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PATIENT NUTRITION

This Research Paper discusses the nutritional care of patients, with focus on the issue of malnutrition. The paper introduces malnutrition, the factors that can cause malnutrition or exacerbate it in hospitals, and its effect on patient illness and recovery. The importance of screening for malnutrition in healthcare settings is discussed. The paper presents an overview of the main European and UK policies, introduced over the last decade, to improve nutritional care of patients and also highlights numerous examples of reported good practice in this field.

CONTENTS

KEY MESSAGES

THE PROBLEM OF MALNUTRITION

Malnutrition is the result of dietary intake of an individual, which does not meet his or her nutritional needs.

With the current focus on obesity, malnutrition is often overlooked or underestimated by healthcare staff, in both the community and in hospitals. It has been estimated that:

- In more than 60% of patients, nutritional status deteriorates during their stay in hospital;
- In the elderly population four out of 10 older people admitted to hospital are already malnourished on arrival and six out of 10 older people are at risk of becoming malnourished, or their situation getting worse, in hospital.

In 2007 the total figure for all public expenditure on disease-related malnutrition in the UK has been estimated at in excess of £13 billion per annum.

NUTRITIONAL SCREENING OF PATIENTS

A National Patient Safety Agency study in 2008 highlighted the fact that nutritional screening of patients is not mandatory and this may impact on compliance. The study noted that:

- A majority of patients had not been weighed on admission;
- Recent weight loss and reduced appetite had not been assessed;
- Patients were unaware that they should have a nutritional assessment completed.

POLICIES TO ADDRESS NUTRITIONAL CARE

European policy was issued in 2003 to address nutritional care in hospitals. The *Council of Europe Resolution Food and Nutritional Care in Hospitals* contained 10 key messages and was signed by 18 countries.

In the UK, A King's Fund Report in 1992 recommended that an assessment of nutritional status should be carried out for all hospital patients. However, it was not until the publication, in 2001, of the NHS *Better Hospital Food Programme*, that attention focused on to how hospital food services could be enhanced via improved recipes, protected mealtimes and a 24 catering service.

With regard to nutritional screening, in 2006, the National Institute for Health and Clinical Excellence published guidance on nutritional care of adults recommending nutritional screening and assessment of inpatients and outpatients.

In 2007 concern had shifted from the quality of the food itself to the help patients required to eat their meals with the resulting Department of Health action plan *Improving Nutritional Care.*
Also in 2007, the Royal College of Nursing focused its attention on the role nurses should play in patient nutrition with the launch of its *Nutrition Now* Campaign.

In Northern Ireland, the DHSSPS acknowledged the importance of nursing care in delivering good nutrition to patients with its publication *Get your 10 a day* (2007). In addition, a new strategy *HSC Catering Services – A Strategic Framework for Future Delivery* has been drafted and is expected to be in final draft form by the end of the 2009.

WAY FORWARD

Despite a policy focus on patient nutrition in the UK over the past decade it is believed by many that greater priority still needs to be given by all healthcare professionals to the issue of patients not eating well enough.

The way forward may include improved coordination and dissemination of the many documented examples of good practice in improving nutritional care for patients, particularly in the areas of improved hospital policies; nutritional screening; improved food quality; and improved assistance for patients.

SUMMARY

In the current era of focus on obesity an often overlooked facet of poor nutrition is malnutrition, which is the result of dietary intake of an individual, either living in the community or a patient in hospital or residential home, which does not meet his or her nutritional needs. It has been estimated that in more than 60% of patients, nutritional status deteriorates during their stay in hospital, with those who are already malnourished on admission, many of them elderly, particularly affected[1]. Malnutrition causes mental and physical changes which are important in the sick patient and impair appetite and ability to eat. The paper outlines the many factors that have been identified as causing or contributing to a poor dietary intake by patients in hospital, including such diverse factors as management failings in food policy to the effects of medication on appetite and nutrient absorption[2].

The Advisory Group on Malnutriton, led by BAPEN (British Association of Parenteral and Enteral Nutrition) estimated the total figure for all public expenditure on disease-related malnutrition in the UK in 2007 at in excess of £13 billion per annum.[3]

In the UK, a King's Fund Report was among the first to recommend that a simple assessment of nutritional status should form part of the standard assessment process for all hospital patients.[4] More recently the National Institute for Health and Clinical Excellence (NICE) guideline (2006) on nutritional care of adults in hospital recommended that all patients should be screened on admission and all outpatients at their first clinic appointment.[5]

In July 2008, BAPEN carried out its second Nutrition Screening Week Survey. In the 2008 survey 'Malnutrition' was found to affect almost 1 in 3 adults on admission to hospitals; more than 1 in 3 adults admitted to care homes in the previous 6 months; and 1 in 5 in adults on admission to Mental health Units. There is no single or standard way of assessing nutritional status. Two of the nutritional screening tools in use in clinical settings in the UK are BAPEN's 'MUST' ('Malnutrition Universal Screening Tool')[6], a five-step screening tool which can be used to identify adults who are malnourished, at risk of malnutrition or are obese; and the NRS (Nutritional Risk Score) developed at Birmingham Heartlands Hospital[7].

With regard to European policy on nutritional care in hospitals, the paper outlines a Council of Europe Resolution which was signed by 18 countries in 2003 - *Council of Europe Resolution Food and Nutritional Care in Hospitals*. It contained 10 key characteristics of good nutritional care in hospitals, which are outlined in the body of the paper. Nutrition Day in Europe, organised by the European Nutrition for Health

[1] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin*, **28**, 87-120, Section 5
[2] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin*, **28**, 87-120, Sections 6.1 and 6.2
[3] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Findings, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf
[4] Lennard-Jones, J.E. (Editor) (1992). In *A Positive Approach to Nutrition as Treatment*
[5] O'Regan, P. (2009) Nutrition for patients in hospital, *Nursing Standard*, **23**, 35-41
[6] 'MUST' www.bapen.org.uk/must_tool.html
[7] Reilly, H.M. (1996) Symposium on Nutrition in clinical management: malnutrition in out midst, Screening for Nutritional Risk, *Proceedings of the Nutrition Society*, **55**, 841-853

Alliance, aims to "*move the political declaration to reality*".[8] The results of Nutrition Day 2007 demonstrated that 47% of patients interviewed on that day had been hospitalised with signs of disease-related malnutrition[9].

The paper highlights a variety of the main UK policies in the area of patient nutrition over the last decade. In 2001 the government looked at how hospital food services could be improved. The resulting *Better Hospital Food Programme* was launched in May 2001 with the main aims of producing a range of interesting and nutritious recipes that every NHS hospital could use in the context of a more flexible menu system; the introduction of Protected Mealtimes; and the introduction of 24-Hour catering. A recent review found that the uptake of the Protected Mealtimes Initiative remains variable between hospitals and between wards within hospitals across England and Wales[10].

From April 2005 there was a new performance framework for the entire NHS with 'Standards' as the main driver for continuous improvements in quality. Core Standards 15a and 15b are directly related to tackling patient nutrition and point to the need for nutritional screening of patients[11]:
C15 Where food is provided, healthcare organisations have systems in place to ensure that:

a) *patients are provided with a choice and that it is prepared safely and provides a balanced diet;*
b) *patients' individual nutritional, personal and clinical dietary requirements are met, including any necessary help with feeding and access to food 24 hours a day.*

In February 2006, the National Institute of Clinical Excellence (NICE) issued its guidance on Nutrition Support in Adults. This included the key clinical priorities of screening for risk of malnutrition and subsequent nutritional support which goes beyond the provision of hospital food to include[12] oral nutrition support, enteral tube feeding and parenteral nutrition.

By 2007, concern around patient nutrition had shifted away from "*poor quality hospital fare*" to "*the help patients need to eat it*"[13]. The Department of Health joined forces with a wide range of stakeholders (Nutrition Summit Stakeholders Group) and produced the action plan *Improving Nutritional Care* and its five key priorities are outlined in the body of this paper. In the same year the Royal College of Nursing (RCN) launched its *Nutrition Now* Campaign in response to the fact that "*most nurses want to spend more time with their patients so they can ensure good nutrition and hydration*".[14]

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[8] European Nutrition for Health Alliance, Malnutrition, www.european-nutrition.org/record.jsp?type=requiredPage&ID=9
[9] European Nutrition for Health Alliance, Malnutrition, www.european-nutrition.org/record.jsp?type=requiredPage&ID=9
[10] Extract from Executive Summary of *Protected Mealtimes Review, Findings and Recommendations Report*, NHS National Patient Safety, www.npsa.nhs.uk/nrls/improvingpatientsafety/cleaning-and-nutrition/nutrition/protected-mealtimes/
[11] Standards for Better Health, Department of Health (July 2004), www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyandGuidance/DH_4086665
[12] NICE Clinical Guideline 32, Nutrition Support in Adults, Quick Reference Guide, page 4 http://www.nice.org.uk/nicemedia/pdf/cg032quickrefguide.pdf
[13] Gray, J. (2007), Taking control of nutrition, Editorial, *Nursing Standard*, **22** (5), 1
[14] Gray, J. (2007), Taking control of nutrition, Editorial, *Nursing Standard*, **22** (5), 1

In Northern Ireland, the Department of Health, Social Services and Public Safety (DHSSPS) also acknowledged the importance of nursing care in delivering good nutrition to patients with its publication *Get your 10 a day* (2007). The Health Minister noted that, *Get your 10 a day* was "*part of a new strategy being progressed by his Department to improve hospital catering and nutritional care"*[15]. The new strategy *HSC Catering Services – A Strategic Framework for Future Delivery* has been drafted and is expected to be in final draft form by the end of the 2009.[16]

In Scotland, in 2003, the NHS Quality Improvement Scotland published a set of six national standards on how NHS Scotland provides food, fluid and nutritional care in hospitals. The primary purpose of the standards was to address the risk of malnutrition in hospitals.[17] Following a review of all NHS Boards in Scotland against the standards, evidence suggested that nutritional care could still be improved. Subsequently, an *Integrated Programme for Improving Nutritional Care* has been established to support NHS Boards in meeting the requirements of the six standards. Some of the main aspects of the programme are the development of a Core Nutrition Pathway; the Protected Mealtimes policy; and the introduction of the key posts of 'Nutrition Champions' whose role is to support NHS Boards to improve nutritional care in hospitals.[18]

There are many reported examples of good practice in improving nutritional care for patients. This paper outlines some examples in the areas of improved hospital policies, for example, with the establishment of multidisciplinary groups; nutritional screening; improved food quality; improved patient assistance; and some smaller scale changes with substantial impact on patient well-being in this regard. The paper outlines one of the most pioneering approaches taken in the UK to improving the overall catering service and nutritional quality, undertaken by the National Health Service in Cornwall. Since 2001, "*The Cornwall Food Programme, working in partnership with the Soil Association, has transformed menus, by serving increased amounts of fresh, locally produced and organic food to patients, visitors and staff*" in its three flagship hospitals.[19]

The discussion section of the paper closes with a key message from Age Concern that, "*despite the core standards, and the guidance, and a raft of other regulations, malnutrition in hospitals continues to be all too prevalent…Much greater priority should be given to the issue of patients not eating well enough*".[20]

1. INTRODUCTION TO MALNUTRITION

1.1 MALNUTRITION AND ITS EXACERBATION IN HOSPITALS

In the current era of focus on obesity, most attention from policy makers and health promotion is aimed at reducing calorie intake via a healthier diet,

[15] *Meeting Patients Nutritional Requirements is Essential – McGimpsey*, DHSSPS Press Release, 14 May 2008
[16] Personal communication, Neil Magowan, Office of the Permanent Secretary, DHSSPS, 11/09/09
[17] Annual Report to Clinical Governance Committee, November 2008, NHS Scotland, Food Fluid and Nutrition Group, Introduction
[18] Improving Nutritional Care, NHS Quality Improvement Scotland, June 2008, page 12
[19] A fresh approach to hospital food, The Cornwall Food Programme, Soil Association, 2007, Executive Summary, page 7
[20] Hungry to be Heard, Age Concern, 2006, page 8

> "*yet a forgotten facet of poor nutrition is malnutrition, defined as an imbalance of energy, protein, and other nutrients that causes measurable adverse effects on tissue and body form and function as well as clinical outcomes*".[21]

Malnutrition is the result of dietary intake of an individual that does not meet his or her nutritional needs. In an individual living in the community it usually has a slow onset resulting from weeks to months when the dietary intake has not matched the individual's requirements. The factors that can decrease dietary intake below needs include those that apply to individuals living in the community and those that apply to those in hospital. The list of such factors includes[22]:

- Difficulties with access to or affordability of shopping;
- Difficulties with food preparation, cooking or eating;
- Reduced appetite due to physical or mental illness, disease or its treatment;
- Lack of interest in food due to life circumstance;
- Inadequate or unappetising meals;
- Repeated fasting for diagnostic tests or certain treatments;
- Difficulties with eating, chewing or swallowing; and
- Difficulty with self-feeding.

> "*The prevalence of malnutrition is undeniably high: up to 40% of patients of all ages are malnourished upon admission to hospital. Certain groups are particularly at risk: older people, patients with cancer, renal disease, chronic heart failure and patients who have had surgery. In all clinical and community settings and across the population, malnutrition is severely unrecognised*".[23]

At any point in time, more than three million people in the UK are malnourished or at risk of becoming malnourished and most of these (93%) are living in the community and around 2% are in hospital. However, hospital provides a vital opportunity to identify malnutrition and provide treatment which can be continued in the community on discharge[24].

Malnutrition is associated with a number of socioeconomic factors, including poverty, social isolation and substance misuse and societal trends such as an ageing population, an increase in care provided in the community, and an increase in conditions associated with malnutrition (e.g. dementia and stroke) look set to increase malnutrition in the future[25].

It has been estimated that in more than 60% of patients, nutritional status deteriorates during their stay in hospital, with those who are already malnourished on admission, particularly affected. There may be a failure in hospitals to identify those with or those at risk of malnutrition; to provide appropriate food; to encourage eating

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[21] European Nutrition for Health Alliance, Malnutrition, www.european-nutrition.org/record.jsp?type=requiredPage&ID=9

[22] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin*, **28**, 87-120, Section 3

[23] European Nutrition for Health Alliance, Malnutrition www.european-nutrition.org/record.jsp?type=requiredPage&ID=9

[24] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Findings, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf

[25] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Findings, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf

and monitor consumption; and to correct inadequate food intake with dietary supplements.[26]

The issue of malnutrition is commonly of particular concern in the elderly population, however, the majority of people at risk of malnutrition in the community are aged less than 65 years[27]. With regard to the elderly population, Age Concern has reported that four out of 10 older people admitted to hospital are already malnourished on arrival, with patients over the age of 80 having a five times higher prevalence of malnutrition than those under the age of 50. In addition six out of 10 older people are at risk of becoming malnourished, or their situation getting worse, in hospital.[28]

1.2 Factors Causing Poor Dietary Intake in Hospitals

Many factors have been identified that cause or contribute to a poor dietary intake in hospital. Schenker identified an extensive list as follows[29]:

- Management failings in food policies and setting of standards for the food service;
- Education – low standard of nutritional knowledge among medical and nursing staff, and lack of basic nutrition knowledge among catering and domestic staff;
- Problems with ordering, including:
    - Unclear menus;
    - Lack of assistance with ordering where needed;
    - Inefficient ordering systems, often too far in advance leading to waste, e.g. original patient may have been discharged or moved and new bed occupant gets meal not of their choice; and
    - Patient's orders not checked to ensure food and portion sizes are correct;
- Poor and unsuitable menu choices, including:
    - Menus not designed to take account of needs, tastes and customs of different patient groups;
    - Inappropriate 'healthy' low-fat meals for undernourished patients;
    - Lack of frequent small meals/snacks for elderly patients; and
    - Meals inappropriate for children;
- Lack of appropriate food choices, including lack of high energy density foods for those malnourished, lack of pureed or semi-solid choices for those with swallowing difficulties;
- Quality and presentation of food, often linked to the purchase of meals externally which are heated up on-site, including
    - General poor presentation and appearance of food;
    - Lack of variety; and
    - Re-heating methods often not conducive to preservation of quality or presentation;
    - Portion sizes inappropriate;
- Interrupted or missed mealtimes caused by;
    - Ward rounds; and

[26] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin*, **28**, 87-120, Section 5

[27] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Findings, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf

[28] *Hungry to be Heard*, The scandal of malnourished older people in hospital, Age Concern (2006), page 6

[29] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin*, **28**, 87-120, Sections 6.1 and 6.2

    - Investigations and procedures;
- Timing of meals;
    - Meal times often inflexible;
    - Long gaps between evening meal and breakfast; and
    - Lack of access to nutritious snacks between meals;
- Medication;
    - Food intake can be decreased as a consequence of the side-effects of drugs such as taste changes, dry or sore mouth and confusion; and
    - Nutritional factors influence drug absorption, action and effectiveness;
- Physical problems with patient and surroundings;
    - A patient may be unable to unwrap food and drink and eating utensils may pose difficulties;
    - False teeth may be poor fitting and/or impaired vision or hearing may impact of ordering food and eating;
    - Tray of food may be placed out of reach;
    - The patient may need to be helped into eating position;
    - Nurses and other staff may be short of time to give assistance at mealtimes; and
    - Unpleasant sights, sounds and odours in ward environment may discourage patients from eating.

1.3 MALNUTRITION AND ITS EFFECT ON ILLNESS AND RECOVERY

Malnutrition has been described as an "*insidious factor which prolongs recovery time, increases the need for high dependency nursing care and sometimes intensive care, increases the risk of serious complications of illness, and at its worse leads to death either from an unnecessary complication or from inanition*".[30]

Malnutrition causes mental and physical changes which are important in the sick patient and impair appetite and ability to eat. These include apathy and depression, inability to concentrate and a general sense of weakness and illness. A loss of muscle power precedes a loss of actual muscle tissue. Weakness in, for example, respiratory muscles makes it difficult for patients to cough effectively leading to an increased risk of chest infection. Muscle weakness also reduces mobility thus delaying recovery and increasing the risk of blood clots and bedsores. The malnourished patient also develops reduced immune resistance to infection, which in turn worsens nutritional status. Lack of nutrients leads to changes in structure and function of the gut causing an increased chance of the spread of intestinal bacteria within the body.[31]

1.4 COST OF MALNUTRITION IN THE UK

BAPEN (British Association of Parenteral and Enteral Nutrition), using the 'Malnutrition Universal Screening Tool' ('MUST') as the basis of calculating the health care cost of malnutrition and any associated disease, estimated that in 2003 the

[30] *A Positive Approach to Nutrition as Treatment*, January 1992, King's Fund Centre, Report of a Working Party Chaired by Professor JE Lennard –Jones on the role of enteral and parenteral feeding in hospital and at home, Section: How does Malnutrition Complicate Illness?

[31] *A Positive Approach to Nutrition as Treatment*, January 1992, King's Fund Centre, Report of a Working Party Chaired by Professor JE Lennard –Jones on the role of enteral and parenteral feeding in hospital and at home, Section: How does Malnutrition Complicate Illness?

annual cost in the UK was in excess of £7.3billion.[32] A breakdown of this figure is provided below:

- Treatment of malnourished patients in hospital – approx. £3.8 billion;
- Treatment of malnourished patients in long-term care facilities – approx. £2.6 billion;
- GP visits – approx. £0.49 billion;
- Outpatient visits – approx. £0.36 billion;
- Enteral[33] and parenteral[34] nutrition, tube feeding and oral nutritional supplementation in the community – approx. £0.15 billion.

The annual additional cost of treating all patients in the general population with medium and high risk of malnutrition and associated disease, compared to treating the same number of patients with low risk of malnutrition and associated disease was estimated to be over £5.3 billion. This was mostly due to more frequent and more expensive hospital in-patient stays and a greater need for long-term care in those with medium and high risk of malnutrition compared to those with low risk.[35]

A more recent total figure for all public expenditure on "*disease-related malnutrition in the UK in 2007 has been estimated at in excess of £13 billion per annum*".[36]

2. SCREENING FOR MALNUTRITION IN HEALTHCARE SETTINGS

2.1 INTRODUCTION TO NUTRITIONAL SCREENING

Nutritional Screening can be defined as "*the routine use of nutritional assessment to highlight patients at risk of nutrition-related complications*".[37] Nutritional screening not only detects undernutrition but also obesity. Reilly highlights how, "*obesity can mask severe tissue wasting during periods of illness; any patient with a rapid or prolonged decline in nutritional status can be at risk of associated complications and can require nutritional support, regardless of current body weight*".[38]

In the UK, a King's Fund Report was among the first to highlight the important role that nutritional screening should play in recognising abnormalities of nutritional status and recommended that a simple assessment of nutritional status should form part of the standard assessment process for all hospital patients.[39] More recently the National Institute for Health and Clinical Excellence (NICE) guideline (2006) on nutritional care of adults in hospital recommended that all patients should be screened on admission and all outpatients at their first clinic appointment. It also

[32] The Cost of disease-related malnutrition in the UK and economic considerations for the use of oral nutritional supplements in adults, BAPEN, www.bapen.org.uk/pdfs/health_econ_exec_sum.pdf

[33] Enteral nutrition is given through a tube or stoma directly into the small intestine, thus bypassing the upper digestive tract.

[34] Parenteral nutrition is feeding a person intravenously, bypassing the usual process of eating and digestion. The person receives nutritional formulas containing salts, glucose, amino acids, lipids and added vitamins.

[35] (see footnote 8)

[36] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Findings, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf

[37] Reilly, H.M. (1996) Symposium on Nutrition in clinical management: malnutrition in out midst, Screening for Nutritional Risk, *Proceedings of the Nutrition Society*, **55**, 841-853

[38] Reilly, H.M. (1996) Symposium on Nutrition in clinical management: malnutrition in out midst, Screening for Nutritional Risk, *Proceedings of the Nutrition Society*, **55**, 841-853

[39] Lennard-Jones, J.E. (Editor) (1992). In *A Positive Approach to Nutrition as Treatment*

advocates that screening should be repeated weekly for all inpatients and for outpatients where there are clinical concerns.[40]

Nutritional screening is not a mandatory requirement and it has been estimated by NICE that, prior to its issue of *Nutritional Support for Adults* in 2006, only 30% of patients were screened on admission to hospital. In that context, the National Patient Safety Agency carried out a structured investigation project into nutritional screening in 10 NHS Trusts. The project was conducted by working with nurses and dieticians from the 10 Trusts and two patient participation meetings were held.[41] The main barriers to compliance with nutritional screening within the first 24 hours of admission were identified as a lack of equipment, lack of leadership, lack of clarity in relation to screening and assessment procedures to be followed, dependency of patients, credibility and ease of use of screening tools, Lack of training for medical and nursing staff in this area; and the fact that such screening is not mandatory.[42]

The key findings from the patient participation meetings were that a majority of patients had not been weighed on admission, recent weight loss and reduced appetite had not been assessed on admission, and patients were unaware that they should have a nutritional assessment completed on admission.[43]

2.2 BAPEN'S NUTRITIONAL SCREENING WEEK SURVEY AND AUDIT

In July 2008, the British Association of Parenteral and Enteral Nutrition (BAPEN) carried out its second Nutrition Screening Week Survey and Audit. BAPEN plan to undertake two more surveys in 2010 and 2011, to amalgamate all the data obtained in the four seasons, and analyse them together to obtain a more complete picture of 'malnutrition' in the UK. Its third Nutrition Screening Week is planned for 12-14 January 2010.[44] A summary of key points extracted from the 2008 survey are as follows[45]:

- 'Malnutrition' was found to affect almost 1 in 3 adults on admission to hospitals; more than 1 in 3 adults admitted to care homes in the previous 6 months; and 1 in 5 in adults on admission to Mental health Units. The overall results are similar to those obtained in the 2007 Nutrition Screening Week, with the exception of a higher prevalence of 'malnutrition' in care homes, found in 2008;
- Nutritional screening policies and practice vary between and within health care settings so malnutrition continues to be under-recognised and under-treated;
- Much of the malnutrition present on admission to institutions originates in the community;

[40] O'Regan, P. (2009) Nutrition for patients in hospital, *Nursing Standard*, **23**, 35-41
[41] Nutritional Screening, Structured Investigation Project, National Patient Safety Agency, NHS (2008), http://npsa.nhs.uk/nrls/improvingpatientsafety/cleaning-and-nutrition/nutrition/nutritional-screening-project
[42] Nutritional Screening, Structured Investigation Project, National Patient Safety Agency, NHS (2008), http://npsa.nhs.uk/nrls/improvingpatientsafety/cleaning-and-nutrition/nutrition/nutritional-screening-project, bullet points are direct extract from Executive Summary
[43] Nutritional Screening, Structured Investigation Project, National Patient Safety Agency, NHS (2008), http://npsa.nhs.uk/nrls/improvingpatientsafety/cleaning-and-nutrition/nutrition/nutritional-screening-project, bullet points are direct extract from Executive Summary
[44] www.bapen.org.uk/pdfs/press_releases/nsw10_media_release.pdf
[45] Nutrition Screening Survey in the UK in 2008, Hospitals, Care Homes and Mental Health Units, BAPEN (2008), www.bapen.org.uk/pdfs/nsw/nsw_report2008-09.pdf

- Data on cancer (not available in 2007 survey) revealed an above average prevalence of malnutrition on admission to hospital (40%) and to care homes (55% of those admitted in the previous 6 months);
- Data on weighing scales (not available in 2007 survey) showed that scales were not regularly calibrated in all hospital wards, care homes and mental health units, therefore failing to meet national recommendations;
- Whilst nutritional screening is linked to care plans in most institutions this is not routinely followed through into discharge planning.

2.3 NICE Guidance on Nutrition Support in Adults

In 2006 the National Institute of Clinical Excellence issued guidance on Nutrition Support in Adults. This included the key clinical priorities for screening for risk of malnutrition and subsequent nutritional support as follows[46]:

- Screening for malnutrition or the risk of malnutrition should be carried out by healthcare professionals, with appropriate skills and training, on all hospital inpatients on admission and all outpatients at their first clinic appointment and should be repeated weekly for inpatients and when there is clinical concern for outpatients. People in care homes should be screened on admission and when there is clinical concern;
- Hospital departments who identify groups of patients with low risk of malnutrition may opt out of screening these groups. Opt-out decisions should follow an explicit process via the local clinical governance structure;
- Nutrition support should be considered in people who are malnourished, as defined by any of the following:
    - A body mass index (BMI) of less than 18.5 kg/$m^{2;}$
    - Unintentional weight loss greater than 10% within the last 3–6 months; or;
    - A BMI of less than 20 kg/m^2 and unintentional weight loss greater than 5% within the last 3–6 months;
- Nutrition support should be considered in people at risk of malnutrition who have eaten little or nothing for more than 5 days and/or are likely to eat little or nothing for the next 5 days or longer; and have a poor absorptive capacity, and/or have high nutrient losses and/or have increased nutritional needs from causes such as catabolism.

2.4 Nutritional Screening Methods

There is no single or standard way of assessing nutritional status. It is a "*dynamic state, which reflects physiological requirements, nutritional intake, body composition and body function*"[47]. A variety of methods can be used in a clinical setting to evaluate these factors including[48]:

- Clinical factors – increased nutrient requirement, increased nutrient loss and impaired nutrient digestion and absorption;
- Physical factors such as appearance, mobility and/or mood of patient; breathing difficulties; and pressure sores and wound healing;
- Dietary factors – change in appetite, meal pattern and food choice and consistency; and

[46] Section directly extracted from - NICE Clinical Guideline 32, Nutrition Support in Adults, Quick Reference Guide, http://www.nice.org.uk/nicemedia/pdf/cg032quickrefguide.pdf

[47] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin,* **28**, 87-120, para. 8.2

[48] Schenker, S. (2003), Undernutrition in the UK, British Nutrition Foundation, *Nutrition Bulletin,* **28**, 87-120, para. 8.2 and8.3

- Anthropometry measurements such as height and weight (actual body weight and percentage weight loss are probably the most important indices of nutritional assessment, with acute unintentional weight loss particularly associated with morbidity and mortality); measurements of lean body mass and assessment of fat stores (tricep skinfold thickness and BMI – body mass index).

Two of the nutritional screening tools in use in clinical settings in the UK are BAPEN's 'MUST' ('Malnutrition Universal Screening Tool')[49], a five-step screening tool which can be used to identify adults who are malnourished, at risk of malnutrition or are obese; and the NRS (Nutritional Risk Score) developed at Birmingham Heartlands Hospital.

The 'MUST' guide (full details of which are available on the BAPEN website[50]) includes five steps and management guidelines which can be used to develop a care plan. It is for use in hospitals, community and other care settings and can be used by all care workers. The five steps are as follows:

1. Health and weight are measured to get a BMI score using the chart provided (if it is impossible to obtain height and weight an alternative procedure is given in the guide);
2. The percentage unplanned weight loss is noted and scored using tables provided in the guide;
3. The acute disease effect is established and scored;
4. The scores from steps 1, 2 and 3 are added together to obtain the overall risk of malnutrition;
5. The management guidelines and/or local policy are used to develop a care plan for the patient based on the level of risk.

The Nutritional Risk Score (NRS) was designed and validated at Birmingham Heartlands Hospital as a result of a nutritional screening project set up in 1992 to raise hospital staffs awareness of nutritional status and its implications. It proved to be easy and appropriate to use by nursing staff on a wide variety of patients. Reilly states that "*It incorporates the basic techniques of assessing nutritional status and food intake, into a structured process to facilitate simple, standardized assessment"* and *"A means of providing guidance for interpretation of findings and for relevant action for patients identified as undernourished or at risk of nutritional depletion was also incorporated*".[51] The following factors are scored in the NRS[52]:

- Weight loss – amount of weight loss and duration;
- Body Mass Index (for adults) – weight in Kg/[height in m]^2)
- Percentile Charts (of expected weight for length) for children;
- Appetite;
- Ability to eat and retain food; and
- 'Stress factors' – effect of medical condition on nutritional requirements.

[49] 'MUST' www.bapen.org.uk/must_tool.html
[50] www.bapen.org.uk/must_tool.html
[51] Reilly, H.M. (1996) Symposium on Nutrition in clinical management: malnutrition in out midst, Screening for Nutritional Risk, *Proceedings of the Nutrition Society*, **55**, 841-853
[52] Reilly, M.M. et. al. (1995), Nutritional screening – Evaluation and implementation of a simple Nutrition Risk Score, *Clinical Nutrition*, **14** (5), 269-273

3. EUROPEAN POLICY ON NUTRITIONAL CARE IN HOSPITALS

Nutritional care in hospitals was addressed in 2003 by a resolution of the Council of Europe signed by 18 countries - *Council of Europe Resolution Food and Nutritional Care in Hospitals*. The 10 key characteristics of good nutritional care in hospitals outlined in the resolution are as follows[53]:

1. All patients are screened on admission to identify the patients who are malnourished or at risk of becoming malnourished. All patients are re-screened weekly.
2. All patients have a care plan which identifies their nutritional care needs and how they are to be met.
3. The hospital includes specific guidance on food services and nutritional care in its Clinical Governance arrangements.
4. Patients are involved in the planning and monitoring arrangements for food service provision.
5. The ward implements Protected Mealtimes to provide an environment conducive to patients enjoying and being able to eat their food.
6. All staff have the appropriate skills and competencies needed to ensure that patient's nutritional needs are met. All staff receive regular training on nutritional care and management.
7. Hospital facilities are designed to be flexible and patient centered with the aim of providing and delivering an excellent experience of food service and nutritional care 24 hours a day, every day.
8. The hospital has a policy for food service and nutritional care which is patient centered and performance managed in line with home country governance frameworks.
9. Food service and nutritional care is delivered to the patient safely.
10. The hospital supports a multi-disciplinary approach to nutritional care and values the contribution of all staff groups working in partnership with patients and users.

Nutrition Day in Europe, organised by the European Nutrition for Health Alliance, aims to "*move the political declaration to reality*" and "*increase awareness and knowledge on the importance of nutrition status and care on recovery from illness in patients, care givers and relatives as well as political and economic decision makers…to reduce the burden of illness and decrease health care costs…as the healthcare cost is similar in magnitude to that of obesity*".[54] Nutrition Day is a project where patients and caregivers in hospitals, nursing homes and intensive care units are interviewed with standardised questionnaires all over Europe. The results of Nutrition Day 2007 demonstrated that[55]:

- 47% of patients interviewed on that day had been hospitalised with signs of disease-related malnutrition;
- Only one out of three patients eat all they have been served leading to their length of stay being increased by 6 days;
- One of five patients ate little or nothing, of these 47% stated it was mainly because of no appetite or nausea, with 11% stating that they did not like the food;

[53] Direct extract from BAPEN website, www.bapen.org.uk/pdfs/coe_leaflet.pdf

[54] European Nutrition for Health Alliance, Malnutrition, www.european-nutrition.org/record.jsp?type=requiredPage&ID=9

[55] European Nutrition for Health Alliance, Malnutrition, www.european-nutrition.org/record.jsp?type=requiredPage&ID=9

- Patients with adequate food intake had a mortality of 1.3% compared with more than 5% for those eating less than a quarter of adequate amount; and
- Hospitalised patients with an increased body weight on admission had a reduced mortality but this apparent 'advantage' was largely negated by a higher risk of becoming ill in the first place.

4. MAIN UK POLICIES ON PATIENT NUTRITION & HOSPITAL FOOD SINCE 2000

4.1 'BETTER HOSPITAL FOOD PROGRAMME'

In 2001 the government looked at how hospital food services could be improved and as a result a panel of experts, chaired by food critic and broadcaster, Loyd Grossman, was established. The resulting *Better Hospital Food Programme* was launched in May 2001. The main aims of the Better Hospital Food Programme were as follows[56]:

1. **PRODUCE A RANGE OF INTERESTING AND NUTRITIOUS RECIPES THAT EVERY NHS HOSPITAL COULD USE.** As well as the new recipes, the traditional 1-3 week cycle of the NHS menu was replaced with a 'Flexi Menu' system in certain trial hospitals. These menus were designed to test the suitability of offering the same fixed (but more extensive) menu for both lunch and evening meals rather the cyclical menu which offered a wide choice over a week but less choice each day;
2. **INTRODUCE PROTECTED MEALTIMES.** The National Protected Mealtimes Initiative introduced periods on a hospital ward when all non-urgent clinical activity stops so that patients are able to eat without being interrupted and staff can offer assistance;
3. **24-HOUR CATERING.** Hot food has not always been available to hospital patients who are admitted late in the day or who miss mealtimes due to treatment. With the introduction of the 24-hour Catering initiative the following were made available 24 hours a day:
    a. Light Bite hot meals e.g. cottage pie, cod in parsley sauce;
    b. Ward Kitchen Service of light refreshments, such as tea or coffee with toast or fresh fruit; and
    c. Snack Boxes containing sandwiches, cheese and crackers, fruit and a drink.

The National Protected Mealtimes Initiative (PMI) was one of the main themes of the *Better Hospital Food Programme* and its implementation was recently reviewed by the National Patient Safety Agency (NPSA). The profile of this Review was raised by the launch of Age Concern's 'Hungry to be Heard' campaign (see Section 1.1 above).

Prior to the NPSA Review, early reports from Hull Royal Infirmary and North Devon Healthcare Trust indicated that there were clear benefits of the PMI in terms of improved patient nutrition and less food wastage.[57] The Review found that the uptake of the PMI remains variable between hospitals and between wards within hospitals across England and Wales and there are inconsistencies around which meal time services are protected and in the type of clinical area that have introduced PMI. The main barriers to the implementation of the PMI identified during the Review were interruptions from - ward rounds, for diagnostic tests, by visitors and by other healthcare professionals. The two key factors identified as causing a failure to

[56] http://195.92.246.148/nhsestates/better_hospital_food
[57] Protected Mealtimes Review, Findings and Recommendations Report, NHS National Patient Safety, www.npsa.nhs.uk/nrls/improvingpatientsafety/cleaning-and-nutrition/nutrition/protected-mealtimes/

implement the PMI were a lack of "Board to Ward" level leadership and a lack of education and training of all staff groups. The critical success factors identified were having a Trust Policy related to Protected Mealtimes, promotion of the initiative, good communication and lleadership at all levels of the organisation regarding the PMI.[58]

4.2 NHS Core Standards and NICE Guidance

From April 2005 there was a new performance framework for the entire NHS with 'Standards' as the main driver for continuous improvements in quality. Core Standards 15a and 15b are directly related to tackling patient nutrition and point to the need for nutritional screening of patients[59]:

C15 Where food is provided, healthcare organisations have systems in place to ensure that:

- *c) patients are provided with a choice and that it is prepared safely and provides a balanced diet;*
- *d) patients' individual nutritional, personal and clinical dietary requirements are met, including any necessary help with feeding and access to food 24 hours a day.*

In February 2006, the National Institute of Clinical Excellence (NICE) issued guidance on Nutrition Support in Adults. This included the key clinical priorities of screening for risk of malnutrition and subsequent nutritional support which goes beyond the provision of hospital food and includes[60]:

- Oral nutrition support, e.g. fortified food, additional snacks and/or sip feeds,
- Enteral tube feeding – the delivery of a nutritionally complete feed directly into the gut via a tube; and
- Parenteral nutrition – the delivery of nutrition intravenously.

4.3 'Improving Nutritional Care'

By 2007, concern around patient nutrition had shifted away from "*poor quality hospital fare*" to "*the help patients need to eat it*"[61]. The Department of Health noted that although,

> "*Following the introduction of the Better Hospital Food Programme in 2001, hospital food is better than at any time since measurement began…insufficient attention to the importance of nutritional care, meals and mealtimes remains evident in a number of NHS and social care organizations….Assistance with eating and dignity at mealtimes were common issues raised in the Department of Health online Dignity in Care Survey (2006)…Living Well in Later Life (2006) identified that many older people are missing meals on hospital wards due to a lack of assistance with eating and drinking…Age Concern recently published Hungry to be Heard (2006) a compelling report into malnourished older people in hospital…The most recent Healthcare Commission Inpatient Survey (2006) found …a rise in the proportion of patients who needed help from staff to eat their meals*

[58] Extract from Executive Summary of *Protected Mealtimes Review, Findings and Recommendations Report*, NHS National Patient Safety, www.npsa.nhs.uk/nrls/improvingpatientsafety/cleaning-and-nutrition/nutrition/protected-mealtimes/

[59] Standards for Better Health, Department of Health (July 2004), www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyandGuidance/DH_4086665

[60] NICE Clinical Guideline 32, Nutrition Support in Adults, Quick Reference Guide, page 4 http://www.nice.org.uk/nicemedia/pdf/cg032quickrefguide.pdf

[61] Gray, J. (2007), Taking control of nutrition, Editorial, *Nursing Standard*, **22** (5), 1

saying they did not get enough help, increasing from 18% in 2005 to 20% in 2006".[62]

To address the issues identified, the Department of Health joined forces with a wide range of stakeholders (Nutrition Summit Stakeholders Group) and produced the action plan *Improving Nutritional Care,* A joint Action Plan from the Department of Health and Nutrition Summit Stakeholders, NHS, (October 2007). In the same year the Royal College of Nursing (RCN) launched its *Nutrition Now* Campaign in response to the fact that "*most nurses want to spend more time with their patients so they can ensure good nutrition and hydration*".[63]

A selection of the main action points under the five key priorities of the action plan *Improving Nutritional Care* are included below and are extracted from the Action Plan[64]:

KEY PRIORITY 1. TO FURTHER RAISE AWARENESS OF THE LINK BETWEEN NUTRITION AND GOOD HEALTH AND THAT MALNUTRITION CAN BE PREVENTED:
All Summit stakeholders will support and widely promote the Council of Europe Alliance (UK)'s *10 key characteristics of good nutritional care in hospitals*, creating a common understanding of what good nutritional care looks like in hospital settings and how it should be organised (see Section 3 above). The Council of Europe Alliance (UK) will develop the 10 key characteristics to make them more suitable for following in a social care environment and will ensure that they also refer to the importance of good hydration.

KEY PRIORITY 2. TO FURTHER ENSURE THAT ACCESSIBLE GUIDANCE IS AVAILABLE ACROSS ALL SECTORS AND THAT THE MOST RELEVANT GUIDANCE IS APPROPRIATE AND USER-FRIENDLY.
All Summit organisations will ensure that any guidance they issue in future is made simpler and easier to read and co-ordinated with guidance produced by other stakeholders. The RCN, NPSA, Water UK, HCA, NHS Supply Chain and Patients Association are all working together to publicise their recently launched *Hydration best practice toolkit for hospitals and healthcare.* This initiative will raise awareness of the benefits of drinking water to patient care. Age Concern has teamed up with the RCN to develop a free resource pack for hospitals and patients to help promote good nutrition, enable more people to assist at mealtimes, and encourage patient involvement and feedback.

KEY PRIORITY 3. TO FURTHER ENCOURAGE NUTRITIONAL SCREENING FOR ALL PEOPLE USING HEALTH AND SOCIAL CARE SERVICES.
The Department of Health and the Nutrition Summit stakeholder group will communicate the importance of NHS and social care organisations implementing nutritional screening for all. The health and social care regulators will look for evidence of nutritional screening in their assessments of local services. BAPEN aims to repeat the Nutrition Screening Week on an annual basis and, given appropriate funding, will expand the initiative to cover GP surgeries, sheltered housing and other settings.

[62] *Improving Nutritional Care,* A joint Action Plan from the Department of Health and Nutrition Summit Stakeholders, NHS, October 2007, page 19
[63] Gray, J. (2007), Taking control of nutrition, Editorial, *Nursing Standard*, **22** (5), 1
[64] *Improving Nutritional Care,* A joint Action Plan from the Department of Health and Nutrition Summit Stakeholders, NHS, October 2007, page 1925-31

KEY PRIORITY 4. TO FURTHER ENCOURAGE PROVISION AND ACCESS TO RELEVANT TRAINING FOR FRONT-LINE STAFF AND MANAGERS ON THE IMPORTANCE OF NUTRITION FOR GOOD HEALTH AND NUTRITIONAL CARE.

The Nutrition Action Plan Delivery Board will advise on any gaps in current training provision and take steps to encourage training providers to fill those gaps and all Nutrition Summit stakeholders will promote key nutritional training to their members. From September 2008 the NPSA will require nutrition principles to be taught and assessed in practice as part of the pre-registration nursing programme. The NHS Core Learning Unit will run an online training session on nutritional care and assistance with eating from May 2008. The session will be available to all health and social care staff.

KEY PRIORITY 5. TO FURTHER CLARIFY STANDARDS AND STRENGTHEN INSPECTION AND REGULATION.

'Skills for Care' will work with the Commission for Social Care Inspectorate (CSCI)[65] to develop training for its inspectors around awareness of what good nutritional care looks like in practice. The Healthcare Commission (see footnote 40) will continue to assess the performance of NHS organisations through the annual health check process against the core standards relevant to Dignity in Care – these include core standards C15a and 15b on nutrition. Services will be assessed on whether people have nutritious and attractive meals and snacks, at a time and place to suit them.

4.4 RCN 'NUTRITION NOW' CAMPAIGN

As stated above, *Nutrition Now* is the clinical campaign launched in 2007 by the Royal College of Nursing (RCN). The aim of the campaign is to raise the standards of nutrition and hydration in hospitals and the community. "*The campaign gives the nursing community the practical tools, support and evidence it needs to make nutrition a priority*".[66] Around the launch of the campaign an RCN survey of over 2000 nurses revealed that 42% said they did not have enough time to ensure patients received good nutrition; 49% said that some of the main barriers were lack of food availability outside of main mealtimes and insufficient staff to ensure patients get the help they need to eat and drink.[67] The *Nutrition Now* campaign stresses the leadership role that nurses take on the issue of nutrition and hydration and gives "*nurses the practical tools, support and evidence they need to make nutrition a priority in the area where they work*".[68]

A set of RCN principles for Nutrition and Hydration were published at the launch of the 'Nutrition Now' campaign as outlined below[69]:

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[65] The Healthcare Commission, Commission for Social Care Inspection and the Mental Health Act Commission ceased to exist on 31 March 2009. The Care Quality Commission is the new health and social care regulator for England www.cqc.org.uk

[66] http://www.rcn.org.uk/__data/assets/pdf_file/0006/187989/003284.pdf

[67] www.rcn.org.uk/newsevents/campaigns/nutritionnow/news_stories/news_one

[68] www.rcn.org.uk/newsevents/campaigns/nutritionnow/news_stories/news_one

[69] Principles directly extracted from:http://www.rcn.org.uk/newsevents/campaigns/nutritionnow/principles

PRINCIPLE: ACCOUNTABILITY

Every member of the nursing team is accountable for:

- Providing some aspect of nutritional care, be that at frontline delivery or executive board level;
- Assessing, planning, implementing and evaluating the nutritional and hydration needs of patients, clients and users and
- Contributing to ongoing monitoring, evaluation and review of the nutrition of patients, clients and users through clinical governance systems.

PRINCIPLE: RESPONSIBILITY

All nurses are responsible for:

- Providing person-centred and evidence-based care. In relation to nutrition this means ensuring that all aspects of nutrition are taken into account and acted upon in the context of the person's individual needs;
- Keeping up to date about nutrition and hydration through continuous professional development;
- Challenging poor practice in relation to nutrition and hydration;
- Assessing the environment and ensuring it supports good nutritional care;
- Evaluating the impact of nutrition and hydration care plans and making the necessary changes;
- Contributing to multi-professional and multi-agency working that achieves seamless nutritional care;
- Dedicating time to prioritise the nutritional needs of patients, clients and users with protected meal times; and
- Knowing the recognised process in each organisation for anticipating, minimising, recording and reporting nutritional risks to patients, clients and users.

PRINCIPLE: LEADERSHIP AND MANAGEMENT

- Executive nurses have the responsibility for ensuring that nutritional care is prioritised at board level and that systems are in place to support this;
- Team leaders are responsible for enabling effective organisation of care so that the provision of food and nutrition will be prioritised and patients, clients and users experience care that meets their needs as they see them and
- All nurses in their leadership role are responsible for enabling others to provide good nutritional care.

4.5 POLICY IN NORTHERN IRELAND

In Northern Ireland, the Department of Health, Social Services and Public Safety (DHSSPS) also acknowledged the importance of nursing care in delivering good nutrition to patients with its publication *Get your 10 a day* (2007). The Health Minister, noted that *Get your 10 a day* was "*part of a new strategy being progressed by his Department to improve hospital catering and nutritional care to make sure that all patients, particularly vulnerable groups, have access to a healthy diet…In Northern Ireland, Trust spend around £39 million every year on hospital catering, which…relates to an average of just £5 per day for feeding one patient*"[70]. The new strategy *HSC Catering Services – A Strategic Framework for Future Delivery* has been drafted and is expected to be in final draft form by the end of the 2009.[71]

[70] *Meeting Patients Nutritional Requirements is Essential – McGimpsey*, DHSSPS Press Release, 14 May 2008

[71] Personal communication, Neil Magowan, Office of the Permanent Secretary, DHSSPS, 11/09/09

The 10 standards from *Get your 10 a day* (2007) are outlined below and are directly extracted from the publication[72]:

1. All patients admitted to hospital are screened for risk of malnutrition (using a reliable and valid tool such as MUST);
2. Following screening by nurses, patients who are identified as malnourished or at risk of malnutrition are referred for and receive a nutritional assessment appropriate to their level of need (this is a more detailed process than screening);
3. Patients who require nutritional intervention will have a nursing care plan devised, implemented, evaluated and renewed to reflect the patient's nutritional and physical care needs and which documents both the dietetic plan and the nursing care assessment;
4. Patients who require food and/or fluid intake to be monitored will have that activity carried out in a way that is informative, accurate and up-to-date (the amount of food and fluid a patient consumes must be accurately known as it is a vital indicator of care and treatment);
5. Patients who require support with eating and drinking are clearly identified (e.g. coloured tray/napkin system);
6. Patients who require support with eating and drinking receive assistance when it is required (e.g. hand hygiene, positioning, specific cutlery, actual 'hands-on' assistance);
7. Patients will be served their food and allowed to eat their meals without disruption (mealtimes protected from non-urgent activities);
8. Patients receive their meals in a physical environment that is conducive to enjoying their food (consideration given to ward environment, tables seating, utensils etc.);
9. Patients are offered a replacement meal if they miss their meal for whatever reason and can access snacks at ward level (hot food and snacks available outside main mealtimes); and
10. The patient receives food presented in a way that is appealing and appetising.

4.6 Policy in Scotland

In Scotland, in 2003, the NHS Quality Improvement Scotland (NHS QIS) published a set of six national standards on how NHS Scotland provides food, fluid and nutritional care in hospitals. The primary purpose of the standards was to address the risk of malnutrition in hospitals[73]:

Standard 1 – deals with the policies and strategies that NHS Boards need to have in place to ensure that high quality nutritional care is provided.
Standard 2 – covers the assessment of each patient's nutritional status and requires that a care plan is put in place.
Standard 3 – looks at the plans and processes needed to support the provision and delivery of food and fluids to patients in hospitals.
Standard 4 – covers the important elements of choice and quality of the dining experience in Hospitals.
Standard 5 – relates to the patients need for appropriate information about nutritional services and the structures required for patient feedback and views.
Standard 6 – is about the education and training provided to NHS Scotland staff on nutritional care.

[72] http://www.dhsspsni.gov.uk/food_standards-10_a_day.pdf

[73] Annual Report to Clinical Governance Committee, November 2008, NHS Scotland, Food Fluid and Nutrition Group, Introduction

Following a review of all NHS Boards in Scotland against Standards 1, 2 and 6, between 2005 and 2006, evidence suggested that nutritional care could still be improved. Subsequently, an *Integrated Programme for Improving Nutritional Care* has been established to support NHS Boards in meeting the requirements of the six standards. One of the main aspects of the programme has been the development of a Core Nutrition Pathway which "de*fines critical points in the patient journey at which nutritional requirements should be assessed, recorded and acted upon*".[74] The Core Nutrition Pathway has six key stages and although a linear model it is accepted that for patients the transition between stages may not be so clearly defined. The six stages are summarised below[75]:

STAGE 1 – *patient is admitted to hospital*;

STAGE 2 – *admission documentation is completed* – opportunity for general questions to be incorporated into routine admission process such as other conditions linked to diet e.g. celiac disease, food likes and dislikes, portion sizes, food allergies, religious/cultural requirements, and assistance required to eat and drink;

STAGE 3 – *nutrition screening* – The National Nutrition Programme Board in Scotland has specified the 'MUST' as the preferred nutrition risk screening tool for adults in hospital;

STAGE 4 – *nutritional care plane developed* – an individual care plan is developed that includes information gathered on admission and the outcome of Stage 3 nutrition screening;

STAGE 5 – *Implementation and monitoring of care plan* – repeat nutritional screenings must be undertaken in accordance with clinical need as the care plan is implemented and monitored;

STAGE 6 – *discharge from hospital* – Prior to discharge to home to another care setting, a discharge plan should be prepared including relevant nutritional information.

Additional aspects of the *Integrated Programme for Improving Nutritional Care* are the Protected Mealtimes policy stating that, "*all non essential staff activity (clinical and non clinical) is stopped during patient mealtimes*"[76] and the introduction of the key posts of 'Nutrition Champions' whose role is to support NHS Boards to improve nutritional care in hospitals[77]. In 2008, £1.08 million was made available to allow NHS Boards to appoint the Nutrition Champions.[78]

5. GOOD PRACTICE EXAMPLES IN IMPROVING NUTRITIONAL CARE FOR PATIENTS

In Stepping Hill Hospital (Stockport NHS Foundation Trust), a multidisciplinary Nutritional Benchmarking Group has been in existence from November 2005 with the

[74] Improving Nutritional Care, NHS Quality Improvement Scotland, June 2008, Introduction, page 1
[75] Improving Nutritional Care, NHS Quality Improvement Scotland, June 2008, pages 6-8
[76] Improving Nutritional Care, NHS Quality Improvement Scotland, June 2008, page 10
[77] Improving Nutritional Care, NHS Quality Improvement Scotland, June 2008, page 12
[78] Better food on the menu in hospitals, www.scotland.gov.uk/News/Releases/2008/07/08090936

aim of improving the nutritional outcomes for the patients. Among the changes it implemented[79] were the introduction of 28 nutritional standards; an audit tool; from 2005, over 200 volunteers were trained in basic feeding; the 'Red Tray System' was introduced in 2007 so that any patient on a specialised diet or requiring assistance has their meals served on an easily identifiable red tray; from July 2007, all patients with Dysphagia (difficulty in swallowing) were able to choose their own meal from a menu (previously the Dietetic department had chosen the meals for these patients); and from May 2007, nurses involved in assessing patients for malnutrition have received training in the 'MUST' (as recommended in NICE guidance 2006).

With regard to nutritional screening, West Hertfordshire Hospitals NHS Trust also established a multidisciplinary nutrition group and undertook an audit on seven pilot hospital wards. The audit revealed that not all weighing scales were working properly, not all areas had appropriate scales, not all assessments were properly recorded and not all staff prioritised the weighing of patients. As a result the facilities department worked with the manual handling advisor to ensure that all weighing scales were fit for purpose, a poster and book-mark were developed for all staff to raise the importance of good nutritional care and a teaching pack was developed for dieticians to use in ward based teaching sessions on assessing patients nutritional risk score. The multidisciplinary team also revitalised the Trust's Protected Mealtime Initiative.[80]

The difficulties faced when introducing a Protected Mealtimes Policy are highlighted by University Hospitals Coventry and Warwickshire NHS Trust. Many positive changes were made to support the implementation of the policy in 2005. For example, changes to visiting times, cleaning times, changes to ward rounds and extended ranges of meals and snacks, Davidson noted that, "*nevertheless, patients are still being taken off wards for routine diagnostic tests*".[81] A similar Protected Mealtimes policy has also been implemented by Newham County Hospital which includes a Red Tray system for those needing assistance to eat in its medical, elderly care, women and family health directorates.[82]

The use of trained volunteers is being employed by some Trusts to ensure good nutritional care. For example, Addenbrooke's Hospital in Cambridge has launched a mealtime volunteer scheme with members of the public working alongside nutrition assistants to help patients eat, provide patients with company and ensure they eat the meals.[83]

One of the most pioneering approaches to improving the overall catering service, including nutritional quality, has been undertaken by the National Health Service in Cornwall. Since 2001, "*The Cornwall Food Programme, working in partnership with the Soil Association, has transformed menus, by serving increased amounts of fresh, locally produced and organic food to patients, visitors and staff*" in its three flagship hospitals: the Royal Cornwall Hospital, St Michael's and the West of Cornwall

[79] Arkwright, S (June 2007), Stockport NHS Foundation Trust http://www.rcn.org.uk/__data/assets/word_doc/0007/69028/Nutritional_benchmarking_group.doc

[80] Enhancing Nutritional Care, Royal College of Nursing, page 19 www.rcn.org.uk/nutritionnow

[81] Davidson, A. and Scholefield, H. (2005), Protecting mealtimes, *Nursing Management*, **12** (5), 32-36

[82] www.rcn.org.uk/newsevents/campaigns/nutritionnow/case_studies

[83] Volunteers help patient nutrition, http:///news.bbc.co.uk/1/hi/england/cambridgeshire/7915931.stm

Hospital.[84] Without increasing its costs and remaining inside the Royal Cornwall Hospitals' Food budget of £2.50 per patient per day, the projects successes include[85] the introduction of a local, clotted–cream ice cream with a high calorie content which has reduced the amount spent on powdered drink supplements given to elderly patients; the introduction of a locally made fish cake to replace the former nationally procured fishcake; the patient feedback showing increased satisfaction with the quality and taste of the meals and 83% of the Royal Cornwall Hospitals Trust's £975,000 food budget spent with companies based in Cornwall (in 2006).

The Royal Cornwall Hospital team also changed the way the meals were prepared. It built the NHS's first central production unit, using energy-efficient equipment. Fresh food is prepared by a team of chefs and menus include Hungarian goulash, tarragon chicken, fish pie and leek and potato hotpot. Those meals not needed immediately are blast frozen so they remain fresh and meals are delivered either chilled or frozen to hospitals where each ward has a regeneration trolley.[86]

Around one fifth of hospitals in the UK provide patient food via a meal assembly food service system. In such a system no food preparation takes place on site, leaving the hospital catering service to focus on assembly, regeneration and service of the meals, which are purchased from specialised food manufacturers.[87] There are examples of alternative methods being used to attempt to provide patients with better choice and quality. Improving patient choice of food was the aim of the project at County Durham and Darlington Primary Care Trust. As a result, a freezer was ordered to allow frozen meals to be stored and patients to choose as required; a four week menu was agreed in advance; light snacks were added to the menu and freezer and ward stock was agreed for added variety and flexibility.[88]

The 'Steamplicity' concept has also recently been developed[89],

> "*using a static extended choice menu, revised patient ordering procedures, new cooking processes and individual patient food heated/cooked at ward level…in hospital catering [it] relies on a sealed pack (plate) incorporating a valve. Food, raw, fully and partially cooked, is plated in a central production unit, chilled (<5 ^{o}C) and distribute to hospital wards where it remains chilled for up to a further 4 days. When required, meals are heated/cooked individually in a microwave to > 75 ^{o}C which allows patient choice at short notice, ensures better quality food.*"

A small study by Bournemouth University in a large NHS teaching hospital indicated that patients preferred the 'Steamplicity' system overall compared to the current cook-chill system in operation on the ward, whereby a cyclical menu was used with

[84] A fresh approach to hospital food, The Cornwall Food Programme, Soil Association, 2007, Executive Summary, page 7
[85] A fresh approach to hospital food, The Cornwall Food Programme, Soil Association, 2007, Executive Summary, page 8
[86] Neustatter, A. *Green Living: Recipe for recovery: Since when did anyone like, yet rave about, hospital food? Well, they do in Cornwall, where it's locally sourced and freshly made,* The Guardian, December 11,, 2008
[87] Edwards, J.S.A and Hartwell, H.J. (2006), Hospital food service: a comparative analysis of systems and introducing the 'Steamplicity' concept, *J. of Hum. Nutr. Diet*, 19. pages 421-430
[88] Enhancing Nutritional Care, Royal College of Nursing, page 16 www.rcn.org.uk/nutritionnow
[89] Edwards, J.S.A and Hartwell, H.J. (2006), Hospital food service: a comparative analysis of systems and introducing the 'Steamplicity' concept, *J. of Hum. Nutr. Diet*, 19. pages 421-430

food ordered a day before. The wastage was considerably less and the mean intake of food per patient was increased with the 'Steamplicity' method.[90]

The Clinical Nutrition Unit at Queen's Medical Centre, Nottingham is a unit for highly dependent adult patients who require complex nutritional support having spent weeks in the intensive care unit. When finally reintroduced to normal eating, many of the patients have decreased appetites and increased nutritional needs. A dedicated kitchen was opened on this unit to offer "*highly nutritious food that is well presented and produced in close proximity to patients*" thus assisting the patients to integrate back into patterns of normal nutrition. The dedicated kitchen allows hot food to be cooked to order at short notice and in appropriate portion sizes. Since the kitchen was opened the use of liquid supplement drinks has fallen as the patients prefer the real food and snacks.[91]

Even small changes can have a major impact on patient nutrition. For example in Southampton University Hospitals NHS Trust, the Trust makes its own Victoria sponges and fruit cakes using protein supplements and additional calories from whole milk and eggs, so that the cakes provide the same calorie and protein intake as sip supplements. Although the cakes cost £6000 per year to produce, the Trust had been wasting £15,000 per year on sip supplements that were thrown away. There have been benefits for the elderly patients who enjoy the cakes with tea and appreciate that their "*nutrition is not medicalised*".[92]

An example of good practice in the area of religious sensitivity is demonstrated by Bradford Teaching Hospitals NHS Foundation Trust where patients and staff are offered a choice of two halal meals at every sitting. The menu in general at the hospital is diverse and has been developed in consultation with dieticians, patient representatives, the equality and diversity department and multi-faith representatives.[93]

6. DISCUSSION

Hospital malnutrition and its consequences came to attention in 1992 with the publication of a King's Fund Report[94] which stated that "*under-nourished patients had a greater risk of medical complications, required more drug treatment, took longer to recover and were more likely to re-admitted to hospital following discharge compared with well-nourished patients*".[95]

The physiological reasons behind malnutrition of patients in hospitals are relatively straightforward to understand, i.e. the effects of the disease process or treatment on appetite or energy expenditure in tandem with inadequate nutritional support. However, as described in section 1.2 of this paper, the underlying practical reasons

[90] Edwards, J.S.A and Hartwell, H.J. (2006), Hospital food service: a comparative analysis of systems and introducing the 'Steamplicity' concept, *J. of Hum. Nutr. Diet*, 19. pages 421-430
[91] Nutrition Now, RCN, Case Study 1, *Can cook, does cook*, www.rcn.org.uk/newsevents/campaigns/nutritionnow/case_studies
[92] Older patients get to have their cake in the name of nutrition, *Nursing Standard*, **22** (11), 7
[93] Carlowe, J. (2007) Something for everyone, *Nursing Standard*, **22** (4), 20-21
[94] *A Positive Approach to Nutrition as Treatment*, January 1992, King's Fund Centre, Report of a Working Party Chaired by Professor JE Lennard –Jones on the role of enteral and parenteral feeding in hospital and at home, Section: How does Malnutrition Complicate Illness?
[95] Ruxton, C. H. S. et. al. (2008) Risk of malnutrition in a sample of acute and long-stay NHS Fife in-patients: an audit, *J Hum Nutr Diet*, **21**, 81-90

are more complex and cover a wide range of factors, including poor quality or unsuitable meals, lack of assistance with feeding, failure of staff to identify malnutrition, or lack of appropriate hospital policies.[96]

It is recognised that the frequent failure to recognise and treat malnutrition, especially where it is common, is unacceptable. According to Elia et. al. "*Failure to recognise hospital inpatients with malnutrition or to refer them for further assessments and treatment has been reported in 60-85% of patients in UK hospitals…there is also a frequent failure to identify malnutrition in hospital outpatients*".[97] As has been discussed in Section 4, NICE guidance on nutritional care of adults in hospital recommends that all patients should be screened on admission. It advocates routinely screening all hospital inpatients on admission and all outpatients at their first clinic appointment and proposes that screening should be repeated weekly for all inpatients and for outpatients where there are clinical concerns[98]. Some research also indicates that all new patients registering with a GP should have nutritional screening, and the baseline result recorded for future reference.[99]

The Advisory Group on Malnutrition, Led by BAPEN report that a long-term national strategy is required to tackle malnutrition, as the effectiveness of current policy is being hampered by the fact that it falls mostly under the responsibility of the Department of Health, and the "*Cabinet Office's Strategy Unit should build on its recent work in food policy by initiating the development of a comprehensive, joined-up nutrition strategy. This strategy should have the aims of combating: food poverty; nutritional inequalities; poor quality nutritional care; and gaps in services*".[100]

In addition the Advisory Group recommend more specific actions in the health field, including[101]:

- Removing barriers to nutritional screening within healthcare settings, for example, the Department of health should re-issue guidance to all health, housing and social care providers detailing both the weight and height measuring equipment required to undertake nutritional screening;
- Requirements to undertake nutritional screening should be included in the Quality and Outcomes Framework of the GP contract;
- Nutritional screening should be incorporated as a Directed Enhanced Service in the community pharmacy contract; and
- The importance of nutritional care should be reflected in the system of Payment by Results, both for secondary and primary care.

Age Concern have highlighted the particular problem of elderly patients becoming malnourished during a stay in hospital and revealed in a 2008 press release that 43% of NHS Trusts had still not introduced Protected Mealtimes and one in three NHS Trusts had not introduced a Red-Tray System to alert staff to those patients needing

[96] Ruxton, C. H. S. et. al. (2008) Risk of malnutrition in a sample of acute and long-stay NHS Fife in-patients: an audit, *J Hum Nutr Diet*, **21**, 81-90
[97] Elia, M. et. al. (2005), To screen or not to screen for adult malnutrition? *Clinical Nutrition*, **24**, 867-884
[98] O'Regan, P. (2009) Nutrition for patients in hospital, *Nursing Standard*, **23**, 35-41
[99] Elia, M. et. al. (2005), To screen or not to screen for adult malnutrition? *Clinical Nutrition*, **24**, 867-884
[100] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Recommendations, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf
[101] *Combating malnutrition: Recommendations for Action* (2008), Report from the Advisory Group on Malnutrition, Led by BAPEN, Edited by M. Elia and C.A. Russell, Key Recommendations, www.bapen.org.uk/pdfs/reports/advisory_group_report.pdf

assistance with eating.[102] These findings came two years after its *Hungry to be Heard* publication (2006), when it proposed a seven step plan to "*end the scandal of malnutrition in hospitals*".[103] The seven steps proposed are summarised below[104]:

1. Hospital staff must listen to older people, their relatives and carers – older people must be consulted about hospital menus, their meal requirements and preferences and hospitals must respond to what they are told;
2. All ward staff must become 'food aware' – as the majority of older patients will have been admitted as an emergency, hospital staff need to find out their normal eating patterns, any help they need etc;
3. Hospital staff must follow their own professional codes and guidance from other bodies – food and help with eating are important elements in maintaining dignity;
4. Older people should be assessed for the signs or danger of malnourishment on admission and at regular interval during their stay;
5. Introduce 'Protected Mealtimes';
6. Implement a 'red tray' system and ensure that it works in practice – patients that need help with eating should be identified on admission and a system put in place to signal the need for help;
7. Use volunteers where appropriate – hospitals should use trained volunteers, where appropriate, to provide additional help and support at mealtimes.

With respect to elderly patients in particular, Age Concern highlight that, "*despite the core standards, and the guidance, and a raft of other regulations, malnutrition in hospitals continues to be all too prevalent… there is clearly a gap between how trusts think they are performing and the experiences of older people in hospitals… as older people are the main users of the NHS, this should be reflected in the services provided by trusts. Much greater priority should be given to the issue of patients not eating well enough*".[105]

[102] Hospitals still not doing enough to tackle malnutrition, Age Concern Press Release, 25th August, 2008
[103] Hungry to be Heard, Age Concern, 2006, page 20
[104] Hungry to be Heard, Age Concern, 2006, page 20-26
[105] Hungry to be Heard, Age Concern, 2006, page 8