Nutrition and the Dining Experience in Long-Term Care:
Critical Indicators of Nursing Home Quality of Care

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Long-term care facilities of all types, those providing skilled nursing care in particular, are at a crossroads. With the predicted growth of the older adult population, and the population of older adults who will require dementia-specific care, long-term care facilities face a probable and rapid increase in the need and demand for skilled nursing services. In fact, the number of adults over the age of 65 in nursing facilities* is predicted to double by 2020.[1] Currently, there are 16,032 nursing facilities in the United States with more than 1.4 million residents.[2] In North Carolina, there are 424 nursing facilities with capacity for 42,897 residents.[3] In the face of the changing demographics in our society, nursing facilities are re-engineering to embrace the future and successfully meet these challenges. Part of the re-engineering will involve modifications of the physical plant, new construction and innovations in technology and services to match the evolving needs of residents.

This issue of the *North Carolina Medical Journal* focuses on one of the most salient aspects of long-term care quality—food and the dining experience (as well as hydration and fluid intake). Nutrition is one of the major determinants of successful aging and, for most, eating is one of life's most pleasant daily experiences. In the long-term care setting, the medical-nutritional needs of nursing facility residents are often competing with the provision of "consumer-defined" quality of care. To begin with, nursing facility residents often have complex healthcare conditions that limit their function, depress their senses of taste and smell, require multiple medications, and necessitate therapeutic or mechanically altered diets. These treatments can limit independence, choice, and pleasure and, thus, have a negative effect on quality of life. In the interest of preserving both the health and happiness of their residents, long-term care facilities are trying to find a balance between the residents' required medical treatments and personal preferences. North Carolina's nursing facilities are finding ways to achieve this balance as they also juggle the logistic challenges of feeding large numbers people in a highly regulated industry. Many of these specific efforts are described in the commentary by Nadine Pfeiffer, BSN, RN, and her colleagues in this issue of the Journal.[4]

"Though nutrition, hydration, and the dining experience in general is but one indicator of overall quality of care, it is clearly among the most critical indicators of quality from a consumer's point of view."

Those of us who have been asked to contribute to this discussion bring a variety of perspectives (viz., industry, regulatory, advocacy, clinical, administrative) and extensive periods of professional experience in dealing with the challenges of providing high-quality nutrition and fluid options to those served by North Carolina's nursing facilities. Though nutrition, hydration, and the dining experience in general is but one indicator of overall quality of care, it is clearly among the most critical indicators

* Skilled nursing facilities are "institution[s] (or a distinct part of an institution) which are primarily engaged in providing skilled nursing care and related services for residents who require medical or nursing care, or rehabilitation services for the rehabilitation of injured, disabled, or sick persons, and is not primarily for the care and treatment of mental diseases." § 1819(a) and 1919(a) of the Social Security Act.

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of quality from a consumer's point of view. We view the challenge of addressing these issues as one of our most important tasks.

The Social and Cultural Importance of Food and Dining to Long-Term Care Quality

Few would question the importance food plays in everyday life. From physiologic, social, and personal financial perspectives, food plays an enormous role in the human experience. Americans spend about 13% of their annual income on food, the third highest household expense, behind housing (33%) and transportation (19%).[5] The food industry markets to the young and old. Restaurants and grocery stores are multi-billion dollar industries, offering nearly unlimited choices to those who can afford them. Most Americans can eat anything they want, whenever they want, and often chose to eat too much. We have television channels, shows, and magazines dedicated to food preparation. Holidays are typically centered on food and dining. We don't think of Thanksgiving, Halloween, or a birthday without thinking of turkey, candy, and cake, respectively. Food is the center of celebration, pleasure, and entertainment throughout life in the United States, even in nursing facilities. For nursing home residents, mealtime may be the highlight of each day and is a key component of health and quality of daily living.

On any given day, approximately 40,000 North Carolinians reside in skilled nursing facilities due to catastrophic health events, disability, frailty, and/or declining health.[3] Each resident has a unique, but usually culturally-defined life history of nutrition, consumption, and food experience. As part of their effort to provide patient-centered care, nursing facilities strive to meet reach resident's nutritional needs, dietary preferences, and expected dining experiences at a time when many other personal choices and freedoms are being lost. These losses make preserving resident choice an even more critical component of quality care. The commentary by Beverly A. Speroff, RD, LDN, and her colleagues in this issue of the Journal provides a useful overview of the dining experience in nursing facilities and describes ways nursing facilities balance residents' nutritional needs and preferences.[6]

Medical Care and Quality of Life: Competing Issues

Long-term care facilities face two, sometimes seemingly competitive, goals with regard to nutrition: (1) maintaining optimal levels of health through dietary means, and (2) assuring the highest possible quality of life. In order to accomplish the first goal, nursing home staff must do a thorough and nutrition-focused assessment and develop an individualized plan for meeting the resident's medically-defined nutritional needs. To meet the second of these goals, it is essential that nursing home staff frequently assess and document each resident's dietary preferences so explicit arrangements can be made to assure that residents have as much choice and independence as possible. Facility staff try to reach both goals without compromising the health or happiness of the resident. Accomplishing this requires consultation with the resident (when possible), family members, and the resident's physician.

The notion of involving nursing home residents themselves in decisions about diet and fluid intake is consistent with the idea that, for many nursing home residents, living in such a facility is "home." With average length of stay in such facilities being approximately 2.5 years (901 days) for current residents and just over one year (388 days) for discharged residents,[7] it is logical that residents (when they are able, and family members or a guardian if they are not) should have such a decision-making role. Residents have the right to choose (or refuse) specific treatments and services provided by nursing facilities, once the facility has ensured that the patient (or his/her guardian) is fully informed about his/her functional status, medical, and/or rehabilitation needs.

Therapeutic and Mechanically Altered Diets

The majority of skilled nursing residents are likely to have a chronic disease or condition (e.g., diabetes or high blood pressure) that requires a prescribed diet. There are many different types of therapeutic* or mechanically altered** diets with varying degrees of restriction and complexity. Armed with the necessary dietetic knowledge, food service managers and dieticians must balance considerations of seasoning, nutrition, taste, texture, and variety to produce meals that residents will consume in quantities that provide adequate nutrition and satisfaction. In addition to preparing and serving special diets, staff members teach and reinforce the benefits, and necessities, of these special diets. At the same time, staff members try to honor the resident's choices.

In the past, nursing facilities have been criticized for using what is perceived to be a predominantly "medical model" approach to the organization and provision of care. Compared to patient-centered care, the medical model focuses more on treatment and is less likely to consider the resident's personal preferences. Because a therapeutic diet can negatively affect individual food consumption patterns and lead to unplanned weight loss, it is possible that a medically-recommended diet could have deleterious effects on both quality of life and physical health status. As Dorner, Niedert, and Welch[9] have pointed out:

> *A diet that is not palatable or acceptable to the individual can lead to poor food and fluid intake, which results in weight loss and undernutrition, followed by a spiral of negative health effects. Often, a more liberalized nutrition intervention that allows an older adult to participate in his or her diet-related decisions can provide for the person's nutrient*

* Therapeutic diets are used to help treat/manage certain chronic diseases (e.g., diabetes and hypertension).

** A mechanically altered diet includes foods that may be pureed or softened to help patients who have trouble chewing and/or swallowing.

needs and allow alterations contingent on medical conditions while simultaneously increasing the desire to eat and enjoyment of food. This ultimately decreases the risks of weight loss, undernutrition, and other potential negative effects of poor nutrition and hydration.

The American Dietetic Association recommends liberalizing therapeutic diets when possible,[8] but this remains challenging in some ways. Honoring resident choice, following prescribed therapeutic diets, maintaining resident health, and complying with state and federal regulations are individual variables that are not mutually exclusive. Nursing facilities have to take appropriate steps to assure that dietary restrictions considered medically necessary are followed. But within these boundaries, nursing facilities are challenged to identify multiple options that will allow the maximum degree of individual choice in food and beverage selections throughout the day.

Health Conditions Can Affect One's Ability/Desire to Eat

Catastrophic health events take a heavy toll on our ability to consume and enjoy food. While in the treatment phase of an acute illness, patients are more likely to be at risk for malnutrition and dehydration. They are also more likely to experience depression, which also can decrease appetite. Close attention must be paid to these factors as people who are ill or rehabilitating return to their homes or enter any long-term care setting.

"Long-term care facilities provide 'supportive social services for people who have functional limitations or chronic health conditions and who need ongoing healthcare or assistance with normal activities of daily living.'"[8,9] By definition, nursing facility residents have healthcare conditions that may impact their ability to feed themselves and/or consume enough calories or fluids to stay healthy. Some residents may have added difficulty due to their medications, age-related sensory losses, and/or decreased physical function or cognitive abilities.

Medications and Side Effects

Nursing facility residents take an average of eight prescription medications a day.[10] Medications from almost every category can have profound effects on one's ability to consume and enjoy food. Many medications may decrease appetite, sense of taste and smell, or cause gastrointestinal disturbances. It is difficult to find normal day-to-day pleasure in eating with these side effects. The commentary by Christopher M. Herman, MD, in this issue of the Journal addresses the medical aspects of dietary management among nursing home residents.[11]

Age-Related Loss of Senses

In addition to the side effects of certain medications, normal aging can affect our sense of taste and smell. As we grow older, our sense of taste and smell begins to diminish, and this worsens as we reach the age 70 and beyond.[12,13] Taste and smell greatly affect our desire and ability to nourish our bodies by telling our brains that it is time to eat and digest food. Without these signals, many residents do not consume enough nutrients.

For this reason, long-term care facilities often use flavor enhancers, primarily powdered odor enhancers mixed with soups, gravies, eggs, vegetables, grits or cereals, sauces, or pastas, such as macaroni. The work of Susan Schiffman[14-17] at the Duke University Medical Center has been an important stimulus for further experimentation with flavor enhancement as a way of assuring the desired nutritional intake of long-term care residents who have experienced sensory losses of taste and smell in their older years. In her work on these problems, Schiffman has shown that older persons living in long-term care facilities consume more food when flavor enhancement is used, and the increased consumption is associated with improved immune function and functional status related to nutrient intake.[15]

Functional Limitations, Tube Feeding, and Feeding Assistance

Most people who are admitted to a nursing facility are admitted after a surgery or a sudden illness. These health events can cause unique problems in relation to nutrition and fluid intake. For example, many persons who suffer strokes may have limited abilities to speak, swallow, and/or use their arms and hands. In this case, speech therapists, occupational therapists, nursing staff, and physical therapists in the skilled nursing facility work diligently to restore these abilities, but for some the loss is permanent.

According to federal data for North Carolina skilled nursing facilities, only 47% of nursing facility residents are able to eat independently. Twenty-eight percent eat with some assistance, and 25% are totally dependent on someone else to feed them.[2] About 10% of residents are tube-fed.[18] While all efforts are made to avoid feeding tubes, some severe circumstances make their use necessary, as described in the commentary by Timothy S. Carey, MD, in this issue of the Journal.[19]

For some residents who experience a loss in motor function that interferes with independent feeding, complete rehabilitation may be possible, while others may need specially trained nursing assistants to provide ongoing feeding assistance. This ongoing assistance can be frustrating to the resident because it is an additional loss of personal independence, may seem unnatural to be fed as an adult, and is time-consuming. According to the Commonwealth Fund study by Burger, Kayser-Jones, and Prince-Bell, a dependent resident requires a minimum of 20-30 minutes to assist him/her with eating and still make the experience satisfying to the resident.[20] The heavy staffing requirements of providing a highly personalized approach to eating for these populations is a constant challenge to all skilled nursing facilities and a potential source of dissatisfaction expressed by both residents, families, and guardians. In addition to knowing how to help residents eat, staff members must know how to ease resident frustration and offer support as being fed by someone else can be a difficult, but necessary, process to sustain life.

Dementia

Another medical condition that can present unique nutritional challenges is dementia. The resident with dementia may

greatly decrease his/her consumption of food by simply being unable to remember to eat. For example, the resident may become distracted and leave the table without eating enough or at all. With advanced dementia, the resident may forget how to hold food in their mouth, how to chew, and how to swallow. This may become a part of an encompassing condition commonly referred to as "failure to thrive."

Trained nursing facility staff must employ special feeding techniques and cues to get residents who suffer from dementia to eat enough. Facilities also use snacks and activities to increase consumption. Staff may target residents who have dementia or reduced consumption with recreational opportunities that offer food and beverages as an integral part of these activities in an effort to increase nutritional and fluid intake. The commentary by Heidi K. White, MD, MHS, in this issue of the Journal provides a thorough discussion of nutrition issues related to the care of persons with advanced dementia.[21]

Logistical and Technical Aspects of Meeting the Nutritional Needs of Residents

Preparing food within the constraints of a congregate healthcare setting is one of the most challenging aspects of long-term care facility management. Operational budgets, the use of safe and sanitary equipment, and proper storage and access to the appropriate quantity and quality of food supplies are often under-estimated daily challenges of a food service department. Facilities must involve registered dieticians and food service managers, who are trained to interface with the operation of an institutional kitchen. The registered dietician and food service managers plan menus with many considerations, including seasonal food options and regional and cultural preferences. Facilities strive to prepare tasty, nutritionally-balanced meals in large quantities three times a day, 365 days a year. North Carolina's long-term care facilities serve an average of 32 food items to each resident every day.

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Food choice does not present the challenge at one's home that it does in a nursing facility. In the average facility, about 90 people are served three meals a day along with periodic snacks.[2] Accommodating large numbers of special requests can easily overwhelm the dietary department. There is no realistic way to accommodate 90 or more menu changes at each meal. Upon admission and throughout their stay, residents and families hold discussions with care planners regarding food and beverage preferences. Many times these preferences are uncomplicated and easily accommodated. Finding the balance between medical/nutritional need and resident preference is an on-going effort of nursing home staff that requires individualized attention, creative thinking, and shared decision-making between staff and residents and their family members.

Working within State and Federal Regulations

Maintaining the health and safety of each resident is the goal of each long-term care facility. As mentioned previously, meeting the individual resident needs and preferences, family expectations, and doctor's orders, while abiding by state and federal regulations, can be challenging. Long-term care is one of the most regulated segments of the United State healthcare system, and nursing facilities strictly adhere to rules and regulations. A commentary by Cindy H. DePorter, MSSW, in this issue of the Journal explains the regulations that pertain to nutrition and fluid intake among nursing home residents.[22]

Facility staff members counsel and educate the residents and family members about the risks of not following a prescribed therapeutic diet. For example, a resident at risk for choking may ask for food that is restricted according to his/her nutritional care plan. Nursing facility staff must explain the risks involved with eating such foods to the resident and/or family. The facility could be held legally responsible if the resident choked on the food that the resident's physician had restricted. While eating restricted food now and then may seem harmless, it could present a significant health risk to residents who are prescribed therapeutic or mechanical diets. In a nursing facility, the negotiation of risks, choice, and benefits are carried out on a minute-to-minute basis.

While mindful of the regulations, facilities try to creatively satisfy the needs, priorities, and preferences of residents and families. For example, many residents want their families to bring them food from home. Nursing facilities permit families to bring home-cooked meals to their loved one; however, the food should not be shared with other residents. Skilled nursing facilities cannot risk having other residents exposed to possible food-borne illnesses. Although it is unfortunate, in this example, it is impossible for the facility to guarantee the safety of food preparation that occurs in other locations. A number of long-term care facilities have created special occasions to help provide the residents a variety foods, such as hosting an oyster roast, ordering specialty take-out meals from area restaurants, etc. The commentary by H. Harvin Quidas, et al., in this issue of the Journal describes other ideas that nursing facilities have used to make food and/or the dining experience more interesting to residents.[23]

Conclusion

For all residents in a skilled nursing facility, regardless of medical condition, their life experiences from birth-to-present create needs far beyond the mechanical act of food consumption. Where, when, and how residents wish to dine; their food likes and dislikes; the role of the dining experience as socialization;

and their ability to exert choice and control affect the amount of satisfaction and pleasure they gain from the act of eating.

In these efforts, today's skilled nursing facilities face a number of substantial challenges, but all agree that finding ways to satisfy residents is one of the most important aspects in creating the nursing facility of the future—within which we would all be willing to reside ourselves, or have a loved one reside, were the need to arise. As our society's need and demand for skilled nursing care increases, the capacity of existing facilities will be stretched beyond present expectations. But, as these trends occur, careful attention to how food, nutrition, and hydration issues are managed will have much to do with the ultimate success of our efforts to make long-term care a pleasant and health-enhancing experience. **NCMedJ**

REFERENCES

1 American Geriatrics Society. Nursing-Home Care. Aging in the Know March 15, 2005. Available at: http://www.healthinaging.org/aginginthenknow/chapters_ch_trial.asp?ch=15#Lives. Accessed August 4, 2005.

2 Activities of Daily Living–Eating–Percent of Patients and Dependency: CMS OSCAR Data Current Surveys. American Health Care Association. June 2005. Available at: http://www.ahca.org/research/oscar_patient.htm. Accessed August 4, 2005.

3 Personal Communication with Cindy DePorter, Assistant Chief of the Licensure and Certification Section, Division of Facility Services, North Carolina Department of Health and Human Services. August 5, 2005.

4 Pfieffer N, Rogers D, Roseman M, Jarema LC, Reimann A, Combs-Jones D. What's new in long-term care dining? NC Med J 2005;66(4):287-291.

5 Consumer Expenditures in 2003. US Department of Labor. US Bureau of Labor Statistics. June 2005. Report 986. Available at: http://www.bls.gov/cex/csxann03.pdf. Accessed July 31, 2005.

6 Speroff BA, Davis KH, Dehr KL, Larkins KN. The dining experience in nursing homes. NC Med J 2005;66(4):292-295.

7 ElderWeb: Average Length of Nursing Home Stay. Available at: http://www.elderweb.com/default.php?Page ID=2770. Accessed August 1, 2005.

8 Dorner B, Niedert KC, Welch PK. Liberalized diets for older adults in long-term care. J Am Diet Assoc 2002;102:1316-1323.

9 American Health Care Association. Today's Nursing Facilities and the People they Serve. Available at: www.ahca.org and http://www.ahca.org/who/profile3.htm. Accessed January 8, 2002.

10 Doshi JA, Shaffer T, Briesacher BA. National estimates of medication use in nursing homes: Findings from the 1997 Medicare current beneficiary survey and the 1996 medical expenditure survey. J Am Geriatr Soc 2005;53(3):438-43.

11 Herman C. A physician's perspective on the dining experience in long-term care. NC Med J 2005;66(4):304-306.

12 Schiffman SS, Gatlin CA. Clinical physiology of taste and smell. Annu Rev Nutr 1993;13:405-436.

13 Schiffman SS, Warwick ZS. 1991. Changes in taste and smell over the life span: Their effect on appetite and nutrition in the elderly. In Chemical Senses, Appetite and Nutrition, Friedman MI, Tordoff MG Kare MR 4:341-65. New York: Dekker.

14 Schiffman SS. Intesification of sensory properties of foods for the elderly. J Nutr 2000;130:927S-930S.

15 Schiffman SS, Warwick ZS. Effect of flavor enhancement of foods for the elderly on nutritional status: Food intake, biochemical indices, and anthropometric measures. Physiol Behav 1993;53:395-402.

16 Schiffman SS. Taste and smell losses in normal aging and disease. JAMA 1997;278(16):1357-1362.

17 Schiffman SS. Taste and smell in disease. N Eng J Med 1983;308:1275-1279 and 1337-1343.

18 MDS Quality Indicator Data Report: Fourth Quarter 2004. Centers for Medicare and Medicaid Services. Baltimore, Maryland. Available at: http://www.cms.hhs.gov/States/mdsreports/. Accessed August 8, 2005.

19 Carey PS, Use of feeding tubes in the care of long-term care residents. NC Med J 2005;66(4):313-315.

20 Burger SG, Kayser-Jones J, Prince-Bell J. Malnutrition and dehydration in nursing facilities: Key issues in prevention and treatment. National Coalition of Citizens for Nursing Home Reform. Now available at: http://www.cmwf.org/publications_show.htm?doc_id+221392. Accessed August 1, 2005.

21 White HK. Nutrition in advanced Alzheimer's disease. NC Med J 2005;66(4):307-312.

22 DePorter C. Regulating food service in North Carolina's long-term care facilities NC Med J 2005;66(4):301-303.

23 Quidas H, Chavis T, Kepler A, Murphy N. So, who's complaining about the food? Ombudsman perspectives on "the dining experience" in North Carolina's nursing homes. NC Med J 2005;66(4):283-286.