Royal Commission into Aged Care Quality & Safety: Propositions relating to allied health services

March 2020

The Dietitians Association of Australia is the national association of the dietetic profession with over 7,500 members, and branches in each state and territory. DAA is a leader in nutrition and advocates for food and nutrition for healthier people and healthier communities. DAA appreciates the opportunity to provide feedback to the Royal Commission into Aged Care Quality and Safety regarding the draft propositions relating to allied health services.

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DAA interest in this consultation

As the leading organisation of nutrition and dietetic professionals in Australia, the Dietitians Association of Australia (DAA) supports reforms to aged care systems and services to better support older Australians who have reduced capacity to care for themselves. In particular, DAA considers it vital that the aged care system is changed to improve the availability of allied health services, including dietetic services and nutrition supports.

The Accredited Practising Dietitian (APD) program provides an assurance of safety and quality and is the foundation of self-regulation of the dietetic profession in Australia. Accredited Practising Dietitians have an important role to play in aged care, such as in the assessment and dietary management of clients with chronic diseases and malnutrition, in the planning and coordination of food service within aged care homes and home delivered meal programs, and in the training of aged care sector staff.

Access to Allied Health services

Evidence put forward to the Royal Commission shows that Australians accessing aged care services have extremely limited access to allied health care, including dietetic care from Accredited Practising Dietitians. In the University of Wollongong research paper (commissioned by the Royal Commission) on '*How Australian Residential Aged Care Staffing Levels Compare with International and National Benchmarks*' (1), it is highlighted that the **system in British Columbia recommends that residents receive an average of 22 minutes of allied health services per day**. Refer in particular to pages 23-25 of this report for comparisons of allied health hours in Australia v's Canada – British Columbia. The current Australian average (8 minutes of allied health care per day) is well below this. Only 2% of Australian residents currently receive the allied health care recommendation. Achieving the level recommended in British Columbia would require a 175% increase in allied health staffing.

In order to set minimum benchmarks for the ratio of allied health staff to consumers in residential aged care, it is important to review the roles and responsibilities of each and every allied health profession, including Accredited Practising Dietitians (APDs). APDs work collaboratively with consumers and carers to maximise an individual's nutrition, function and quality of life. Unlike many other allied health professions, the role and responsibilities of APDs in residential aged care extends beyond individual clinical consultations, as highlighted below:

Key roles and responsibilities of dietitians in aged care:

- Medical nutrition therapy (i.e. individual clinical consultations and nutrition care plans) for consumers and their carers.
- Nutrition screening and assessment processes to detect malnutrition and ensure adequate processes are implemented.

- Reviews of menus, meals and the dining experience – in residential aged care, at home and in other care settings (e.g. respite care).
- Guidance to catering staff re: the provision of meals and special diets (e.g. for dysphagia, malnutrition, diabetes, hypertension, renal disease, food allergy and intolerance etc).
- Management of food service systems working in partnership with food services and care staff.
- Nutrition training for all staff, including food service and care staff.

Given the **role of APDs in aged care is a mix of individual clinical care, management of food and nutrition systems and staff training**, establishing minimum benchmarks for the ratio of allied health staff to consumers in residential aged care needs to consider not only the clinical care components, but also the systems management and staff training components. This is a vital consideration for APDs, which doesn't always affect other allied health professionals with a hands-on role (e.g. occupational therapists and physiotherapists).

The role of APDs in strengthening food and nutrition systems and in training staff regarding the basics of nutrition care are just as important as individual clinical care, so therefore any work to develop minimum benchmarks for allied health staff ratios must take this into consideration. Strong food and nutrition systems and a nutrition-wise workforce not only equate to better health outcomes for consumers, but they also equate to monetary savings (e.g. savings on nutrition supplements due to lower rates of malnutrition; reduced rates of wounds and savings on wound dressings due to better nourished residents). Nutrition screening and treatment of any degree of malnutrition is integral to the prevention and healing of pressure injuries and related wounds in adults (2).

Draft propositions relating to Allied Health

DAA supports the submissions specific to allied health services put forward by Counsel Assisting at Adelaide Hearing 4 on the redesign of future aged care programs, including:

- the redesigned aged care program should have an increased focus on preventative and early interventions with the aims of maintaining and restoring function, sustaining independence, and enhancing wellbeing;
- wellness, reablement and rehabilitation services (including occupational therapy and physiotherapy) should be available for all Australians accessing aged care services, and should not be funded from the individual's budget for ongoing care, but should be available based on assessed need *(with DAA adding the vital importance of including dietetic services in wellness, reablement and rehabilitation services);*
- there should be a comprehensive care assessment which should be face-to-face, taking into account the person's living environment and other relevant

circumstances, and be conducted with a strong emphasis on certain principles, including: prioritising the person's quality of life and wellbeing, restoring or maintaining functioning, and sustaining independence.

Here follows feedback from DAA on the draft propositions relating to allied health services put forward in the paper 'Adelaide Hearing 5 – Draft Propositions', with the aim of improving access to primary allied health care by Australians receiving aged care services, particularly those living in residential aged care.

Proposition A1: increase funding for allied health services through a new MBS benefit structure for Australians accessing aged care services:

- ***By 1 January 2022, the Australian Government should implement a new MBS benefit structure for allied health services provided under an "Aged Care Plan" to aged care recipients.***
- ***The level of MBS benefit for allied health services provided under Aged Care Plans should be raised to a level that removes the current disincentive to provide MBS services and the need for service providers to charge large gaps.***

DAA agrees that access to allied health services through Medicare Allied Health Chronic Disease Management items is totally inadequate. The limit to five services per year across all eligible professions, where each session is a minimum of 20 minutes (the norm would be 40 – 60 minutes) is rarely sufficient to meet the complex needs of older people. DAA therefore supports an increase in the number of services and duration of service available under Medicare Allied Health Chronic Disease Management items to improve access to Accredited Practising Dietitians working in the private sector for the management of malnutrition and chronic disease in the elderly community.

A study published in 2012 identified that the prevalence of malnutrition in older Victorians receiving home nursing services was around 8% and approximately 35% were at risk of malnutrition (3). In residential care, Australian studies have identified a prevalence of malnutrition from 22% up to 50% (see Appendix). There is obviously a failure in safety and quality systems for the prevention and management of malnutrition in older Australians.

It should be noted that **home care consumers who are identified as malnourished will require the services of an APD at least 15-20 times per annum and those with other diagnosis (e.g. chronic disease, food allergy/intolerance) require 10-15 APD consultations per annum.** Therefore, any increase in the number of services and duration of service available under Medicare Allied Health Chronic Disease Management items for an 'Aged Care Plan' must allow for this. The example of a cap or limit on allied health services provided in point 61 of the Royal Commission proposals (i.e. dietitians should be available only quarterly) is not evidence-based and therefore not supported by DAA. It will be vital to make decisions on any caps/limits by seeking clinical advice from each and

every allied health profession, which in the case of APDs is the Dietitians Association of Australia.

Given face-to-face consultations in a GP practice or private practice are not always possible for elderly Australians, the **inclusion of home visits and telehealth for allied health staff are essential** in this proposed model, so as to allow consumers with mobility issues and those located in rural and remote locations to access allied health services.

As part of the MBS proposition, DAA considers it vital to introduce a strategy to improve general practitioner (GP) knowledge and skills to identify and manage nutrition risk, and identify when to refer to an Accredited Practising Dietitian for specialised nutrition care. This would be supported by the inclusion of a **validated malnutrition screening tool in the 'Medicare Health Assessment Tool for Older Persons (75+)'** to achieve consistency in the malnutrition screening process Australia-wide.

A major issue with this proposed funding model is that it would not reimburse allied health professionals for work they undertook to support family members and aged care staff. So in the case of an APD needing to discuss a nutrition care plan with a family member, care staff or catering staff (e.g. catering staff in a residential aged care home or Meals on Wheels for clients in the community) they would not be reimbursed for their time. This would equate to a significant amount of 'unpaid work' for an APD in private practice who provides services to aged care, which is unacceptable.

Proposition A2: fund general practices which have received an aged care accreditation to provide allied health services to their patients:

- ***By 1 January 2022, the Australian Government should fund aged care general practices to provide a comprehensive range of allied health services to patients.***

DAA considers Proposition A2 to be feasible provided:

- a strategy is introduced to improve general practitioner (GP) knowledge and skills to identify and manage nutrition risk and promptly refer clients to an Accredited Practising Dietitian for specialised nutrition care. DAA considers it vital to include experienced aged care APDs in the development and facilitation of the GP training; and
- mandatory malnutrition screening is included in the 'Medicare Health Assessment Tool for Older Persons (75+)' to achieve consistency in the malnutrition screening process Australia-wide, and a clear referral pathway to APDs is provided for clients who are malnourished and 'at risk' of malnutrition; and
- this model allows allied health staff to service consumers at their place of residence and via telehealth. Funding must be provided to cover both the allied health consultation and any associated costs, such as travel; and

- this model is implemented in tandem with another model to embed allied health services in residential aged care (such as the model in Proposition A3 below).

Proposition A3: fund residential aged care providers to deliver a comprehensive range of allied health services to residents:

- ***By 1 January 2022, the Australian Government should fund aged care providers to deliver a comprehensive range of allied health services to people receiving aged care.***

DAA supports this model for residential aged care, provided it is implemented in tandem with a model that embeds allied health services in community aged care (e.g. Proposition A2 above).

A major strength of this model is that it allows for a broader range of service provision beyond one-on-one treatment. As highlighted previously, APDs play a vital role in **individual clinical care** as well as in the **management of food and nutrition systems** and **staff training.** In this model, APDs are able to provide beneficial services beyond treatment for individual care, such as building the expertise of aged care staff (both in residential and home care) through training, advice and improvement initiatives. DAA fully supports this model given the multi-role approach that it takes, which will achieve better health outcomes and cost savings across the whole system.

Providing funding to allow aged care providers to deliver a full range of allied health services to residents supports a continuum of best-practice care in residential aged care. As part of this model, DAA sees it vital to:

1. Develop and implement a 'Nutrition Care Policy' in all residential aged care homes that includes an onsite Accredited Practising Dietitian (as a consultant or employee) who is supported by a multidisciplinary governance structure encompassing:
    - auditing of food and nutrition systems
    - malnutrition screening
    - nutrition assessment
    - nutrition care planning
    - menu planning
    - meal reviews
    - mealtime environment standards
    - assistance with eating and drinking
    - staff nutrition education and ongoing training
2. Ensure the framework for 'Malnutrition screening' (as part of the 'Nutrition Care Policy' for residential aged care, outlined above) incorporates a validated screening tool, with monthly follow-up embedded in the assessment process. The

framework for malnutrition screening must include initial and ongoing training of all care staff and support workers working in residential aged care in use of the screening tool, prompt referral of all identified as being malnourished or 'at risk' of malnutrition to an Accredited Practising Dietitian and minimum standards for the documentation of screening results and follow up. Consumers who are identified as malnourished will require the services of an APD at least 15-20 times per year.

3. Establish a multidisciplinary team within residential aged care homes to plan, implement and monitor food and nutrition services which includes an Accredited Practising Dietitian, food service staff, nursing staff, care workers, family/carers and volunteers.
4. Ensure that the funding model to replace the Aged Care Funding Instrument (ACFI) includes consideration of the cost of fundamental components of care, including:
    - food ingredients
    - nutrition supplements (e.g. high energy high protein commercial supplements)
    - ongoing access to Accredited Practising Dietitians

Proposition A4: fund multi-disciplinary allied health organisations to deliver a comprehensive range of allied health services to Australians accessing aged care services:

- ***By 1 January 2022, the Australian Government should fund multi-disciplinary allied health organisations to deliver a comprehensive range of allied health services to people accessing aged care***

DAA does not support proposition A4 given that this model does not necessarily improve the quality of care provided. At present there are a number of very large multi-disciplinary groups currently providing a basic service (e.g. ad hoc one-on-one APD consultations only, without vital services being offered beyond that, such as the assessment and management of food and nutrition systems, and staff nutrition training). The current focus of multi-disciplinary allied health organisations on ad hoc consultations does not support a continuum of best-practice allied health care for elderly Australians. As highlighted earlier, any aged care model needs to consider not only the clinical care components, but also the systems management and staff training requirements.

Aged care requires a specialist knowledge base in each discipline. So while multi-disciplinary allied health organisations should have experienced aged care allied health specialists on staff, it has been observed by DAA members that this is not always the case. In some situations, less experienced (new graduate) allied health staff are largely employed by multi-disciplinary allied health organisations in the quest to keep staffing

costs down. For the proposed model to work, very stringent accountability processes would be required, including the recruitment of experienced aged care allied health practitioners, with discipline specific mentoring for less experienced staff.

Hospital-led organisations, such as specialist geriatric services, whilst having a good knowledge of medical nutrition therapy, will not have any understanding of the food system and processes that are in place in any given residential aged care home. Therefore, DAA does not consider it a feasible option to fund hospital-led organisations to deliver a comprehensive range of allied health services to Australians accessing aged care services.

Alternate draft proposition – a new primary care model:

- ***Alternate draft proposition: the Australian Government implement a new primary care model for aged care recipients by 2022***

This model of care only focusses on primary health, which is only part of the picture for aged care. Details are vague on referrals to allied health services as part of the 'Aged Care Plan', such as the number of permitted consultations per annum. If an 'Aged Care Plan' determined the number of allied health visits, APDs would need 15-20 consults for a malnutrition diagnosis and 10-15 per annum for other diagnosis (e.g. chronic disease, food allergy/intolerance). There also needs to be funding available for the additional services that APDs provide, such as menu and meal audits, foodservice management, staff nutrition training etc.

DAA's preferred models of care from the list of propositions put forward by the Royal Commission include:

- **Proposition A2** (fund general practices which have received an aged care accreditation to provide allied health services to their patients);

  In tandem with…

- **Proposition A3** (fund residential aged care providers to deliver a comprehensive range of allied health services to residents)

References:

1. How Australian Residential Aged Care Staffing Levels Compare with International and National Benchmarks. Prepared by the University of Wollongong Centre for Health Service Development on behalf of the Royal Commission into Aged Care Quality and Safety. Research Paper 1, October 2019.
2. Emily Haesler (Ed.). National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Cambridge Media: Perth, Australia; 2014. Available from: https://www.npuap.org/wp-content/uploads/2014/08/Updated-10-16-14-Quick-Reference-Guide-DIGITAL-NPUAP-EPUAP-PPPIA-16Oct2014.pdf
3. Rist G, Miles G, Karimi L. The presence of malnutrition in community-living older adults receiving home nursing services. Nutr Diet 2012; 69:46-50.

Appendix: Studies of malnutrition in older Australians

Older Australians in the community and in residential aged care represent a heterogeneous population i.e. some are well nourished, some are overweight or obese, some are malnourished. Research shows that up to 50% are either at risk of malnutrition or are malnourished. Malnutrition is defined as two or more of the following characteristics

> *insufficient energy intake, weight loss, loss of muscle mass, loss of subcutaneous fat, localized or generalized fluid accumulation or diminished functional status*[1].

There are many contributors to the development of malnutrition. People with malnutrition are at higher risk of falls, infection and pressure wounds and they experience greater mortality than people who are well nourished. They also experience longer recovery from illness or injury and are less able to carry out activities of daily living.

There are a variety of tools available to screen and assess malnutrition in different care settings. These have been reviewed and summarised in 'Nutrition Education Materials Online' (NEMO) on the Queensland Health website.

While there is no single marker for malnutrition, unplanned weight loss is a key indicator of malnutrition risk. It is possible to be overweight or obese and also malnourished, as any weight loss at a later age can significantly impact lean body mass and therefore immune capacity, wound healing ability and more. Studies show also that there is an increased risk for older people with a Body Mass Index (BMI) <23.0 kgm^2. Monitoring of body weight is essential in both residential and community aged care settings.

The involvement of Accredited Practising Dietitians is vital where unplanned weight loss is identified as they are uniquely qualified to lead integrated strategies for the prevention and management of malnutrition. Better outcomes in treating malnutrition and hydration are achieved when organisations implement proactive policies and when collaboration occurs with older people, carers, nursing, medical practitioners, allied health professionals, food service managers and staff, aged care workers and service managers.

1. White JV, Guenter P, Jensen G, Malone A, Schofield M. Consensus statement: Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition: characteristics recommended for the identification and documentation of adult malnutrition (undernutrition). JPEN 2012; **36**: 275-83

Summary table showing prevalence of malnutrition in Australian studies

The table below is a summary of Australian studies in malnutrition. While the focus in this document is residential care and community settings, the prevalence of malnutrition in Australian hospitals is also of concern. Most hospital programs aim to screen and assess patients soon after admission, which reflects nutritional status prior to admission to hospital. This is not to say however that a great deal more needs to be done to address malnutrition in hospital, whether it is pre-existing or not.

Author	Year of publication	Age of subjects	Number subjects	Malnutrition prevalence	Assessment Tool	Practice setting	State/Territory
Hamirudin et al	2016	>75 yrs	72	1.4% malnourished 27.8% at risk	MNA-SF	General Practice	NSW
Hamirudin et al	2016	Mean: 85±5.8 yrs	79	61.8% at risk or malnourished	MNA	DVA	NSW
Walton et al	2015	Mean: 81.9 (±9.4) yrs	42	5% malnourished 38% at risk	MNA	MoW customers	NSW
Winter et al 2013	2013	>75 yrs Mean age: 81.3 ± 4.3 yrs	225	1 malnourished person 16% At Risk	MNA-SF	General Practice	VIC
Ulltang	2013	Mean age: 62 yrs	153	17% malnourished	SGA	Hospital – MAPU	QLD
Charlton et al	2013		774	34% malnourished 55% at risk	MNA	Older Rehabilitation Inpatients	NSW
Manning et al	2012	Mean: 83.2±8.9 yrs	23	35% malnourished 52% at risk	MNA	Hospital	NSW

Charlton et al	2012	Mean: 80.6±27.7 yrs	2076	51.5% malnourished or at risk	MNA	Older Rehabilitation Inpatients	NSW
Kellett	2013		57	26% moderately malnourished 7% severely malnourished	SGA	RACF	ACT
Kellett	2013		101	20% moderately malnourished 2% severely malnourished	SGA	RACF	ACT
Kellett	2012		189	47% moderately malnourished 6% severely malnourished	PG- SGA	hospital	ACT
Gout	2012	59.5 +/- 19.9 yrs	275	16% % moderately malnourished 6.5% severely malnourished	SGA	Hospital	VIC
Ackerie	2012		352	19.5% moderately malnourished – Public 18.5% moderately malnourished - Private 5% severely malnourished – Public 6% severely malnourished - Private	SGA	Hospital – public and private	QLD
Sheard	2012	Mean 70 (35 -92)	97	16% moderately malnourished 0% severely malnourished	PG-SGA		
Agarwal	2010	64 +/- 18 yrs	3122	24% moderately malnourished 6% severely malnourished	SGA	Hospital	QLD
Rist	2009	82 (65–100) yrs	235	8.1% malnourished 34.5% at risk of malnutrition	MNA	Community	VIC metro
Vivanti	2009	Median 74 yrs (65–82)	126	14.3% moderately malnourished 1% severely malnourished	SGA	Hospital – Emergency department	QLD
Gaskill	2008		350	43.1% moderately malnourished 6.4% severely malnourished	SGA	RACF	QLD
Adams et al	2008	Mean: 81.9 yrs	100	30% malnourished 61% at risk	MNA	Hospital	
Leggo	2008	76.5 +/- 7.2 yrs	1145	5 – 11% malnourished	PG - SGA	HACC eligible clients	QLD
Brownie et al	2007	65-98 yrs	1263	36% high risk 23% moderate risk	ANSI	Community setting	

Thomas et al	2007	Mean: 79.9 yrs	64	53% moderately malnourished 9.4% severely malnourished	PG_SGA	Hospital	
Walton et al	2007	Mean: 79.2±11.9	30	37% malnourished 40% at risk	MNA	Rehabilitation Hospitals	NSW
Banks	2007	66.5/ 65.0 yrs 78.9 78.7 yrs	774 1434 hospital 381 458 RACF	Hospital 27.8% moderately malnourished, 7.0% severely malnourished (2002), 26.1%% moderately malnourished, 5.3% severely malnourished (2003) RACF 41.6% mod malnourished, 8.4% severely malnourished (2002), 35.0% moderately malnourished, 14.2% severely malnourished (2003) malnourished	SGA	Hospital RACF	QLD – metro, regional and remote
Collins et al	2005	Mean: 80.1 ±8.1	50	34% moderately malnourished 8% severely malnourished (at baseline)	SGA	Community	NSW
Lazarus et al	2005	Mean: 66.8 yrs	324	42.3% malnourished	SGA	Acute Hospital	NSW
Martineau et al	2005	Mean: 72 yrs	73	16.4% moderately malnourished 2.7% severely malnourished	PG-SGA	Acute Stroke Unit	
Neumann et al	2005	Mean: 81 yrs	133	6% malnourished 47% at risk	MNA	Rehabilitation Hospital	
Visvanathan et al	2004	Mean: 76.5-79.8 yrs	65	35.4-43.1%	MNA	Rehabilitation Hospital	SA
Visvanathan	2003	67 – 99 yrs	250 baseline	Baseline 38.4% not well nourished 4.8% malnourished	MNA	Domiciliary care clients	SA metro

Patterson et al	2002	70-75 yrs	12,939	30% high risk 23% moderate risk	ANSI	Community setting	
Middleton et al	2001	Median: 66 yrs	819	36% malnourished	SGA	Acute Hospital	NSW
Beck et al	2001	Mean not available	5749	7-14% malnourished in acute setting 49% malnourished in rehabilitation setting	MNA	Acute and Rehabilitation Hospitals	NSW
Burge & Gazibarich	1999	>65 yrs Mean: 75.2 ±5.8 yrs	92	-High risk: 27% (score of 6 or more) -Moderate risk: 30% (score of 4-5) -Low risk: 43% (score of 0-3) -Most common nutrition risk factors: polypharmacy (47%), eating alone most of the time (45%) and dietary modification due to illness (35%).	Australian Nutrition Screening Initiative (ANSI)	Community living (Senior citizen's centres)	NSW Regional
Cobiac & Syrette	1996	>70 yrs	1098	30% high risk 20.6% moderate risk	ANSI	Community setting	

References for summary table

1. Ackerie A, Carroll E, McCray S, Hill J, Leveritt M. Malnutrition does not discriminate. Nutr Diet 2012; 69: (Suppl. 1): 146
2. Adams NE, Bowie AJ, Simmance N, Murray M & Crowe TC. Recognition by medical and nursing professionals of malnutrition and risk of malnutrition in elderly hospitalised patients. Nutrition & Dietetics 2008; 65:144-150.
3. Agarwal E, Ferguson M, Banks M, Batterham M, Bauer J, Capra S, Isenring E. Nutrition care practices in hospital wards: Results from the Nutrition Care Day Survey 2010. Clin Nutr 2012; 31: 995 – 1001
4. Banks M, Ash S, Bauer J, Gaskill D. Prevalence of malnutrition in adults in Queensland public hospitals and residential aged care facilities. Nutr Diet 2007; 64: 172-178
5. Beck E, Patch C, Milosavljevic M, Mason S, White C, Carrie M & Lambert K (2001a). Implementation of malnutrition screening and assessment by dietitians: malnutrition exists in acute and rehabilitation settings. Australian Journal of Nutrition and Dietetics;58(2):92-97.
6. BROWNIE, S., MYERS, S. P. & STEVENS, J. 2007. The value of the Australian nutrition screening initiative for older Australians - Results from a national survey. Journal of Nutrition, Health and Aging, 11, 20-25.
7. BURGE, K. & GAZIBARICH, B. 1999. Nutritional risk among a sample of community-living elderly attending senior citizens' centres. Australian Journal of Nutrition & Dietetics, 56, 137-143.
8. Cobiac, L. & Syrette, J. A. 1995. What is the Nutritional Status of Older Australians? Proceedings of the Nutrition Society of Australia, 19, 139.
9. Charlton, K. E., Batterham, M. J., Bowden, S., Ghosh, A., Caldwell, K., Barone, L., Mason, M., Potter, J., Meyer, B. & Milosavljevic, M. 2013, 'A high prevalence of malnutrition in acute geriatric patients predicts adverse clinical outcomes and mortality within 12 months', e - SPEN Journal, vol. 8, no. 3, pp. e120-e125.
10. Charlton K, Nichols C, Bowden S, Milosavljevic M, Lambert K, Barone L, Mason M, 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, 66, 1224-1228.
11. Collins CE, Kershaw J, Brockington S. Effect of nutritional supplements on wound healing in home-nursed elderly: A randomized trial. Nutrition 2005; 21: 147 – 155.
12. Gaskill D, Black LJ, Isenring EA, Hassall S, Sanders F. Bauer JD. Malnutrition prevalence and nutrition issues in residential aged care facilities. Australasia J Ageing 2008; 27: 189 – 94
13. Gout BS, Barker LA, Crowe TC. Malnutrition identification, diagnosis and dietetic referrals: Are we doing a good enough job? Nutr Diet 2009; 66: 206-211
14. Hamirudin A, Walton K, Charlton K, Carrie A, Tapsell L, Milosavljevic M, Pang G & Potter J (2016). Feasibility of Home-Based Dietetic Intervention to Improve the Nutritional Status of Older Adults Post Hospital Discharge. Nutrition & Dietetics; DOI: 10.1111/1747-0080.12305
15. Hamirudin A, Charlton K & Walton K (2016). Outcomes Related To Nutrition Screening In Community Living Older Adults: A Systematic Literature Review. Archives of Gerontology and Geriatrics; 62:9-25.

16. Kellett J, Itsiopoulos C, Kyle G, Luff N. Prevalence of malnutrition amongst adult inpatients at a tertiary teaching hospital in the ACT region. Nutr Diet 2013; 70 (Suppl. 1): 26 - 47
17. Kellett J, Kyle G, Itsiopoulos C, Bacon R, Chapple L. A snapshot of malnutrition prevalence in five residential aged care facilities in the ACT region. Nutr Diet 2013; 70 (Suppl. 1): 4 - 25
18. Kellett J, Bacon R, Simpson A, Richards C. Malnutrition prevalence in aged care residences. Nutr Diet 2012; 69 (Suppl. 1): 72 - 164
19. lazarus, C. & Hamlyn, J. 2005. Prevalence and documentation of malnutrition in hospitals: A case study in a large private hospital setting. Nutrition & Dietetics, 62, 41-47.
20. Leggo M, Banks M, Isenring E, Stewart L, Tweeddale M. A quality improvement nutrition screening and intervention program available to Home and Community Care eligible clients. Nutr Diet 2008; 65: 162 -167
21. Manning F et al. Additional feeding assistance improves the energy and protein intakes of hospitalised elderly patients. A health services evaluation. Appetite 2012; 59: 471-477
22. Martineau J, Bauer JD, Isenring E & Cohen S (2005). Malnutrition determined by the patient-generated subjective global assessment is associated with poor outcomes in acute stroke patients. Clinical Nutrition;24(6):1073-1077.
23. Middleton MH, Nazarenko G, Nivison-Smith I, Smerdely P (2001). Prevalence of malnutrition and 12-month incidence of mortality in two Sydney teaching hospitals. Internal Medicine Journal; 31:455-461.
24. Neumann SA, Miller MD, Daniels L & Crotty M (2005). Nutritional status and clinical outcomes of older patients in rehabilitation. Journal of Human Nutrition and Dietetics; 18:129-136.
25. Patterson, A., Young, A., Powers, J., Brown, W. & Byles, J. 2002. Relationships between nutrition screening checklists and the health and well-being of older Australian women. Public Health Nutrition, 5, 65.
26. Rist G, Miles G, Karimi L. The presence of malnutrition in community-living older adults receiving home nursing services. Nutr Diet 2012; 69: 46 - 50
27. Sheard J, Ash S, Silburn P, Kerr G. Prevalence of malnutrition in community-dwelling adults with Parkinson's Disease. Nutr Diet 2012; 69 (Supple 1): 72 - 164
28. Thomas JM, Isenring E & Kellett E (2007). Nutritional status and length of stay in patients admitted to an Acute Assessment Unit. Journal of Human Nutrition and Dietetics; 20:320-328.
29. Ulltang M, Vivanti A, Murray E. Malnutrition prevalence in a medical assessment and planning unit and its association with hospital readmission. Aust Health Review 2013; 636 -641
30. Visvanathan R, Penhall R & Chapman I (2004). Nutritional screening of older people in a sub-acute care facility in Australia and its relation to discharge outcomes. Age and Ageing;33(3):26-265.
31. Visvanathan R, Macintosh C, Callary M, Penhall R, Horowitz M, Chapman I. The nutritional status of 250 older Australian recipients of domicilary care services and its association with outcomes at 12 months. J Am Geriatr Soc 2003; 51: 1007 – 11

32. Vivanti A, McDonald CK, Palmer MA, Sinnott M. Malnutrition associated with increased risk of frail mechanical falls among older people presenting to an emergency department. Emergency Medicine Australasia 2009: 21: 386 – 394
33. Walton KL, Williams P, Tapsell LC & Batterham M (2007). Rehabilitation inpatients are not meeting their energy and protein needs. e-SPEN the European e-Journal of Clinical Nutrition and Metabolism; 2 (6): e120 - e126.
34. Walton K, Charlton KE, Manning F, McMahon A, Galea S & Evans K (2015). The nutritional status and dietary intakes of Meals on Wheels (MOW) clients. Appetite; 95: 528-532.
35. Winter, J., Flanagan, D., McNaughton, S. A. & Nowson, C. 2013. Nutrition screening of older people in a community general practice, using the MNA-SF. Journal of Nutrition, Health and Aging, 17, 322-325.

Additional references

1. Barker LA, Gout BS, Crowe T. Hospital malnutrition: Prevalence, identification and impact on patients and the healthcare system. Int J Environ Res Public Health 2011; 8: 514 - 527
2. Charlton K. Nutrition screening: Time to address the skeletons in the bedroom closet as well as those in hospitals. Nutr Diet 2010; 67:209 – 212
3. De van der Schueren M, Elia M, Gramlich L, Johnson MP, Lim SL, Philipson T, Jaferi A, Prado CM. clinical and economic outcomes of nutrition interventions across the continuum of care. Ann N Y Ad Sc 2014; 1321: 20 - 40
4. Demeny D, Jukic K, Dawson B, O'Leary F. Current practices of dietitians in the assessment and management of malnutrition in elderly patients. Nutr Diet 2015; 72: 254 – 260.
5. Ferguson M, Banks M, Bauer J, Isenring E, Vivanti A, Capra S. Nutrition screening practices in Australian healthcare facilities: A decade later. Nutr Diet 2010; 67: 213 – 218
6. Isenring EA, Banks M, Ferguson M, Bauer JD. Beyond malnutrition screening: Appropriate methods to guide nutrition care for aged care residents. J Acad Nutr Diet 2012; 112: 376 – 381.
7. Kendig H, Browning C, Pedlow R, Wells Y and Thomas S. Health, social and lifestyle factors in entry to residential aged care: an Australian longitudinal analysis. Age and Ageing 2010; 39: 342–349
8. May M. Importance of nutrition intervention in geriatric patients waiting for residential care. Nutrition & Dietetics 2007; 64 (Supp. 1): S25
9. Miller M, Crotty M, Whitehead C, Daniels L, Finucane P. Nutritional assessment and intervention in patients admitted with a femoral neck fracture: a chronical of missed opportunities. Nutr Diet 2001; 58: 86 - 91
10. Orpin P, Boyer K, King A. Study report: Assessment of nutrition risk in Home and Community Care Clients. May 2014.

11. Phillips, MB, Foley AL, Barnard R, Isenring EA, Miller MD. Nutritional screening in community-dwelling older adults: a systematic literature review. Asia Pac J Clin Nutr 2010; 19 : 440 – 449.
12. Spence A, McRorie T, Pearce L, Crowe T. Nutrition risk of elderly patients with dementia attending a memory loss clinic. Nutr Diet 2007; 64 (Suppl. 1): S40
13. Walton K. Improving opportunities for food service and dietetics practice in hospitals and residential aged care facilities. Nutr Diet 2012; 69: 222 - 225
14. White JV et al. Consensus statement of the Academy of Nutrition and Dietetics/American Society for Parenteral and Enteral Nutrition: Characteristics Recommended for the identification and documentation of adult malnutrition (undernutrition). J Acad Nutr Diet 2012; 112: 730 - 738
15. Winter J, MacInnis RJ, Wattanapenpaiboon, Nowson CA. BMI and all-cause mortality in older adults: a meta-analysis. Am J Clin Nutr 2014; doi:10.3945/ajcn.113.068122