Public Policy on Oral Health and Old Age: a Global View

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Abstract

This paper reviews major trends in the global demography and oral health status of populations, the challenges faced in ensuring successful aging because of these trends, and basic principles to guide public policy responses. Virtually all populations in which the dental caries prevalence reached high levels in the first half of the 20th century have experienced large reductions. A feared increase of the disease in the developing world has been far less than expected. Some countries that did suffer large increases dating from the 1960s already have managed to return to their former low levels because of timely use of preventive measures. Improving oral hygiene and a consequent reduction in the occurrence and severity of periodontal diseases further bolster the mainly positive trend in global oral health. Only in the former socialist economies is oral health status worsening. These positive changes have brought the expectation that an intact and well-functioning dentition should last for life, no matter how extended the lifespan becomes. But these changes take us into "uncharted waters" and the most appropriate strategies for preserving health in old age are unknown because they have never been tried. However, public policies to support community awareness and acceptance of broad-based preventive behaviors to preserve oral health in old age are essential. Policies also must provide guidance on how to proceed when disabling disease occurs, provide for regular research and updating of information, and ensure access to cost-effective and high-quality services for all. [J Public Health Dent 2000;60(4):335-37]

Key Words: demographic trends, epidemiologic trends, health policy, elderly.

The classical approach of making an exhaustive review of available information from the scientific literature and public records, from which to assess the adequacy of agreed policy and proposed action, has not been taken in this paper. This decision was made in the belief that, no matter how praiseworthy efforts have been to date, the pace of change in demography and oral health status, globally, has overwhelmed them. The intention of this symposium has been an attempt at pathfinding in a maelstrom of change, which needs to look beyond the traditional to perspectives that are bold and challenging.

Demography

The relationship between aging and health has always been a challenging question, but never has it been as compelling as it is now as a result of demographic changes. We have been evolving, over the last 70 to 80 years, from average life expectancy at birth of 35 to 50 years to community averages of 55 to 80 years, the extremes representing a wide range of development. Nor is this process finished or its ultimate ceiling known, if indeed there is a ceiling. Furthermore, we do not know how long a dentition, indemnified from invasive destructive forces such as caries, can survive normal life stresses and strains or what other oral diseases will need to be managed in whole communities at ages that have to date been remarkably rare. In reflecting on this theme, we must not ignore the effect on quality of life of the trends in common oral diseases.

Epidemiology

With reference to the World Health Organization (WHO) Global Oral Data Bank (GODB), the largest reduction in DMFT recorded in Europe was from about 12 to less than 1 at 12 years of age during the past 30 to 40 years (1). Similar massive to very large reductions have been experienced by virtually all populations in which the caries prevalence reached high to very high levels in the first half of the 20th century. The feared increase of the disease in the developing world, as traditional diets and water supplies were substituted, has been far less intensive than expected, rarely reaching the high levels experienced in established market economies, often moderate levels and, otherwise, trivial to practically imperceptible increases. Some countries that did suffer large increases dating from the 1960s already have managed to return to their former low levels due to timely application of adequate preventive measures. Only in the turmoil of the former socialist economies does one see a current serious worsening of the oral health status affecting large populations.

Improving oral hygiene and a consequent reduction in occurrence and severity of periodontal diseases further bolsters the mainly positive trend in global oral health.

In countries where caries prevalence had never been high, the edentulous state was never expected, but life expectancy was short. In countries where prevalence of the common oral diseases was high, these changes have brought the expectation that an intact and well-functioning dentition should last for life, no matter how extended average expectation of life becomes. It is salutary to reflect that the effect of those changes has now reached as far as the 40- to 50-year-old cohort.

The Challenge

The dental profession has a burgeoning problem to face in addressing

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concerns about aging, as have the other health professions. Ironically, the cause of the problem, which has thrust us into "uncharted waters," is mainly success in reducing disease and promoting healthy life styles, at least in affluent countries and for the affluent in all countries. Much has been spoken and written about the massive expenditures in the health sector during the terminal six months of life. In oral health we are faced with preserving a functional dentition unto death for increasing proportions in our communities of octogenarians, centenarians, and eventually beyond. Clearly, we don't know what to do because it has never been done. We can sometimes take heart in listening to stories of happy centenarians still possessing a natural dentition; however, the numbers are so few that it is perilous to extrapolate from such legends.

Further turmoil relates to the vastly imperfect understanding of how to manage those oral diseases of the elderly that can abruptly destroy aspirations for an orally healthy and contented "third age." Apart from the diseases of the elderly that are well known, such as xerostomia, we do not know what new forms of oral disease may be lurking in the wake of population aging.

The Response

Having summarized the problem, what is the solution? Resting comfortably on a feather bed of ignorance about what will happen, we have to propose a strategy that must be tested and modified repeatedly. The majority of dental professionals have comfortably occupied their professional lives with dental caries and periodontal diseases. Major specialization in orthodontics and prosthetics often has been criticized in public health circles, the former for concentrating too much on cosmetic interests, the latter as an easy option that indicates failure to practice adequate prevention and optimal tissue preservation.

The irony of all this is that the same health promotion and prevention that has eliminated caries as a serious public health problem and dramatically reduced the ravages of periodontal diseases has provided the basis for a shift in aging communities to oral health quality of life issues. Doing what now comes naturally brings whole populations to the more sophisticated questions transcending thoughts of disease prevention and treatment and replacing those thoughts with a focus on lifelong enjoyment linked, inextricably, to a pleasing and self-satisfying appearance. The pariahs of the past in dental public health doctrine are fast becoming the undeniable priority.

Appropriate policy is essential; but what is to be its basis? One might well say that, despite bewildering change, basic approaches of the past are still valuable. Here, I refer to the belated discovery several decades ago that prevention, not treatment, was the key to better oral health in children. Even more belated was the discovery that magic bullets like water fluoridation needed to be underpinned by increased community awareness and acceptance of a broad-based preventive behavior.

It is my opinion that health promotion aimed at creating a state of awareness and consequent behavior similar to that achieved for the young will be the prime pillar of any public policy for the elderly. It will need to provide for adequate formulation and dissemination of information on preservation of oral health in old age. That information will need to be supplemented by guidance on how to proceed when disabling disease does occur, either despite recommended preventive behavior, or due to failure to practice it adequately. It will be very important to provide for regular research and updating of information to stay abreast of changing needs.

The intervention face of public policy for the elderly will need to focus both on how to improve preservation of an intact and functional dentition and how to provide whatever services are needed, acceptable and affordable, focusing especially on the likely escalation of costs at a time in life when resources are diminishing.

Fundamental to the first part of this dual need are the science of biomimetics/tissue engineering and the element of rigorous evaluation. Great advances have been made in prosthetics through the development of implantology and the process of tissue integration with implant materials. Despite spirited defense from some, I remain unconvinced that sufficient quality control of the range of methodologies used has been performed. Such control needs to evaluate success not only at the outset of rehabilitation, but also in maintaining an acceptable status over a very long period of "third age" years. Recently, I have been most impressed by work in northern Europe to evaluate cost-effective surgical care of oral cleft cases (2). That work has resulted in a marked reduction in the number of centers providing the services, thereby focusing on well-managed centers offering proven methodologies. If these positive developments are important for the relatively rare oral cleft rehabilitation needs, how much more important is such quality control for implants and even more for tissue engineering intended to attain the ultimate in rehabilitation of lost orofacial structures. Public policy will need to promote and support methods developments and quality control, together with whatever regulatory means are feasible to ensure that unacceptable methods are eliminated.

The other major element of public policy will be some form of private and/or public insurance or social security system in which the essentials of quality care for the elderly are accessible to all.

Much needs to be done by experts in these areas to design such public policy. Apart from specifying details of the guiding principles I have cited and which should be augmented by several others, it will be necessary to adapt national and even district or provincial policies to the prevailing social structures and cultures. In detailing policies and strategies, as emphasized by this symposium, we must give thought to the very different coverage needed by the independent elderly and by those who are institutionalized.

Conclusions

Recalling my earlier comments about demography and disease trends, there is an urgent need to address public policy in oral health and old age. Public health had for so long concentrated on child health as the compelling priority through which to improve community health that enthusiasm for modest extension to adolescents, and then to young adults, has been difficult to achieve. The quantum leap to give high priority to community programs for the elderly is even more difficult to visualize. Such inertia

is common in all sectors; nevertheless, the present situation compels us to break the bonds of conservatism and work indefatigably toward adequate public policy to ensure continued oral health for the elderly. Some of the solutions undoubtedly will reflect back upon failure to perfect policies in the adolescent and mature adult years upon which the best oral health policies for the elderly will depend.

References

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EDITORIAL NOTE

We were saddened to learn of the death of David E. Barmes as this issue of the *JPHD* was going to press. He died peacefully January 13, 2001, in Australia at the age of 69. He was a resident of Duillier, Switzerland, and Bethesda, Maryland. He joined the World Health Organization in 1967 and served as chief of the Oral Health Unit for 20 years. Among many of his achievements were the introduction of the Oral Health Surveys manual, which is in its fourth edition; establishment of the Global Oral Data Bank; establishment of the goal of "no more than 3 DMFT at 12 years by the year 2000"; and introduction of the CPITN Index. Upon his retirement from the WHO, he served as an NIDCR Special Expert for International Health.