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## Health and Literacy: Supporting the Oral Health Research Agenda

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As is noted in *Healthy People 2010*, good oral health can be achieved and enjoyed by all through the application of known preventive regimens and routine dental visits (1). However, despite a broad array of scientifically sound preventive measures for most oral diseases, many Americans do not use the proven preventive procedures and do not use the oral health care system (2).

First and foremost, financial barriers inhibit the use of known preventive regimens and routine dental visits (3). Countrywide, relatively few employers provide oral health insurance and those that do often offer negligible benefits. Most state Medicaid programs do not include support for oral health care for adults. Furthermore, a significant proportion of providers in many states do not treat patients of low socioeconomic status (4). At the same time, however, surveys indicate that the general public is not aware of the relationship between oral health and general health or that most oral disease can be prevented or controlled (2).

Data presented in *Healthy People 2010* for oral health objectives demonstrate a clear disparity in oral health between those with lower and higher levels of education. Those persons with lower levels of education have higher unmet dental needs, more disease, and in the case of oral cancer, higher morbidity and lower 5-year survival rates than do those with education at or above the high school level (1). Of course, decades of health studies analyses have established strong links between health status and educational attainment and/or income, both commonly used as markers of socioeconomic status (5).

Only recently, however, focused attention is being paid to key components of education, such as literacy, for more in-depth explorations of pathways between education and health. Literacy—the foundation stone of education—includes reading, writing, oral language, and quantitative skills. Studies in education and adult literacy suggest that literacy influences one's ability to access information and to navigate in the highly literate environments of modern society (6).

Increased attention to literacy among health researchers and practitioners was spurred by the 1993 findings of the National Adult Literacy Survey (NALS) that offered insight into adults' ability to use printed materials to accomplish everyday tasks. NALS was not a test of reading but instead focused on adults' use of both prose and document texts to accomplish mundane tasks at varying levels of difficulty and complexity. For example, a survey participant might be asked to use a chart on an over-the-counter medicine package to determine the proper dose for a child of a certain age and weight (6). The finding that 47% to 51% of U.S. adults have functional literacy skills that are below high school level was of critical concern to educators, economists, and researchers (7).

However, literacy-related concerns caught the attention of health researchers and educators even earlier. The nascent field of health literacy has its roots in inquiries dating back to studies in the 1970's that examined the reading demand of health materials. In part, an interest in health literacy was based on access to information as well as on legal and ethical

concerns for adequate protection of human subjects and patient autonomy in informed consent procedures (8).

To date, most of the studies published in health-related journals mentioning literacy have focused on examinations of the reading level of health materials such as health education booklets, hospital directives, or patient care pamphlets. A small number of these studies examined dental health materials (9-10). Despite the many kinds of health-related materials analyzed for readability, findings of over 300 studies indicate that the reading level or demand of public health, medical, dental, and occupational health materials are at reading grade levels that exceed high school levels and are beyond the documented average skill level of U.S. adults (8).

With the development, in the early 1990's, of short and easy-to-administer tests using health vocabulary and texts, researchers were able to conduct studies in medical care settings and compare a variety of health outcomes among adults based on their reading skills. Approximately forty-five studies have linked reading skills to a variety of health outcomes such as understanding a diagnosis or disease, knowledge of recommended regimen or medication, ability to follow a regimen for the management of a chronic disease, and likelihood of hospitalization. For example, findings indicate that those with poorer reading skills are less likely to engage in screening behavior and are more likely to be hospitalized than are those study participants with strong reading skills. The emerging research agenda in medicine has yet to be initiated in oral health (11).

However, the Surgeon General's report on oral health in America noted that limited oral health literacy may serve as a deterrent to care, a barrier to information and to preventive services, and an inhibitor for active engagement in discussions of treatment options (2). *Healthy People 2010, Oral Health in America: A Report of the Surgeon General* and *A National Call to Action to Promote Oral Health* all note the importance of health literacy. Given increased attention to links between literacy and health, it is now time to consider adding systematic studies of literacy to the oral health research agenda.

The 2004 Institute of Medicine report, *Health Literacy: A Prescription to End Confusion*, expanded our understanding of the scope of health literacy to address health-related actions that adults undertake at home, at work, and in the community, as well as in a variety of health systems and care settings (12). In order to fully engage in oral disease prevention, adults take action at home as they purchase and use dental products, advocate for benefit packages at work that include dental care, consider community issues such as the health benefits of water fluoridation, and engage in dialogue and discussion with dentists and dental hygienists to maintain oral health and attend to emerging problems. Studies in oral health literacy that are attentive to the skills adults need to accomplish these tasks and the materials and programs we professionals provide to help them take

action can lead to critical improvements. Equally important, the role of dental care providers in increasing oral health literacy must be explored. Studies in the communication skills of dental providers and how these skills are taught in educational institutions are critically needed. The White Paper included in this volume offers a call to action, highlights the need for oral health specific research tools, and provides suggestions for research initiatives. The White Paper speaks to the importance of oral health literacy and of exciting opportunities to redress existing inequalities.

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