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Clin Nurs Res. Author manuscript; available in PMC 2010 August 1.

Published in final edited form as:
Clin Nurs Res. 2009 August ; 18(3): 218–222.

Commentary by Lorenz

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The article, "Measuring the Oral Health of Nursing Home Elders," describes a useful multidisciplinary approach to address a widespread, complex, and commonly experienced problem of inadequate oral care among nursing home residents. In addition, the findings uncover a larger issue of the disparities in dental insurance coverage and dental care among older adults in the United States by working/retired, race/ethnicity, urban/rural residents, and socioeconomic status. Others have demonstrated that oral disparities begin during childhood and extend through all stages of life. For those most affected, poor oral health has negative consequences on overall health, function, comfort, and quality of life. Older adults are the fastest growing segment of our population and are those that have the highest disease rates and the lowest access to comprehensive oral care. If oral care continues to be lacking in this population, the stress on health care costs will likely increase.

Studies have repeatedly found that although nurses and other caregivers state the importance of good oral care, there is insufficient evidence-based knowledge regarding risk factors and consequences of poor oral health. Therefore, this commentary is written following the heuristic "what is already known, what is new, and what now."

What We Know About Oral Care

Assiduous oral care is essential for optimal health and well-being of all persons. Oral care should be comprehensive and include brushing and flossing after meals as well as frequent professional care. Inadequate oral care allows for the accumulation of dental plaque, the community of microorganisms found on the tooth surface as a biofilm. Numerous studies designed to determine the composition of the plaque found it to be diverse with many species, such as streptococci and lactobacilli, found at different sites. In health, plaque remains relatively stable over time (microbial homeostasis). However, changes, such as reduced salivary flow, can disrupt homeostasis, allow overgrowth of bacteria, and create a state of poor oral health. A clinical consequence of poor oral health can be disease. In fact, poor oral health has been linked to multiple adverse health conditions, including cardiovascular disease (National Institutes of Health, 2005), stroke (Joshipura, Hung, Rimm, Willett, & Ascherio, 2003), poor nutrition, and uncontrolled blood glucose levels in diabetics (Taylor & Borgnakke, 2008). A recent review by Azarpazhooh and Leake (2006) found good evidence (I, Grade A recommendation) that comprehensive oral care reduced occurrence of respiratory diseases among high-risk older adults in hospitals and those living in nursing homes.

As people age, they are more susceptible to poor oral health for a wide variety of reasons. For example, a common side effect of many medications is a reduction of saliva flow. Besides, many adults experience sensory impairment, cognitive decline, and reduced dexterity caused by arthritis or neurological diseases that make self-care difficult. In the nursing home setting, most residents are impaired in activities of daily living, and require assistance completing oral

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care. Yet oral care has been found to be inadequate and frequently eliminated (Bowers & Becker, 1992; Frenkel, 2008).

Multiple obstacles prevent older adults from receiving comprehensive oral care, particularly for those residing in nursing homes. Barriers include biobehavioral aging, financial concerns, lack of coverage by Medicare, insufficient reimbursement by Medicaid, a shortage of dental professionals, and caregivers possessing limited knowledge regarding the provision and importance of oral care, including nurses and certified care assistants (Dolan, Atchison, & Huynh, 2005). The strategy put forth by the U.S. Surgeon General's report (U.S. Department of Health and Human Services, 2000), the American Association of Colleges of Nursing (1995), and the Pew Health Professions Commission (1993) to decrease disparities in oral care for older adults calls for collaboration across health professions, as the need exceeds the capability of any single discipline.

What Is New

This study sought to test the feasibility of using an innovative, collaborative strategy to measure oral health indices in a sample of nursing home residents. Two experienced health care providers, a nurse practitioner and a dental hygienist, trained students from nursing and dental hygiene to work together with an experienced dental hygienist to function as a team. The rationale was to use the specific expertise of each discipline to obtain trust and access to the mouths of residents. The nurses used specific strategies to establish rapport thus reducing care-resistant behaviors. The dental hygienists measured plaque on teeth and dentures and the status of natural dentition. The older adults recruited into the study only infrequently engaged in inappropriate behaviors or exhibited agitation. Thus, not surprisingly, none of the residents resisted examination by the nurse–dental hygiene team.

This study is valuable because, to my knowledge, this is the first study to test the feasibility of using an interdisciplinary team to assess oral health of nursing home residents. The team found that the residents had an average of 17.42 decayed, missing, and filled teeth with an average of 1.5 decayed teeth per resident. According to this research report, nursing students were responsible for conveying any problems that required professional care. Disappointingly, no report was provided on the number of problems professionally treated. Numerous epidemiologic investigations demonstrate the low priority given to oral care in many nursing homes (Berkey, Berg, Ettinger, & Meskin, 2008; Lamy, Mojon, Kalykakis, Legrand, & Butz-Jorgensen, 1999) and to the low concern among dentists and dental hygienists (De Visschere & Vanobbergen, 2006; Pickare & Ablah, 2008) suggesting that merely conveying identified problems to nursing home staff did not result in professional dental treatment.

Similar to this study's findings, previous research has reported a profound need for oral care among nursing home residents (Coleman, 2002) with sharp differences in prevalence of edentulism by race and income, with Blacks, and low-income elders more likely to be edentulous and have untreated and restored lesions (Centers for Disease Control and Prevention, 2005). Older adults may arrive at nursing homes with preexisting poor oral health resulting from past disparities in dental insurance coverage and access to professional oral care. This study put forth an interesting hypothesis that the high plaque scores among nursing home residents may be the result of calcified plaque as opposed to poor oral hygiene. It is important to understand that lack of comprehensive oral care allows dental plaque to accumulate on tooth surfaces, once accumulated, it mineralizes to form calculus. As stated by the authors, currently only professional scaling and cleaning can remove calcified plaque (Harris, Garcia-Godoy, & Nathe, 2008); however, effective nursing interventions can interrupt the process of plaque formation and its consequences. Development of standardized assessment parameters to

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monitor the effectiveness of oral care routines, including timing, frequency, and products would lead to problem recording and implementation of a plan of care.

What Now

The implication for practice is that comprehensive oral care is a crucial part of care for the overall health and quality of life for all older adults, particularly those who are frail and vulnerable. As such, nurses have the potential to play a key role in improving oral care in older adults by obtaining and translating evidenced-based knowledge into more informed practice in care of older adults. Collaboration between nursing and dental professionals offers great promise for improving comprehensive oral care for older adults.

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