Funding has been provided to develop a video on children's dental care for use in elementary schools. In addition, dental kits including toothbrushes, toothpaste, and floss are provided to children throughout Colorado, and assistance is offered to county governments to fluoridate local water systems. Anthem has also commissioned several white papers, a quarterly newsletter on several key oral health issues, and convened a high-level commission on children's dental care to study barriers to oral health and make recommendations to state government officials for addressing them. Finally, funding was used to conduct a statewide public awareness campaign on children's oral health, to create a traveling exhibit on children's dental health, and to establish

an award honoring providers who have made substantial contributions to improving oral health.

- The California Endowment provided a grant to the College of the Redwoods to update equipment and curriculum to meet current health and safety standards and to provide training and oral health services to low-income residents of California's rural northern coast. The Boys & Girls Club of Buena Park received funding to expand service capacity and to develop prevention and education activities at its dental clinic for children.
- The Robert Wood Johnson Foundation is supporting Oral Health America in its campaign to raise awareness among policymakers and the public about the issue. Oral Health America received a \$388,930 grant from the foundation to support a two-year oral health communications project to raise awareness among opinion leaders, policymakers, and a broad spectrum of the public. Activities under this grant include the release of an annual state-by-state report card on prevention, access, and health status measures in 2001 and 2002, and educational events with the Congressional Prevention Coalition and Partnership for Prevention. In August 2001, Oral Health America convened a best practices workshop to highlight a variety of successful oral health projects from around the nation.
- The Kansas Health Foundation supported a program to provide information about hygiene, nutrition, safety, dental health, and health and wellness screenings to students in kindergarten through third grade.
- The Northwest Health Foundation provided a grant to the Oregon Health Division of the Oregon Department of Human Services to support the design and distribution of educational materials for providers about effective strategies for preventing early childhood cavities.
- St. Luke's Health Initiatives in Phoenix, Arizona, funded a public-private collaboration to undertake an education campaign focused on fostering preventive oral health habits among children. Partners include the City of Phoenix Education and Youth Services; Phoenix Coyotes Goals for Kids Foundation; Arizona Department of Health Services, Office of Oral Health; and Delta Dental of Arizona. The campaign ran from April 1999 through July 2000 and included educational events to increase awareness among children and families about the importance of brushing and flossing, eating right, using mouth guards, and getting regular dental checkups.
- Sierra Health Foundation provided a grant to The Dental Health Foundation to support a series of dental health seminars. The seminars educate members of collaboratives about children's dental health and best practices in California, provide training on networking with existing dental health resources, and share information on current collaborative dental health projects.

Direct Delivery of Services

A number of foundations have become involved in financing the direct delivery of services. Many of these initiatives are broad-based efforts to bring care to children.

- Anthem Blue Cross and Blue Shield Foundation provided funding to develop and market the *Kids in Need of Dentistry (KIND)* program, which operates the Miles for Smiles mobile dental clinic. Anthem has also funded other local providers to care for low-income children.
- The California Endowment awarded a grant to *Dientes! Community Dental Clinic* to supplement local funds to provide free, preventive dental services to children of low-income families in Watsonville and the Pajaro Valley. Working with the Healthy Start Program, *Dientes!* currently provides free dental screen-

BEYOND OUTREACH: THE CASE OF COLABORATIVO SABER

In some cases, an awareness campaign is not enough to reach the target audience; instead, more direct interaction is needed. To that end, Colaborativo SABER, an organization serving the health needs of Hispanics in San Diego, California, has developed the *Sonrisitas* (Little Smiles) Dental Health Outreach Project. The project is a collaboration among the Children's Dental Health Initiative of San Diego, Colaborativo SABER, the County of San Diego Health and Human Services Agency, the San Diego Children's Dental Health Center, San Diego Youth and Community Services, the Sherman Heights Community Center, the Sherman Heights Family Health Center, and the staff and faculty of the Matthew Sherman Elementary Business and Government Preparatory School.

Beatriz B. Roppe, director of Health Promotion at Colaborativo SABER, described the program, which relies upon identifying and training individuals within a community who are in a position to have influence over the target audience. Within the Latino community around San Diego, these individuals are known as *promotoras de salud* (or health educators). They are typically women who are well respected and active in seeking out and disseminating information within the community. They also tend to be early adopters of change who are willing to try something new. The *promotoras* receive formal training on relevant health issues and also play an active role in working with Colaborativo SABER in developing the educational outreach programs.

By working within these naturally occurring community linkages, *Sonrisitas* has been able to help the community organize around a number of health issues, including dental care. Through seven *promotoras* who teach a dental curriculum to parents consisting of eight weekly, one-hour classes, it teaches the basics of self-care such as brushing and flossing; the importance of nutrition; and the use of sealants and fluoride. It also identifies dental clinics and dentists for the parents, providing them with a dental home. The curriculum is user-friendly and fosters lasting behavior change through role modeling, group activities, skill building, and goal setting. Virtually all of the activities for the program take place within the schools, which are seen as the best place to reach the key individuals who have influence over children, including school nurses, teachers, and parents. As a testimony to the value of this approach, Ms. Roppe noted that the program was successful in increasing awareness of community health centers from 24 percent to 96 percent, and in increasing the percentage of individuals who had a dentist from 45 percent to 75 percent. The program also was able to change individual behaviors, as more children and adults began to regularly brush and floss their teeth.

ings and preventive visits directly to children at school sites. Many of these children are sons and daughters of migrant workers, who typically do not have access to comprehensive medical and dental services. With this grant, *Dientes!* will be able to expand its successful pilot program to children in additional schools. Services will include free screenings, sealants, fluoride treatments, cleanings, and classroom education. The program will also

add a preventive team to help service the additional schools, enabling dental staff to spend more time at each school, thus increasing the number of children served. The program will also prepare local residents for careers in the dental field by offering training opportunities in the school's dental program and at the *Dientes!* clinic. The endowment has also given direct support to school health clinics to provide dental services. For exam-

ple, a recent grant allowed the Los Angeles Free Clinic to hire a full-time dentist and dental assistant and to establish pediatric oral health services. A grant to Eastside Union High School District was awarded to develop a project that offers integrated health services for students including expanded primary care, oral health, mental health, and counseling services.

- The Robert Wood Johnson's Center for Health and Health Care in Schools recently completed a call for proposals from school-based health centers (SBHC) to support dental and mental health services. The new initiative, *Caring for Kids*, has received more than 100 proposals, 16 of which will be selected to expand dental and mental health services in SBHCs. The foundation's Local Initiatives Funding Partners program also supports local dental projects that secure matching funding from community-based foundations. Lastly, through the foundation's Volunteers in Health Care program, technical assistance is provided to support volunteer efforts by dental providers.
- The John Muir/Mt. Diablo Community Health Benefit Corporation in Contra Costa County, California, provided a grant to Parkside Elementary School to support a program of dental care and education for children, many of whom speak only Spanish, who have been identified as having dental problems. Community dentists volunteer to attend to the needs of low-income and uninsured children by providing cleaning, repair, and extraction services. The grant will allow the program to continue providing care to these children and their parents, and to hire a dental hygienist to provide most of the cleaning services.
- A partnership between The Rhode Island Foundation and The Robert Wood Johnson Foundation has funded *Providence Smiles*, a program run by St. Joseph Hospital that involves use of a pediatric mobile clinic staffed

by dentists and dental hygienist teams that periodically visits 10 schools (representing more than 6,000 children) to conduct examinations and cleanings, fill cavities, administer fluoride treatments, and apply dental sealants. Children with serious dental problems and no family dentist are referred to St. Joseph Hospital's Pediatric Dental Center. The program also identifies children without health insurance and assists eligible parents in enrolling in the state's Medicaid managed-care program. The success of this initiative has led to a more ambitious program to put dentists back into the state's community health centers. As a result, 5 of the state's 13 centers offer dental services today. Other key partners include the Rhode Island Department of Human Services and the Health and Education Leadership for Providence (HELP) coalition.

- The United Methodist Health Ministry Fund provides funding for *Healthy Teeth for Kansans*, a \$2.75 million campaign to prevent dental disease in Kansas. As an example of the types of activities supported through this initiative, the sealants program makes grants available to pay the expenses of a sealant project within a local community, providing payments of \$60 per child up to a total of \$18,000 (or 300 children). Through 44 grants totaling \$475,311, community sealant projects have reached 6,358 children; 1,005 more children are scheduled for sealants in upcoming projects.
- Over the last 15 years, the Washington Dental Service Foundation has contributed millions of dollars to activities focused on improving oral health through provision of dental care. The foundation's *Cavity Free Kids* program is dedicated to eliminating tooth decay in young children in Washington state. Through innovative projects and strategic partnerships, *Cavity Free Kids* links with oral health coalitions, dental care providers, and community organizations. For example, the SmileMobile, a partnership of

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Partnerships are as much about timing as they are about investment and planning. If you come to somebody after you've planned the entire program and ask them to fund a component of it, that's not a partnership – that's a proposal.

MALCOLM WILLIAMS,
GRANTMAKERS IN HEALTH,
MAY 2001

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Our new benchmark for determining our work is to “comfort the afflicted and to afflict the comfortable.”

JANE PEARSON,
ST. LUKE'S HEALTH
INITIATIVES,
MAY 2001

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the foundation and the Washington State Dental Association, is a unique dental office on wheels that brings oral health services to more than 12,000 children throughout the state. In addition, the Foundation supports the Children's Hospital Dental Clinic, which offers state-of-the-art care for children with complex medical and behavioral needs, such as birth defects and cancer. These services are offered to all families, regardless of ability to pay.

Other funders have committed to supporting the direct delivery of care to special populations, including the frail elderly and disabled, as follows.

- The Moses Cone-Wesley Long Community Health Foundation provided a grant to Access Dental Care to improve dental care for elderly residents of nursing homes, assisted living facilities, and group homes in nine communities in North Carolina. Under the program, two dentists, a dental hygienist, and a dental assistant will serve 20 facilities, providing 24-hour emergency coverage and helping facility staff deliver daily preventive oral hygiene. Partners in the project include the Greensboro Area Health Education Center, Guilford County Dental Society, Guilford County Health Department, and Piedmont Triad Area Agency on Aging.
- The Jenkins Foundation of Richmond made an award to the Virginia Foundation of Dentistry for the Handicapped to provide free comprehensive dental care to elderly and disabled indigent patients.
- The Retirement Research Foundation awarded funds to Nova University in Fort Lauderdale, Florida, to support a dental services program that serves nonmobile geriatric patients in retirement communities and that provides special training for dental students and professionals in caring for the elderly.

Improving Access to Care

Rather than, or in addition to, getting involved in the direct delivery of care, some foundations are focusing on providing systemic solutions to the oral health access problem. For example, St. Luke's Health Initiatives in Phoenix, Arizona, is helping individuals gain access to an existing delivery network. A community health needs assessment conducted by the Arizona Department of Health Services found that half of nonelderly adults did not have dental insurance. In response, St. Luke's is sponsoring a dental insurance pilot program for Maricopa County adults living in families who receive subsidized child care. (Some of these families may be eligible for coverage by AHCCCS insurance – Arizona's Medicaid program – but the AHCCCS dental benefit does not cover basic prevention and treatment for adults.)

The project is conducted in partnership with the Arizona Department of Economic Security (DES), the Maricopa County Department of Public Health Services (PHS), and Delta Dental of Arizona. DES staff determine eligibility, PHS staff provide overall program direction, and Delta Dental offers a benefits package (which mirrors that offered by private sector employers) and administers the program on a day-to-day basis. St. Luke's pays roughly two-thirds of the program costs, with enrollees picking up the remainder through copayments for services, and is in the process of conducting an extensive evaluation of the program.

First-year results indicate that 35 percent of enrollees utilized services, which were skewed toward restorative care. A higher percentage of enrollees will likely use services in 2001. Enrollees paid \$18,000 of the \$54,000 total cost for services. St. Luke's plans to track a variety of data – including workdays lost before and after the program began – as a means of convincing state policymakers and private

employers to initiate and/or expand dental coverage.

In 1998, the W. K. Kellogg Foundation launched *Community Voices*, a national initiative to improve health care access and quality in 13 cities. The five-year program is intended to help ensure the survival of safety-net providers, to strengthen community support services, and to help educate the public and policymakers on the importance of improving health care to the underserved, through communications, research, and technical assistance. The Kellogg Foundation requires each of the learning laboratories to integrate oral health services into their other activities.

Another example comes from Sierra Health Foundation, which since 1998 has funded *brightSMILES*, an initiative which makes \$500,000 available to improve access to oral

health services in 26 northern California counties. In 1999, The California Endowment contributed \$1 million to the program, expanding its reach to six additional counties. Funding from *brightSMILES* supports expanded school-based screening and sealant programs, primary dental services, dentist recruitment, capital equipment, and clinic renovation.

Addressing the Dental Care Workforce

Workforce issues – including the number, distribution, diversity, and technical and cultural competency necessary to manage the unique oral health problems of special needs populations – continue to represent major barriers to improved oral health. To address these issues, several foundations have focused on investing resources in dental schools. For example, the Josiah Macy, Jr. Foundation funded a consor-

COVERAGE VERSUS DELIVERY?

Foundation approaches to oral health put into relief a more generic quandary facing grant-makers. Many foundations are working to improve access to care, but often struggle to find the proper balance between two essential strategies: developing systemic solutions to the problems they face and responding to the immediate needs of the populations they serve.

Foundations have taken two very different approaches to improving oral health. One focuses on supporting the delivery of services through safety-net providers who serve low-income populations (especially children and the elderly), often through new distribution vehicles such as school- or nursing home-based clinics, or even mobile dental offices. The other, typified by the St. Luke's Health Initiatives example, focuses on providing at-risk individuals with the financial resources they need to access an existing network of private providers within traditional office settings.

These two different approaches are symbolic of a fundamental choice facing foundations with an interest in improving access to care – whether to work to shore up the safety-net system for low-income individuals, or whether to promote access to the mainstream system. While some would argue that the latter approach is ultimately what needs to occur, it would likely take many years and dollars to gain 100 percent access to mainstream care. In the interim, both strategies seem prudent: maximizing the contribution of the safety net, particularly where private resources are slim; and developing programs and policy change to enhance access to private providers. Foundation leaders need to weigh the benefits of these two very different approaches as they decide how to allocate scarce resources to improving oral health.

tium of three dental schools (Columbia University, University of Connecticut, and University of Michigan) to assess the feasibility of teaching dental students and residents in community settings such as private offices, school-based health centers, and community health centers in addition to the traditional venue of the dental school clinic. The three schools will enlist dental practitioners from the community to serve as mentors. As an added benefit, students will learn practice management as part of their training. Ideally, both students and patients should benefit. By working in underserved areas, students will train in settings where the needs are high; and patients will be treated in their own communities, where they may be more comfortable, and receive the full range of services for their dental care needs.

Another example comes from The Robert Wood Johnson Foundation. After considering a variety of potential strategies for improving oral health, the foundation decided to help fund a major program aimed at changing the way dental students are recruited, trained, and how they work within community settings. The program, called *Pipeline, Profession, and Practice: Community-Based Dental Education*, is a \$15 million, six-year initiative to support 10 of the nation's 55 dental schools in an effort to create a new dental workforce, one that is more able and willing to serve high-risk populations. The program is designed to accomplish three goals:

- provide care to those who need it most,
- help develop a four-year curriculum that supports and includes community-based practice, and
- expand the diversity of students attending dental schools.

Each of the 10 schools would receive up to \$1.5 million of the \$15 million over a five-year period. Each school is expected to take one

year for planning, and four years for implementation. An additional \$4 million will be made available for technical assistance. The Columbia University School of Dental and Oral Surgery will serve as the home for this project, with codirectors Dean Allan Formicola, D.D.S., and Howard Bailit, D.M.D., Ph.D., from the University of Connecticut Health Center.

These efforts tackle one important aspect of the workforce issue – the education and training infrastructure. Going forward, foundations will also need to work with partner organizations to address other aspects of the workforce issue that are critical to improving oral health. Potential strategies to address provider shortages might include debt forgiveness or other financial incentives to encourage practitioners to work in underserved communities as well as collaborations with lending institutions to help finance the housing, education, and practice costs of recent graduates (Community Voices 2001). At the same time, other health professionals, including physicians, need to be engaged in screening, referral, and oral health promotion, and in building community-based preventive interventions that target high-risk populations.

In addition to addressing shortages, there is also a need to build dentists' competencies in serving the unique needs of the very young, the elderly, and culturally diverse populations. Changes in curriculum are only part of the story, as the capacity of dental schools to educate students in the needs of special populations must also be addressed. This will require training faculty, increasing the number of faculty, and potentially increasing the number of dental schools. The W.K. Kellogg Foundation has already begun to address the issue of recruitment and retention of minority students and faculty through a \$1 million grant to the American Dental Education Association.

Water Fluoridation

Access to fluoridated water is another important component of oral health. The per capita cost of water fluoridation over an entire lifetime can be less than the cost of one dental filling, making fluoridation a cost-effective although still contentious method of preventing dental disease.

Several foundations have awarded grants for the development of fluoridation systems for their communities. The United Methodist Health Ministry Fund, aided by funding from the Kansas Health Foundation, developed a partnership with the Kansas Dental Association and the Kansas Public Health Association to provide funding and technical assistance to communities throughout the state considering using fluoridation in their water systems. Before the program began, more than 40 percent of Kansans lacked access to fluoridated water. Prior to the partnership, the Health Ministry Fund offered to pay the reasonable costs of a water fluoridation system. The response to the initiative was relatively muted, until the sponsors realized that local communities also needed technical assistance. Once the program was expanded, it quickly gained momentum. To date, it provides roughly 93,000 people across nine communities with fluoridated water. This represents roughly 3 percent of the entire population of the state (and more than 7 percent of the 40 percent of Kansans who previously lacked access to fluoride in their water supply). These projects are surprisingly inexpensive, with the total outlays to date being only \$412,000 or about \$4.50 per person.

Sierra Health Foundation is also active in water fluoridation. In 1997, the foundation awarded a \$95,000 grant to Yuba City, California, to fluoridate the community water supply. Due to the success of this grant, the foundation approved an additional \$1 million to support

community water fluoridation projects including a \$213,000 grant to Modesto city in 2000. Municipal water fluoridation takes place year-round, providing children access to optimally adjusted fluoridated water. The benefits of community water fluoridation include reduced dental decay, reduced emergency medical and dental care resulting from dental decay, substantial dental care savings to the community, reduced Denti-Cal expenditures, and increased school attendance due to fewer dentist visits by children.

Research, Policy Analysis, and Dissemination

Some foundations are supporting research that can help to identify the root causes of oral health problems and uncover potential solutions. For example, the United Methodist Health Ministry Fund provided a grant to the University of Kansas Health Services Research Group to study the reasons so few Kansas children on Medicaid receive dental care each year. The study surveyed dentists, beneficiaries, advocates, and policymakers, and then developed recommendations for ways to improve Medicaid children's access to dental services. Another grant allowed the Wichita-Sedgwick County Department of Community Health to study and compare the potential for other methods, besides community water fluoridation, for delivering fluoride.

Another approach is to provide funds for the evaluation of existing programs to determine their effectiveness. This information can be useful in making decisions as to whether to continue, expand, or terminate a particular initiative. It can also help foster the dissemination of best practices across communities.

But more work needs to be done in this area. In fact, more research is necessary to evaluate the effectiveness of proposed solutions and to further inform our understanding of oral health

problems and their antecedents. This is particularly true when assessing financing and policy solutions to improve oral health. Data on cost, market rates, and utilization are sorely needed, as are case studies where public or private solutions have been implemented. There is also a need for a more thorough inventory of safety-net clinics and a comparison to the private sector in terms of capacity, productivity, efficiency, and costs.

Fortunately, some of this work is beginning to occur. The Milbank Memorial Fund, a foundation that supports research and policy analysis, copublished *Pediatric Dental Care in CHIP and Medicaid: Paying for What Kids Need, Getting Value for State Payments*, with the Reforming States Group. The report identifies a new approach to the state financing of dental care that improves children's access to care by simplifying the interaction between dentists and public agencies and increasing provider payments. For this project, a model dental insurance plan for SCHIP-eligible children was devised and made available over the Internet. Officials and dentists across the nation can use the model to change assumptions about payment and the number of eligible children in order to calculate the approximate cost of the model plan for a specific state.

The W.K. Kellogg Foundation provided a grant to the Children's Dental Health Project (CDHP) to underwrite a series of policy-related projects. *Expanding Support Capacity for Progressive Oral Health Policy* promotes public policy analysis, formulation, and strategy. Through this effort, CDHP has worked with key organizations around oral health policy issues including the Association of Maternal and Child Health Programs, Association of State and Territorial Health Officers, National Academy for State Health Policy, National Association of State Medicaid Directors, National Conference of State Legislatures, and

the National Governors Association. CDHP provides technical assistance to policymakers and program administrators, identifies and disseminates best practices, and promotes policies to improve oral health and dental care.

In Connecticut, two community foundations have taken on the role of convener and have stimulated widespread policy attention to improving oral health and dental care for underserved populations. The Connecticut Health Foundation and the Children's Fund of Connecticut are engaged in a long-term policy development and program funding campaign to stimulate integrated systems of care. These systems involve not only private dentists and the dental safety net but educators, social service organizations, policymakers, primary care providers, schools, and health departments. One of the outcomes of their efforts is a recent publication, *Elements of Effective Action to Improve Oral Health and Access to Dental Care for Connecticut's Children and Families*, which provides a blueprint for programming focusing on five key strategies:

- maximizing the involvement of existing dental providers,
- expanding the dental care infrastructure,
- linking children and families to care,
- reducing disease burden, and
- ensuring program accountability.

Perhaps most significantly, these foundations developed their plans through an ongoing forum in which competing and sometimes contrary interests openly discussed and resolved their differences so that final recommendations were both appropriate and acceptable to those served.

A Summary of Potential Roles for Foundations

Throughout the Issue Dialogue, speakers and participants engaged in a thought-provoking

discussion about the potential roles that foundations can play in the area of oral health. They also provided valuable guidance on how best to implement a foundation-led initiative.

In an effort to provide a useful tool for foundation leaders who are considering becoming involved in the area of oral health – or setting priorities for those scarce resources available for oral health – this section highlights the key points from the discussion, laying out potential roles, strategies, and tactics, organized by type of activity. The next section offers advice on implementation.

Supporting education, outreach, and advocacy:

- raise awareness and perceptions about the issue among all segments of the general public and among policymakers, in order to sustain interest and promote change;
- embark on public education campaigns targeted at promoting behavior change among individuals, with respect both to overall oral health and to specific issues (e.g., the importance of dental sealants);
- educate parents to pay attention to the oral health of their children;
- educate older children or caregivers about their role in improving the oral health of the elderly;
- support coalition-based advocacy and public policy at all levels;
- support and fund individual leaders, advocates, and other change agents, and provide technical assistance to these individuals;
- help states and localities develop skills of their own rather than using outside experts to solve a problem (since this expertise may not be available when the next set of problems arises);
- identify and work with specific members of the community who are in a position to reach the target population;

- tap into the media (e.g., editorial boards, journalists) as a means of getting out the message;
- create and support coalitions that can develop local or state plans for improvement that can be used by legislators and/or other public officials;
- educate policymakers on the important role that midlevel practitioners can play;
- develop a toolkit for policymakers to address the small but vocal anti-fluoridation lobby and rally community support for fluoridation;
- provide funding to publish a paper, print op-ed pieces in the newspaper, or promote other publications that can advance the dialogue on oral health;
- develop and disseminate model benefits packages that policymakers and/or private corporations can use, along with some analysis of the costs and benefits of offering the package; and
- stimulate public discussion about society's moral imperative and individual responsibilities with respect to oral health.

Bringing together key stakeholders in a community:

- convene key stakeholders to educate and build consensus, perhaps by supporting the creation of a commission or some other kind of body that comes together and makes recommendations for consideration by policymakers;
- leverage other stakeholders in the public and private sectors (including other foundations, providers, and nontraditional partners) through community partnerships;
- integrate different parts of the health care system (e.g., medical and dental, home health and dental);
- promote dental enterprise zones which create regional collaboration;
- serve as a catalyst and enabler for innovative programs at the local level;

.....
*If it's a zero sum game in
 terms of budget, you're
 talking about setting priorities
 ... but it doesn't take a lot in
 terms of the total budget to
 move the oral health agenda.*

DON SCHNEIDER,
 CENTERS FOR MEDICARE
 AND MEDICAID SERVICES,
 MAY 2001

- fund travel to meetings, site visits, and/or conferences to ensure that the right people are hearing the message and sitting around the table during key discussions; and
- bring together government agencies that lack the funds to collaborate on their own.

Supporting the delivery system:

- promote expansion of the safety net;
- educate primary care providers and other professionals about the importance of oral health and dental care, training them to answer basic questions related to oral health, perhaps by working to get accrediting organizations to include oral health in testing;
- test the expansion of roles for other allied dental health professionals;
- develop and support mobile clinics and school-based clinics;
- develop campaigns to promote the idea of volunteerism among providers and provider associations, and create and facilitate an infrastructure for these volunteers to use; and
- publish reports on volunteer models that work.

Addressing workforce issues:

- facilitate the recruitment and training of faculty, including minorities;
- support development or access to other training sites; and
- support changes in the curriculum for dental education, particularly on cultural competency.

Supporting research and dissemination:

- build the science base to ensure that care provides value;
- help promote health services research to guide policymakers and other decisionmakers in legislatures and state governments;

- fund studies to evaluate the effectiveness of programs (even if the program itself is not supported by the foundation);
- support surveillance studies (in conjunction with local health departments) that help localities stay informed;
- get involved in demonstration projects, including design and evaluation; and
- disseminate information on best practices, lessons learned, and failed strategies.

Foundations can also maximize opportunities created by changes in federal policy. For example, in January 2001, CMS notified the states about new compliance requirements for Medicaid access. Each state was asked to develop a Medicaid dental program reform plan that addresses provider engagement and payments, participant outreach, and administrative improvements. The plans must also detail how each state intends to increase dental access to more than 40 percent. Foundations can capitalize on the energy created by these plans and develop key partnerships to improve oral health.

Implementation Advice

In addition to the roles highlighted above, Issue Dialogue participants offered a number of helpful suggestions related to effective implementation of a foundation-led initiative. Many suggested focusing on improving oral health within special populations where the need for improvement is greatest, including the frail elderly, high-risk children, minorities, disabled individuals, and those in rural areas.

Other suggestions include the following:

- focus on meaningful, measurable outcomes, and insist on the sustainability of programs;
- adopt 1 or more of the 23 goals related to oral health within Healthy People 2010;
- promote system change;

- think comprehensively and plan for the long-term; and
- do not measure success only by the number of grants awarded – consider convening.

When working with policymakers it is important to:

- highlight the importance of oral health, by making clear the workforce and economic ramifications of poor oral health;
- understand the financial constraints many policymakers are working under; and
- advocate for continued support of important state and federal programs that are in jeopardy of ending when administrations change.

Conclusion

Despite tremendous overall improvements in the oral health of Americans, poor oral health and lack of dental care are reaching crisis proportions among the most vulnerable populations. These problems reflect not only the broader deficits in health care related to access, financing, knowledge, and behavior, but can also be attributed to the unique problems of dental care. Some of these include a lack of insurance, workforce issues, a weak safety net, and limited access to fluoridated water. In addition, prevention efforts are often poorly understood and underutilized, and there is a general misunderstanding of the importance of oral health to overall health and well-being.

Improving oral health and dental care will require developing a balanced approach that considers the financing and administration of publicly funded dental insurance, the capacity of the workforce to deliver services, and the need to raise awareness of prevention efforts. It will require coordination with the overall health care system, a heightened involvement of policymakers, and a commitment by many disparate interests.

The Surgeon General and others have identified the major areas of need, and have put together a strong framework for organizations to help improve the oral health of current and future generations. Together, organizations in the public and private sector must work toward changing the perceptions of the public, policymakers, and providers about oral health, so that it becomes an accepted component of general health. They must also enhance research and policy analysis; build an effective health infrastructure that meets the oral health needs of all Americans; remove barriers to receiving oral health services; and use public-private partnerships to improve oral health for those who disproportionately suffer from oral diseases.

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