Oral Health Care Services for Older Adults: A Looming Crisis

Two important oral health policy concerns in the United States are disparities in the oral disease burden and the inability of certain segments of the population to access oral health care.[1] Both of these challenges are largely due to socioeconomic stratification in US society. As a consequence of the release of the surgeon general's report on oral health,[1] there has been a call to action to improve the oral health of underprivileged groups who have difficulty accessing dental services. In particular, an emphasis has been placed on children, and specifically the oral health of economically disadvantaged children.

GROWING AND DIVERSE OLDER POPULATION

In contrast to the extensive national attention focused on children's oral health in recent years, America's growing elderly population has received relatively little attention and almost no public health or public policy interventions. Population projections for the United States indicate that the elderly will constitute an increasing percentage of the population as we proceed into the 21st century.[2] In 2001, the population of the United States was almost 278 million, and 12.6% of the population was 65 years of age or older. By 2015, the population is expected to increase to 312 million, and 14.7% of the population will be aged 65 years or older. In 2030, which is within the practice lives of students currently enrolled in dental schools, the population will have increased to more than 350 million, and 20% of the population—1 of every 5 members of US society—will be 65 years of age or older. Further, the elderly population will become increasingly diverse in terms of race/ethnicity, financial resources, and living conditions.

A substantial number of older adults will be able to function quite independently in their communities. The majority of their working lives will have been spent during periods of relative economic prosperity. With attention to oral health earlier in their lives, these seniors will have complete or near-complete dentition and sufficient resources to afford some out-of-pocket expenses for dental services. In contrast to these community-dwelling elders, others will be homebound or have limited access outside their homes, while still others will live in long-term care (LTC) facilities. Access to dentists will be just one of many difficulties that will complicate attempts to provide health care to this group of seniors.

For the vast majority of seniors in LTC facilities, financing of oral health care services will be a formidable challenge. Medicare does not provide coverage for routine dental services, and in the absence of private insurance or personal resources, a large portion of this group will not be able to afford any dental services whatsoever, let alone the most appropriate treatments. Clearly, there must be a response to the increasing oral health concerns of the elderly who present with special needs, especially those who are homebound or living in LTC facilities and burdened with other chronic disorders.

DISPROPORTIONATE IMPACT OF ORAL DISEASES ON SENIORS

For both obvious and less obvious reasons, oral and dental diseases have a disproportionate effect on the elderly. In addition to years of exposure of the teeth and related structures to microbial assault, their oral cavities will show evidence of wear and tear as a result of normal use (chewing and talking) and destructive oral habits such as bruxism (habitual grinding of the teeth). The elderly also suffer from chronic disorders that can directly or indirectly affect oral health, including autoimmune disorders such as pemphigus and pemphigoid.[3] The elderly often require multiple medications, and a common side effect of more than 500 medications is reduced salivary flow.[4] A reduction in saliva can adversely affect quality of life, reduce the efficiency of chewing, and lead to significant problems of the teeth and their supporting structures.

The elderly may also have difficulty performing routine oral hygiene procedures because of physical limitations. In addition, oral infection is now recognized as a risk factor for a number of systemic diseases, including cardiovascular and cerebrovascular diseases, diabetes mellitus, and respiratory disorders. Finally, it is important to emphasize that once people have become edentulous (toothless) and are using com-

plete dentures, their oral health needs do not cease. Jaws are not static and may continue to resorb over time. Ill-fitting prostheses can adversely affect chewing and lead to poor nutrition. People without teeth remain susceptible to oral cancer, mucosal diseases, and alterations in salivary gland function.

SENTINEL MEASURES OF ORAL HEALTH

Tooth loss is one general measure of oral health status of a population. While there are many diseases that affect the oral cavity, caries (cavities), periodontal disease (gum disease), and oral and pharyngeal cancer are other sentinel measures used to track oral health at the population level.

Tooth Loss

The percentage of individuals who are totally edentulous has decreased from the time period 1971–1974 (National Health and Nutrition Examination Survey [NHANES] I) to the time period 1988–1994 (NHANES III).[1] This was found across all age groups: 18 to 34 years (from 2.0% to 0.44%), 35 to 54 years (from 12.6% to 5.2%), 55 to 64 years (from 33.3% to 20.1%), and 65 to 74 years (from 45.6% to 28.6%). However, this encouraging trend is accompanied by other challenges. As the aging population retains more teeth, these seniors will be at increased risk for caries and periodontal diseases.

Furthermore, there are distinct regional and state differences in tooth loss experienced by older Americans (those older than 65 years).[5] According to data from the Behavioral Risk Factor Surveillance System (BRFSS), the highest percentages of edentulous individuals were seen in Kentucky (42.3%) and West Virginia (41.9%), while the lowest percentages were observed in Hawaii (13.1%) and California (13.3%). Determinants of loss of 6 or more teeth include lack of a high school diploma, a household income of less than $15 000, self-identification as non-Hispanic Black, current smoking, and being in poor to fair health status (including having diabetes).

Dental Caries

Dental caries constitute the most common disease of childhood. Nevertheless, as adults retain all or more of their teeth into their later years, the number of teeth at risk for root caries, as opposed to the coronal caries commonly observed in children, will increase. In fact, in the most recent national survey (NHANES III), nearly half of all individuals aged 75 years or older had root caries on 1 or more teeth. A comparison of NHANES I and NHANES III—for which data were collected in 1971–1974 and 1988–1994, respectively—reveals that the percentage of teeth with caries (treated or untreated) decreased for individuals between the ages 18 and 54 years but increased for those between the ages of 55 and 74 years.[1] The progression of root caries in an individual with little or no saliva can be quite rapid, and the restoration of these lesions is often technically challenging.

Periodontal Diseases

Periodontal diseases constitute the second most common group of oral disorders. These are inflammatory disorders affecting the supporting structures of the teeth; they manifest as tissue inflammation and loss of alveolar bone supporting the teeth. NHANES III clearly demonstrated that the proportion of adults with loss of attachment along the root surface (a measure of periodontitis) increased with increasing age. For example, the percentage of individuals who displayed at least one tooth with at least 4 mm of loss of attachment increased from 3% for persons aged 18 to 24 years to 12% for those aged 25 to 34 years, 22% for those aged 35 to 44 years, 55% for those aged 65 to 74 years, and 65% for individuals aged 75 years or older.[1]

As noted previously, the concern for increased prevalence of periodontitis in older individuals must be considered in light of the risk posed by periodontitis for certain systemic disorders, including cardiovascular and cerebrovascular diseases, diabetes mellitus, and respiratory disorders. Periodontal infections are chronic, and the gram-negative bacteria that characterize advanced forms of periodontitis can be an important source of endotoxins. These organisms, and endotoxins, gain access to the systemic circulation, with resultant activation of the inflammatory response. Patients with periodontitis have been shown to be at increased risk for myocardial infarction, fatal myocardial infarction, and stroke.[6,7] Anti-infective treatment of periodontitis has been shown to improve the metabolic management of poorly controlled diabetes mellitus,[8] and a professionally administered oral hygiene program provided to LTC patients has been shown to reduce the occurrence of fever and death due to pneumonia.[9]

Oral and Pharyngeal Cancer

Each year, approximately 30 000 individuals in the United States develop oral cancer. Oral and pharyngeal cancers are predominantly disorders of the elderly; the median age at diagnosis is 64 years. Epidemiological surveys reveal that the incidence of these disorders decreased approximately 0.5% per year over the period from 1973 to 1996. However, one disturbing statistic is that the survival rate for these cancers has not improved in 25 years.[1] The etiology of oral and pharyngeal cancers has been intensely studied, and cigarette and alcohol use are the primary determinants. Hence, smoking cessation activities are increasingly recognized as vital to dental practice.

ADDRESSING THE ORAL HEALTH CARE NEEDS OF THE ELDERLY

The need for a coordinated effort to address the oral health care needs of the elderly is suggested by demographic trends and epidemiological data. Such a plan must consider contributions from the dental profession, possibly through the efforts of the American Dental Association (ADA) and its state and local associations; the dental schools, with involvement of the American Dental Education Association; federal, state, and local health authorities; and assistance from national organizations and foundations that focus on health care. With adequate attention and focus, a variety of national initiatives with implementation on the state and local levels will serve to improve access to oral care for older Americans who are currently most in

need, including the poor and disabled.

While effective preventive measures exist for younger populations (water fluoridation, dental sealants), no preventive measures are yet available to address the expected increase in oral health needs of the aging population. There are, however, a number of approaches that should be considered.

Geriatric dentistry should receive increased emphasis in the nation's dental schools, specifically in predoctoral dental curricula. This suggestion has been proposed in the past, but it assumes new urgency at this time. Nevertheless, it is important to recognize that there is a need to balance the ever increasing demands for curricular time with the requirement that dental schools graduate individuals who are capable of treating the public after only 4 years of education.

A national program for older Americans similar to the ADA-sponsored "Give Kids a Smile" should be launched. In addition, a campaign comparable to the ADA-supported initiative to increase awareness about oral cancer may prove effective. Mandatory continuing education in geriatric dentistry is another approach to informing the practice community about the oral health care needs of the elderly. According to the ADA, at least 45 states and the District of Columbia and Puerto Rico require continuing education for relicensure of dentists (data on file, ADA, Department of State Government Affairs, October 22, 2002). Data from recent BRFSS surveillance activities[5] indicate differences in tooth loss by geographic locale, supporting the concept of regional or state strategies.

US dental schools, which often focus their service programs on those who have difficulty accessing care, can focus both on-site and off-site care activities on older populations. This could be accomplished via local outreach to older, fully ambulatory seniors, who could come to the school clinics for care, and by seeking collaborations with nursing homes and other LTC facilities for older adults with greater health and personal needs. Many of these facilities have on-site dental care, but staffing may be limited owing to budget constraints.

Effective and relatively inexpensive preventive procedures and protocols can be employed for the elderly who have problems accessing care, including application of topical fluoride varnishes and anti-infective (chlorhexidine) rinses or swabs. Under certain circumstances, these services could be delivered by home health aides or staff at LTC facilities.

Collaboration with other health care providers who routinely treat the elderly should be encouraged, with a focus on increasing their awareness of potential oral health problems. They might be asked to discuss the need for dental care visits and proper dental care with their patients. A cursory oral examination can be conducted by health care professionals other than dentists, who can then make referrals on the basis of their findings or specific patient complaints.

The challenges faced by both the dental profession and the nation as a whole regarding provision of oral health care services to older adults were the subject of a recent report prepared by Oral Health America.[10] This report notes that older Americans suffer disproportionately from oral diseases, and the problem is particularly acute for individuals in LTC facilities. Further, all 50 states were surveyed to determine the level of Medicaid coverage for dental services, and the report concludes that financing oral health care services for the elderly is a major challenge. Medicare does not provide any coverage for dental services, and only 1 of 5 Americans aged 75 years or older has any type of private dental insurance. The overall assessment for the nation, reflecting availability of dental coverage, is a grade of D.

The ADA report *The Future of Dentistry* briefly addressed the problem of financing of dental services for the elderly, especially in light of reductions in employer-sponsored coverage of dental services for retired workers.[11] While suggestions were offered (tax-deferred accounts for medical and dental services, reliance on public funding for special-needs and disabled individuals), a comprehensive plan was not proposed.

A CALL FOR NATIONAL ATTENTION TO GERIATRIC DENTISTRY

On September 22, 2003, the Senate Special Committee on Aging held a forum chaired by Senator John Breaux of Louisiana on "Ageism in Health Care: Are Our Nation's Seniors Receiving Proper Oral Health Care?" The surgeon general, representatives of the ADA and the American Dental Education Association, and practitioners involved in the provision of care to the aged, blind, and disabled, were passionate in their concern for the crisis at hand.

It is generally acknowledged that there is a paucity of dental practitioners who are formally trained to meet the needs of elderly patients. Geriatric dentistry is not a recognized dental specialty. There is no obvious source of support for training a new group of "gerodontologists." Since care of the elderly is not the specific purview of any dental subspecialty, professional organization–based responses to the challenge of providing oral health care services to the elderly need to be developed. The dental profession has an opportunity to take a leadership role in the delivery of health care services to the seniors who have contributed so vitally to our society's well-being and who deserve to be treated with the best oral health care we have to offer. ■

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