Malnutrition in older Australians

While older Australians in Residential Aged Care (RAC) and in the community represent a heterogeneous population (i.e. some are well nourished, some are overweight or obese, some are malnourished), research shows that approximately 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].

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 and 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 BMI <23.0 kgm2.

In both residential and community aged care, monitoring of body weight is essential and the services of an Accredited Practising Dietitian (APD) is vital where unplanned weight loss is identified. There are many contributors to the development of malnutrition and the APD may engage with a number of other health professionals and carers to help identify and treat malnutrition. This might include older people themselves, carers, nursing, medical or other allied health professionals, food service managers, aged care staff and management.

APDs play a key role in preventing and treating malnutrition among older Australians in both community and residential aged care settings. Trends in weight changes for older people in care are a flag to engage the services of an APD to assess nutritional and hydration status, manage malnutrition or hydration issues and implement strategies to prevent issues from arising once nutrition and hydration issues have been resolved.

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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: 81.3 ± 4.3 yrs	225	1 malnourished person 16% At Risk	MNA-SF	General Practice	VIC
Ulltang	2013	Mean age 62	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

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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	

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