Oral Health

U.S. Department of Health & Human Services • Public Health Service

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PROGRESS REVIEW

In the 19th in a series of assessments of *Healthy People 2010*, Acting Principal Deputy Assistant Secretary for Health Arthur Lawrence chaired a focus area Progress Review on Oral Health. Dr. Lawrence commended modern dentistry for its holistic view of oral health and pointed out that oral health can affect many other aspects of an individual's general health status. In conducting the review, Dr. Lawrence was assisted by staff of the co-lead agencies for this *Healthy People 2010* focus area, the National Institutes of Health (NIH), the Indian Health Service (IHS), the Health Resources and Services Administration (HRSA), and the Centers for Disease Control and Prevention (CDC). Also participating were representatives of other Department of Health and Human Services (HHS) offices and agencies.

Dushanka Kleinman, Chief Dental Officer of the U.S. Public Health Service, provided an overview of salient issues in the focus area and asserted the central role of the *Surgeon General's Report on Oral Health* in alerting the nation to substantial barriers to the uniform application of preventive measures. For instance, 100 million individuals still do not have access to community water fluoridation, and only 58 percent of parents of children believe fluoride to be very important for their children's teeth. Compared with medical insurance, at least 2 1/2 times as many citizens lack dental insurance. To provide a national home for oral health issues, the Surgeon General launched *A National Call To Action To Promote Oral Health,* a partnership that enlists the efforts of a broad range of organizations and individuals in the public and private sectors. Using the *Healthy People 2010* objectives as a vital element in its plans, the partnership will pursue five principal actions: changing perceptions of oral health; overcoming barriers by replicating effective programs and proven efforts; building the science base and accelerating science transfer; increasing oral health workforce diversity, capacity, and flexibility; and increasing collaborations.

The complete text for the Oral Health focus area of *Healthy People 2010* is available at **www.healthypeople.gov/document/html/volume2/21oral.htm**. For more information about *A National Call To Action To Promote Oral Health*, go to **www.surgeongeneral.gov/topics/oralhealth/nationalcalltoaction.htm**. The meeting agenda, tabulated data for all focus area objectives, charts, and other materials used in the Progress Review can be found at **www.cdc.gov/nchs/about/otheract/hpdata2010/focusareas/fa21-oral.htm**.

Data Trends

In opening his summation of progress achieved in meeting the targets of objectives in the Oral Health focus area, Edward Sondik, Director of CDC's National Center for Health Statistics, noted that the prevalence of oral disease remains very high in the United States. Profound disparities among population groups still exist in levels of oral disease and in receipt of preventive and restorative care. More than 100 million Americans lack dental insurance, and an estimated 28,000 new cases of oral/pharyngeal cancer will be reported in 2004.

Data for some objectives featured in the Progress Review show favorable trends (e.g., the reduction in tooth decay among adolescents in the 1990s). By the end of that decade, the downturn in rates of decay in this age group had resulted in the saving of more than 30 million teeth and almost $3 billion in treatment costs.

Comparison of data from the survey periods 1988–1994 and 1999–2000 show that the proportion of 15-year-olds who had ever had caries in permanent teeth fell from 61 percent to 59 percent. The 2010 target is 51 percent (Obj. 21-1c), but data available so far in this decade do not indicate a clear trend. The proportion of adults aged 35 to 44 years who had experienced no permanent tooth loss due to caries or periodontal disease increased from 31 percent in 1988–1994 to 39 percent in 1999–2000 (42 percent of males, 36 percent of females). Among racial and ethnic groups, blacks showed the greatest proportional improvement over that timespan, going from 12 percent with no loss to 30 percent. The target is 42 percent (Obj. 21-3).

The picture was less favorable for children aged 2 to 4 years, among whom the prevalence of caries in primary teeth rose from 18 percent in 1988–1994 to 23 percent in 1999–2000. In that age group, 21 percent of females had had experience with caries in 1999–2000, compared with 26 percent of males. Among young Mexican American children, the caries rate was 36 percent. The target for that age cohort is 11 percent (Obj. 21-1a). IHS data from 1991 showed a 24 percent prevalence of early childhood caries (ECC) in American Indian/Alaska Native children younger than age 4. This compares with an ECC prevalence of less than 2 percent among all American children aged 1 to 2 years in 1988–1994.

The proportion of children aged 8 years who had received dental sealants on their molar teeth increased from 23 percent in 1988–1994 to 28 percent in 1999–2000. Among 14-year-olds, 15 percent had received dental sealants in both first and second molars in 1988–1994, compared with 14 percent in 1999–2000. The target for both age cohorts is 50 percent (Obj. 21-8a, -8b). Estimates for both sealant applications and caries prevalence are based on preliminary data. National data from the Medical Expenditure Panel Survey show that, in 2000, 31 percent of low-income children and adolescents (i.e., living in families with income ≤ 200 percent of poverty level) received preventive dental service(s) during the preceding year, compared with 20 percent in 1996. The target is 57 percent (Obj. 21-12).

Between 1990 and 1995, 36 percent of oral and pharyngeal cancers were detected at the earliest stage, compared with 35 percent in 1995–2000. The target is 50 percent (Obj. 21-6). The proportion detected in whites was almost twice the proportion found in blacks. Little change occurred in the proportion of people who visited a dentist in the preceding year: in 1996, 44 percent of the population (age-adjusted, aged 2 years and older) did so, compared with 43 percent in 2000. The proportion of persons with disabilities who visited dentists declined from 40 percent to 30 percent over that timespan. In 2000, the visitation rate reported for whites was 48 percent, compared with 27 percent for blacks and Hispanics. The target is 56 percent (Obj. 21-10). The proportion of local health departments and community-based health centers that provide onsite dental services increased from 52 percent in 1997 to 61 percent in 2001. The target is 75 percent (Obj. 21-14). There continues to be a significant difference between the proportion of persons with diabetes and those without who have an annual dental examination; persons in the former category had fewer dental examinations. The proportions in both categories changed little between 1997 and 2002 and are well short of the target of 75 percent (Obj. 5-15).

Key Challenges and Current Strategies

In the presentations that followed the data overview, the principal themes were introduced by representatives of the four co-lead agencies: Lawrence Tabak, Director of NIH's National Institute of Dental and Craniofacial Research (NIDCR); Patrick Blahut, Deputy Director of IHS's Division of Oral Health; William Maas, Director of the Division of Oral Health in CDC's National Center for Chronic Disease Prevention and Health Promotion; and Steve Smith, Senior Advisor to the HRSA Administrator. These agency representatives and other participants in the review identified a number of obstacles to achieving the objectives and discussed activities under way to meet these challenges, including the following:

- Most oral diseases and conditions are complex in nature, representing an interplay of factors that may involve genetics, nutrition and diet, infectious agents, the environment, tobacco use, behavior, and social systems.
- Twenty-five percent of the nation's most vulnerable children account for 80 percent of the cases of dental caries. Poor children have 4 times the prevalence of severe dental decay as nonpoor children and 2.4 times their unmet need for dental treatment.
- Overall, there is a serious lack of dental care providers who will accept Medicaid fees because the reimbursement rates are low. Also in short supply are providers who will treat very young children, an age group with a high incidence of dental decay.
- Tobacco use, the primary risk factor for oral/pharyngeal cancer, is high among poor people, especially American Indians/Alaska Natives, and constitutes the sixth most common cancer among U.S. males (fourth for black men). Especially in the form of cigarette smoking, tobacco use also is a significant risk factor for periodontal disease, accounting for up to half of all cases of periodontitis.
- IHS is responsible for addressing the oral health needs of approximately 1.6 million American Indians/Alaska Natives, the fastest growing minority group in the United States. Acute challenges include exceedingly high decay rates at all ages, including early childhood, and high rates of systemic disease that affect both oral health and the provision of dental care. Recent data suggest that increasing periodontal disease and use of tobacco will be added to the list of challenges in the near future.
- In cooperation with the Association of State and Territorial Dental Directors, CDC developed the National Oral Health Surveillance System, which enables states to collect and use uniform state-specific data to plan preventive interventions, target areas of greatest need, and monitor results. Currently, 14 states have data to monitor *Healthy People 2010* objectives for caries experience, untreated caries, sealant prevalence, dental visits, and fluoridation. The challenge is to expand this monitoring to all states.
- In Phase I of a current program, NIH/NIDCR funded five statewide models of oral cancer prevention and early detection. After statewide needs assessments are conducted with the aid of these funds, NIDCR and the National Cancer Institute plan to award Phase II grants to three of the states. These grants will constitute educational interventions for the public and health provider groups.
- Through its Health Center Programs, HRSA is expanding capacity to provide oral healthcare services by building this capacity into newly established or existing health centers that serve low-income and disadvantaged populations. As part of a 5-year plan, HRSA expects that its funded health center programs will enable 75 percent of the 1,200 community health centers to provide oral healthcare services onsite or by referral.
- By cooperative agreements funded in 2001, NIH/NIDCR supports five university-based Centers for Research To Reduce Oral Health Disparities, whose research results should provide guidance on how to reduce incidence of dental caries among poor children. The centers recognize that community involvement is essential and that health promotion/disease prevention activities must be designed on the basis of the prevailing culture and risks in each community.
- CDC is developing a strategy to increase the knowledge of diabetes educators, dentists, and dental hygienists about the oral complications of diabetes. To strengthen the role of other health professionals in preventing and treating diabetes complications, the National Diabetes Education Program has developed a guidebook to promote a team approach to diabetes care.
- HRSA, CDC, and the Centers for Medicare & Medicaid Services support an initiative to train physicians and physician extenders to provide oral screening, fluoride varnish application, and counseling of caregivers to reduce dental decay in children from birth to age 3 who are enrolled in Medicaid and State Child Health Insurance Programs.
- IHS is beginning to report reductions in incidence of caries among young American Indians/Alaska

Natives, principally as a result of its expanded program to apply dental sealants through school-based or school-linked interventions. About one-quarter million such applications were accomplished in 2003.

- HRSA supports training in the dental health professions to broaden access to quality oral healthcare professionals in all geographic areas and to all segments of society.
- The Academy of General Dentistry, with a membership of 37,000 practicing dentists, has a Memorandum of Understanding with HHS and the four co-lead agencies to promote the *Healthy People 2010* objectives, focusing on implementing *A National Call To Action To Promote Oral Health* and on improving access to dental services through raising the general level of oral health literacy.

Approaches for Consideration

Participants in the review made the following suggestions for steps to enable further progress toward achievement of the objectives for Oral Health:

- Enhance oral health literacy on the part of the public, particularly among parents and prospective parents.
- Seek ways to ensure that high-risk women of childbearing age are provided with preconception counseling about measures to protect the oral health of infants and young children.
- Tailor interventions designed to reduce disparities to the cultural characteristics of specific low-income neighborhoods and of other areas at increased risk for poor oral health.
- Expand school-based health centers to provide children and adolescents with dental preventive and restorative treatment.
- Bring about comparability between data collected by IHS on American Indians/Alaska Natives and those that derive from the National Health and Nutrition Examination Survey.
- Increase the proportion of underrepresented racial and ethnic groups in the dental workforce that are compatible with the populations in highest need of dental preventive and treatment services.
- Explore ways to redress the high vacancy rate for dentists in IHS and the National Health Service Corps, perhaps through reforming schedules of loan repayment, the burden of which serves as a disincentive to recruitment of new graduates into programs that provide care to the underserved.

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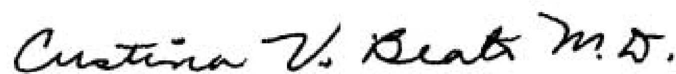

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