“Not what I want and not when I want it”
The challenge of meeting the nutritional needs of hospitalised patients

Elizabeth Weekes
Consultant Dietitian & NIHR Clinical Lecturer
Department of Nutrition & Dietetics
Guy’s & St Thomas’ NHS Foundation Trust
London
Introduction

• What is malnutrition?

• Why does it matter?

• Why does it happen?

• What are we doing about it?
Malnutrition

• A state of nutrition in which a deficiency or excess (or imbalance) of energy, protein and other nutrients causes measurable adverse effects on tissue and/or body function and clinical outcome (Elia, 2005)

• *Starvation-related malnutrition* e.g. resulting from social and/or psychological or environmental issues

• *Disease-related malnutrition*
  – Chronic e.g. associated with cancer, COPD or chronic kidney disease
  – Acute e.g. associated with severe illness or injury (Jensen et al., 2010)
Impact on the individual

- Widespread adverse effects on physical, social and psychological function (*Elia et al, 2003*)
  - ↓ muscle strength
  - ↓ mood
  - ↓ ability to perform everyday tasks
  - ↓ quality of life

- In the presence of illness malnutrition results in delayed recovery, increased complications and increased mortality (*NICE, 2006*)
The malnutrition carousel

30% patients admitted to hospital are malnourished

Up to 70% patients discharged from hospital weigh less than on admission

Up to 70% patients discharged from hospital weigh less than on admission

GP visits  
Hospital admissions  
Quality of life  
Activities of daily living  
mortality

↑ mortality  
↑ complications  
↑ length of stay  
↑ support after discharge

(Elia, 2010)
Impact on society

• Malnourished individuals cost twice as much to manage as the well nourished (Guest et al., 2011)

• Management of malnutrition costs the health and social care services £ 13 billion per annum (Elia & Russell, 2009)
How big is the problem?

- 3 million malnourished or at risk of malnutrition at any time in the UK (*BAPEN, 2011*)
- 1.1 million aged over 65 years old
The case for change

• Early identification and treatment of malnutrition would save the NHS £13 million a year even after costs of training and screening (*NICE, 2006*)

• The estimated saving with screening and early intervention is £71,800 per 100,000 people (*NICE, 2012*)

• Malnutrition is the sixth largest source for NHS savings (*NICE, 2013*)

• Not to mention the potential impact on patients’ outcomes and quality of life
Factors affecting nutritional intake

**Psychological**
- Dementia
- Depression
- Bereavement
- Mental illness
- Anxiety
- Apathy
- Motivation
- Loneliness
- Self-esteem
- Independence
- Substance abuse

**Disease effects**
- Anorexia
- Fatigue
- GI dysfunction
- Pain
- Co-morbidities
- Dentition
- Swallowing difficulties
- Medical interventions
- Surgery
- Medication

**Social**
- Financial issues
- Social isolation
- Access to shops
- Access to health and social care services
- Social networks

**Goals of treatment**
- Diagnosis
- Prognosis
- Duration of nutritional support

*Kelly et al (2000); Patel & Martin (2008); Mudge et al (2011)*
Why don’t patients eat in hospital?

- Being in an uncomfortable position to eat
- Food out of reach
- Utensils or packaging presenting difficulties for eating
- Environmental factors such as staff interrupting meal-times
- Long gaps between evening meal and breakfast
- Prolonged or inappropriate nil by mouth

How much do patients eat in hospital?

• Meals provide 2000 kcal/day and 78g protein/day 
  \( (Dupertius\ et\ al,\ 2003) \)

• 30 - 40 % hospital food is wasted  
  \( (Barton\ et\ al,\ 2000;\ Weekes,\ 2007) \)

• 70 % patients do not eat enough in hospital  
  \( (Dupertius\ et\ al,\ 2003) \)
Managing malnutrition – it’s complicated

- Neighbours
- Medical Practitioners
- Dietitians
- Physiotherapists
- Nurses
- Occupational Therapists
- Family and/or carers
- Friends
- Social workers
- Voluntary sector
- Catering services
- Health care assistants
- Speech & Language Therapists
- Dentists
- Pharmacists
Malnutrition: everyone’s responsibility

...and no-one’s responsibility
## Governments and National bodies

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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| 2000 | “Better Hospital Food” programme  
Patient Environment Action Teams |
| 2003 | Council of Europe “10 key characteristics of good care in hospitals”  
Welsh Assembly “Fundamentals of care: guidance for health and social care staff” |
| 2006 | NICE Clinical Guideline 32 – Nutrition support in adults |
| 2007 | European Union declares malnutrition is an urgent public health problem |
| 2012 | Scottish Parliament “Improving nutrition ……improving care” |
| 2015 | National Nutrition Strategy? |
Benchmarking

2006  NICE Guideline 32 “Nutrition support in adults”

2010  Essence of Care benchmarks for food and drink

2011  Care Quality Commission – Outcome 5 Meeting nutritional needs

2012  NICE Quality Standards for Nutrition
Multi-disciplinary management

Good nutritional care at a glance

All NHS Trusts need to work towards developing highly reliable systems to deliver good nutritional care and should provide the following:

- Nutrition steering Committee
- Nutrition Support Team
- At least one nutrition nurse
- Ward to Board Nutrition Dashboard
- All frontline staff to receive education re: nutrition and hydration
- BAPEN’s nutrition screening e-learning module
- Harm free care hydration e-learning module
- All patients must be screened on admission
- Appropriate screening in outpatients
- Referral to Dietitian / specialist nutrition service as appropriate
- Personalised nutritional care plan
- Food and fluid intake chart as appropriate
- Protected Mealtimes
- Red tray system
- Ongoing monitoring
- Discharge planning / care across boundaries

Source: BAPEN Commissioning Toolkit (2012)
Nutrition Steering Committee

- Remit across the Trust
- Multi-disciplinary
- Clarifies roles and responsibilities
- Develops a nutrition strategy and relevant policies e.g. nutrition screening
- Leads on nutrition training
- Tests and embeds initiatives e.g. protected mealtimes
- Addresses the needs of vulnerable groups and at risk individuals
Protected mealtimes and mealtime environment

Protected mealtimes
- No RCTs
- Observational studies
  - ↓ mealtime interruptions
  - ↑ feeding assistance
  - Contradictory effects on energy and protein intake

Mealtime environment
- Family-style dining and protected mealtimes or dining room
  - ↑ energy intake
  - ↑ nutritional status

Weekes (2007); Young et al (2012)
Red trays and feeding assistance

Red trays
• No RCTs

Feeding assistance
• ↑ intake and ↓ mortality

• No benefits
Nutrition screening and assessment

**Nutrition screening**

- Identifies patients with actual (or potential) nutritional problems i.e. nutrition risk status
- Undertaken by non-specialists

**Nutritional assessment**

- Establishes nutritional status
- Explores causes and duration of nutritional problems
- Forms the basis for a nutrition action plan
- Undertaken by nutrition specialists
Nutrition screening

Resources include:
- Instruction booklet
- E-learning package
- BMI charts
- Weight loss ready reckoners
- Tape measures
- MUST app

http://www.bapen.org.uk/screening-for-malnutrition/must/introducing-must

MDT assessment and care planning

• ↑ energy intake  *Johansen et al (2004)*

• No differences in weight change  
  *Johansen et al (2004); Olofsson et al (2007)*

• Length of hospital stay results contradictory  
  *Johansen et al (2004); Olofsson et al (2007)*

• No difference in quality of life  
  *Johansen et al (2004)*

• No difference in mortality  
  *Johansen et al (2004); Olofsson et al (2007)*
Treatment

- Dietary counselling
- Oral nutritional supplements
- Food fortification
- Texture modification
Oral nutritional Supplements

• > 20 systematic reviews evaluating the impact of ONS (Stratton et al, 2007)

• Consistent benefits in increasing intake and weight gain

• Less consistent impact on clinical and functional status, length of hospital stay or mortality

• Hospitalised, acutely unwell patients aged over 75 years are most likely to benefit from ONS (Milne et al, 2009)
Dietary counselling

• Takes account of personal preferences and usual habits

• More variety in flavour, texture and consistency of food and drinks

• Individualised advice may improve compliance

• Changes in dietary behaviour may persist beyond the intervention period (*Weekes et al, 2009*)

• Relative lack of evidence of benefit (*Baldwin & Weekes, 2012*)
Snack provision

300 (91 %) delivered to the wards

33 (10 %) incorrectly labelled

36 (11 %) different from prescription

53 (16 %) refused by patient

89 (27 %) Snacks left in fridge, offered at wrong time/to wrong patient, or patient requested snack for different time

89 (27 %) snacks met the audit standard Bremang et al, 2006
Oral Nutritional Supplements (ONS)

302 ONS prescribed

- 72 (24 %) ONS offered were different from those prescribed by the dietitian
- 57 (19 %) ONS were not delivered to the patient as ward supplies were insufficient
- 107 (35 %) occasions doctors prescribed an alternative supplement or the incorrect amount
- 39 (12.5 %) ONS were offered at wrong time or left in fridge

- 27 (9 %) supplements met the audit standard

Bremang et al, 2006
Summary

• Meeting the nutritional needs of hospitalised patients is challenging

• Effective management requires senior leadership and multi-disciplinary input

• Screening identifies those at risk but must result in timely and appropriate actions

• Small benefits may result from organisational and ward-based strategies but more research is needed
What happens on discharge?
“Every careful observer of the sick will agree in this, that thousands are annually starved in the midst of plenty, from want of attention to the ways which alone make it possible for them to take food”

Florence Nightingale (1859)
More information

- British Dietetic Association (www.mindthehunnergap.com)
- BAPEN Malnutrition matters (www.bapen.org.uk)
- Malnutrition Task Force (www.malnutritiontaskforce.org.uk)
- Age UK (www.ageuk.org.uk)
- Carers UK (www.carersuk.org)