



FOOD SETTINGS and the HEALTH AND WELLBEING OF OLDER PEOPLE

**AN ANNOTATED BIBLIOGRAPHY AND
SUMMARY OF THE LITERATURE**

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November 2017

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Acknowledgements

We would like to thank Amanda Donnelly and Genevieve Cox, both at the Soil Association Food for Life, for their advice in scoping this work. Special thanks also goes to the Soil Association for supporting this work as part of the wider evaluation of the Food for Life Better Care programme.

For further details about the Food for Life Better Care programme see www.foodforlife.org.uk or contact Amanda Donnelly, Research and Partnerships Manager, ADonnelly@soilassociation.org

Citation for this paper

Ismail, U. S. & Jones, M. (2017) *Food Settings and the Health and Wellbeing of older people: an annotated bibliography and summary of the literature*. Bristol: University of the West of England

ISBN: 9781860435386

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INTRODUCTION

Evidence shows that settings have an important influence on what, why and how people eat. Settings such as the home or the workplace are much more than simply ‘context’ or ‘environmental factors’ that direct behaviour. Rather, settings give rise to meanings, routines and material interactions that are essential elements of the lived experience. Although there is extensive research on the role of settings in the lives of children, young people, families, and working age people, settings-based perspectives are less clearly conceptualised or investigated with regard to older people. Whereas there has been considerable attention on the dietary and nutrient contents of older people’s food, especially in clinical contexts, little evidence has been collated on the role that food settings play in the health and wellbeing of older people.

The purpose of this bibliography is to bring together evidence from a variety of fields and to identify common themes, key learning and gaps in the literature. The backdrop to this review is the Food for Life Better Care (FFL BC) programme: an initiative led by the Soil Association with the stated aim to use the power of good food to improve the health and wellbeing of older people and bring communities together to reduce loneliness. The FFL BC programme looks at the way that the food environment can be enhanced in different settings to support the nutrition and overall wellbeing of older people.

Our initial stage in evaluating the FFL BC activities has been to explore the academic literature on state of research and practices surrounding the use of food, particularly the food environment, in improving the health and wellbeing of older people. The scope of this annotated literature does not concern itself with much detail into the clinical impact of food on older people. Rather, it takes a much focused stance, where it focuses on the role of the food environment on the wellbeing of older people.

The annotated bibliography is organised into three broad themes: the problem of malnutrition among older people; interventions or activities to reduce malnutrition and improve the health and wellbeing of older people; and evidence of effectiveness of interventions. Under each theme, we have organised works based on their focus on care home (including nursing home and other institutionalised living facilities), hospital (including acute, subacute or any form of hospital care) and community (including home and informal community spaces) settings. A summary of the literature is

provided for each setting, along with relevant food-related policies or guidelines for older people in the UK.

METHODS

The development of this bibliography builds on a theoretical framework that postulates the influence of different settings on the food experiences of older people. We then developed a search strategy to guide us in obtaining literature on the topic - food settings and the health and wellbeing of older people. Thus, we limited our search to food-related aspects on the health and wellbeing of older people in care home, hospital and community settings.

We searched the following academic databases with their default publication start date until September 2017 for relevant records (articles, reports and documents): Scopus, ASSIA (Applied Social Sciences Index and Abstracts), PsycINFO, CINAHL, MEDLINE and the Cochrane Library. We used the following search terms to obtain literature from the databases:

food, feed, eat, meal, nutrition, cook, gardening, food growing, dining, shopping, catering, health, wellbeing, isolation, loneliness, malnutrition, food supplement, oral supplement, hydration.

Truncations (e.g. asterisks “*”) were used on these search terms to get the widest possible search. Boolean terms, “AND” and “OR” were applied to the search terms to get the most relevant records. In addition, we requested relevant reports and documents on the topic from staff at the Soil Association working in the area of food and older people.

All records identified through our search process were exported to a reference manager software, RefWorks, where duplicates were removed, and the bibliographic summary of the records were generated. When records could not be exported to RefWorks, the annotations were done manually. The final selection of 102 records presented in this annotated bibliography were derived from screening and categorisation of 5,488 records. The annotations were produced through reading the abstracts and full text of each record. Only records published in English Language are presented in this annotated bibliography.

KEY FOR TYPE OF LITERATURE

AJ = Academic Journal article

G = Guidelines

NR = Narrative Review

SR = Systematic Review

R = Report

****** = Proposed research

We used abbreviations (AJ, G, NR, SR, R, **) to denote the type of literature in our bibliographic presentations. Our classification of the type of literature used here is only arbitrary and does not represent a clear distinction between types of literature. Thus, there are several cross overs in our classification. For instance, a systematic review (SR) or a narratives review (NR) can both be classified as academic journal articles. We have therefore, used our classification for organisational purposes only.

THEORETICAL FRAMEWORK

In order to inform the review, we developed a framework to help conceptualise the role of settings in food-related experiences of older people. Figure 1 is the first draft developed. It is intended to show the relative importance of different settings for people in older age, and to illustrate changes over the course of time. The framework builds on various sources of evidence including data on employment patterns, household residence patterns and food consumption, hospital and care home residence.

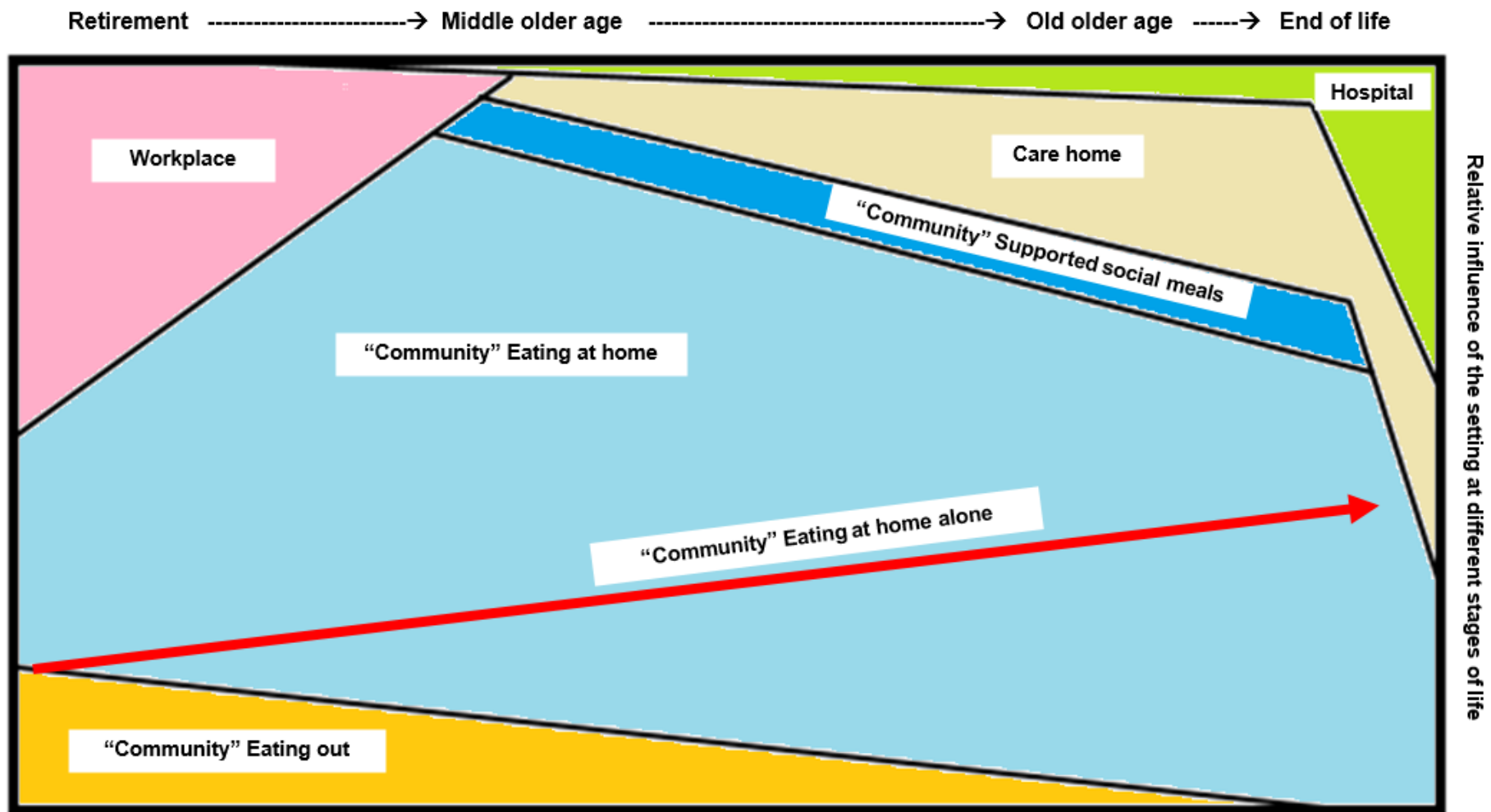


Figure 1: Food Settings in Older Age: a theoretical framework

Table 1 Key to Figure 1

Label	Brief explanation
Workplace	As people retire the workplace becomes less important as a food consumption environment. Workplace studies do not feature in this report.
“Community” Eating at Home	Eating at home is the main environment in which people eat. This rises in importance after retirement. Towards the end of life other settings become more influential.
“Community” Eating at home alone”	As people age, the proportion routinely eating at home alone increases
“Community” Eating out	This includes purchasing meals and drinks in cafes, restaurants, pubs and similar venues. As people grow older this gradually becomes less of a part of everyday life. <i>No evidence to support this, just a contention</i>
“Community” Supported social meals	These are settings where the meals are provided with a social purpose – usually with a subsidy. Examples include lunch clubs, day centres etc. These are a relatively minor part of life for most people.
Care Home	Care home settings become increasingly important for old older age population
Hospital	Hospitals as a food setting are not a major part of most people’s lives, but this setting becomes increasingly important in the period towards the end of life for many people.

The visual appearance of the theoretical framework changes when applied to different social groups. For example, eating out features more strongly for high income group; care homes and hospital eating experiences may feature more strongly in the experiences of low income groups.

ANNOTATED BIBLIOGRAPHY

The annotated bibliography is organised into four main themes: Diet-related ill health in key settings, Intervention/ Activities, Evidence and Policy/ Guidelines.

DIET-RELATED ILL HEALTH IN KEY SETTINGS

We present annotated literature documenting prevalence, risk factors and health and cost implications of malnutrition among older people in care, hospital and community settings under this section.

CARE HOME SETTING

NR: Agarwal, E., Marshall, S., Miller, M., & Isenring, E. (2016). Optimising nutrition in residential aged care: A narrative review. *Maturitas* [online], 92, 70-78. [Accessed 12 September 2017].

This narrative review summarises literature on identification, prevalence, risk factors and effects of malnutrition among older people in residential aged care.

AJ: Arvanitakis, M., Beck, A., Coppens, P., De Man, F., Elia, M., Hébuterne, X., . . . Lochs, H. (2008). Nutrition in care homes and home care: How to implement adequate strategies (report of the Brussels forum (22–23 November 2007)). *Clinical Nutrition* [online], 27(4), 481-488. [Accessed 15 September 2017]

This report presents the findings of a forum that discussed the prevalence, causes and consequences of undernutrition in care institutions and recommendations on strategies to ensure adequate nutrition in care settings. The forum consisted of representatives from patient associations and people from nutritional, medical, commercial and political backgrounds.

SR: Bell, C. L., Tamura, B. K., Masaki, K. H., & Amella, E. J. (2013). Prevalence and measures of nutritional compromise among nursing home patients: Weight loss, low body mass index, malnutrition, and feeding dependency, a systematic review of the literature. *Journal of the American Medical Directors Association* [online], 14(2), 94-100. [Accessed 15 September 2017].

This systematic review examines and synthesises the literature on the definition and prevalence of nutritional problems in care homes.

AJ: Bell, C. L., Lee, A. S., & Tamura, B. K. (2015). Malnutrition in the nursing home. *Current Opinion in Clinical Nutrition and Metabolic Care* [online], 18(1), 17-23. [Accessed 15 September 2017].

A review that summarises the prevalence, risk factors and consequences of malnutrition in care homes and potentially beneficial interventions to tackle malnutrition in care homes.

AJ: Bolmsjö, B. B., Jakobsson, U., Mölsted, S., Östgren, C. J., & Midlöv, P. (2015). The nutritional situation in Swedish nursing homes—a longitudinal study. *Archives of Gerontology and Geriatrics* [online], 60(1), 128-133. [Accessed 16 September 2017].

A 24-month longitudinal study describing the prevalence of malnutrition among older people in a Swedish nursing home. Survival rates were also computed among malnourished and well-nourished individuals.

AJ: Carlsson, M., Haglin, L., Rosendahl, E., & Gustafson, Y. (2013). Poor nutritional status is associated with urinary tract infection among older people living in residential care facilities. *The Journal of Nutrition, Health & Aging* [online], 17 (2), 1-6. [Accessed 15 September 2017]

A cross-sectional study to determine the factors associated with poor nutritional status among residents of nine care institutions in Umea, Sweden.

AJ: Carrier, N., Ouellet, D., & West, G. E. (2007). Nursing home food services linked with risk of malnutrition. *Canadian Journal of Dietetic Practice and Research* [online], 68(1), 14-20. [Accessed 16 September 2017]

A cross-sectional study investigates the characteristics of food services and their relationship with risk of malnutrition among care home residents.

AJ: Chan, M., Lim, Y., Ernest, A., & Tan, T. (2010). Nutritional assessment in an Asian nursing home and its association with mortality. *The Journal of Nutrition, Health & Aging* [online], 14(1), 23-28. [Accessed 15 September 2017]

A cross-sectional study investigates the nutritional status of residents of a nursing home in Singapore and prospectively collects mortality data to determine the association of nutritional status and risk of mortality.

AJ: Donini, L. M., Neri, B., De Chiara, S., Poggiogalle, E., & Muscaritoli, M. (2013). Nutritional care in a nursing home in Italy. *PLoS One* [online], 8(2), e55804. [Accessed 15 September 2017]

A study that cross-sectionally describes the nutritional status of residents in a nursing home in Italy.

AJ: Doumit, J. H., Nasser, R. N., & Hanna, D. R. (2014). Nutritional and health status among nursing home residents in Lebanon: Comparison across gender in a national cross-sectional study. *BMC Public Health* [online], 14(1), 629. [Accessed 15 September 2017]

Compares the socio-economic, health and nutritional status of men and women in thirty-six nursing homes in Lebanon.

AJ: Dunn, H., & Moore, T. (2017). 'You can't be forcing food down 'em': Nursing home carers' perceptions of residents' dining needs. *Journal of Health Psychology* [online], 21(5), 619-627. [Accessed 15 September 2015]

Interviews analysed in a qualitative study to understand staff perspectives of the nutritional needs of residents.

AJ: Dunne, A. (2009). Malnutrition in care homes: Improving nutritional status. *Nursing and Residential Care* [online], 11(9), 437-442. [Accessed 15 September 2017]

An account of malnutrition in care homes in the UK is provided, that discusses the prevalence and screening of malnutrition. Practical steps to improve nutrition among care home residents are also presented.

AJ: Gaskill, D., Black, L. J., Isenring, E. A., Hassall, S., Sanders, F., & Bauer, J. D. (2008). Malnutrition prevalence and nutrition issues in residential aged care facilities. *Australasian Journal on Ageing* [online], 27(4), 189-194. [Accessed 16 September 2017]

The findings of the descriptive component of a pre-and post-test study design are presented to show the prevalence of malnutrition and nutritional issues among 342 older people living in residential aged care facilities in Australia.

AJ: Gordon, A. L., Franklin, M., Bradshaw, L., Logan, P., Elliott, R., & Gladman, J. R. (2013). Health status of UK care home residents: A cohort study. *Age and Ageing* [online], 43(1), 97-103. [Accessed 15 September 2017]

Detailed description of the health status and healthcare resources of residents of care, nursing and residential institutions in the UK through a 180-day longitudinal cohort study.

AJ: Grieger, J. A., Nowson, C. A., & Ackland, L. M. (2009). Nutritional and functional status indicators in residents of a long-term care facility. *Journal of Nutrition for the Elderly* [online], 28(1), 47-60. [Accessed 16 September 2017]

A cross-sectional study examines the association between scores from the Mini Nutritional Assessment (MNA), Geriatric Depression Scale (GDS), and Katz Activities of Daily Living (ADL) and nutritional status and mobility of residents in long-term residential care.

AJ: Lou, M., Dai, Y., Huang, G., & Yu, P. (2007). Nutritional status and health outcomes for older people with dementia living in institutions. *Journal of Advanced Nursing* [online], 60(5), 470-477. [Accessed 15 September 2017]

A 3-month study that examines changes in nutritional status and associated factors among older people with dementia living in two residential care facilities in Taiwan.

AJ: Merrell, J., Philpin, S., Warring, J., Hobby, D., & Gregory, V. (2012). Addressing the nutritional needs of older people in residential care homes. *Health & Social Care in the Community* [online], 20(2), 208-215. [Accessed 15 September 2017]

The factors that influence the nutritional care of residents in residential care homes in two local authorities in Wales were explored in a qualitative study.

AJ: Muurinen, S., Savikko, N., Soini, H., Suominen, M., & Pitkälä, K. (2015). Nutrition and psychological well-being among long-term care residents with dementia. *The Journal of Nutrition, Health & Aging* [online], 19(2), 178-182. [Accessed 15 September 2017]

A cross-sectional study conducted in 2011 investigates the association between nutritional status and psychological wellbeing of people with dementia who live in nursing homes.

AJ: Neyens, J., Halfens, R., Spreeuwenberg, M., Meijers, J., Luiking, Y., Verlaan, G., & Schols, J. (2013). Malnutrition is associated with an increased risk of falls and impaired activity in elderly patients in Dutch residential long-term care (LTC): A cross-sectional study. *Archives of Gerontology and Geriatrics* [online], 56(1), 265-269. [Accessed 16 September 2017]

Secondary analysis of data examines the relationship between malnutrition, activity and falls among residents in long-term care in Holland.

AJ: Noronha, M. B., Cunha, N. A., Araújo, D. A., Abrunhosa, S. F., Rocha, A. N., & Amaral, T. F. (2015). Undernutrition, serum vitamin B12, folic acid and depressive symptoms in older adults. *Nutrición Hospitalaria* [online], 32(1), 354-361. [Accessed 10 September 2017]

A cross-sectional study identifies an association between risk of malnutrition and depression among 84 older people living in care homes.

AJ: Sahin, S., Tasar, P.T., Simsek, H., Çicek, Z., Eskiizmirli, H., Aykar, F.S., Sahin, F. and Akcicek, F (2016). Prevalence of anemia and malnutrition and their association in elderly nursing home residents. *Aging Clinical and Experimental Research* [online], 28(5), 857-862. [Accessed 16 September 2017]

This cross-sectional study establishes a link between malnutrition and anaemia using residents in a care home in Turkey as the sample population.

AJ: Shah, S. M., Carey, I. M., Harris, T., DeWilde, S., & Cook, D. G. (2013). Mortality in older care home residents in England and Wales. *Age and Ageing* [online], 42(2), 209-215. [Accessed 15 September 2017]

This cohort study describes the predictors of 1-year mortality of older people in care homes in England and Wales by comparing data from 9,772 older people in care homes to 354,306 older people residents in the community.

AJ: Smoliner, C., Norman, K., Wagner, K., Hartig, W., Lochs, H., & Pirlich, M. (2009). Malnutrition and depression in the institutionalised elderly. *British Journal of Nutrition* [online], 102(11), 1663-1667. [Accessed 12 September 2017]

The relationship between nutritional status and depression among care home residents and their impact on self-caring capacity and quality of life was investigated in this cross-sectional study.

AJ: Ulger, Z., Halil, M., Cankurtaran, M., Yavuz, B., Yesil, Y., Kuyumcu, M. E., . . . Abbasoglu, O. (2013). Malnutrition in Turkish nursing homes: A correlate of short term mortality. *The Journal of Nutrition, Health & Aging* [online], 17(4), 305-309. [Accessed 22 September 2017]

A cross-sectional study determines an association between malnutrition and mortality risk among residents in care homes.

Summary

- Variable prevalence rates of malnutrition in care home settings have been estimated among studies - prevalence rates reported range from 1.5% to 66.5%.
- In the UK malnutrition prevalence have been estimated at 30%.
- Among people with dementia, the prevalence of malnutrition varies from 18% to 28%.
- Risk of malnutrition is relatively higher than malnutrition itself in care homes and studies have reported malnutrition risk prevalence ranging from 27.6% to 66%.
- Risk factors to malnutrition in care home settings are multifactorial and include medical, social, environmental, organisational and financial factors.

- Among people with dementia, poor nutritional status, eating little of the food offered, having meals alone and not having snacks are associated with poor psychological wellbeing.
- Staff in care homes fail to recognise the psychosocial aspects of mealtimes.
- There is more focus on nutritional intake and malnutrition-related clinical outcomes in care homes – little attention is given to the food ambiance or social element to food.
- Adverse outcomes of malnutrition include risk of infections, mortality, falls, pressure ulcers and hospital admissions, leading to higher healthcare costs and poorer quality of life.

HOSPITAL SETTING

AJ: Agarwal, E., Ferguson, M., Banks, M., Bauer, J., Capra, S., & Isenring, E. (2012). Nutritional status and dietary intake of acute care patients: Results from the nutrition care day survey 2010. *Clinical Nutrition* [online], 31(1), 41- 47. [Accessed 14 September 2017]

Malnutrition and poor food intake were established as risk factors to risk of mortality among hospital adult patients

AJ: Alzahrani, S. H., El Sayed, I. A., & Alshamrani, S. M. (2016). Prevalence and factors associated with geriatric malnutrition in an outpatient clinic of a teaching hospital in Jeddah, Saudi Arabia. *Annals of Saudi Medicine* [online], 36(5), 346. [Accessed 15 September 2017]

This cross-sectional study investigates the prevalence and determinants of malnutrition among older people in a geriatric clinic.

AJ: Charlton, K., Nichols, C., Bowden, S., Milosavljevic, M., Lambert, K., Barone, L., . . . Batterham, M. (2012). Poor nutritional status of older subacute patients predicts clinical outcomes and mortality at 18 months of follow-up. *European Journal of Clinical Nutrition* [online], 66(11), 1224. [Accessed 11 September 2017]

A retrospective analysis of admission records of older people in two acute hospitals was carried out to assess the association between nutritional status at hospital admission and clinical outcomes following an 18-month period.

AJ: Eide, H. D., Halvorsen, K., & Almendingen, K. (2015). Barriers to nutritional care for the undernourished hospitalised elderly: Perspectives of nurses. *Journal of Clinical Nursing* [online], 24(5-6), 696-706. [Accessed 12 September 2017]

Interviews from focus group discussions with nurses identify the barriers to nutritional care in a university hospital in Norway.

AJ: Gomes, F., Emery, P. W., & Weekes, C. E. (2016). Risk of malnutrition is an independent predictor of mortality, length of hospital stay, and hospitalisation costs in stroke patients. *Journal of Stroke and Cerebrovascular Diseases* [online], 25(4), 799-806. [Accessed 15 September 2017]

Examines the predictive ability of the Malnutrition Universal Screening Tool (MUST) on poor health outcomes among stroke patients.

AJ: Mudge, A. M., Ross, L. J., Young, A. M., Isenring, E. A., & Banks, M. D. (2011). Helping understand nutritional gaps in the elderly (HUNGER): A prospective study of patient factors associated with inadequate nutritional intake in older medical inpatients. *Clinical Nutrition* [online], 30(3), 320-325. [Accessed 14 September 2017]

A prospective cohort study examines prevalence and patient-related risk factors to malnutrition.

AJ: Planas, M., Álvarez-Hernández, J., León-Sanz, M., Celaya-Pérez, S., Araujo, K., & De Lorenzo, A. G. (2016). Prevalence of hospital malnutrition in cancer patients: A sub-analysis of the PREDyCES® study. *Supportive Care in Cancer* [online], 24(1), 429-435. [Accessed 14 September 2017]

This cross-sectional multi-centre study presents results on the prevalence of risk of malnutrition and associated clinical and economic outcomes of oncology patients.

AJ: Rasheed, S., & Woods, R. (2014). An investigation into the association between nutritional status and quality of life in older people admitted to hospital. *Journal of Human Nutrition and Dietetics* [online], 27(2), 142-151. [Accessed 15 September 2017]

This prospective cross-sectional study examines the relationship between malnutrition and quality of life among older inpatients.

AJ: Söderström, L., Adolfsson, E. T., Rosenblad, A., Frid, H., Saletti, A., & Bergkvist, L. (2013). Mealtime habits and meal provision are associated with malnutrition among elderly patients admitted to hospital. *Clinical Nutrition* [online], 32(2), 281-288. [Accessed 16 September 2017]

The relationship between mealtime habits, meal provision, and malnutrition were examined in this cross-sectional study involving older people admitted to a hospital.

SR: Thomas, J. M., Cooney, L. M., & Fried, T. R. (2013). Systematic review: Health - Related characteristics of elderly hospitalized adults and nursing home residents associated with short - term mortality. *Journal of the American Geriatrics Society* [online], 61(6), 902-911. [Accessed 10 September 2017]

In the quest to identify the health-related factors associated with mortality among adults admitted to hospital, this review identifies nutrition as a risk factor to mortality among hospitalised adults.

AJ: Vaudin, A., & Sahyoun, N. R. (2015). Food anxiety is associated with poor health status among recently hospital-discharged older adults. *Journal of Nutrition in Gerontology and Geriatrics* [online], 34(2), 245-262. [Accessed 11 September 2017]

This study describes the food anxiety of older people at three different time points in their hospitalisation journey – prior, during and post hospitalisation.

AJ: Wong, S., Graham, A., Green, D., Hirani, S., Grimble, G., & Forbes, A. (2012). Meal provision in a UK national spinal injury centre: A qualitative audit of service users and stakeholders. *Spinal Cord* [online], 50(10), 772. [Accessed 15 September 2017]

This survey describes perspectives of patients and stakeholders on patient food and satisfaction with food provision.

Summary

- Malnutrition prevalence rates among older people in hospitals varies widely from 5.3% to 32%.
- Risk of malnutrition in hospital settings ranges from 32.9% to 55%.
- Risk factors to malnutrition in hospital settings include long overnight fast, being female, living alone, few eating episodes, and not cooking independently.
- Barriers to nutritional care in hospitals include loneliness in nutritional care, a need for competence in nutritional care, low flexibility in food service practices, system failure in nutritional care and ignoring nutritional care.
- Assistance with feeding is a significant risk factor to malnutrition among older people in medical wards.
- Patients at risk of malnutrition during their stay in hospital lack sufficient nutritional support at discharge.
- Main factors that are associated with reduced meal intake in hospitalised patients are reduced intake during the previous week, confinement to bed, female sex, younger age, older age and low body mass index.
- Malnutrition increases length of stay in hospital, readmissions rates and mortality.
- Healthcare cost associated with patients at nutritional risk at discharge is significantly higher than well-nourished patients.
- Risk of malnutrition is significantly linked to poorer quality of life.
- Food anxiety (anxiety about ability to obtain enough food) is significantly higher during hospitalisation relative to prior admission of patients into hospital.

COMMUNITY SETTING

SR: Abizanda, P., Sinclair, A., Barcons, N., Lizán, L., & Rodríguez-Mañas, L. (2016). Costs of malnutrition in institutionalised and community-dwelling older adults: A systematic review. *Journal of the American Medical Directors Association* [online], 17(1), 17-23. [Accessed 22 September 2017]

This systematic review determines the cost of malnutrition in institutionalised and community settings from nine studies. The review also attempts to identify cost-effective interventions in reducing malnutrition in institutionalised and community settings.

AJ: Guest, J. F., Panca, M., Baeyens, J., de Man, F., Ljungqvist, O., Pichard, C., . . . Wilson, L. (2011). Health economic impact of managing patients following a community-based diagnosis of malnutrition in the UK. *Clinical Nutrition* [online], 30(4), 422-429. [Accessed 19 September 2017]

This UK-based case-control study investigates impact of malnutrition on health outcomes and health resources using records from the Health Improvement Network (THIN) database of malnourished and non-malnourished older patients.

Summary

- The cost of malnutrition per patient in the UK is estimated at 2.3 times more (£1,753 vs £750) in malnourished older people (mean age 63 years) compared to non-malnourished older people.
- Cost of malnutrition is also higher among malnourished older people compared to non-malnourished older people in other European countries.

INTERVENTIONS/ACTIVITIES

This section outlines interventions or activities that have examined the role of food in improving the health and wellbeing of older people across care home, hospital and community settings.

CARE HOME SETTING

NR: Agarwal, E., Marshall, S., Miller, M., & Isenring, E. (2016). Optimising nutrition in residential aged care: A narrative review. *Maturitas* [online], 92, 70-78. [Accessed 13 September 2017]

This narrative review summarises literature on interventions to manage malnutrition among older people in residential aged care.

AJ: Barnes, S., Wasielewska, A., Raiswell, C., & Drummond, B. (2013). Exploring the mealtime experience in residential care settings for older people: An observational study. *Health & Social Care in the Community* [online], 21(4), 442-450. [Accessed 17 September 2017]

The Dementia Care Mapping tool was adapted and used to observe meal experiences in four residential care homes in Manchester, UK.

AJ: Bell, C. L., Lee, A. S., & Tamura, B. K. (2015). Malnutrition in the nursing home. *Current Opinion in Clinical Nutrition and Metabolic Care* [online], 18(1), 17-23. [Accessed 15 September 2017]

Interventions to reduce malnutrition in the nursing home were discussed in this review.

AJ: Cole, E. (2016). Supporting care home residents with hydration. *Nursing Older People* [online], 28(7), 16-18. [Accessed 15 September 2017]

Discusses the use of a hydration toolkit to improve fluid intake by a care home in Great Britain.

AJ: Hutchison, R. (2012). Mealtime experiences: Enhancing quality of life. *Nursing & Residential Care* [online], 14(8), 428-429. [Accessed 25 September 2017]

Perceptions of residents in a nursing home in the UK on their eating and mealtime experience were explored qualitatively through interviews and observations.

AJ: Keller, H., Beck, A. M., & Namasivayam, A. (2015). Improving food and fluid intake for older adults living in long-term care: A research agenda. *Journal of the American Medical Directors Association* [online], 16(2), 93-100. [Accessed 15 September 2017]

This article presents discussions from international experts and stakeholders on the factors that influence food and fluid intake among people in long-term residential care.

AJ: Kenkmann, A., & Hooper, L. (2012). The restaurant within the home: Experiences of a restaurant-style dining provision in residential homes for older people. *Quality in Ageing & Older Adults* [online], 13(2), 98-110. [Accessed 10 September 2017]

Unstructured interviews with residents and staff of care homes in Norfolk, England explored their experiences with new restaurant-style meal provision.

AJ: Mahadevan, M., Hartwell, H. J., Feldman, C. H., Ruzsilla, J. A., & Raines, E. R. (2014). Assisted-living elderly and the mealtime experience. *Journal of Human Nutrition and Dietetics* [online], 27(2), 152-161. [Accessed 11 September 2017]

The views of a group of residents was sought on their experiences during mealtimes to understand the factors that affect their wellbeing. Focus groups were used in the investigation and content analysis was used to analyse the data.

AJ: Merrell, J., Philpin, S., Warring, J., Hobby, D., & Gregory, V. (2012). Addressing the nutritional needs of older people in residential care homes. *Health & Social Care in the Community* [online], 20(2), 208-215. [Accessed 16 September 2017]

This was a qualitative study in two nursing homes in Wales, UK, to explore the factors that influence nutritional care in these homes. One of the homes had a communal dining area and the other had dining facilities and their own kitchen.

AJ: Murphy, J. L., Holmes, J., & Brooks, C. (2017). Nutrition and dementia care: Developing an evidence-based model for nutritional care in nursing homes. *BMC Geriatrics* [online], 17(1), 55-55. [Accessed 04 October 2017]

Focus group discussions and semi-structured interviews were conducted with those who provided nutritional support in nursing homes to develop a research informed model for understanding the complex nutritional problems associated with eating and drinking for people with dementia.

AJ: Nell, D., Neville, S., Bellew, R., O'Leary, C., & Beck, K. L. (2016). Factors affecting optimal nutrition and hydration for people living in specialised dementia care units: A qualitative study of staff caregivers' perceptions. *Australasian Journal on Ageing* [online], 35(4), E1-E6. [Accessed 18 September 2017]

Staff perceptions about factors influencing good nutrition and hydration among individuals in specialised dementia care units were explored through semi-structured interviewing.

AJ: Nijs, K., de Graaf, C., van Staveren, W.,A., & de Groot, L.,C.P.G.M. (2009). Malnutrition and mealtime ambiance in nursing homes. *Journal of the American Medical Directors Association* [online], 10(4), 226-229. [Accessed 15 September 2017]

The theory or mechanism underpinning meal ambiance stimulus is discussed in this article with reference to other study results and recommendations for practice.

AJ: Palacios-Ceña, D., Losa-Iglesias, M., Cachón-Pérez, J. M., Gómez-Pérez, D., Gómez-Calero, C., & Fernández-de-las-Peñas, C. (2013). Is the mealtime experience in nursing homes understood? A qualitative study. *Geriatrics & Gerontology International* [online], 13(2), 482-489. [Accessed 19 September 2017]

This qualitative research explores the mealtime experience of residents in a nursing home.

AJ: Philpin, S., Merrell, J., Warring, J., Gregory, V., & Hobby, D. (2011). Sociocultural context of nutrition in care homes. *Nursing Older People* [online], 23(4), 24-30. [Accessed 15 September 2017]

A qualitative research that investigates factors that influenced nutritional care provided in two different types of residential care settings. Participants were staff members, managers and residents of the care homes and their informal carers.

AJ: Philpin, S., Merrell, J., Warring, J., Hobby, D., & Gregory, V. (2014). Memories, identity and homeliness: The social construction of mealtimes in residential care homes in South Wales. *Ageing & Society* [online], 34(5), 753-789. [Accessed 11 September 2017]

Using a variety of qualitative methods, this research explored the factors affecting residents' experiences and understanding of mealtimes in a residential care home in South Wales

AJ: Ullman, S. (2009). The contribution of care home staff to nutrition and hydration. *Nursing and Residential Care* [online], 11(3), 128-134. [Accessed 15 September 2017]

Sue Ullman describes how good nutrition, hydration and enjoyable mealtimes can improve the health and wellbeing of older people

AJ: Ullrich, S., McCutcheon, H., & Parker, B. (2011). Reclaiming time for nursing practice in nutritional care: Outcomes of implementing protected mealtimes in a residential aged care setting. *Journal of Clinical Nursing* [online], 20(9), 1339-1348. [Accessed 23 September 2017]

This qualitative study examines the nutritional care and the mealtime experience of older people in a residential care setting; with particular focus on protected meal times.

SR: Watkins, R., Goodwin, V.A., Abbott, R.A., Backhouse, A., Moore, D. and Tarrant, M. (2017) Attitudes, perceptions and experiences of mealtimes among residents and staff in care homes for older adults: A systematic review of the qualitative literature. *Geriatric Nursing* [online]. 38 (4), pp.325-333. [Accessed 23 September 2017]

This review synthesised literature on the attitudes, perceptions and mealtime experiences of care home residents and staff in contributing to reducing malnutrition of care home residents.

AJ: Winterburn, S. (2009). Residents' choice of and control over food in care homes. *Nursing Older People* [online], 21(3), 34-37. [Accessed 21 September 2017]

From interviews with chefs and nursing staff, this qualitative study explores care home residents' choice and control over their meals.

AJ: Wu, S., & Barker, J. C. (2008). Hot tea and juk: The institutional meaning of food for Chinese elders in an American nursing home. *Journal of Gerontological Nursing* [online], 34(11), 46-54.

This qualitative enquiry describes the food and mealtime experiences of Chinese residents, family members and staff in a nursing home in America.

Summary

- A deeper understanding of the sociocultural context of eating and drinking in residential care settings could inform nutritional programmes and interventions.
- Strategies to ensure positive nutritional and clinical outcomes go beyond improving the nutritional value of food to encompass other factors such as the mealtime ambiance.
- Mealtime ambiance increases food intake by serving as an external stimulus to facilitate increases in food intake.
- Protected meal time is feasible in a residential aged care setting.
 - Organisational and staff support are key in enhancing the meal experiences of residents.
- Food service factors significantly associated with risk of malnutrition include food packages, lids, and dishes that are difficult to manipulate, bulk food-delivery systems, overall food satisfaction, menu cycle length, and porcelain dishes.
- Nutritional intake and quality of life can be improved by ensuring a pleasing mealtime experience for residents in care institutions.
- Interventions to address the determinants of food and fluid intake should include social interactions of residents at mealtime; self-feeding ability; the dining environment; the attitudes, knowledge, and skills of staff; adequate time to eat/availability of staff to provide assistance; sensory properties of the food;

hospitality and mealtime logistics; choice and variety in the dining experience; and nutrient density of food.

- Factors that affect the wellbeing of older people during mealtimes include being able to make healthy food choices, interacting and socialising with staff, family and friends during mealtimes and having a tasty meal in an environment that is warm and inviting.
- Understanding the social importance of residents' mealtimes in nursing homes would help address resident's expectations. As a result, this will help to improve food service and resident's quality of life.
- A multidisciplinary and coordinated approach is advocated as a potential solution to improve the health and nutrition of care home residents in the UK.
- There is a need for further training for care home staff regarding the importance of nutrition in maintaining health in older people, use of nutritional screening and special dietary needs. Shared nutrition training between health and social care staff needs expansion and policy implications in terms of an enhanced regulatory focus on maintaining nutritional needs in care homes.

HOSPITAL SETTING

AJ: Furman, E. (2014). The theory of compromised eating behavior. *Research in Gerontological Nursing* [online], 7(2), 78-86. [Accessed 15 September 2017]

Ellen Furman attempts to develop a theory that explains the social processes affecting eating habits of older people admitted to hospital.

AJ: Johns, N., Hartwell, H., & Morgan, M. (2010). Improving the provision of meals in hospital. The patients' viewpoint. *Appetite* [online], 54(1), 181-185. [Accessed 16 September 2017]

The views of patients at an NHS hospital in South England on the provision of hospital meals are presented in this qualitative enquiry.

AJ: Johnson, A., & Baum, F. (2001). Health promoting hospitals: A typology of different organizational approaches to health promotion. *Health Promotion International* [online], 16(3), 281-287. [Accessed 15 September 2017]

This article discusses health promotion activities in hospital settings

AJ: Roberts, H. C., De Wet, S., Porter, K., Rood, G., Diaper, N., Robison, J., . . . Robinson, S. (2014). The feasibility and acceptability of training volunteer mealtime assistants to help older acute hospital inpatients: The Southampton mealtime assistance study. *Journal of Clinical Nursing* [online], 23(21-22), 3240-3249. [Accessed 17 September 2017]

Interviews and focus group discussions were used to assess the feasibility of and acceptability of training volunteers to assist female patients during mealtimes in a hospital in Southampton.

AJ: Ross, L. J., Mudge, A. M., Young, A. M., & Banks, M. (2011). Everyone's problem but nobody's job: Staff perceptions and explanations for poor nutritional intake in older medical patients. *Nutrition & Dietetics* [online], 68(1), 41-46. [Accessed 28 September 2017]

Three staff focus groups were carried out to understand the potential contextual and cultural barriers to feeding older adults in hospital.

AJ: Schindler, K., Themessl-Huber, M., Hiesmayr, M., Kosak, S., Lainscak, M., Laviano, A., Ljungqvist, O., Mouhieddine, M., Schneider, S., de van der Schueren, M., Schutz, T., Schuh, C., Singer, P., Bauer, P. and Pichard, C. (2016). To eat or not to eat? Indicators for reduced food intake in 91,245 patients hospitalized on nutrition Days 2006-2014 in 56 countries worldwide: A descriptive analysis. *The American Journal of Clinical Nutrition* [online], 104(5), 1393-1402. [Accessed 15 September 2017]

Secondary data analysis was carried to describe the factors that are associated with reduced meal intake in hospitalized patients and geographical differences in relation to these factors.

AJ: Walton, K. (2012). Improving opportunities for food service and dietetics practice in hospitals and residential aged care facilities. *Nutrition & Dietetics* [online], 69(3), 222-225. [Accessed 15 September 2017]

This narrative review tries to present the role that dietitians play in food provision in healthcare settings

AJ: Walton, K., Williams, P., & Tapsell, L. (2012). Improving food services for elderly, long-stay patients in Australian hospitals: Adding food fortification, assistance with packaging and feeding assistance. *Nutrition & Dietetics* [online], 69(2), 137-144. [Accessed 29 August 2017]

This survey highlights barriers and feasible opportunities to enhance nutrition support for elderly, long-stay patients in Australian hospitals.

AJ: Walton, K., Williams, P., Tapsell, L., Hoyle, M., Shen, Z. W., Gladman, L., & Nurka, M. (2013). Observations of mealtimes in hospital aged care rehabilitation wards. *Appetite* [online], 67, 16-21. [Accessed 15 September 2017]

Observations were carried out on the environmental factors that are associated with adequate food consumption of patients in a hospital setting.

Summary

- Mealtime is an integral part of care in healthcare settings.
- Interventions that enhance the meaning of food and mealtimes for older adults during hospitalisation, may improve dietary intake and nutritional outcomes.
- Prioritising mealtimes and taking a multidisciplinary approach to nutrition in the hospital will help overcome the barriers to good nutritional status of patients in the hospital.
- Food intake appears to be better in hospitals when meals are consumed communally in a dining room.
- There is a need for protected mealtimes in hospital wards.
- Multilevel and multidisciplinary interventions based on a shared understanding of food and nutrition as an vital component of hospital care are essential to improve dietary intake and reduce the risk of adverse clinical outcomes.

COMMUNITY SETTING

******Aalborg University. (2014). Scientists will improve the eating experience for the elderly. Available from: <http://www.inside.aau.dk/nyheder/aaudk/vis/forskere-vil-forbedre-madoplevelsen-for-aeldre.cid322297> [Accessed 02 October 2017].

Improving food experience of older people in the community through a food delivery intervention - opportunity to improve dietary intake among older people in the community

R: Brighton & Hove Food Partnership (2015). *Eating together: exploring the role of lunch clubs and shared meals in Brighton & Hove*. Report: Brighton & Hove Food Partnership.

The role that shared meals play in the social and nutritional fabric of Brighton & Hove, including gaps and opportunities

AJ: Buys, D.R., Marler, M.L., Robinson, C.O., Hamlin, C.M. and Locher, J. (2011). Recruitment of volunteers for a home-delivered meals programme serving homebound older adults: A theoretically derived programme among faith communities. *Public Health Nutrition* [online], 14(8), 1473-1478. [Accessed 14 September 2017]

The design of a theoretically-driven community project to increase the participation of volunteers in a Meals on Wheels intervention.

AJ: Dera, M., & Woodham, D. (2017). Treating malnutrition in the community. *Nursing and Residential Care* [online], 19(3), 140-145. [Accessed 15 August 2017]

This article describes the dangers associated with malnutrition among older people living in the community.

AJ: Marshall, S., Agarwal, E., Young, A., & Isenring, E. (2017). Role of domiciliary and family carers in individualised nutrition support for older adults living in the community. *Maturitas* [online], 98, 20-29. [Accessed 16 September 2017]

This review provides insight into the role of both domiciliary and family carers in providing individualised nutrition support for older, community-dwelling adults with malnutrition.

AJ: Romero-Ortuno, R., Casey, A., Cunningham, C., Squires, S., Prendergast, D., Kenny, R., & Lawlor, B. (2011). Psychosocial and functional correlates of nutrition among community-dwelling older adults in Ireland. *Journal of Nutrition, Health & Aging* [online], 15(7), 527-531. [Accessed 15 September 2017]

Correlates of nutrition between community-dwelling older adults in Ireland were investigated in this observational study.

AJ: Thomas, N., & Emond, R. (2017). Living alone but eating together: Exploring lunch clubs as a dining out experience. *Appetite* [online], xxx (2017) 1-7. [Accessed 10 September 2017]

Perceptions and preferences of ten older people towards domestic and communal meals in South East Scotland were explored in this qualitative study.

AJ: Watkinson-Powell, A., Barnes, S., Lovatt, M., Wasielewska, A., & Drummond, B. (2014). Food provision for older people receiving home care from the perspectives of home-care workers. *Health & Social Care in the Community* [online], 22(5), 553-560. [Accessed 08 September 2017]

A qualitative study conducted in a large city in North England to explore barriers and facilitators to food provision for older people receiving home care.

Summary

- A “food first approach”, where nutritious food is provided, and food intake is encouraged, is recommended as an initial stage of tackling malnutrition before the consideration of other strategies such as food fortification and oral nutritional supplements.
- Improving food delivery experience among older people may serve as a potentially useful intervention in reducing malnutrition among older people living in the community.
- Shared meal provision can potentially reduce social isolation among older people living in the community.
- Faith communities can be a reliable source for recruiting volunteers to support food-based interventions for older people in the community.

- Domiciliary carers may have a role in malnutrition interventions when supported by health professionals. Interventions such as group education, skill-development workshops and telehealth demonstrate promise and have significantly improved outcomes in older adults with dementia. More research is needed to demonstrate the efficacy of engaging with domiciliary and family carers of older adults in the general community.
- Significant correlates of nutrition among community-dwelling older adults include mobility and social support.
- Considerable time pressures limit home-care workers in their ability to socially engage with service users at mealtimes, or provide them with anything other than ready meals. •Enabling choice is considered more important than providing a healthy diet, but choice is limited by food availability and reliance on families for shopping.
- Home-care workers receive little nutritional training and are not involved by healthcare professionals in the management of malnutrition.

EVIDENCE OF WHAT WORKS

Under this theme, we lay out the evidence of what works in using food to improve the health and wellbeing of older people in care home, hospital and community settings.

CARE HOME SETTING

AJ: Carrier, N., West, G. E., & Ouellet, D. (2009). Dining experience, foodservices and staffing are associated with quality of life in elderly nursing home residents. *The Journal of Nutrition, Health & Aging* [online], 13(6), 565-570. [Accessed 30 August 2017]

This cross-sectional study explores the relationship between dining experience, food provision services and staff-related factors and quality of life of residents in care settings.

AJ: Charras, K., & Frémontier, M. (2010). Sharing meals with institutionalised people with dementia: A natural experiment. *Journal of Gerontological Social Work* [online], 53(5), 436-448. [Accessed 06 September 2017]

A natural experiment investigates the impact of shared mealtimes for people with dementia living in residential care.

AJ: Crogan, N. L., Dupler, A. E., Short, R., & Heaton, G. (2013). Food choice can improve nursing home resident meal service satisfaction and nutritional status. *Journal of Gerontological Nursing* [online], 39(5), 38-45. [Accessed 06 September 2017]

A two-group repeated measure design examines the feasibility of a food-based intervention focusing on food choice and the impact of this intervention on the nutritional status of residents in care homes.

SR: Green, S. M., Martin, H. J., Roberts, H. C., & Sayer, A. A. (2011). A systematic review of the use of volunteers to improve mealtime care of adult patients or residents in institutional settings. *Journal of Clinical Nursing* [online], 20(13 - 14), 1810-1823. [Accessed 30 August 2017]

Use of volunteers in mealtime care was explored in this systematic review of the literature.

AJ: Kenkmann, A., Price, G. M., Bolton, J., & Hooper, L. (2010). Health, wellbeing and nutritional status of older people living in UK care homes: An exploratory evaluation of changes in food and drink provision. *BMC Geriatrics* [online], 10, 28-28. [Accessed 06 September 2017]

The impact on the health of care home residents of an intervention in UK care homes is investigated in this study. The intervention comprises of improved dining atmosphere, greater food choice, extended restaurant hours, and readily available snack and drink machines.

AJ: Mamhidir, A., Karlsson, I., Norberg, A., & Mona, K. (2007). Weight increase in patients with dementia, and alteration in meal routines and meal environment after integrity promoting care. *Journal of Clinical Nursing* [online], 16(5), 987-996. [Accessed 30 August 2017]

Effects of altering the mealtime environment on the weight of people with dementia living in a care home.

AJ: Nijs, K. A., De Graaf, C., Siebelink, E., Blauw, Y. H., Vanneste, V., Kok, F. J., & Van Staveren, W. A. (2006). Effect of family-style meals on energy intake and risk of malnutrition in Dutch nursing home residents: A randomized controlled trial. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* [online], 61(9), 935-942. [Accessed 13 September 2017]

Effects of family-style dining experience (relative to control) on the risk of malnutrition (assessed with Mini Nutritional Assessment) and energy intake is evaluated in this study.

AJ: Parsons, E. L., Stratton, R. J., Cawood, A. L., Smith, T. R., & Elia, M. (2017). Oral nutritional supplements in a randomised trial are more effective than dietary advice at improving quality of life in malnourished care home residents. *Clinical Nutrition* [online], 36(1), 134-142. [Accessed 18 September 2017]

Comparing the use of oral nutritional supplements (relative to dietary advice) on quality of life among residents in care home.

AJ: Tse, M. M. Y. (2010). Therapeutic effects of an indoor gardening programme for older people living in nursing homes. *Journal of Clinical Nursing* [online], 19(7 - 8), 949-958. [Accessed 13 September 2017]

Findings of an evaluation of an indoor gardening programme on loneliness and satisfaction is presented in this article.

SR: Whear, R., Abbott, R., Thompson-Coon, J., Bethel, A., Rogers, M., Hemsley, A., . . . Stein, K. (2014). Effectiveness of mealtime interventions on behavior symptoms of people with dementia living in care homes: A systematic review. *Journal of the American Medical Directors Association* [online], 15(3), 185-193. [Accessed 30 August 2017]

This review appraises the evidence on the use of mealtime interventions on the behavioural symptoms of people with dementia.

Summary

- Mealtime interventions such as music, changes to food service, dining environment alteration, and group conversation tend to improve behavioural symptoms of people with dementia, although study quality is assessed to be poor, limiting the generalisability of the findings.
- Beneficial interventions to reduce malnutrition in nursing homes include dietary supplements, greater resident role in food choice, and staff training programmes.
- There is some evidence that volunteers can improve mealtime care of residents in institutional care settings by increasing satisfaction of patients, relatives and staff in relation to meal-time assistance. However, few well designed studies support this.
- Indoor gardening programme decreases loneliness and improves satisfaction among care home residents.
- Oral nutritional supplements (ONS) relative to dietary advice improves quality of life among residents in a care home and use of ONS may have an impact in reducing healthcare cost by reducing malnutrition.

- Shared mealtimes improve weight gain among care home residents and improves nutritional experiences of residents and carers.
- Improvement in meal environments improves weight among residents.
- Family-style dining experience reduces risk of malnutrition and increases energy intake.

HOSPITAL SETTING

AJ: Chan, J., & Carpenter, C. (2015). An evaluation of a pilot protected mealtime program in a Canadian hospital. *Canadian Journal of Dietetic Practice and Research* [online], 76(2), 81-85. [Accessed 13 September 2017]

Evaluation of the effect of a protected mealtime programme in a hospital on mealtime experiences and patient care

AJ: Hope, K., Ferguson, M., Reidlinger, D. P., & Agarwal, E. (2017). “I don’t eat when I’m sick”: Older people’s food and mealtime experiences in hospital. *Maturitas* [online], 97, 6-13. [Accessed 13 September 2017]

The factors leading to poor dietary intake among older hospital patients were explored in this qualitative research.

AJ: Huang, C., Dutkowski, K., Fuller, A., & Walton, K. (2015). Evaluation of a pilot volunteer feeding assistance program: Influences on the dietary intakes of elderly hospitalised patients and lessons learnt. *The Journal of Nutrition, Health & Aging* [online], 19(2), 206-210. [Accessed 30 August 2017]

This study evaluated the effects of a volunteer feeding assistance programme on dietary intake of older inpatients

SR: Hubbard, G. P., Elia, M., Holdoway, A., & Stratton, R. J. (2012). A systematic review of compliance to oral nutritional supplements. *Clinical Nutrition* [online], 31(3), 293-312. [Accessed 15 September 2017]

This review summarises the findings of previous studies on patient compliance with oral nutritional supplements.

AJ: Porter, J., Haines, T. P., & Truby, H. (2017). The efficacy of protected mealtimes in hospitalised patients: A stepped wedge cluster randomised controlled trial. *BMC Medicine* [online], 15(1), 25. [Accessed 10 September 2017]

A randomised controlled trial to assess the effect of a protected mealtime intervention on energy and protein intake of patients in subacute hospital setting.

AJ: Robison, J., Pilgrim, A.L., Rood, G., Diaper, N., Elia, M., Jackson, A.A., Cooper, C., Aihie Sayer, A., Robinson, S. and Roberts, H.C. (2015). Can trained volunteers make a difference at mealtimes for older people in hospital? A qualitative study of the views and experience of nurses, patients, relatives and volunteers in the Southampton mealtime assistance study. *International Journal of Older People Nursing* [online], 10(2), 136-145. [Accessed 16 September 2017]

This qualitative study explores the impact of the use of volunteers in improving the meal experience of older hospitalised patients.

Summary

- Protected mealtime programme improves mealtime experiences and patient care.
- Volunteer feeding assistance programme tends to improve the dietary intake of older people in hospital.
- Trained volunteers positively impact on mealtime experiences of older people in hospitals.
- There is some evidence of good patient compliance with ONS in healthcare settings.

COMMUNITY SETTING

AJ: Burke, D., Jennings, M., McClinchy, J., Masey, H., Westwood, D., & Dickinson, A. (2011). Community luncheon clubs benefit the nutritional and social wellbeing of free living older people. *Journal of Human Nutrition and Dietetics* [online], 24(3), 278-278. [Accessed 13 September 2017]

This study investigates the effect of meals provided in the community on the health and wellbeing of older people living in the community.

SR: Campbell, A. D., Godfryd, A., Buys, D. R., & Locher, J. L. (2015). Does participation in home-delivered meals programs improve outcomes for older adults? Results of a systematic review. *Journal of Nutrition in Gerontology and Geriatrics* [online], 34(2), 124-167. [Accessed 30 August 2017]

This review appraises the literature on the effect of home-delivered meals on the health of older people living in the community.

SR: Elia, M., Normand, C., Laviano, A., & Norman, K. (2016). A systematic review of the cost and cost effectiveness of using standard oral nutritional supplements in community and care home settings. *Clinical Nutrition* [online], 35(1), 125-137. [Accessed 13 September 2017]

This review examines the cost-effectiveness of oral nutritional supplements in improving the health of older people living in the community or care homes.

AJ: Francis, S. L., MacNab, L., & Shelley, M. (2014). A theory-based newsletter nutrition education program reduces nutritional risk and improves dietary intake for congregate meal participants. *Journal of Nutrition in Gerontology and Geriatrics* [online], 33(2), 91-107. [Accessed 30 August 2017]

Evaluating the impact of theory-based Chef Charles (CC) programme (treatment) in reducing nutritional risk and dietary practices against traditional CC programme.

AJ: Same, A., Lee, E. A. L., McNamara, B., & Rosenwax, L. (2016). The value of a gardening service for the frail elderly and people with a disability living in the community. *Home Health Care Management & Practice* [online], 28(4), 256-261. [Accessed 17 September 2017]

The effects of a gardening programme on older people with disability residing in the community were investigated through this research.

AJ: Wilson, A., & Dennison, K. (2011). Meals on wheels service: Knowledge and perceptions of health professionals and older adults. *Nutrition & Dietetics* [online], 68(2), 155-160. [Accessed 30 August 2017]

This mixed methods study explores the knowledge and perceptions of GPs, practice nurses and older adults living in the community on a meals-on-wheels service.

SR: Young, K., Bunn, F., Trivedi, D., & Dickinson, A. (2011). Nutritional education for community dwelling older people: A systematic review of randomised controlled trials. *International Journal of Nursing Studies* [online], 48(6), 751-780. [Accessed 16 September 2017]

This review synthesises the evidence around the health impacts of nutritional education interventions.

Summary

- Community luncheon clubs improve the social wellbeing of older people.
- There is insufficient research to assess the effectiveness of home-delivered meals programmes.
- ONS are cost-effective in improving clinical-related outcomes in the community.
- Gardening programme has positive impacts on independence and emotional wellbeing.
- Nutritional education or advice can positively affect physical function and diet, whilst complex interventions with nutritional education as a component, can reduce depression in people over 65years who live at home.

POLICIES AND GUIDELINES

This section annotates relevant policy documents, guidelines or reports on food and older people.

R: The Caroline Walker Trust (2004) *Eating well for older people: Practical and nutritional guidelines for food in residential and nursing homes and for community meals*. Report of an expert working group. Second Edition. Wordworks: London

This document provides nutritional guidelines for older people in residential and care homes

R: Crawley, H. and Hocking, E. (2011) *Eating well: supporting older people and older people with dementia: A Practical Guide*. The Caroline Walker Trust: London

This report explains the reasons for good nutrition among older people and recommends the types and amounts of food required to meet the nutritional needs of older people and people with dementia.

G: The Caroline Walker Trust (2014) Eating well for Adults: Balanced Meals Photo Resource. Available from: <http://www.cwt.org.uk/publications/?action=search> [Accessed 02 October 2017].

A PowerPoint folder of files, photos and notes on several meals and recipes for adults.

G: VOICES (1998) *Eating Well for Older People with Dementia*. VOICES: London:

This guideline looks at the nutritional aspect of care for people with dementia. The guideline also offers practical and nutritional recommendations for people with dementia who live in residential and nursing homes.

G: National Association of Care Catering (year) *NACC recommended standards for older people in residential, day care and community meals*. Available from: <http://www.thenacc.co.uk/shop/product/Nutritional+Standards+for+Adults> [Accessed 03 October 2017]

Provides recommendations on the amount of nutrient and fluid intake for older people