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A Quality Improvement System to Manage Feeding Assistance Care in Assisted-Living

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A B S T R A C T

Purpose: To describe a feasible quality improvement system to manage feeding assistance care processes in an assisted living facility (ALF) that provides dementia care and the use of these data to maintain the quality of daily care provision and prevent unintentional weight loss.
Design and methods: Supervisory ALF staff used a standardized observational protocol to assess feeding assistance care quality during and between meals for 12 consecutive months for 53 residents receiving dementia care. Direct care staff received feedback about the quality of assistance and consistency of between-meal snack delivery for residents with low meal intake and/or weight loss.
Results: On average, 78.4% of the ALF residents consumed more than one-half of each served meal and/or received staff assistance during meals to promote consumption over the 12 months. An average of 79.7% of the residents were offered snacks between meals twice per day. The prevalence of unintentional weight loss averaged 1.3% across 12 months.
Implications: A quality improvement system resulted in sustained levels of mealtime feeding assistance and between-meal snack delivery and a low prevalence of weight loss among ALF residents receiving dementia care. Given that many ALF residents receiving dementia care are likely to be at risk for low oral intake and unintentional weight loss, ALFs should implement a quality improvement system similar to that described in this project, despite the absence of regulations to do so.

Assisted living facilities (ALFs) provide care for older adults in need of help with activities of daily living (ADL), but who do not require the more intensive nursing supervision provided by nursing homes (NHs). However, similar to NH residents, ALF residents often also have significant cognitive and physical impairment,[1,2] multiple chronic conditions, and polypharmacy, all of which are risk factors for inadequate food and fluid intake and unintentional weight loss.[3–5] Thus, one might expect ALFs to house a significant proportion of residents with inadequate food and fluid intake and associated weight loss, particularly those that provide dementia care services.

ALFs are not governed by the same federal regulations as NHs that receive Medicare and/or Medicaid reimbursements because ALFs house predominately private-pay residents. Consequently, state regulations govern ALFs, and these regulations vary between states. In contrast to NHs, for example, ALFs are not required to monitor residents' food and fluid intake and body weight nor are they required to publicly report data related to the prevalence of unintentional weight loss or other clinical conditions for their resident population. While ALFs should not be subject to the same intense federal regulations as NHs, the vulnerability of the ALF dementia care population and the absence of rigorous external regulation increases the importance of internal systems to assure care quality for all aspects of daily care, such as feeding assistance.

Studies have shown that there are multiple factors that can contribute to low food and fluid intake and unintentional weight loss among older adults. These factors include but are not limited to chronic diseases, cognitive and/or physical impairments, depression, and polypharmacy.[1–5] However, studies also have demonstrated that improvements in the amount and quality of mealtime assistance and caloric supplementation between meals results in significant

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improvements in oral intake, irrespective of these other risk factors.[6–10] Moreover, daily feeding assistance care processes are one of the few, if not only, risk factors under the control of direct care providers, which makes it suitable for a quality improvement intervention.[11–13]

Only 1 published study, to date, has reported observational data related to food and fluid intake among ALF residents and contrasted these data to NH residents. The results of this study showed that 54% of ALF residents and 62% of NH residents with dementia had low food and fluid intake.[14] The extent to which mealtime assistance or between-meal caloric supplementation was used in the ALF or NH settings included in this study was not reported. However, other studies have shown that feeding assistance in NHs is suboptimal both during and between meals.[15–17] Suboptimal nutritional care quality in NHs has been largely attributed to insufficient staffing and time constraints.[6,18–20] Given ALFs reported higher staffing levels relative to NHs, nutritional care quality has the potential to be better in this care setting, particularly for residents with dementia.

Specifically, the national average for direct care staff (nurse aide equivalent) in ALFs that provide dementia care services is reported to be 3.1 hours per resident day (HPRD).[21] In contrast, the national average for NHs for direct care staff is 2.4 HPRD.[22] Moreover, a nurse aide staffing level of 3.1 HPRD has been reported as sufficient to meet care requirements in most NHs, including feeding assistance.[22] Thus, based on direct care staffing data alone, ALFs should have the capacity to provide optimal feeding assistance care to all residents in need. Beyond staffing capacity, however, all residents in need of staff attention during mealtime and/or caloric supplementation between meals must be identified in a timely manner and supervisors must ensure consistent quality in daily care provision. It is unknown if most ALFs routinely collect data that would allow them to identify residents with low food and fluid intake; state regulations do not require ALFs to collect such data. In the absence of this information, ALFs likely would face significant challenges to managing daily feeding assistance care delivery, even with sufficient staffing capacity. Inadequate supervision and management related to daily care delivery has been cited as a problem in NHs, where there are more licensed nurse supervisors relative to ALFs.[18,23–25]

The objective of this quality improvement project was to describe a feasible system to manage daily feeding assistance care processes in an ALF that provides dementia care services. While a comprehensive nutritional care program should also consider the potential influence of other factors (eg, diet orders, medications, medical and psychiatric diagnoses) on nutritional health, the provision of adequate mealtime assistance and between-meal caloric supplementation represents a key daily care process under the control of direct care staff. Given the dearth of published data related to nutritional care quality in ALFs, this project included objective methods to assess the quality of assistance during and between meals. We also describe how to use these data in a quality improvement system to sustain care quality across 12 months.

Methods

Participants and Setting

This study was conducted in one relatively new (open for approximately 2 years) nonprofit ALF facility that provides dementia care services to 42 residents in 3 separate households. Over the course of this 12-month project, there were 53 unique residents who resided in the ALF and who were, thus, included in the data collection. Each of the 3 dementia care households were staffed with a ratio of 6 residents to 1 unlicensed personnel (ie, referred to as care partners in this ALF but analogous to nurse aides in NHs) during scheduled meals (breakfast, lunch, and dinner) and between-meal snack periods (morning and afternoon). This staffing ratio is equivalent to 3.86 direct care HPRD, which is high relative to the national average for ALFs (3.1 direct care HPRD) that provide dementia care services.[21] In addition to unlicensed personnel, the participating site had 2 licensed nurses from 7AM to 9PM and 1 licensed nurse from 9PM to 7AM, which is comparable to the licensed nurse staffing reported for ALFs nationally.[21] The turnover rate during the 12 study months was 47.8% for care partners (unlicensed staff) and 24.5% for residents (15.1% because of death and 11.3% because of relocation to a different facility).

The participating ALF established a contract with the Vanderbilt Center for Quality Aging (see Acknowledgments section) to implement a databased quality improvement system for multiple care areas, including feeding assistance. All data were collected by ALF staff as part of an internal quality improvement effort, and the use of deidentified data was approved for publication. Designated supervisory staff within the ALF observed all residents to assure quality and inform individualized resident care plans. A key part of their mission is to implement scientifically defensible programs, including quality improvement efforts, amenable to replication by other ALFs. Thus, prospective family members and residents are informed upon admission that they will receive standardized assessments and structured observations by ALF staff.

Meal Service

All 3 scheduled meals are served in a group dining setting wherein there is a central kitchen and dining room within each of the 3 households for final meal preparation and serving. The kitchen and dining room areas were designed to create a home-like atmosphere conducive to a resident-centered dining experience. The kitchen is open from 6:30AM to 7PM and residents may choose their mealtimes; however, meal service for most residents occurs from 7:00AM to 10:00AM for breakfast, 12:00PM to 1:30PM for lunch and 5:00PM to 6:30PM for dinner (average mealtime period per resident = 60 minutes). Residents also may choose where to sit, unless they are physically dependent on staff for eating, in which case they are assigned to a specific table to receive assistance from a designated staff member (ratio of 2 physically dependent residents per staff member).

Residents are also offered a choice of at least 2 entrées at the beginning of each meal as well as the option of daily substitutions (eg, assorted sandwiches and soups) if they do not want either entrée option. Meals are served 1 course at a time (ie, salad, soup, entrée, dessert), and the average total calories offered per meal ranges from 522 to 1066, or 2032 meal calories per person per day, based on the planned menus. Assorted snacks are available in the central dining area at any time throughout the day, and all residents are offered snacks at least twice per day (morning and afternoon) by designated staff on a set schedule. On average, total snack calories offered is 250 per person per day. The ALF spends an average of $11.00 per resident per day on meal and snack items, which is significantly more than the average cost of food service in a typical community NH.[26] A registered dietitian consults with the facility on the composition of planned menus and observes food preparation and meal service on a quarterly basis. The consultant dietitian also performs a nutritional risk assessment for designated residents identified by ALF staff. However, state regulations do not require nutritional risk assessments or monitoring of body weight or other indicators of nutritional health for ALF residents in the state of Tennessee, and this is typical of most other states.

The quality improvement system for feeding assistance care processes was initiated within 6 months of opening the ALF for 2 reasons. First, it became apparent that many residents routinely consumed less than one-half of their meals despite the high level of direct care staffing, home-like dining environment, and the variety of food and fluid options available to residents both during and between meals. Second, 8 residents (or 19% of the resident population) experienced a