



1 in 10 older people*



are suffering from or are at risk of
malnutrition



MALNUTRITION
TASK FORCE

www.smallappetite.org.uk

*over 65 in England and Wales (2009)

Community Nutritional Strategy June 2015

Summary

- Carmarthenshire does not have a Community Nutritional Strategy that identifies and promotes the importance of good nutrition and hydration in ensuring the health and well-being of its population.
- This strategy is a response to recommendations made by Welsh Government in the Health Promotion Action Plan for Older People¹, as well as guidelines from the World Health Organisation which clearly states that ‘many diseases suffered by older people are the result of dietary factors’².
- This document outlines an integrated approach to supporting the nutritional needs of vulnerable adults in the community.
- We are currently awaiting official approval from Hywel Dda University Health Board to adopt the strategy as a fully integrated document; initial discussions have been extremely positive.
- The target group identified are vulnerable adults supported by integrated services. The needs of older adults are particularly emphasized however, as research shows that they are a particularly vulnerable group, with around 1 in 10 older people being malnourished or at risk of malnutrition. This equates to around 1 million in the UK and of these 93% are living in the community.
- The aim of the strategy and associated action plan is to ensure that optimum conditions are created to support good nutrition in the community as well as processes to embed malnutrition pathways should someone become at risk of malnutrition.
- The strategy identifies the barriers to achieving good nutrition in the community and recommends the implementation of an action plan that focuses on 5 priority areas.
- The Community Nutritional Strategy will be regularly reviewed and a measurement of effectiveness adopted, this will also include any associated cost saving benefits.

¹ <http://gov.wales/docs/dhss/publications/130521olderpeoplestrategyen.pdf>

² <http://www.who.int/nutrition/topics/ageing/en/index1.html>

Introduction

“Good nutrition is not just about food and meals, but about people, warmth and social inclusion.”³

Good nutrition plays a vital part in the wellbeing and health of older or disabled adults⁴ and can also contribute in delaying and reducing the risk of developing disease.

Due to the significant risk for older adults the quality of the diet is extremely important to ensure that both macronutrient (carbohydrate, fat, protein and energy) and micronutrient (vitamin and mineral) requirements are met, this can be difficult, particularly for the frail older person.

As nutritional care should incorporate information about both dietary intake and promoting independence, this strategy will aim to focus on an individual's ability to perform activities of daily living, preventing falls and independent living initiatives. The primary outcome of initiatives and interventions will be to make improvements in both a person's ability to perform activities of daily living as well as their nutritional status.

The strategy will review the barriers to older people meeting their nutritional needs and outline a plan to address the issues. These will include encouraging social eating initiatives, introducing a malnutrition screening tool in the community and a training programme. It also highlights the lack of robust evidence to support effective interventions which may improve the nutritional intake of older adults in the community but will outline specific interventions based on the evidence which is available.

Aims

The aims of this strategy are to:

- Identify the barriers to meeting the nutritional requirements of older people living in the community.
- Identify effective interventions, including interventions to improve food access and nutritional intake for older people to improve health outcomes of this population group; in particular those people who are at risk of nutritional deficiencies, which includes all those who are malnourished, at risk of malnutrition, physically or cognitively frail

³ The International Longevity Centre –UK (ILC UK) report Personalisation, Nutrition and Community Meals, March 2010

⁴ This strategy will focus predominantly on the needs of older adults however it also supports intervention with other client groups within the department which includes adults with a physical disability, long term health condition and sensory impairment, if they are in need of nutritional support.

- To outline the delivery of a rehabilitative and enabling approach to provision in Carmarthenshire in line with person-centred outcome focused model of care planning supporting people to maintain their independence in the community and reduce their dependence on social services

Principles of the Community Nutrition Strategy

- Good nutrition for older people is an integral part of the prevention and early intervention work stream of Older People's Services.
- Recognition of the social and economic value of supporting older people to remain independent in their own homes with a good nutritional status.
- Raise awareness of the need for good nutrition amongst older people and those working with older people to prevent decline in their health and well-being.
- Provide a variety of opportunities for older people to access a nutritionally balanced diet, both in their own homes and in social settings, and to promote the importance of meal times in reducing social isolation and loneliness.
- Individual needs for a healthy, nutritious and appetising diet should be met by services that are tailored to personal preferences in Carmarthenshire.

Why do we need a targeted approach to community nutrition?

- Ageing is associated with loss of muscle stores and increases in fat stores. A 10% reduction in muscle mass has been shown to decrease functional ability, increase risk of infection and is associated with increased levels of mortality. Additionally, increasing levels of chronic illness and disease, along with a deterioration in taste, smell and teeth can lead to and exacerbate poor nutritional status
- Around 1 in 10 older people are malnourished or at risk of malnutrition. This equates to around 1 million in the UK and of these 93% are living in the community.
- NICE has identified combating malnutrition as the sixth largest potential source of health savings which could save budgets £13 million a year after costs of training and screening which in real terms would save £71,800 per 100,000 people.
- Poor nutrient intake can impact on an older person's functional and cognitive ability and thus their ability to participate in activities of daily living as well as add time and financial costs to illness or operation recovery period amongst older people

- One in three people aged over 65, and half of those aged over 80, fall at least once a year⁵. Falls are the commonest cause of death from injury in the over 65s, and many falls result in fractures and/or head injuries. Falls cost the NHS more than £2 billion per year and also have a knock-on effect on productivity costs in terms of carer time and absence from work⁶. Evidence suggests a strong link between malnutrition and poor nutrition with falls in older adults⁷
- There are some specific recommendations regarding the diets of for older people. Energy requirements are generally lower in older people while vitamin and mineral requirements remain the same. The nutrient density of the diet in older people is therefore of prime importance to ensure that deficiencies do not develop and there seems to be a lack of awareness of this when care planning.
- Under-nutrition could be prevented or treated with the implementation of appropriate nutritional screening and management, but the use of nutrition screening tools in the community in Wales is extremely limited. Whilst nutrition screening tools may not detect all nutritional deficiencies in older people and the cost effectiveness and impact on outcome of nutritional screening in the community have not been quantified, this tool could provide valuable information for the supporting the frailty agenda as well as acting as a pilot for its effectiveness.

Barriers

Recent research has identified a number of factors which affect the ability of older people, living in the community, to meet their nutritional requirements. These barriers are outlined in the table below and other factors explored in a wider context.

⁵ Todd and Skelton 2004

⁶ Snooks et al 2011

⁷ Vivanti et al, 2010

Summary of factors influencing dietary intake⁸

Issue	Description	Evidence
Poverty and economic uncertainty	- Poverty can affect food choice and dietary diversity. - Foods that are integral to a healthy diet (e.g. fruit, vegetables and fish) may be perceived as a luxury. - Healthier alternatives to everyday foods can carry a price premium (e.g. wholemeal bread, spreads low in saturates). - Food preparation facilities and skills may be limited in poorer households.	16% of pensioners continue to live in poverty in Wales - The Low Income Diet and Nutrition Survey (LIDNS)⁹ () states that in poorer households: ➤ The average consumption of fruit and vegetables was half of the recommended five portions per day. ➤ Saturated fat intake was above the (maximum) UK recommendations. ➤ Intakes of non-starch polysaccharides (fibre) fell below the (minimum) UK recommendations. ➤ There was evidence of inadequate nutritional status for iron, folate and vitamin D. - Further analysis of the LIDNS data found that older men and in particular those who live alone may be at even more risk of an inadequate diet (Holmes et al, 2008).
Mobility	Immobility may lead to difficulties with shopping, preparing, cooking and eating foods	
Mental Health and Wellbeing	- Depression can lead to loss of interest in food - Dementia can impact on appetite and food intake	Depression occurs in one in seven people over the age of 65¹⁰. There are a number of symptoms associated with depression and these may be physical, psychological and/or social. These symptoms include apathy, anorexia, inability to make decisions and refusal of food and fluid¹¹. As a result depression may significantly impact on activities of daily living and thus dietary intake which can then

⁸ Denny, 2008; Schenker, 2003

⁹ Nelson et al, 2007

¹⁰ Vink et al, 2008

¹¹ NHS Choices, 2009

		result in deterioration of nutritional status. • Poor nutritional status and deficiency in a number of nutrients has been linked with depression in older people.¹² • Although clinically the types of dementia vary considerably many of the effects which impact on dietary intake and nutritional status are the same. Early stages of dementia impact on nutritional intake through difficulty in shopping and storing food, forgetting to eat and changes in food preferences. As dementia progresses food can be hoarded in the mouth but not swallowed, and mealtimes interrupted due to poor concentration and wandering. In very advanced stages problems may include food not being recognised, refusal to eat, inability to ask for food or drinks and an inability to swallow food and drinks safely due to a deterioration in the swallowing reflex.
Social / Psychological support	• Social isolation or emotional trauma can result in disinterest in food • Social interaction may encourage eating	The “Recipe for Life” project¹³ aimed to find better ways to support older people to eat well, found a number of social and psychological factors which had an impact on dietary intake which included: • Eating with others • Cooking for others • Having a good quality meal cooked by someone else • Eating food that looks appetising • Smelling food as it is being cooked • Getting out of the house • Being active • Having exposure to foods and food ideas • Having a varied and suitable diet • Being supported to be spontaneous with food

¹² Rogers, 2001

¹³ Jones et al., 2005

		• Support to address losses, low mood or depression
Health problems	• Illness and medications can result in reduced appetite and difficulties with shopping, preparing and eating food. • Problems with incontinence may stop individuals eating and drinking normally.	• Malabsorption conditions (i.e. gastritis & pernicious anaemia) reduce ability to absorb B12 from food. • Some medication can contribute to constipation.

Food Poverty

The Welsh Consumer Council¹⁴ has identified key characteristic associated with barriers to meeting nutritional needs in Wales:

Affordability: Low/limited incomes may restrict an older person's ability to afford healthy food;

Accessibility: The proximity, and ease of travelling to, supermarkets and smaller, independent retailers that offer a range of healthy foods;

Education/ Cooking Skills: Some older people, particularly older men, may lack the skills and/or equipment to prepare healthy meals.

Geographical factors

- There are diverse population densities across Carmarthenshire but the difference in dietary intake between people living in urban and rural areas is poorly defined. Those people living in rural areas have access to a smaller variety of foods, in particular fresh produce, have inconsistent food deliveries and the food which is available generally costs more¹⁵. Whether this translates into a poorer nutritional status is not known.
- Levin & Leyland (2005) reported greater health inequalities in remote rural areas than urban areas for both males and females, however how much this can be attributed to in diet is unknown, as there is a paucity of data regarding differences in food intakes between rural and urban areas.
- In the past 20 years there has been a decentralisation of supermarkets to sites out of town centres with large retail parks such as Trostre in Llanelli. This has resulted in many older people experiencing difficulty in accessing food retailers¹⁶. These stores generally require people to have access to a car and in low income groups this is not always available. Although there are still small

¹⁴ Food Poverty and Older People

¹⁵ Skerratt, 1999

¹⁶ Wilson et al., 2004

numbers of local convenience stores available they are generally more expensive and have a poorer variety of fresh produce compared to larger supermarkets.

- Current trends show that as people age, they make less use of private cars and increased use of public transport¹⁷. Access to reliable and convenient public transport is therefore essential to provide older people access to among other things goods, services, and amenities and this enables them the ability to maintain their independence. This is becoming an issue in Carmarthenshire as public transport is being 'streamlined'¹⁸ as a result of lack of funding.

Lack of appropriate provision

- Whilst Carmarthenshire provides supported meal services, there is evidence that the popularity of provision such as Meals on Wheels are declining, with 486 people accessing the service in 2012 compared to 328 in March 2015. It seems that the landscape of community meal provision to those in need has changed radically over the last 5-10 years and that simply a Meals-on-Wheels or food delivery service no longer fits with the needs of a growing number of clients in light of higher expectations. Meals on Wheels is a valued service however it does not provide the social support around eating or monitor consumption.
- An internet search for meal delivery services in Carmarthenshire provided numerous take-away menus with a housing care website dedicated to the needs of vulnerable people provided 4 alternatives however the closest location was in Exmoor in Devon.
- Wiltshire Farm Foods deliver frozen foods to residents of Carmarthenshire, some clients have a private arrangement with the provider and there are also some service users who receive frozen meals via a social work assessment. Frozen meals are delivered to the clients homes and the meals are heated in a microwave, whilst these meals may be re-heated by a carer the delivery service does not address the social and physiological barriers to good nutrition.
- The Recipe for Life project also found that services may often be poorly set up to address the social and psychological factors contributing to an older person's ability to eat well. If these factors are not considered they can provide significant barriers to older people's ability to eat well. In addition to this, the report highlighted a need for further work to be undertaken to explore how services and communities can address these factors more systematically. Prioritising the physical needs of older people over their social and psychological needs may lead to inappropriate targeting of resources with little positive benefit.¹⁹

¹⁷ Scottish Executive 2007

¹⁸ <http://www.carmarthenjournal.co.uk/Funding-cuts-force-buses-axe/story-20998002-detail/story.html>

¹⁹ Jones et al., 2005

- Research conducted by the Third Sector Brokers in Carmarthenshire identified support with shopping as an area of unmet need across the county.

Frailty

- A popular approach to the assessment of geriatric frailty²⁰ encompasses the assessment of five dimensions which are: unintentional weight loss, exhaustion, muscle weakness, slowness while walking, and low levels of activity.
- It is well documented that nutritional status deteriorates during a patient's hospital stay²¹ and as a result many patients are discharged from hospital in a poorer nutritional state than they entered. This results in a further group of undernourished individuals being discharged into the community, with the likelihood of entering the frailty cycle. It is possible that such a problem could be prevented or treated with the implementation of appropriate screening and management within the community.

Education

- Lack of skills and training regarding appropriate meal preparation and nutritional needs across the county for service users and carers.
- Lack of digital inclusion training for older adults.
- A significant proportion of the population aged 65+ are prepared to eat food which is past its use by date (FSA 2009b) increasing the likelihood of developing food poisoning. Part of the problem lies in the fact that only 25% of older people aged 65 -74 and 17% of people aged 75 years and over said that food hygiene was important to them when deciding what to buy to eat at home. This is of concern as the number of cases of Listeria poisoning (the number one food poisoning killer) has increased dramatically in the over 65 age group over recent years. Ensuring good food hygiene practice will contribute towards maintaining health and nutritional status in the over 65's
- The convenience of on-line shopping may not be available to older people and particularly those in low income households. As there is generally a delivery charge for this service, the cost of the food bill is increased and more fundamentally the shopper requires access to a computer. In the National Survey for Wales 2013 indicated that 75% of households have access to the internet with age is an influencing factor in Internet usage, with 95% of people aged under 45 years old use the Internet, compared with 22% of people aged 75 or over. Digital Inclusion training has not significantly changed this figure.

Identified priorities

²⁰ Linda Fried / Johns Hopkins Frailty Criteria

²¹ McWhirter & Pennington, 1994



1. Review

Review of effectiveness of all provision should be conducted continuously, however a formalized review of the strategy as a whole will be conducted on a bi-monthly basis through the governance group and Senior Management Team meetings of integrated service

- **Conduct a process and outcome evaluation of current services.**

Assess all criteria including delivery coverage, programme utilisation, food intake behaviour and nutrient content of community meals provided, assessed against the Caroline Walker Trust guidelines

2. Community

Interventions addressing whole communities and populations are likely to have the greatest impact in preventing malnutrition amongst older adults the elderly. In the wider environment, initiatives to reduce deprivation and improve housing and local amenities, for example by providing access and advice on benefits and services, also have an essential part to play to positively influence nutritional status, health and well-being of older people living in the community. This strategy will ensure that it engages and supports this wider agenda.

The community initiatives outlined have the potential to directly impact positively on older people's dietary intake and nutritional status and they may also reduce the social isolation that is associated with depression, poor mental and physical health, which in turn are associated with reduced food intake.

- **Social Eating**

To develop with partners, imaginative ways of expanding the range of opportunities for social eating for example pie and pint clubs, buddying with neighbours or lunch clubs.

- **Local Provision**

Deliver training, information and support to care management staff on the availability of meal services in the community and a practice exchange of ideas on how to support clients with their nutritional requirements in a community based way.

- **Transport**

Community transport schemes should be strengthened and encouraged around the provision and promotion of affordable and accessible transport to shops, to enable older people to choose and purchase their own food. Links with DANCER in NPT, Health initiatives as well as community regeneration to be strengthened.

- **Assisted shopping schemes:**

Work with supermarkets with the aim of introducing 'older people shopping days', with 'personal shoppers' on-hand. Approach RLP with idea of Coleg Sir Gar and Trinity St Davids setting-up 'shopping partner' schemes in which student volunteers help older people to do their food shopping.

- **Volunteer-led Services**

Services to be developed in conjunction with volunteering networks / CAVS to address the social aspects of good nutrition and to provide more social interaction with older people both in their homes and in the community to create the warm and friendly atmosphere conducive to eating well. Time banking schemes should be promoted across provision to ensure that this is used effectively.

- **Community food initiatives:**

Community food initiatives must continue but have to be resourced in a sustainable way to meet the needs of an ageing population

- **Intergenerational Activities**

Explore agreements with third sector providers to develop lunch clubs at local schools, College Sir Gar and Trinity St David's.

- **Community Kitchens**

The main aim of the community kitchen schemes are to address barriers to older people eating the foods that they used to enjoy but are now unable to. In addition, it facilitates older and younger people working together in the community to share skills and knowledge about food and eating.

3. Integration

- **Partnerships**

Key partnerships will need to heart the heart of this strategy across all stakeholder groups which will include Public Health Wales, Community Regeneration Schemes and Third Sector Groups.

There is strong evidence that physical activity has a positive effect in functional status of older people. It is possible that a care package, combining diet and physical activity may be more effective than diet alone in improving functional capacity of older people living in the community. A partnership approach is needed to support this objective.

Among the elderly population, poor oral health is an important contributing factor in the development of unintentional weight loss associated with protein-energy malnutrition. Although on their own oral health interventions are not likely to impact on nutritional status, in combination with dietetic and community interventions, they may produce significant effects on nutritional status.

- **Integrated Assessment**

Include a nutrition-focused section into the assessment with a recommendation that a malnutrition care pathway is developed.

- **Supporting MDTs**

To explore how, through closer joint working between Health and Social Care, signs of malnutrition and dehydration can be more easily identified in older people living at home and support

appropriate actions. This should be done by identifying as a project lead within the community setting that will convene a project group to take objectives forward.

- **MUST Nutritional Screening**

Recommendations include extending nutritional screening practices from the acute setting into the community setting, beginning with a pilot. In addition nutritional screening should consider not just nutritional status but also other factors such as barriers an individual has to meeting their nutritional requirements.

- **Training**

All community and social care professionals should receive appropriate training in the importance of nutritional care, how to screen for malnutrition, basic nutritional care measures and the indications for onward referral for nutritional assessment and support. E-learning modules for staff on the principles and practice of 'MUST' are also available.

4. Information, Advice and Assistance

- **iLocal**

Co-ordinate information on variety of options related to meeting nutritional needs on and upload to iLocal

- **Information**

In order to raise awareness of the value of eating well and practical solutions for implementing change, specifically designed information for older people will be produced, made available in a variety of formats to ensure it is readily accessible across the county, for use via statutory and voluntary partnership organisations.

- **Community Development Work**

Ensure that CDC are targeting information regarding nutritional support in their work plans and identify this as a key priority of their work stream.

- **Good Practice Booklet**

To support frontline social work staff to share good practice and to develop ways of working that meet the needs of frail older clients who live alone and have difficulty leaving home to eat well

5. Education and Training

- **Cookery**

Using the Age UK Fit as a model to develop a sustainable structure of cookery courses across the county. This will enable people to learn how to cook simple nutritious meals and provide an opportunity to make friends and become part of their local community.

Kitchen utensils and equipment have been specifically designed with older people in mind. Information and training about these will be promoted and delivered.

- **Food Hygiene**

Provide opportunity for personalized training in food hygiene to complement accessible fact sheets.

- **Professional Training**

A range of awareness raising sessions to be delivered to front line staff and key stakeholders with a training resource for home care workers on aspects of nutrition in later life to be developed. This intervention will address the importance of assessing older people's food related needs and include three elements:

- a training course on food and nutrition for home carers
- an accompanying leaf resource pack on nutrition in later life for home carers
- a leaflet giving information about nutrition in later life, intended for older people and their carers

- **Carers**

Provide training to carers and/or family that promotes nutritional awareness, appropriate meal preparation and targeted interventions based on the learning resources outlined above.

- **Digital Inclusion**

Promote digital inclusion training and awareness in partnership with specific schemes and third sector.

Recommendations

1. For Integrated Services in Carmarthenshire to implement a holistic community nutritional strategy which focuses on five priority areas:

- I. **Review** – a process of monitoring will be embedded across all provision and will begin with a wide scale outcome evaluation of current services.
- II. **Community** - interventions addressing whole communities are likely to have the greatest impact as well as have the potential to directly impact positively on reducing social isolation.
- III. **Integration** – evidence conducted by the Kings Fund suggests that joint is likely to achieve better results than those that rely on a single or limited set of strategies

IV. *Information, Advice and Assistance* - without this service people cannot be truly at the heart of decisions with services appropriate and accessible to all.

V. *Education* - Older adults and their caregivers need reliable health information and education, promote their health and follow nutritional advice

2. That the strategy is adopted as an integrated policy with clear pathways identified for generalised and specialist support.
3. For an identified manager within Integrated Services to take the lead on delivering the action plan and reporting on progress.
4. For Integrated Services to be represented at the HDUHB Nutrition Board to represent the needs of community provision.
5. For an Integrated Services to create a time limited working group to implement the action plan and ensure that good practice is embedded across all provision.
6. For the following to be achieved within the timescales:

Action	Deadline
Consult with HDUHB and gain decision about integrated approach across Health and Social Care	August 2015
Complete scoping exercise of current provision	September 2015
Run consultation sessions with stakeholders	October 2015
Convene Working Group with associated responsibilities for membership	November 2015

Complete review of all service users who discrete nutritional support such as Meals on Wheels.	December 2015
Complete review of current provision and effectiveness	December 2015
Complete Operational Delivery Plan	January 2016
Feedback on progress of strategy	Ongoing bi-monthly to SMT
Provide 6 monthly report to DMT	June 2016

Conclusion

In Carmarthenshire we currently have a great opportunity to change current practices to enhance the nutritional health of vulnerable adults by developing a more coordinated approach to nutrition and hydration in the community. Enhancing nutritional status should not be considered in isolation but alongside optimising people's ability to perform activities of daily living and as a social interaction. This will have a positive impact on the health and well-being of older people, as well as delay their need for more intensive health and social care intervention.

References

- Denny, A (2008) An overview of the role of diet during the ageing process. *British Journal of Community Nursing*. Vol.13
- Jones, C., Dewar, B. and Donaldson, C. (2005) Recipe for life: Helping older people to eat well. The Royal Bank of Scotland Centre For Older Person's Agenda. Queen Margaret University College, www.qmu.ac.uk/copa/research/documents/Recipe%20for%20LifeReport%20of%20Research.pdf
- Lehman, A.B. (1989) Review: under-nutrition in elderly people. *Age and Ageing*. 18:339–53. Levin, K. and Leyland, H. (2005) A comparison of health inequalities in urban and rural Scotland.
- McWhirter, J. and Pennington, C.R. (1994) Incidence and recognition of malnutrition in hospital. *British Medical Journal*.
- National Association of Care Catering (2005) A recommended standard for community meals.
- Nelson, M., Erens, B., Bates, B., Church, S. and Boshier, T. (2007) Low Income Diet and Nutrition Survey. London. The Stationery Office. NHS Choices: Your health your choice (2009) Available from URL: <http://www.nhs.uk/Conditions/Depression/Pages/Symptoms.aspx>
- Rogers, P.J. (2001) A healthy body, a healthy mind: long-term impact of diet on mood and cognitive function. *Proceedings of the Nutrition Society*.
- Scottish Executive (2007) All our futures: planning for a Scotland with an ageing population Edinburgh.
- Skerratt, S., (1999) Food availability and choice in rural Scotland: the impact of “place”. *British Food Journal*.
- Stanner, S., Thompson, R., Buttriss, J.L. eds. (2009) *Healthy Ageing. The role of nutrition and lifestyle*. Wiley-Blackwell for the British Nutrition Foundation.
- Vink, D., Aarsten, M.J. and Scroevers, R.A. (2008) Risk factors for anxiety and depression in the elderly: A review. *Journal of Affective Disorders*.
- Welsh Consumer Council (2006) Food poverty and older people. Cardiff. Welsh Consumer Council. Welsh Consumer Council (2008) Tackling malnutrition among older people in the community – summary report. Cardiff. Welsh Consumer Council.
- Wilson, L. (2009) Preventing Malnutrition in later life. The role of community food projects.
- The Caroline Walker Trust. Wilson, L.C., Alexander, A. and Lumbers, M.
- Angela Vivanti, A. Ward, N. Haines, T. (2010) Nutritional status and associations with falls, balance, mobility and functionality during hospital admission.