promoting good nutrition in older age

Professor Siân Robinson, University of Southampton, discusses the importance of encouraging good nutrition and indicators of malnutrition to look out for.

contributors:

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Head of Research
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Mathew Done
Owner and founder
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strategies to identify and manage under nutrition in older adults

Catherine Hankey and Lisa Hutchison, University of Glasgow, highlight ways to manage under nutrition in older adults; a nutritionally susceptible group.

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Promoting excellence in health and eldercare

Nutrition

Spring 2017

Issue Seventeen

Repromoting excellence in health and eldercare

Nutrition

Spring 2017

Issue Seventeen
Welcome to issue 17 of Innov-age, focusing on the topic of nutrition.

The elderly, an increasing sector of our population, are seen to be a nutritionally susceptible group. According to the British Nutrition Foundation (BNF), both malnutrition and obesity are prevalent in the older population. Malnutrition is more prevalent in older people living in institutions, whereas obesity is more prevalent in independent living adults (British Nutrition Foundation, 2016).

Leading this issue, Jane Alderdice discusses the importance of good nutritional status for older people. Sarah Russell, head of research and clinical innovation at Hospice UK goes on to debate the impact of research active hospices.

We also hear from University Hospital Southampton about the feasibility and acceptability of trained volunteers on mealtime care in hospitals. Sian Robinson talks about promoting good nutrition in older age, and Catherine Hankey and Lisa Hutchison discuss strategies to identify and manage under nutrition in older adults.

Mathew Done, founder of Slö Drinks informs us how to improve the nutritional intake of those with Dysphagia (problems with swallowing). We also learn of the outcomes of oral care observations carried out over the past 3 and half years in England involving over 400 patients.

Finally, our resident contributor to Cochrane Corner Tracey Howe, is joined by her colleague Alexandra Mavroeidí to discuss the nutritional considerations for healthy ageing.

Health and diet is always a hot topic, from new restricted diets, to ensuring we have our 5 (or 10!) a day. There’s a myriad of bewildering information out there. As we age and our needs change, it becomes even more important to understand our nutritional requirements. This issue helps demystify some of this information and highlights the importance of good nutrition to remain healthy.

Jackie Oldham
Honorary Director, Edward Centre for Healthcare Management Research
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We MUST ensure good nutritional status for older people

Jane Alderdice is the Professional Lead for Adult Dietetics at Central Manchester NHS Foundation Trust (CMFT). She has nearly 25 years clinical dietetic experience where she has been able to witness first-hand some of the issues faced by elderly patients in maintaining good nutritional status. Jane is a passionate advocate of the important interface among primary and secondary care professionals to ensure nutritional care is optimised regardless of the setting.

Unfortunately it is now widely accepted that people over the age of 65 years are at risk of malnutrition particularly if they have recently been admitted to hospital or are living in a care/nursing home. Social factors such as isolation, financial concerns, limited cooking skills, the increased likelihood of having a long-term medical condition, dementia and disability combined with the physical causes of malnutrition can often accentuate the problem.

Evidence suggests that malnutrition in elderly people can cause or result in a deterioration of acute and/or chronic health conditions. It is recognised that malnourished older people have 65% more GP visits, 82% more hospital admissions and 30% longer hospital stays (Public Health England, 2017). Being malnourished can increase the risk of frailty and is detrimental to health outcomes. If an older person is less able to feed themselves and becomes malnourished, they will be more susceptible to disease, and end up in a vicious cycle whereby their nutritional state will continue to deteriorate and impair recovery. Dr Mike Stroud, a previous Chair of the British Association for Parenteral and Enteral Nutrition (BAPEN) described this cycle and “Malnutrition Carousel” summarised in Figure 1 (BAPEN, 2016).

In November 2015, a new report published by the National Institute for Health Research Southampton Biomedical Research Centre (NIHR Southampton BRC) and BAPEN, estimated that the cost of malnutrition in England between 2011 & 2012 was £19.6 billion This figure represents almost a 50% increase in estimated costs compared with the £13 billion stated in a 2007 report (Elia, 2015). This upward trend is only set to increase with an ageing population and the rising cost of health and social care.

These costs relate to an increased overall dependency including the need to be admitted to nursing or care homes, increased GP visits resulting in polypharmacy and referrals to specialists in the acute setting. In the acute setting it is well established that developing malnutrition whilst in hospital can result in increased length of stay due to complications such as delayed wound healing, developing secondary infections, the need for nutritional interventions and for referral to other members of the multi professional team all of which contribute to the hidden cost of malnutrition.

On an individual level malnutrition in elderly patients affects most body systems and in extreme cases if it goes undetected and untreated it can cause death as outlined in Table 1.

Figure 1. The Malnutrition Carousel (BAPEN, 2016)
Early detection of malnutrition is therefore a priority.

Malnutrition Universal Screening Tool (MUST), launched by BAPEN in 2003 is now widely accepted and can be used both in the community and acute setting helping to facilitate continuity of care between the two settings. It is a simple five step tool that can be completed by qualified or non-qualified care staff. Local guidelines offer guidance on who can complete this tool. Training packages and supporting information can be found on the BAPEN website - http://www.bapen.org.uk/.

A final score is derived from calculating body mass index (BMI), percentage weight loss and acute disease effect. Depending on this score the overall risk of malnutrition can be assessed – Table 2.

MUST is simple to complete, reliable and provides valuable continuous information about the nutritional status of elderly patients irrespective of location. It also provides the health professional responsible for their care with a suitable action plan dependent on risk. MUST provides an invaluable interface about the nutritional history of the elderly patient between primary and acute care setting.

Primary care

In the community setting the GP, practice nurse, district nurse, nursing/care home staff and community dietitian are likely to be involved in the nutritional management of elderly patients. Geographical area is likely to influence what services are available. Other non-NHS staff and organisations e.g. voluntary services also play a vital role in ensuring good nutritional status. For example, luncheon clubs not only provide a hot nutritious meal but can also provide much needed social interaction. Cooking clubs can provide those individuals who have done little or no cooking essential skills to prepare nutritious meals. Healthy lifestyle courses that include exercise and healthy eating programmes can help individuals focus on nutrition and exercise in a fun and relaxed atmosphere. Meals on wheels or companies that provide individual meals en masse can prove useful in times of need.

It appears prudent therefore to provide education and skills to support front line community staff to identify the signs of malnutrition and provide first line intervention in elderly patients. Having the ability to refer onto specialist services e.g. community dietitians is essential however, if as a result of regular screening the nutrition status of the individual is not improving. Dietitians can assess nutritional intake to see if individuals are meeting their nutritional requirements and if not put appropriate nutritional care plans in place. Recommendations may include oral dietary supplements, alternative forms of feeding e.g. naso-gastric (NG) feeding or feeding via a percutaneous endoscopic gastrostomy (PEG). A referral to speech and language therapists (SLT) may be necessary if there are concerns about aspects of an individual’s ability to swallow for example post stroke. SLT’s will be able to assess the individual and make recommendations on the appropriate consistency of fluids and foods.

<table>
<thead>
<tr>
<th>Body System</th>
<th>Result</th>
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<tbody>
<tr>
<td>Immune system</td>
<td>Reduced ability to fight existing infection. Increased likelihood of developing secondary infections e.g. pneumonia, sepsicaemia.</td>
</tr>
<tr>
<td>Muscle</td>
<td>Reduces muscle density therefore effects all activities of daily living.</td>
</tr>
<tr>
<td>Heart</td>
<td>Heart failure if malnutrition severe.</td>
</tr>
<tr>
<td>Circulation</td>
<td>Poor wound healing. Development of pressure sores.</td>
</tr>
<tr>
<td>Body thermostat</td>
<td>Inability to control temperature resulting in hypothermia.</td>
</tr>
</tbody>
</table>

Table 1 – Results of malnutrition from within different parts of the body system

<table>
<thead>
<tr>
<th>Score</th>
<th>Risk</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Low Routine clinical care</td>
<td>Repeat screening Hospital – weekly Care Homes – monthly Community – annually for special groups e.g. those &gt;75 yrs</td>
</tr>
<tr>
<td>1</td>
<td>Medium Observe</td>
<td>Document dietary intake for 3 days If adequate – little concern and repeat screening Hospital – weekly Care Home – at least monthly Community – at least every 2-3 months If inadequate – clinical concern – follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly</td>
</tr>
<tr>
<td>&gt;2</td>
<td>High Treat</td>
<td>Refer to diettian, Nutritional Support Team or implement local policy Set goals, improve and increase overall nutritional intake Monitor and review care plan Hospital – weekly Care Home – monthly Community – monthly * Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.</td>
</tr>
</tbody>
</table>

Table 2 – Actions relating to the score and risk of the patient

Continued on next page
Acute care
When an elderly patient is admitted to hospital with an acute episode this often results in additional concerns relating to maintaining their nutritional status. All patients should have their risk of malnutrition assessed on admission and the appropriate care plan commenced. This may vary from a simple re-screen in 7-days’ time to ‘red tray’ assessment and food record charts being completed. Red trays are used as a visible indicator of vulnerable patients who need help and support. Red tray assessment may also include offering patients additional snacks or a referral to a dietitian for more detailed nutritional assessment and action plan.

Normalising eating is usually the action of choice but it has to be acknowledged that not all patients can meet their nutritional requirements via food, therefore an alternative may be needed. This may often be the case during an inpatient episode when there are many other factors affecting nutritional intake such as unfamiliar surroundings or routine, different meal patterns, specific food likes and dislikes. The underlying medical condition may also increase nutritional requirements. There are a range of oral nutritional supplements that can be recommended depending on patients’ preference and nutritional need. If these still do not meet the nutritional requirements of the patient then alternative forms of feeding need to be discussed.

The dietician, in conjunction with their multi professional colleagues can consider NG feeding or PEG feeding if the gut is functional. If this is not the case then parenteral nutrition may be considered if this is appropriate given the medical condition. All of these decisions would form part of a multi-professional decision process.

Summary
It is vital that all elderly patients have their risk of malnutrition assessed on a regular basis irrespective of care setting, and the appropriate nutritional care plans put in place and monitored. This requires multi agency and multi professional working to be successful. Table 3 summarises some top tips to promote good nutritional status in elderly patients.

Table 3 – Top tips to promote good nutritional status in elderly patients

<table>
<thead>
<tr>
<th>Top tips to promote good nutritional status in elderly patients</th>
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<tr>
<td>Use MUST to screen patients for risk of malnutrition both in the community and acute setting.</td>
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<tr>
<td>Monitor any changes in risk of malnutrition using MUST.</td>
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<tr>
<td>Consider a referral to other members of the multi professional team for assessment as needed. e.g. dietitians, speech and language therapists, occupational therapists.</td>
</tr>
<tr>
<td>Discuss concerns with the multi professional team and consider alternatives e.g. oral nutritional supplements or alternative routes of feeding.</td>
</tr>
<tr>
<td>Find out what agencies and support are available in the local community e.g. lunch clubs, cooking clubs, exercise and nutrition clubs. These may be run by local government, statutory bodies, the private sector or voluntary organisations including charities.</td>
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<tr>
<td>Provide small appetising meals and snacks that look and smell appealing to encourage oral intake.</td>
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<tr>
<td>Consider soft meal options or altered consistency if needed to promote oral intake. This may be particularly important post stroke or if individuals have a painful dry mouth or poorly fitting dentures.</td>
</tr>
<tr>
<td>Try fortifying foods to maximise oral intake.</td>
</tr>
<tr>
<td>Offer lots of variety in terms of consistency, colour, flavours etc.</td>
</tr>
<tr>
<td>Ensure communication between primary and acute settings.</td>
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Useful websites
http://www.ageuk.org.uk/health-wellbeing/healthy-eating-landing/
http://www.bapen.org.uk/screening-and-must/must/introducing-must

References:
Research Active Hospices: Why bother?

Sarah Russell has been a hospice and palliative care nurse for nearly 25 years and is the Head of Research at the national charity for hospices, Hospice UK. Sarah is regularly found on Twitter as @learnhospice or @WeEOLC

Hospices as places of rest and care of the dying have been present in our culture for some time. In the UK, there are over 220 hospices, supporting approximately 200,000 people each year with terminal and life-limiting conditions as well as more than 40,000 people in their bereavement. Hospices are not just for people with cancer or the last days of life, increasingly they are supporting people with multiple life-limiting conditions and providing health and wellbeing programmes. The majority of hospice care (80 per cent) is provided in community-based settings, including home care/hospice at home, outpatient services and hospice day care.

So why should hospices bother with research?

In 2013, Hospice UK published a series of reports discussing the future of hospice care (https://www.hospiceuk.org/what-we-offer/commission-into-the-future-of-hospice-care/commission-resources) and initiated the Commission into the Future of Hospice Care to help hospices look ahead, anticipate, and meet the changing and growing needs of the communities they serve. One report highlighted the importance of hospices taking part in research in a consistent and systematic way. Key points included:

- Research is an investment for the future – without it we cannot sustain high quality care.
- If we are to understand how to deliver best care in the context of an ageing population, changing patterns of disease, an increasing range of treatment options and limited resources, we absolutely need research to tell us which hospice based interventions are effective, how they work, which models of care are best, and whether they are both effective and cost-effective (Murtagh in Payne et al 2013).

Furthermore, people have the right to expect the highest possible standards of care and practice. Without the rigour of investigation and exploration for new ways of knowing what research offers, the strategic direction and thrust of policy and funding is compromised (Larkin in Payne et al 2013).

Research active hospices undertake research to be able to deliver the best possible care to patients

Since 2013, there has been a flurry of increased hospice based research activity with benefits not only for direct day to day patient care, but also in terms of contributing to policy and evidenced based care. Hospices have been initiating or developing their research readiness or activity. Princess Alice Hospice in Esher, St Gemma’s in Leeds, St Columbus Hospice, Edinburgh or Marie Curie Hospice in Glasgow are just a few examples of hospices that are research active; contributing to understanding what’s important to people as they live and die with an incurable illness as well as what types of care or interventions work best.

In 2016 Hospice UK undertook a stakeholder consultation with adult and children’s hospices, universities, clinical research networks and other interested parties on their views and opinions on the barriers and facilitators for research activity in hospices. We worked with the UK charity for children with life-threatening & life-limiting conditions Together for Short Lives to understand better what research activity hospices were doing and how it made a difference.

The consultation reinforced several key points:

1. The importance of supporting hospices to be research ready and active in order to deliver, support, generate or lead evidence (Figure 1).
2. The value of regional groups and hubs to network and share resources and ideas.
3. Examining the relationship between hospices and universities to understand ‘what good looks like’ in those interactions.
4. Exploring how to support and develop the workforce to be research ready and active.
5. A central national point to share resources (this is being developed through Hospice UK).
6. The importance of sharing research findings to make a difference to peoples lives.

The consultation confirms the importance of hospices taking part in research. There is an appetite, desire, passion, and willingness to understand and deliver excellent end of life care. Excellent care for patients and their families should be at the heart of what we do; being research active provides the fuel for hospices to do so.

Furthermore, people have the right to expect the highest possible standards of care and practice. Without the rigour of investigation and exploration for new ways of knowing what research offers, the strategic direction and thrust of policy and funding is compromised (Larkin in Payne et al 2013).

References:

Mealtime care in hospitals: the impact of trained volunteers

Helen Roberts is an academic geriatrician with research interests in nutrition, mobility, sarcopenia and frailty in older people. She is the national lead for the NIHR Comprehensive Research Network Ageing Specialty Group, leads the Ageing and Dementia theme in the NIHR CLAHRC: Wessex and is deputy lead for nutrition and ageing in the NIHR Southampton Biomedical Research Centre in Nutrition.

Poor nutrition among older people in hospital is common and impacts on patients, their families, health and social care services, and society as a whole. In 2015 a national survey, conducted by the British Association of Parenteral and Enteral Nutrition (BAPEN), reported that 28% of patients over the age of 65 years and 34% of patients admitted to elderly care wards were at risk of malnutrition at the time of their admission to hospital (Russell, 2014). This problem is not limited to the UK, with international research identifying similar levels of malnutrition in many countries. Importantly, poor nutrition is associated with increased complications such as pressure ulcers and infections, slower recovery from illness, longer hospital stays and even increased mortality.

A number of factors are recognised contributors to poor dietary intake among older people in hospital. Patient factors include poor appetite, nausea or vomiting, acute illness, and changes in taste due to medication. Organisational factors such as changes in timing of meals, different food choices and mealtime interruptions are also recognized to contribute to poor nutrition. Additionally, there is widespread recognition that some older patients are not given enough help to eat and drink.

Improving the nutrition of hospital inpatients requires a multifaceted approach. The benefits of protein and energy supplementation (in the form of ‘sip-feeds’) have been clinically proven although there are issues with palatability and they are often incompletely consumed. Additional interventions, such as coloured trays to indicate people who may have difficulty eating and protected mealtimes where routine clinical care stops to focus on patients’ meals have been introduced in many hospitals though there is no clear evidence they are of benefit. Evaluation of protected mealtimes has shown no increase in dietary intake for adult patients on medical and surgical wards although sitting up for meals and timely mealtime assistance were reported to be associated with some benefit (Palmer and Huxtable, 2015) (Young et al., 2016).

One factor that particularly affects older inpatients is the amount of assistance they receive at mealtimes. There is evidence, from both UK and international studies that increasing workload and competing priorities at mealtimes mean that nursing staff often do not have the time they would like to help patients with their meals. In 2011, the Care Quality Commission conducted a series of themed inspections focusing on nutrition and dignity for older patients in hospital and found that patients did not receive the right choices or support at mealtimes in 17% of the hospitals they inspected.

Mealtime assistance can include preparing patients for meals, helping open packets, cutting up food, encouraging reluctant eaters and actually feeding patients as well as social interaction. A few small studies evaluating mealtime assistance for older inpatients from either paid staff or volunteers have reported variable impact on their dietary intake. A recent meta-analysis demonstrated a mean increase in daily energy intake of 486 kJ and daily protein intake of 5.9 g with assistance, which would be clinically relevant (Tassone et al., 2015). However, the four studies analysed were variable in the duration and frequency of assistance provided by either volunteers or paid staff, two studies were very small and there was little overall change in body composition outcomes such as weight. A systematic review of mealtime assistance given only by trained volunteer mealtime assistants (Howson et al., 2016) reported that they were safe and can improve the mealtime experience for patients although evidence for an effect on dietary intake was mixed.
The Southampton Mealt ime Assistance Study has evaluated the feasibility and acceptability of trained volunteer mealt ime assistants on one Medicine for Older People ward at University Hospital Southampton. The volunteers recruited through the hospital voluntary services team attended a half-day group training session and then a 1-1 competency assessment before they are able to assist patients independently. They did not help people who had swallowing difficulties, were drowsy or unable to sit up.

Mealt ime assistants were present each weekday lunch- time and helped prepare patients for their meal, assist with packaging and fed patients if needed. During the year, 29 volunteers assisted nearly 4,000 patients and interview data confirmed that the mealt ime assistants were highly valued by patients, relatives and nursing staff (Roberts et al., 2014). Volunteers were reported to spend more time with patients at mealtimes and both patients and volunteers reported this as a positive experience (Robison et al., 2015). The study concluded that volunteers can be successfully trained as mealt ime assistants to supplement nursing staff and may provide a cost-effective means of addressing the issue of malnutrition among older in-patients as part of a wider strategy including protected mealtimes and menus designed for smaller appetites. The study was supported by the Southampton Biomedical Research Centre Nutrition and the MRC Lifecourse Epidemiology Unit. Since finishing, volunteers have continued to work on the ward and are now well established members of the team.

The study is now being extended to evaluate the implementation of mealt ime assistants in four different hospital departments over a two year period to establish the mealt ime needs of patients in different clinical areas and the characteristics of volunteers best suited to meet those needs. The study will focus on male and female patients over the age of 70 years on Medicine for Older People, the Acute Medical Unit, Adult Medicine and Trauma & Orthopaedics wards. The study will also assess how practical it is to recruit, train and retain mealt ime assistants on a large scale, as well as assessing how patients, relatives and staff feel about them. Patients and relatives will be interviewed, and focus groups held with nursing staff and with the volunteers to investigate their experiences of mealt ime assistance. At the end of the study the process of successfully establishing a team of mealt ime assistants in these different departments will be reported. This study is supported by the NIHR Wessex: CLAHRC (Collaboration for leadership in applied health research and care).

References:


Care home residents need tailored nutrition

**Older people living in residential care require nutritional plans that cater to their changing physiology.**

Malnutrition is thought to affect 10% of people over 65 in the UK. The key to getting food and nutrition in care homes right is respecting the diversity of the residents and their care needs.

Sunrise Senior Living and Gracewell Healthcare provide guidance on nutrition across their care homes in the UK, but it is crucial for individual homes to tailor their food and nutrition provision to the individual. With this in mind, here are some guidelines for how best to approach food and nutrition in care homes.

*To find out more please visit:* [https://www.theguardian.com/social-care-network/2016/aug/05/care-home-residents-need-tailored-nutrition-guidelines](https://www.theguardian.com/social-care-network/2016/aug/05/care-home-residents-need-tailored-nutrition-guidelines)

**Malnutrition among older people: A lack of food and thought**

There are an estimated 3 million people in the UK suffering from malnutrition, the resulting problems are believed to cost the public sector several billion pounds for example from avoidable hospital admissions and extra GP visits for treatments of the range of illnesses malnutrition can cause.

*Learn more here:* [http://www.bbc.co.uk/news/health-36518770](http://www.bbc.co.uk/news/health-36518770)

**Huge rise in hospital beds in England taken up by people with malnutrition**

The number of hospital beds in England taken up by patients being treated for malnutrition has almost trebled over the last 10 years, in what charities say shows the “genuinely shocking” extent of hunger and poor diet. Critics blame three-fold rise on poverty, cutbacks to meals on wheels services for the elderly and inadequate social care.


**Charity calls for better access to exercise and nutrition advice for elderly**

**A charity says that better access to exercise and nutrition advice for the elderly could help free up hospital beds**

Age Concern want the government to increase funding to tackle the issue of an ageing population. Based on research done by Liverpool Hope University the charity says that better access to exercise classes and practical advice on nutrition could help reduce the need for hospitalisation for elderly people.

Age Concern quote government projections that by 2037, there will be 1.42 million more households headed by someone aged 85 or over – an increase of 161% over 25 years (Future of an Ageing Population Report, Government Office for Science, 2016).

*To find out more please visit* [http://www.itv.com/news/granada/update/2017-03-14/charity-calls-for-better-access-to-exercise-and-nutrition-advice-for-elderly/](http://www.itv.com/news/granada/update/2017-03-14/charity-calls-for-better-access-to-exercise-and-nutrition-advice-for-elderly/)
Robots could help solve social care crisis, say academics

**Humanoid robots, with cultural awareness and a good bedside manner, could help solve the crisis over care for the elderly, academics say.**

An international team is working on a £2m project to develop versatile robots to help look after older people in care homes or sheltered accommodation.

The robots will offer support with everyday tasks, like taking tablets, as well as offering companionship. Academics say they could alleviate pressures on care homes and hospitals.

Researchers from Middlesex University and the University of Bedfordshire will assist in building personal social robots, known as Pepper Robots, which can be pre-programmed to suit the person they are helping.

**To find out more please visit:**
http://www.bbc.co.uk/news/education-38770516

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**Upcoming Events…**

**Global ageing: challenges and opportunities**  
24th – 25th April 2017  
Attend this flagship conference and join an international panel of experts to open debates around access to medicines and innovations for chronic conditions, HIV and ageing, and future policies for dementia.


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**Nutricia Dysphagia Academy**  
6th June 2017  
Nutricia Advanced Medical Nutrition host this event in London, with talks on such topics as ‘why mouth care matters’ and ‘making malnutrition in dysphagia everybody’s business’.


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**Health Plus Care**  
28th – 29th June 2017  
Europe’s largest integrated care conference taking place at ExCel London will unleash a wealth of ideas and solutions to support the NHS and social care. Speakers from NHS England, Age UK and many more.

http://www.healthpluscare.co.uk/

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**National Nurses Nutrition Group Conference 2017**  
10th and 11th July 2017  
The objectives of the NNNG are to promote education in nutrition and related subjects for members of the nursing profession, for the public benefit, and especially for the benefit of patients in the hospital and community.

http://www.nnng.org.uk/
Eating less may be expected in older age as, alongside declining activity levels, our energy needs fall. Whilst there is huge variation between individuals, an average reduction in food intake is about 25% between the ages of 40 and 70 years (Nieuwenhuizen et al 2010). Older adults may eat more slowly, consume smaller meals, and eat fewer snacks between meals than younger adults, and poor appetite is commonly reported. The fall in food intake has been described as the ‘anorexia of ageing’. The underpinning mechanisms are not fully understood, but include a range of physiological, psychological and social factors that influence appetite and food consumption. Specific age-related changes include loss of acuity in taste, smell and sight, changes in appetite hormones, effects on gut motility, chewing and swallowing difficulties, as well as negative effects of chronic disease and associated medication.

Although smaller appetites may be a feature of ageing, eating less can put older people at risk. As total food intake declines, intakes of protein and other nutrients are also likely to fall and, although energy requirements may still be met, needs for other nutrients (that don’t change in older age) may not. This highlights the importance of a good quality diet to ensure nutrient intakes are sufficient. This can be challenging since the need for a higher quality diet may coincide with other effects of ageing i.e. when food access and preparation becomes more challenging, diets can be more monotonous and there is clear potential for under nutrition. Estimates of the numbers of older adults affected by poor nutrition vary across studies, depending on definitions used and the nature and age of groups included. However, a consistent message is that poor nutrition, even in developed settings, is common. In England, current prevalence estimates from the British Association of Parenteral and Enteral Nutrition (BAPEN) are that a third (34%) of older patients are either malnourished or at risk of malnutrition, when assessed on admission to hospital (BAPEN 2015). Being malnourished is associated with poorer health outcomes, longer hospital stay and increased mortality. Thus, apart from the evident personal costs, the economic costs of disease-related malnutrition are significant; in England, the most recent estimate of public expenditure on malnutrition in health and social care amounted to £19.6 billion, with older adults accounting for 52% of this figure (BAPEN 2015).

Simple indicators (see Box) can be used to identify malnutrition. The current prevalence data point to an urgent need for better recognition of malnutrition risk among older adults in the UK, including routine screening of nutritional status and early diagnosis. This needs to be prioritised; for example, in a European survey, a third of adults over the age of 80 years reported that they had not been weighed by their general practitioner, and older adults commonly report that they do not receive advice on diet from their doctor or other health professionals.

**National Institute for Health and Care Excellence [CG32]:**

‘Nutrition support should be considered in people who are malnourished, as defined by any of the following:

- a body mass index (BMI) (weight/height²) of less than 18.5
- unintentional weight loss greater than 10% within the last 3 to 6 months
- a BMI below 20 and unintentional weight loss greater than 5% within the last 3 to 6 months.'
A number of initiatives to tackle malnutrition are on going in the UK. A key example is the work of the Malnutrition Task Force that is overseeing the Malnutrition Prevention Programme, a Department of Health-funded scheme to help older people in England who are suffering from or are at risk of malnutrition (http://www.malnutritiontaskforce.org.uk/). This takes a whole-community approach and local initiatives are currently being piloted in five different areas. The findings will be disseminated nationally to inform future programmes and, importantly, will also help to raise awareness of malnutrition.

In addition to improving recognition of malnutrition and identification of older adults who are at-risk, new preventive strategies may be needed. As a clear understanding of the personal and contextual influences that affect patterns of food choice and consumption is essential to inform successful policies and interventions to support older adults, a first step is to recognise where malnutrition occurs. Although often associated with hospital and institutional care, current estimates suggest that malnourished adults in hospitals, care homes and sheltered housing account for less than 10% of the total (BAPEN 2015). Since the majority of malnourished adults are living in the community, this is where the problem arises, and the place for preventive efforts.

The current prevalence figures for malnutrition highlight a need for longitudinal data to enable evaluation of age-related changes in diet over time, in order to identify when, where and how to intervene with preventive efforts. To date, this information has been lacking. In a UK cohort of older men and women, research has recently described the quality or ‘healthiness’ of diets, at baseline assessment when participants were in their mid-60s, and at follow-up a decade later (Bloom et al 2016). At baseline, diet quality was related to a range of psychosocial factors – but the most striking associations were in relation to the level of participation in leisure activities. Greater participation was associated with having a healthier diet – and also with a smaller decline in diet quality over 10 years. These associations, that appear to be consistent with other evidence of social engagement benefits, were not explained by differences in education or number of comorbidities, and were evident among men and women.

The findings raise the possibility that psychosocial factors have important effects on diet quality in later life, and this may have implications for design of strategies to prevent malnutrition in the future.

Identification of the nature and timing of effective interventions to promote good nutrition among older community-dwelling adults is a focus of current research, supported by the NIHR Southampton Biomedical Research Centre in Nutrition. A better definition of ‘where and how’ to provide support will help to inform efforts to promote good nutrition among all older adults in the future.

References
Strategies to identify and manage under nutrition in older adults; an increasing sector of our population and a nutritionally susceptible group

Catherine Hankey is a Senior Lecturer in Human Nutrition at the University of Glasgow and a registered dietitian. Catherine’s research interests include the identification and management of chronic under nutrition in older adults.

Lisa Hutchison is a researcher at the University of Glasgow with an interest in the clinical management of nutritional status. Her research experience includes designing and delivering public health interventions within secondary care. Lisa has recently completed studies in the field of catering provision and calorie labelling.

How large is the UK population aged over 65 years?
The UK is an ageing population, with the number of individuals aged 65 and over rising at a higher rate than any other age group; figures are projected to reach 24.3% of the population by 2039 (Office for National Statistics, 2016). Therefore, it is imperative that this age group is encouraged to lead a healthy life, through diet, exercise and social interaction. This will not only improve their quality of life and aid in the prevention of disease, it will also improve their mental wellbeing.

Impact of ageing on health, disease and lifestyle
Whilst health advice to keep well and fit appears straightforward, there are a number of challenging factors that may hinder implementation and maintenance. The likelihood of suffering from particularly chronic disease is heightened in older age. Diseases such as type II diabetes, joint or arthritic disease, and the insidious development of sarcopenia (loss of muscle mass) can all result in a decreased ability to exercise and carry out activities of daily living. These factors themselves probably impair appetite and in turn limit food intake. Physiological factors affecting appetite and mobility include decreased motor function, impaired oral health and loss of smell and taste (Robbins et al., 2006) (Watson et al., 2006) (Savoca et al., 2011).

Psychological conditions such as anorexia, paranoia and depression can occur in this population, causing decreased food intake (Marcus & Berry, 1998) (Saka et al., 2010). Another major factor affecting the older adults is social isolation, which often results in decreased food intake and can lead to depression (Saka et al., 2010). Many of these factors correlate and are likely to result in a decreased quality of life. One problem that often arises due to one or more of these factors is malnutrition.

Is malnutrition prevalent in older adults in the UK?
Although, as a nation, the UK is becoming more health aware, malnutrition remains prevalent amongst the older population. Recent figures from Age UK indicate that approximately 1.3 million people aged 65 and over are malnourished. It is more common among those living at home, however the exact number of people living within the community who are suffering from malnutrition is unknown as not all of these individuals will be screened regularly for the condition. Although the elderly do visit their General Practitioner more often, due to their likelihood to suffer from chronic health conditions, it is unlikely they will be specifically
How can malnutrition be identified in the care setting?

Undiagnosed malnutrition would likely result in an increase in morbidity and mortality rates; therefore effective screening tools are essential. The ‘MUST’ screening tool, developed in 2003, is currently the most accurate test available and many of the nation’s leading organisations, including National Institute for Health and Care Excellence (NICE), British Diietetic Association (BDA) and British Association for Parental and Enteral Nutrition (BAPEN), promote its use. The use of ‘MUST’ throughout various care settings is important to ensure continuity of care (Russell & Elia, 2015). ‘MUST’ is a five step screening method that assesses the malnutrition risk of an individual based on their Body Mass Index (BMI), percentage of unintentional weight loss and presence of disease, to formulate an overall score and develop a treatment plan if required (Stratton et al., 2004).

Recent studies have indicated that most care homes across the UK adhere to strict policies on nutrition, resulting in them becoming more vigilant about nutrition screening (Russell & Elia, 2015).

The National Institute for Health and Care Excellence (NICE) created the following guidelines for care providers to use when creating a care plan for malnourished residents who do not have underlying health problems (NICE, 2006).

• 25-35 kcal/kg/day total energy
• 0.8-1.5g protein/kg/day
• 30-35 ml fluid/kg/day
• Electrolytes, minerals, micronutrients and fibre

Older people suffering from malnutrition are particularly deficient in protein, overall energy intake (calories), vitamin D, vitamin C and folate (B9) (Wells & Dumbrell, 2006).

What practical solutions can be offered to challenge malnutrition?

Food fortification is an oft-discussed tool. The concept that the older adult can only eat a limited volume of food, often favours a lower energy intake. However, this can be countered by concentrating calories using high fat, high carbohydrate enriched smaller meals. In collaboration with a charity-run group of care homes, “CrossReach”, a team of researchers in Glasgow sought to examine such diets in practice. A cluster-randomised trial was designed, with each care home acting as the unit of randomisation. Homes were allocated to either usual care or to receive food fortification of 400 kcal daily. In the “treatment” homes, adults identified as under nourished, with a BMI<18.5 kg/m², had their foods fortified with butter or cream, hot drinks made with full fat milk, among other simple and easy to apply dietary strategies. The study was of 12 weeks duration. The fortification proved an inexpensive intervention, which was easily implemented by care staff, was considered feasible and was affordable in this setting. Final results were less encouraging than hoped, as there was no significant difference between the changes in body weight for the two groups, usual care and intervention. It was possible the intervention was insufficiently long, 12 weeks, to see a clinically important weight change in the intervention group. However, the chronic weight loss observed in care homes was stalled. Anecdotally care staff reported residents were brighter. It may have been that the chronic weight loss was stalled by the intervention, which is sufficiently encouraging to warrant exploring its use over a longer duration.

References:


Improving the Nutritional Intake of those with Dysphagia

Mathew Done has always worked in the food and drinks business developing and launching products. Eleven years ago he started Slõ Drinks with the aim of providing those with dysphagia the widest range of safer to swallow, easy to prepare, palatable drinks. Slõ Drinks are now available for hydration, meditation and recreation.

“Once diagnosed, dysphagia (swallowing difficulties) is often referred to as a prescription for de-hydration and malnutrition. Our aim is to help healthcare professionals change that.”

Dysphagia

Dysphagia is a secondary symptom of 127 conditions including stroke, mouth and throat cancer, Parkinson’s, Alzheimer’s and motor neurone disease. It affects all ages from birth but presents frequently in the over 50’s (approx. 8-10% world wide), equivalent to a global population of 560 million people. It can be defined as a disorder of swallowing mechanics resulting in impairment in the safety, efficiency or quality of eating and drinking. As a result, food and drink flow too fast for the patient to cope with and enter the lungs. If not identified, the patient will quickly develop aspiration pneumonia, which will lead to malnutrition, dehydration and admittance to hospital.

To prevent these complications a speech and language therapist will assess a patient’s swallowing ability and decide what foods and drinks are safe for them to swallow. Foods may have to be pureed and every drink must have their consistencies changed to make them thicker and slow their transit. Drinks must be changed to a Stage 1: Syrup consistency or Stage 2: Custard Consistency (RCSLT, 2007).

To change the consistency of fluids, thickener is added. Historically the only thickeners available were starch and gum based. Supplied in a large tin with a plastic scoop, one, two or three scoops are added until the desired consistency is achieved. Studies show traditional thickeners used in drinks are difficult to use. As a direct result less than 50% of patients had drinks at an appropriate consistency and they tend to be offered 50% less to drink (Whelan, 2001).

Difficulties associated with previous thickeners:

- Difficult to use
- Deciding on correct consistency is a subjective matter, not all carers’ perceptions are the same
- The number of scoops patients receive may vary
- Different drinks affect the thickeners ability to thicken; extending the time the thickener requires
- The thickener could start to separate from the drink after a short time.
- These situations make the drinks unpalatable, unsafe and unused by the patient

The Greater Manchester Academic Health Science Network (GM AHSN), and Manchester: Integrating Medicine and Innovative Technology (MIMIT) have been working together to address unmet healthcare needs. With funding from the GM AHSN Technology Innovation Challenge, Slõ Drinks have developed a new high calorie, nutrient rich milkshake mix, which when made with milk, reaches a perfect consistency to aid dysphagia sufferers in swallowing. Since receiving funding Slõ Drinks have been added to the Enteral Feeds Contract for NHS England, NHS Scotland, and in March NHS Northern Ireland. They are also available to buy at www.slodrinks.com/uk/shop

Slõ Milkshakes+ are presented pre-prepared in a sachet. They contain a mixture of 25 essential vitamins and minerals, milk fats and crucially a cellulose thickener. This has excellent bonding qualities with whole milk and hydrates quickly. Added at an inclusion volume accurate to 0.01g, Slõ Milkshakes+ quickly achieve the correct consistency. Important, they maintain consistency for 24 hours (when kept in the fridge) allowing the drinker to consume small amounts at a time. This thickener is also amylase resistant, dissolves completely and is tasteless so the drinker can only taste the milkshake. Slõ Milkshakes+ do not taste as sweet as pre-made alternatives; ultimately this should improve compliance encouraging people to drink more, more frequently.

Preparing a Slõ Milkshake+ reliably to Stage 1 or Stage 2 consistency is therefore as quick and easy as an ordinary supplement, but it will be safer for the drinker to swallow allowing them to consume 330+ calories, including 23g+ of protein, and a mix of vitamins and minerals.

The Future

The long term trend is for the incidence of dysphagia to increase. Its effect on quality of life from treating the primary condition and impact on a patient’s physical and mental wellbeing is now widely acknowledged. It is therefore essential that more cost effective, reliable and easy to use products to supplement a dysphagia patient’s oral nutritional intake are brought to market. Slõ Drinks are in the final stages of creating a Slõ Vanilla Milkshake+. Longer term the company aims to supplement dysphagia patients’ vitamin and mineral intake by providing Slõ Multi Vitamins and Slõ Multi Minerals.

www.slodrinks.com/uk/products/nutrition/

References:

Owner and founder of Slõ Drinks

Mathew Done
Oral Care Observations

Fiona Ritchie is the Head of Clinical Services for Mouth Care Logistics – an award-winning company specialising in research and the improvement of oral care for dependent and complex needs patients. She has a proven record in developing programmes for clinical teams that have resulted in fewer hospital admissions. Fiona also lectures on best practice which complies with NICE guidelines and works with medical groups to prevent secondary health conditions and imbed robust oral care regimes. The 17 years Fiona has been providing oral care has seen step changes for improving patient outcomes.

In July 2016 NICE issued a set of guidelines; ‘Oral health for adults in care homes’ which called for oral health and access to dental treatments to be given the same priority as general health for all adults in care homes. Recommendations in the guidance focused on improving and maintaining residents’ day-to-day oral healthcare, ensuring staff are properly trained to confidently look after the oral health needs of residents.

There have been 25 studies carried out over the past three and a half years giving an opportunity for clinicians to see the standard of mouth care being delivered on their wards. All were completed in England involving over 400 patients, most of which were dependent for mouth care and over 50% of these were nil by mouth.

Ward sisters and nursing home managers worked closely with speech and language therapists to determine how mouth care was being managed on a day to day basis. The drive was to make changes to improve patient outcomes and reduce preventable secondary infections.

The primary concern was ensuring that oral hygiene was actually carried out – every day, across all shifts, with accurate record keeping and completed assessment sheets if required. Nearly all of the observations were triggered by speech and language therapists being frustrated having to spend 20-30 minutes cleaning a patient’s mouth before being able to carry out a safe swallow assessment.

The final reports were transparent and impartial and used by senior management as bench marks to establish positive clinical outcomes.

Some salient outcomes included:

- Night shift staff were less likely to deliver mouth care, so a good time to check this is when re-positioning a patient.
- Units should supply appropriate products that are fit for purpose for each patient to improve compliance.
- Formal training for carers on how to deliver mouth care would be beneficial compared to the current standard of being taught by more experienced staff.
- A culture change in health carers providing correct oral care is required as mouth care becomes a higher priority.
- Staff need to be aware that patients are out of their daily routine, many blaming themselves when mouth care wasn’t offered, so a ward regime to embed good practice will facilitate this.
- Doctor visits should involve mouth checks to set an example as well as spot possible infection.
- The patient should be asked how their mouth feels (dry, sore, or unclean).

Clinical evidence supports that poor oral hygiene can result in heart failure, strokes, pneumonia and diabetes (Salamone et al 2013). Improving oral care will reduce patients’ hospital stays, lower the risk of developing preventable secondary health conditions, maintain patients’ weight and lower their aspiration risk.

References:


Nutritional considerations for healthy ageing

The older population is increasing worldwide and in many countries older people will outnumber younger people in the near future. It is estimated that by the year 2025, the number of people worldwide aged 60 years and over, will exceed 1.2 billion. This projected growth in the older population has the potential to place significant burden on individuals, healthcare and support services.

Diet and lifestyle, along with maintenance of a healthy body weight, are important in the upkeep of health for all age groups, but are crucial for healthy ageing. Malnutrition, both under and over nutrition, increases health risks in older populations. Increased falls, vulnerability to infection, loss of energy and mobility, poor wound healing and confusion are reported consequences of under nutrition. On the other hand, obesity also increases ill health and reduces life expectancy from common diseases that occur in older age such as diabetes, hypertension and cardiovascular disease. The number of people, who are overweight and obese, particularly in those aged 65 years and over, continues to rise amongst the population.

A number of specific dietary patterns and/or individual nutrients have been researched, to see if they can prevent or slow down the progression of common diseases in older adults and thus improve quality of life and promote healthy ageing.

Mediterranean style diet

This has been defined and includes the following dietary factors: a high intake of fruit and vegetables; cereals and whole-grain breads, beans, nuts and seeds; unprocessed foods; olive oil as a main cooking ingredient and source of fat; low to moderate amounts of cheese and yogurt; low quantities of red meat and higher quantities of fish; and low to moderate amounts of red wine often accompanying main meals.

A recent review of 11 studies involving 52,044 people, looked at the effects of the Mediterranean-style dietary pattern to healthy adults (including older people) or people at increased risk of cardiovascular disease. Results indicated that the Mediterranean diet can prevent the occurrence of cardiovascular disease and reduce associated risk factors.

Vitamin D (with or without calcium)

There is reliable evidence that taking vitamin D only, is unlikely to prevent fractures (broken bones) in older adults. However, when vitamin D is taken with additional calcium supplements, there is a reduction in the likelihood of hip fractures and other types of fracture. These findings were based on data from 53 studies involving 91,791 people. They found that there was no increased risk of death from taking vitamin D and calcium supplements. Vitamin D does not reduce rate of falls in people who are not vitamin D deficient, but could be beneficial for those who have low levels of vitamin D.

Omega 3

It is not clear whether dietary (found in oily fish and some vegetable oils) or supplemental omega 3 fats have an effect on life expectancy, cardiovascular events (such as heart attacks and strokes) or cancers in the general population. Omega-3 have also been considered as a promising non-medical alternative to improve brain function and slow down the progression of dementia, but the evidence so far does not support this.

Omega 6

Omega 6 is an essential fatty acid because humans cannot make it in their bodies and must obtain it in their diet (e.g. as olive oil and nuts). Some evidence suggests that a higher intake of omega 6 fatty acids, along with a low intake of saturated fat, is associated with significant reductions in coronary heart disease but there is no effect on blood lipids and blood pressure.

Protein and energy supplements

Evidence for the effectiveness of nutritional supplements containing protein and energy, often prescribed for older people, is limited. Data from 62 studies including 10,187 people showed that supplementation produces a small but consistent weight gain in older people. In older people who are undernourished life expectancy may be increased, but there was no evidence of improvement in physical function or reduction in length of stay in hospital.

Folic acid (with or without vitamin B12)

There is no evidence that folic acid with or without vitamin B12 improves brain function in elderly people with or without dementia.

References:

Dr Helen Roberts
Associate Professor in Medicine for Older People

What is your current position and what was your career path that took you there?
I am an Associate Professor in Medicine for Older People at the University of Southampton. I worked as an NHS consultant geriatrician for 8 years before going into an academic career path but I had been very involved with research as a senior registrar and as a consultant so it was a natural progression.

What challenges do you face in your current position and which has been the greatest one?
The challenges facing any academic are obtaining research funding and keeping good researchers in my group as they are often on short term fixed contracts.

In your opinion, what are the top three issues affecting the care of older people?
The main issues facing the care of older people currently is the reduction in funding of social care, which has significantly contributed to delays in hospital discharges for older people with complex health needs. Another issue is the need for clinicians who are not specialists in the care of older people to be able to better assess frailty and multi-morbidity in people, to optimise care planning and offer older people appropriate life enhancing treatments e.g. in surgery and oncology.

What changes in elderly care do you anticipate in the next few years?
I anticipate that older people will be more informed of potential healthcare options and treatment decisions. I also expect that improvements in healthcare and technology will enable more people to be offered treatments that previously would have been reserved for ‘fitter’ patients.

If you hadn’t become a specialist in the care of older people what might you have done?
I considered neurology at one point and also general practice but I enjoyed working with older people.

What experience has influenced your career the most?
Encouragement to develop research ideas as a registrar was a great influence.

What advice would you give to someone contemplating following in your footsteps?
The NIHR now has established research career pathways and sources of advice such as Research Design Services so I would recommend making full use of them.

Where do you go for advice and information?
Colleagues are a good source of advice, and the web usually for information.

Who would you most like to work with?
It would have been very interesting to have worked with Marjory Warren, who established the principles of rehabilitation and medicine for older people.

What do you enjoy doing when you are not working?
I enjoy travel, sailing, skiing, gardening and dog walking.

What do you do in a typical working day?
I meet with members of my research group to discuss progress on different studies, papers and presentations and future projects. I do a clinic each week and also organise and teach on the Medicine and Elderly Care module for year 3 medical students at the University of Southampton.

If you were stranded on a desert island what would be your one luxury?
A radio.

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In our next quarterly issue of Innov-age we will be looking at sexual health and older people. The Family Planning Association (FPA) defines sexual health as the capacity and freedom to enjoy and express sexuality without exploitation, oppression, or physical or emotional harm (FPA, 2011). The over 50s are a growing population whose sexual health needs are often ignored (Age UK, 2012).