Australian Government
Aged Care Quality and Safety Commission

Food, dining and nutrition

Residential aged care food services discussion paper

Purpose:
This paper presents a high-level overview of contemporary evidence regarding food services in residential aged care settings.

Reading time:
10 minutes

Food, drink and the broader dining experience play a critical role in supporting an older person's quality of life within the residential aged care service (RACS) setting. Health and quality standards pertaining to food are in place to ensure resident good health and wellbeing as well as appropriate nutrition and hydration. Multiple stakeholders are involved in the production and supply of meals to residents in the aged care service setting. These include management, cooks, chefs, caterers, external providers, food service managers, dietitians, speech pathologists, nurses, volunteers, and direct care workers [1]. RACSs face ongoing challenges in their endeavours to maintain a home-like environment for residents whilst concurrently seeking to meet individual dietary needs and preferences [2]. Furthermore, the organisation, residents and family may possess divergent objectives and expectations regarding food services which can introduce tensions within the service. For example, the organisation may view mealtimes as a process through which adequate nutrition and hydration is provided as key component of care, whereas residents may view mealtimes as a source of daily pleasure and comfort [3].

The *Royal Commission into Aged Care Quality and Safety Final Report* released in 2021 identified food and nutrition as a priority area of attention [4]. As part of feedback specific to food services in particular, it was suggested that increased spending was likely necessary to improve the quality of food in these settings [4]. In response to this recommendation, a basic daily fee supplement of an additional $10 per day, per resident has been introduced by the Australian Government from 1 July 2021. The new supplement supports aged care providers to deliver better care and services to residents, with a focus on food and nutrition [5]. This has since been replaced by the AN-ACC funding model* which became operations on 1 October 2022 [5]. This is promising as earlier research has argued that funding cuts to the aged care industry have significantly impacted catering budgets and aged care staffing levels: both of which may have affected the nutritional status of aged care residents to date [6].

* https://www.health.gov.au/topics/aged-care/providing-aged-care-services/funding-for-aged-care-service-providers/basic-daily-fee-supplements-for-aged-care - accessed 8 December 2022

Why do meals matter?

Appropriate nutrition and hydration are critical to the health of all older people. Poor nutrition amongst older adults within long-term care settings is purportedly common. A study of twenty-one Victorian aged care services concluded that the provision of meat and dairy foods, important sources of protein, did not meet the recommended levels at that time. Furthermore, the study concluded that 68% of people in the study were malnourished or at risk of malnutrition [7].

Mealtimes not only support good physical health, but a sense of social wellbeing, comfort, routine and familiarity for older people living in residential aged care services Food can provide continuation of long standing traditions, practices and preferences and help retain identity and sense of normality.

The consequences of poor nutrition are significant and often irreversible for older people. Malnutrition is associated with a range of health risks, including an increased incidence of falls and fractures, infection, and time needed to heal or recover from injury [4]. Aged care residents with poor nutrition, including malnutrition, are at greater risk and severity of pressure injuries, loss of bone and muscle mass/strength, frailty, reduced functional capacity and greater care needs. They are also at heightened risk for healthcare-associated infections and mortality in hospital. There are a number of contributing factors that lead to malnutrition in older people including poor dentition, multiple medications, difficulty swallowing and low appetite [8]. Additional risk factors include age, sex (female), cognitive impairment, behaviours associated with dementia, level of dependency, and not consuming all foods offered [9, 10].

Weight loss is not a normal part of ageing. In residential aged care unexplained weight loss is a key measure of the National Aged Care Quality Indicator Programme. For many residents the food provided within the aged care service is their only source of food and drink. This means residents are entirely dependent on the organisation providing sufficient suitable, appealing, and texture appropriate food to meet their nutritional requirements. When such nutritional requirements are met, residents who are underweight or losing weight are more likely to regain weight and those with a healthy body weight will maintain their weight [11].

It is a common misconception that older people, particularly those living in RACSs, need less protein, vitamins, minerals and calories than younger people. Daily calories (or kilojoules) required for older adults are greater than traditionally thought. While many residents are no longer active, the amounts of vitamins and minerals needed remain much the same throughout life. In fact, protein, calcium and vitamin D requirements are higher in older people than younger adults [11].

Furthermore, dehydration amongst aged care residents is a common and dangerous problem. Meeting the hydration needs of older adults within residential aged care can be challenging. Recommendations for fluid intakes are approximately 1.5L daily, yet achieving this target can be compromised by a range of factors [12]. Residents can be more prone to dehydration due to diminished sense of thirst, poor oral intake, swallowing disorders, refusal of fluids, inadequate staffing assistance, medication, illness, fear of choking, fluids offered are not to the individual preferences, poor access to fluids (being able to see and reach), inability to manage a cup or glass and dislike of thickened fluids. Some residents may also intentionally limit their fluid intake to minimise incontinence or the need to go to the toilet [11].

Nutritious food is important for general wellbeing as well as positive social experiences. Nutritious food can also support the prevention of chronic disease and enhanced recovery from illness. However, within residential aged care, food is more than a vital component of good health in itself. Food can fulfil the expression of cultural identity, act as a conduit between past and present life, and imbue a sense of wellbeing, routine and emotional comfort in an unfamiliar setting [13]. The mealtime environment has been described as a focal point for the broader experience of older adults in residential care. The experience or mealtimes can be enhanced through understanding how residents interact with one another, accommodating their preferences, and encouraging autonomy specific to dining [14].

What is important to older adults living in residential aged care?

Eating is not only essential to physical survival but is also important to meet human emotional and social needs. To a RACS resident the dining experience may represent the quality of comfort, care, and social relationships [15]. Several studies have found that quality of food and beverage services influence resident satisfaction within RACS settings [16-19]. The greater the quality and choice of food and beverage offered in this setting, the higher the levels of satisfaction reported [20, 21]. Tenderness of meat, taste and flavour of food, and quality of ingredients have been identified as important food quality attributes by older adults living in RACSs. Food sanitation, food handling, personal hygiene, and clean appearance of food staff are important service quality attributes [22]. Meal presentation and appropriate temperatures can also influence food service satisfaction amongst aged care residents [23]. Conversely, dissatisfaction with food quality and/or choice has been linked with lower food and fluid intake and a poorer quality of life [3, 24].

The significance of personal food preference does not diminish with age [25]. Personal preferences, including a choice of what to eat, when and with whom, promote wellness and a sense of normality within RACSs [26]. People bring a range of preferences, tastes, practices and attitudes regarding food with them on entry to long-term care settings. Food that reflects their family backgrounds can act as a powerful source of comfort that can play an important role in recovery from illness or adaptation to their new accommodation [3]. Evidence suggest that responding to individual preferences, providing personal choice and variety in menu options, and perception of food service quality can all affect food consumption amongst residents [27, 28]. Infantilisation or lack of agency can be perpetuated by absence of choice and decisions regarding meals being made on the behalf of a resident [15]. Aged care residents may be less familiar or concerned with regulations associated with risk management and food services. Rather residents prefer to exercise choice and control over their meals, including timing and the environment in which they are consumed [21, 26, 29, 30]. Furthermore personal control in seating arrangements and food access can support sense of autonomy and independence within RACSs [30].

Quality and choice of meals are significant moderators of food intake, satisfaction and quality of life within residential aged care.

What factors affect the dining experience within aged care services?

The ability to make decisions intentionally and independently is a basic human right. Food choice can be defined as a process whereby older adults living in RACSs are able to select from a range of options, choose one food in preference to another, or reject certain food items, with no restriction on the amount that they consume [28]. To varying degrees, people living in RACSs will often relinquish their right to choose what to eat or drink each day. The loss of autonomy to make food choices is of particular concern as a lack of choice decreases motivation to eat, placing residents at risk of malnutrition and reducing their overall quality of life [31]. Choice has been reported to be one of the primary reasons for improved food and nutritional intake in residential aged care service settings [19, 32, 33]. Despite its importance, choice can be challenging to fulfil in these settings for a number of reasons. An Australian study of menus, supported by observations in RACSs identified a low level of choice of meals for residents on both general and texture modified diets. Those on a textured diet appeared to experience even less diversity at mealtimes or options were inconsistent with what was presented on menus prior. While residents may be able to choose certain parts of their meals, it is not often at the point of service itself [28].

Teeth and mouth problems can negatively affect food enjoyment and intake. As such changes in resident eating patterns and behaviours may be an indication of oral health deterioration [11]. People in residential aged care settings are at particular risk of developing complex oral diseases and dental problems. Age related oral health

issues include maintenance and repair of natural teeth which can be further impacted by decay, gum disease and oral cancers [34]. Furthermore, dysphagia is highly prevalent amongst aged care residents exacerbating risk for malnutrition and dehydration [35]. Poor dentition and ill-fitting dentures or age-associated changes in taste and smell may influence food choice and limit the type and quantity of food eaten by older people. Medical conditions such as gastrointestinal disease, malabsorption syndromes, acute and chronic infections, and hypermetabolism will often result in anorexia, micronutrient deficiencies, and increased energy and protein requirements. Furthermore, multiple medications can induce malabsorption of nutrients, gastrointestinal symptoms, and loss of appetite [36].

Person-centred dining promotes the health and wellbeing of RACS residents. Nutrient intake and satisfaction with food services can be enhanced by acknowledging food preferences, promoting choice and accessibility of food, improving food quality and providing a "home-like" dining environment.

Mealtimes are important opportunities to support residents' personhood in care facilities. The environment in which residents dine can influence nutritional intake as well as enjoyment of mealtime more generally. Dining rooms with a home-like ambiance, minimal noise, and careful furniture placement can further contribute to social interactions during meals [37]. An unpleasant mealtime experience not only has negative nutritional consequences, but may also undermine a resident's dignity, self-esteem, and personhood. Feeling rushed to eat or confused by the pacing of meal service can impede nutritional intake and enjoyment of eating itself [38]. Excessive noise has been reported as distracting and can hinder mealtime conversation amongst residents [15]. It can also be particularly overwhelming for older adults with dementia in this setting [38]. Additional factors impeding a quality dining experience can include over stimulation (multiple activities occurring whilst eating), shape and design of the room, furniture, overcrowding, uneven or poor lighting, and "institutional" ambience [38]. "Assembly-line" style feeding assistance for multiple residents concurrently can be dehumanising. The attitudes of staff can further add to or detract from the quality of a resident's mealtime experience. Mealtime should be viewed by staff as an opportunity to create a home-like atmosphere by their interaction with the residents. However this can be difficult to provide in the context of pressure to meet the food and hydration needs of all residents within a timely manner [2].

What has been done to improve the dining experience for aged care residents?

Examples of efforts to improve overall dining experience have been directed towards increasing food intake, reducing weight loss, improving nutrition and hydration, minimising behaviours associated with dementia, enhancing staff knowledge and greater resident satisfaction. Changes are realised through revision of food service delivery, environmental modification, staff education or a combination of one or more of these. The approaches to each have been informed by the existing evidence, resident and family feedback or represent a more innovative attempt towards quality improvement. Some examples of food service interventions and their outcomes include:

- A mealtime intervention, based on Montessori model of care principles, for people living with dementia in a memory support unit described improvements in person-centred mealtime care, and a more respectful, enabling and social dining experience. Staff demonstrated greater support for resident mealtime independence, residents demonstrated increased choice behaviours. Staff and residents both significantly increased their interactional behaviours, with greater social interaction between staff and residents [39].
- Traditional dinner foods replaced with a high-carbohydrate meal increased food consumption overall for participating aged care residents with dementia in a randomised, crossover, nonblinded study of two nutrition interventions. Group mean dinner and 24-hour energy intake increased during the intervention phase compared with baseline [40].
- "Eat Right" food delivery system supporting resident food choice and decision making in two aged care services found the intervention group residents reported improvement in food service satisfaction, and increased body weight and serum prealbumin levels. Intervention participants' overall perceptions of their dining experience were more positive than those in the control group attributed in part to increased autonomy of meal choice and decision making regarding menu development [19].

Interventions introduced to improve dining services within RACS have encompassed efforts to improve food consumption, nutrition and hydration, weight management satisfaction and cultural change.

- The results of a pilot study indicated that it is feasible to implement a buffet style dining program in a long-term care setting without adversely affecting resident nutritional status (overall mean weight remained constant). After implementation of the buffet-style meal service, overall resident satisfaction ratings with food and dining services increased significantly. Qualitative and observational feedback suggested enhanced quality of life with regards to mealtime and increased social interaction amongst participating residents. Staff commented on improvements in eating for some residents [41].
- Bulk food service and a home-like dining environment can optimise energy intake in individuals at high risk for malnutrition. An intervention measuring energy intake amongst aged residents with cognitive impairment found those receiving meals by bulk (cafeteria style with waitress service) recorded a higher 24-hour total and dinner energy intake compared to those receiving traditional tray delivery of meals. Higher energy, carbohydrate, and protein, but not fat intakes, with bulk delivery were more apparent in individuals with lower body mass indexes and high-risk, cognitively impaired individuals with low body mass index benefited the most from the changed food service and physical environment [32].
- A decentralised food service delivery, wherein meals were plated at the point of service rather than in a central kitchen, resulted in increased resident satisfaction with food services [21].
- Changes in meal service delivery to evaluate the nutritional and clinical consequences of changing from a centralised food delivery system to decentralized bulk food portioning (a system in which meal portioning occurs within dining rooms at point of service on each floor) resulted in an increase in the average food consumption after introduction of the bulk food portioning system (with no negative impact on nutritional status). Portioning of food in the residents' dining room simulates a homelike atmosphere thereby encouraging increased food consumption [42].
- Through the provision of better lighting and colour contrast within the dining room (for example between plate and table or table and the floor), aged care residents were better able to see their meal which thereby had an effect on increasing their food intake [43].
- The introduction of a "family-style" meal delivery approach where aged care residents with dementia were presented with serving bowls and empty plates and invited to participate in the preparation of meals resulted in greater engagement with mealtime activities and increased social interactions amongst residents. Communication and participation doubled when family-style meal delivery was introduced and dropped back to baseline levels when it reverted to the more traditional practice of serving meals to residents on prepared plates [44].
- In an effort to improve quality of life amongst residents, dining services were enhanced in a long-term care setting through the introduction of a buffet service, beverage/snack service and diet liberalisation. The mean weight, average food intake and resident satisfaction improved post intervention [45].

Where to from here?

Quality improvement specific to food services within RACS settings will be multidimensional and involve organisational leadership, staff, residents and their families. Evidence suggests that effective interventions are likely to be multifaceted, including staff development, creating small and homelike environments and underpinned by organisational policies that promote good practice specific to food services [15]. As with any other domain of care in this setting, the design and delivery of food services are opportunities to promote resident wellbeing and personhood [15]. A summary of activities or points of focus is presented below.

1. Improved Meal Choice and Quality

Appetite is clearly linked to the enjoyment and consumption of foods and can exercise an important influence over food service satisfaction. Therefore, menus should focus on promoting appetite by maximising flavours and aromas. Choice, including food choice, is fundamental to the Aged Care Quality Standards. Food presentation is also a key component of high-quality food service in residential aged care as satisfaction with meals contributes to food intake. Food provided must be nutritious, familiar, culturally appropriate, well presented and part of a positive mealtime experience [8]. Regular and formalised collection and review of individual dietary, cultural, religious and personal food preferences will support satisfaction in meals provided and encourage those with poorer appetites to eat. It may also include observation of particular cultural or religious events.

2. Alternative Food Service Delivery Models and Innovation

To promote food intake, as well as resident satisfaction, alternative models of food service delivery can be considered. Dining experiences that reflect a “normal” home life in some way can provide comfort and familiarity. Residents should be enabled to make their meal choice at the point of service, or as close as possible, rather than ordering prior to mealtimes. Innovative methods, such as assisted buffets, carts and room service, are potential options. A buffet-style meal service allows residents to make their own food selections from a variety of food choices. Food handling is reduced and food temperatures are maintained, resulting in improved food quality (e.g., taste and texture)41. It may also entail the introduction of a “family” or “domestic home-like” care model, through which residents are involved in the weekly menu design, shopping in some cases and preparation of meals in small groups.

3. Evidence-based Menu Planning and Assessment

Meal planning be based on meeting the specific nutrition and dietary needs of older adults. Where not in place at present it is recommended that dietitians and speech pathologists regularly review menu options to ensure these align with older adult dietary requirements, nutritional needs and safety of food consumption for residents experiencing issues with chewing or swallowing. This may include the use of the newly developed Menu and Mealtime Quality Assessment for Residential Aged Care Tool by Dietitians Australia (which aligns with current quality

standards). Speech Pathologists can advise on consistency of foods and beverages specific to a modified texture menu for people with dysphagia (swallowing issues). Organisations are also encouraged to review budget allocation to ensure food services are allocated sufficient funds to purchase the necessary type, quantity, variety and quality of food necessary to fulfil necessary daily nutritional requirements and satiation, as well engage appropriately skilled staff to prepare and deliver quality meals.

4. Routine Malnutrition Screening.

Older people are at increased risk of unplanned weight loss and malnutrition. However, these risks can be greatly reduced by having evidence-based care strategies in place. Multiple validated nutrition screening tools are available to determine the nutritional status of adults within aged care settings. Improved nutrition may be further supported through establishment of a multidisciplinary team to plan, implement and monitor food and nutrition services, with input from accredited dietitians.

5. Support for Independent Food and Drink Consumption

Accessibility of food may be further promoted through provision of assistive mealtime eating and drinking utensils and placing food within sight and reach of the resident to encourage autonomy. This includes removal of plastic wrap, opening sachets or other assistance. It also refers to consideration of portion size, consistency and manageability. Independent eating should be encouraged as feasible through ongoing assessment of those individuals who may need assistance to eat particular meals and the degree to which this assistance is necessary. It is suggested that appropriately trained and experienced staff, as per particular task associated with meal preparation, serving and assistance with eating, be available during mealtimes to ensure residents receive their meals within a timely and safe manner.

6. Food Delivery, Timing and Temperature Management

Food service timing and delivery be considered to better accommodate resident needs and staff availability. This could include greater flexibility of mealtimes to enable increased time with each resident as necessary. Temperature of meals can be monitored through use of appropriate food utensils, crockery and other equipment to accommodate distance from kitchen to dining room or individual rooms across the service and processes of delivery to individual residents regularly reviewed for opportunities for greater efficiency.

7. Ongoing quality review and consumer feedback mechanisms

Residents should be encouraged to contribute to menu design and food options available to improve choice and variety of meals offered, including those on modified or specialised diets. Obtaining more detailed feedback from residents can help food service managers in identifying specific aspects of the food or service that are causing dissatisfaction. Results of quality evaluation surveys should be used to benchmark and focus the food service's strategies to enhance quality performance and customer satisfaction [22]. Surveys, comment cards, and personal interviews are some suggested methods to obtain valuable feedback about the food and service quality from residents [33].

8. 24-hour Dining and Access to Fluids

Services to ensure snacks such as fruit or other nutritious food items are available throughout the day and between meals for residents ("24-hour dining") as appropriate. These may include yoghurt tubs, custard pots, cheese and crackers. To prevent dehydration, ready access to water, and other fluids for all residents is critical. This may include consideration of how this fluid is provided (to ensure resident can consume independently or with minimal assistance as needed), encouragement and support to regularly drink water for those who may need reminders, provision of preferred fluids (understanding what the resident would like to drink) and regular replenishment of water and drinking utensils (cups, straws, beakers or squeeze bottles). Daily fluid intake and sources should be monitored and recorded.

9. Dining Room Ambience

A "homelike" dining environment can improve resident enjoyment of mealtimes and contribute to a sense of comfort and familiarity. Evidence also indicates that well-designed physical settings play an important role in creating a person-centred dining environment to optimise the mealtime experience of residents. Dining room environmental changes can include appropriate lighting, comfortable furniture, or playing music during mealtimes. Dining rooms, including furniture, equipment, crockery and utensils require regular review for cleanliness and hygienic practices associated with meal service. Validated audit tools exist to support assessment of residential aged care dining environments. Residents and family can also provide feedback on the dining room itself as to how ambience and environment may be improved.

10. Increased Emphasis on Oral Health

Greater emphasis to be placed on ensuring oral hygiene, including frequent brushing of teeth and daily denture cleaning, to prevent issues with eating for residents. This may also entail seeking necessary care to respond to other issues affecting food and liquid intake such as dry mouth or ill-fitting dentures. The establishment of a multidisciplinary team with members of the dental profession, speech pathologists and dietitians may contribute to the management the oral health, swallowing and hydration of aged care residents.

References

1. Pankhurst, M., A. Yaxley, and M. Miller, Identification and Critical Appraisal of Food Service Satisfaction Questionnaires for Use in Nursing Homes: A Systematic Review. Journal of the Academy of Nutrition and Dietetics, 2021. 121(9): p. 1793-1812.e1.

2. Abbey, K.L., Australian Residential Aged Care Foodservices. Menu design, quality and standards – A time for action, in School of Human Movements and Nutrition Studies 2015, University of Queensland.

3. Evans, B.C., N.L. Crogan, and J.A. Shultz, The meaning of mealtimes: connection to the social world of the nursing home. J Gerontol Nurs, 2005. 31(2): p. 11-7.

4. Royal Commission into Aged Care Quality and Safety, Final Report: Care, Dignity and Respect. Volume 1 Summary and recommendations. 2021: Commonwealth Government.

5. DoH. Basic daily fee supplements for aged care. 2021; Available from: https://www.health.gov.au/health-topics/aged-care/providing-aged-care-services/funding-for-aged-care-service-providers/basic-daily-fee-supplements-for-aged-care.

6. Hugo, C., et al., What does it cost to feed aged care residents in Australia? Nutrition & Dietetics, 2018. 75(1): p. 6-10.

7. Iuliano, S., et al., Dairy food supplementation may reduce malnutrition risk in institutionalised elderly. The British journal of nutrition, 2017. 117(1): p. 142-147.

8. Dietitians Australia, Menu Planning and Innovation in Aged Care- Position Statement. 2020: Dieticians Australia.

9. Tamura, B.K., et al., Factors Associated With Weight Loss, Low BMI, and Malnutrition Among Nursing Home Patients: A Systematic Review of the Literature. Journal of the American Medical Directors Association, 2013. 14(9): p. 649-655.

10. Greenwood, C.E., et al., Behavioral disturbances, not cognitive deterioration, are associated with altered food selection in seniors with Alzheimer's disease. J Gerontol A Biol Sci Med Sci, 2005. 60(4): p. 499-505.

11. Bartl, R. and C. Bunney, Best Practice Food and Nutrition Manual for Aged Care Homes Edition 2.2. 2015: Central Coast Local Health District: NSW Government.

12. Dietitians Australia, Oral Health, Swallowing & Hydration in Aged Care- Position Statement. 2020: Dieticians Australia.

13. Vic Health, Healthy and high-quality food in public hospitals and aged care facilities: Audit overview. 2021: Department of Health, Victoria.

14. Watkins, R., et al., Exploring residents' experiences of mealtimes in care homes: A qualitative interview study. BMC geriatrics, 2017. 17(1): p. 141-141.

15. Hung, L. and H. Chaudhury, Exploring personhood in dining experiences of residents with dementia in long-term care facilities. Journal of Aging Studies, 2011. 25(1): p. 1-12.

16. Curtis, M.P., et al., Satisfaction with care among community residential care residents. J Aging Health, 2005. 17(1): p. 3-27.

17. Joung, H.-W., E.-K. Choi, and B.K. Goh, The Impact of Perceived Service and Food Quality on Behavioral Intentions in Continuing Care Retirement Communities: A Mediating Effect of Satisfaction. Journal of Quality Assurance in Hospitality & Tourism, 2015. 16(3): p. 221-234.

18. Goh, B.K., et al., Residents' Satisfaction with Foodservice at a Continuing Care Retirement Community: A Pilot Study. Journal of Quality Assurance in Hospitality & Tourism, 2013. 14(2): p. 185-199.

19. Crogan, N.L., et al., Food choice can improve nursing home resident meal service satisfaction and nutritional status. J Gerontol Nurs, 2013. 39(5): p. 38-45.

20. Chaulagain, S., J. Li, and A. Pizam, What matters, and what matters most? Exploring resident satisfaction in continuing care retirement communities. International Journal of Contemporary Hospitality Management, 2022. ahead-of-print(ahead-of-print).

21. Wright, O.R.L., et al., Determinants of foodservice satisfaction for patients in geriatrics/rehabilitation and residents in residential aged care. Health Expectations, 2013. 16(3): p. 251-265.

22. Seo, S. and C.W. Shanklin, Important Food and Service Quality Attributes of Dining Service in Continuing Care Retirement Communities. Journal of Foodservice Business Research, 2005. 8(4): p. 69-86.

23. O'Hara, P.A., et al., Taste, Temperature, and Presentation Predict Satisfaction with Foodservices in a Canadian Continuing-Care Hospital. Journal of the American Dietetic Association, 1997. 97(4): p. 401-405.

24. Simmons, S.F., P. Cleeton, and T. Porchak, Resident Complaints About the Nursing Home Food Service: Relationship to Cognitive Status. The Journals of Gerontology: Series B, 2009. 64B(3): p. 324-327.

25. Lopez, K.J. and S.L. Dupuis, Exploring meanings and experiences of wellness from residents living in long-term care homes. World Leisure Journal, 2014. 56(2): p. 141-150.

26. Bailey, A., S. Bailey, and M. Bernoth, 'I'd rather die happy': residents' experiences with food regulations, risk and food choice in residential aged care. A qualitative study. Contemporary Nurse : a Journal for the Australian Nursing Profession, 2017. 53(6): p. 597-606.

27. Shahar, S., K.Y. Chee, and W.C.P. Wan Chik, Food intakes and preferences of hospitalised geriatric patients. BMC Geriatrics, 2002. 2(1): p. 3.

28. Abbey, K.L., O.R. Wright, and S. Capra, Menu Planning in Residential Aged Care-The Level of Choice and Quality of Planning of Meals Available to Residents. Nutrients, 2015. 7(9): p. 7580-92.

29. Boelsma, F., et al., "Small" things matter: Residents' involvement in practice improvements in long-term care facilities. Journal of Aging Studies, 2014. 31: p. 45-53.

30. Reimer, H., Providing person-centred mealtime care for long term care residents with dementia. 2012, University of Guelph.

31. Winterburn, S., Residents' choice of and control over food in care homes. Nurs Older People, 2009. 21(3): p. 34-7; quiz 38.

32. Desai, J., et al., Changes in Type of Foodservice and Dining Room Environment Preferentially Benefit Institutionalized Seniors with Low Body Mass Indexes. Journal of the American Dietetic Association, 2007. 107(5): p. 808-814.

33. Vincent, E., Ongoing nutrition assessment, menu modification, and personal service improve food consumption in assisted-living facilities. J Am Diet Assoc, 2008. 108(5): p. 792-3.

34. Lewis, A., A. Kitson, and G. Harvey, Improving oral health for older people in the home care setting: An exploratory implementation study. Australasian Journal on Ageing, 2016. 35(4): p. 273-280.

35. Malhi, H., Dysphagia: warning signs and management. Br J Nurs, 2016. 25(10): p. 546-9.

36. Donini, L.M., C. Savina, and C. Cannella, Eating Habits and Appetite Control in the Elderly: The Anorexia of Aging. International Psychogeriatrics, 2003. 15(1): p. 73-87.

37. Chaudhury, H., L. Hung, and M. Badger, The Role of Physical Environment in Supporting Person-centered Dining in Long-Term Care: A Review of the Literature. American Journal of Alzheimer's Disease & Other Dementias®, 2013. 28(5): p. 491-500.

38. Hung, L., The dining experience of residents with dementia in long-term care facilities. 2008, Simon Fraser University (Canada): Ann Arbor. p. 152.

39. Cartwright, J., et al., Montessori mealtimes for dementia: A pathway to person-centred care. Dementia, 2022. 21(4): p. 1098-1119.

40. Young, K.W.H., et al., A Randomized, Crossover Trial of High-Carbohydrate Foods in Nursing Home Residents With Alzheimer's Disease: Associations Among Intervention Response, Body Mass Index, and Behavioral and Cognitive Function. The Journals of Gerontology: Series A, 2005. 60(8): p. 1039-1045.

41. Remsburg, R.E., et al., Impact of a buffet-style dinning program on weight and biochemical indicators of nutritional status in nursing home residents: A pilot study. American Dietetic Association. Journal of the American Dietetic Association, 2001. 101(12): p. 1460-3.

42. Shatenstein, B. and G. Ferland, Absence of Nutritional or Clinical Consequences of Decentralized Bulk Food Portioning in Elderly Nursing Home Residents with Dementia in Montreal. Journal of the American Dietetic Association, 2000. 100(11): p. 1354-1360.

43. Brush, J.A., R.A. MEEHAN, and M.P. CALKINS, Using the environment to improve intake for people with dementia. Alzheimer's Care Today, 2002. 3(4): p. 330-338.

44. Altus, D.E., K.K. Engelman PhD, and R.M. Mathews, Using family-style meals to increase participation and communication in persons with dementia. 2002, SLACK Incorporated Thorofare, NJ. p. 47-53.

45. Bhat, C.J., A. Wagle, and S. Ousey, Culture Change: Improving Quality of Life by Enhancing Dining Experience. Journal of the American Dietetic Association, 2011. 111(9, Supplement): p. A109.

The Aged Care Quality and Safety Commission acknowledges the Traditional Owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to Elders both past and present.

This paper was prepared for the Aged Care Quality and Safety Commission by Health Outcomes International, 2022

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