Counteracting poor hospital nutrition – which strategies seems to be feasible

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Overview

- Clinical & food service dietetics background
- An Australian hospitals perspective
- Menu Planning Standards
- Research interests & recommendations

Where is Wollongong?

http://www.tourismwollongong.com

http://www.davidbailey.com.au

http://www.ramke-heinemann.de

http://www.travelblog.org

Background

- Initially worked in clinical practice (medical, oncology, aged care) and private practice
- New opportunity - food service manager/dietitian
- Interest in research and teaching
- PhD on food services for long stay hospital patients
- Research & lecturing in food service & dietetics at UOW full time since 2008

The Art and Science of Food Service Dietetics

The Art

- Recipes
- Presentation
- Cooking techniques
- Taste
- Aroma
- Accompaniments
- Customisation
- Preparing for a meal
- Eating environment
- Available assistance
- Customer service

The Science

- Standard recipes
- Estimated daily requirements
- Standard serve sizes
- Nutrition screening
- Nutritional assessment (e.g. SGA or MNA)
- Recommended dietary intakes
- Menu planning standards
- Menu analysis

> Food service systems

Food Service Systems

- Cook-fresh
- Cook-chill
- Cook-freeze
- Combination
- *Steamplicity* emerging

Numerous changes to improve health service efficiency

- Reduced cook-fresh and more cook-chill
- Increased centralised production
- Increased food and beverage packaging

All at a time when.....

- ↑ level of assistance with eating
- ↑ nursing roles & limited time (Kowanko et al, 1999)
- ↑ patient expectations

and.....
Food services is still seen as "hotel services"

Nutrition and Food Service Systems for Long Stay Elderly Patients. A Contextual Analysis

"Making Every Mouthful Count"

The food service and dietetics environment for hospital patients is very complex and is dependent on numerous interwoven variables.

Hospitals are under increasing pressure due to a plethora of priorities and optimal dietary intakes by patients will be difficult.

Malnutrition in Australia

- At least 5% in the community are undernourished
- Increases above 10% with one or more illness (Australian & New Zealand Society for Geriatric Medicine 2007)
- 30% of all patients admitted to hospital are already in a malnourished state and a further 61% 'at risk' of malnutrition (Adams et al 2008)
- 12-42% in acute care; 49% in rehabilitation and 50% in aged care residents (Banks et al 2007)

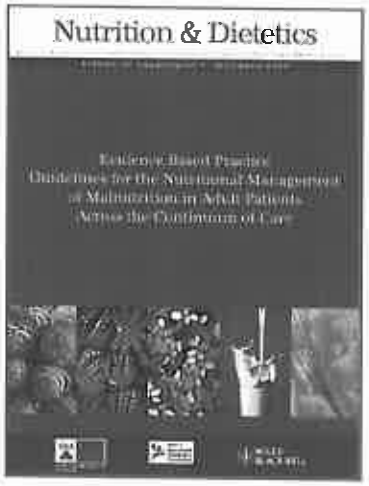
Recognising malnutrition

- **Not** well recognised by others and **not** prioritised

"[there is] underlying global complacency towards malnutrition within hospital culture because it is regarded as an expected occurrence among hospitalised patients and it is difficult to diagnose routinely"

(Lazarus et al 2005)

Advocating for Change



Screening & Assessment
Goals & Interventions
Monitoring

Acute care
Rehabilitation
Residential Aged Care
Community

Advocacy for food service strategies & staff education

www.daa.asn.au

Changing Demographics

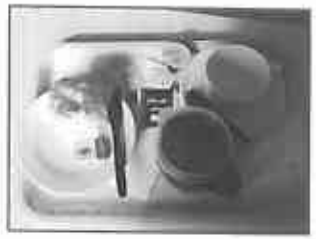
- The population is ageing. Length of stay increases with age
- May be 'at risk' or malnourished on admission
  - Remember the unwell elderly at home
- What is the true length of stay?
  - Patients in for ≥28 days is 34% of OBD's (Vivanti et al 2007)
- 'Frequent admissions' for chronically ill
  - Role of hospital and community care (Sampson 2009; Dundon 2010)

= Changes to menus and food provision

Barriers to Dietary Intakes

– Some Australian examples

Stakeholder focus groups on food service provision in NSW hospitals



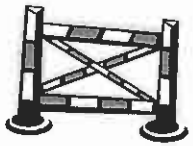
Journal articles:

Walton K, Williams P & Tapsell L (2006) What do stakeholders consider the key issues affecting the quality of foodservice provision for long-stay patients? *Journal of Foodservice*;17:212–225.

Walton K, Williams P & Tapsell L (2012). Improving food services for elderly, long-stay patients in Australian hospitals: adding food fortification, assistance with packaging and feeding assistance. *Nutrition & Dietetics*; 69(2):137-144.

Key barriers to dietary intake

- Level of assistance required to prepare to eat, and feed
- Amount of packaging
- Serve size issues



- Lack of customisation or flexibility
- National survey to quantify barriers and prioritise interventions

Survey - Barriers to nutrition

6 out of 10 in common

Dietitians	Food Service	Nurses
• Lack of feeding assistance		
• Lack of choice due to special diet		
• Boredom with meals due to length of stay		
• Limited variety of food		
• Lack of meal set up assistance		
• Packaging difficult to open		

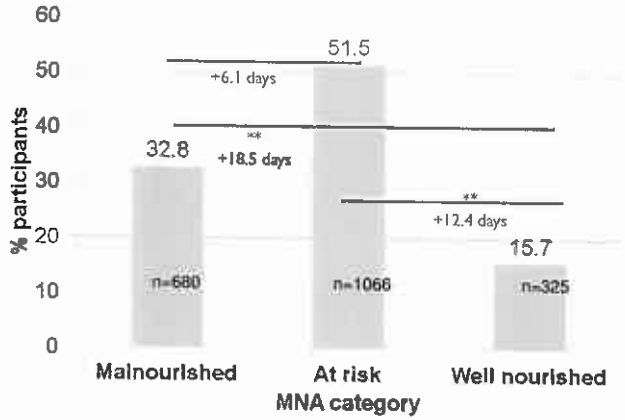
Survey - Intervention priorities

5 out of 10 in common

Dietitians | Food Service | Nurses

- Food fortification
- Assistance with packaging
- Nutrition assessment of all patients
- Adequate monitoring of intakes
- Adequate flexibility of menu choices

Australian rehabilitation patients at high risk



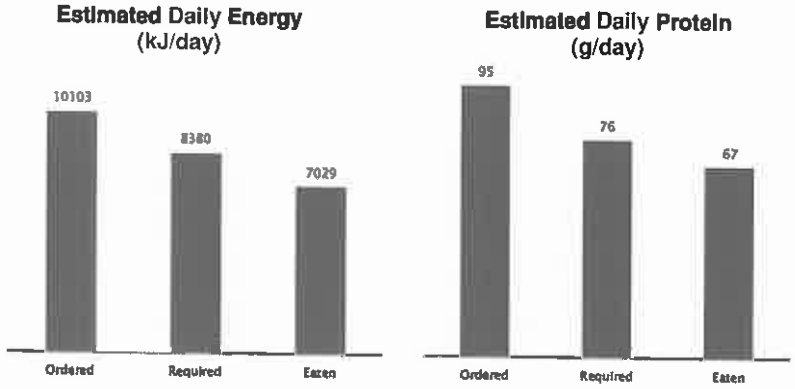
Charlton KE, et al. *J Nutr Health Aging* 2010; 14(8): 622-628.

Energy & protein intakes by aged care rehabilitation patients

- 30 rehabilitation patients in 3 hospitals
- Mean age: 79.2±11.9 years
- Mean LOS: 52.8±32.6 days
- Nutritional status
  - 37% malnourished, 40% at risk & 23% nourished

- Journal article: Walton K, Williams P, Tapsell L & Batterham M (2007). Rehabilitation inpatients are not meeting their energy and protein needs. *European e-Journal of Clinical Nutrition & Metabolism*;2:e120-e126.

Results



Note: Statistically significant differences between: mean ordered & required; mean required & eaten and mean ordered & eaten for energy & protein

Meal time observations

Medication rounds at breakfast: 35% of patients

In the shower at breakfast: 11%

Taken to x-ray at lunch: 6%

Tray/patient position not appropriate:22%

Difficult packaging: 40%

Journal article: **Walton K, Williams P, Tapsell L, Hoyle M, Shen Z, Gladman L & Nurka M (2013). Observations of mealtimes in aged care rehabilitation settings.** ***Appetite;*** **67: 16-21.**

Supplement usage (13 patients)

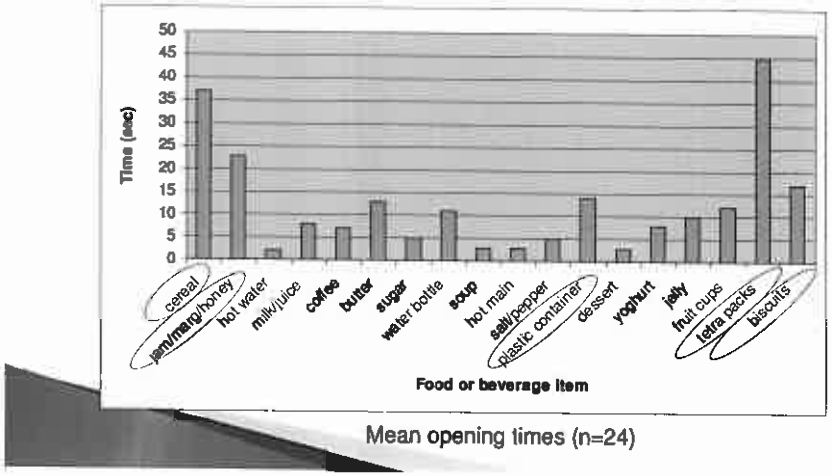
- Extra 3600kJ energy and 33g protein per day
- Only 43% consumed = 57% wastage
- Supplements provided ~ 21% of energy and protein intakes for the supplemented patients
- Targeted use and monitoring intakes is critical
- A need for hospital menu planning standards & adequate mid meal snack options

Food & Beverage Packaging

Journal article: **Bell A, Walton K, Chevis J, Davies K, Manson C, Wypych A, Yoxall A,** Kirby **J & Alexander N** (2013). **Accessing packaged food and beverages in hospital:** Exploring experiences of patients and staff, *Appetite*; 60:231-238.

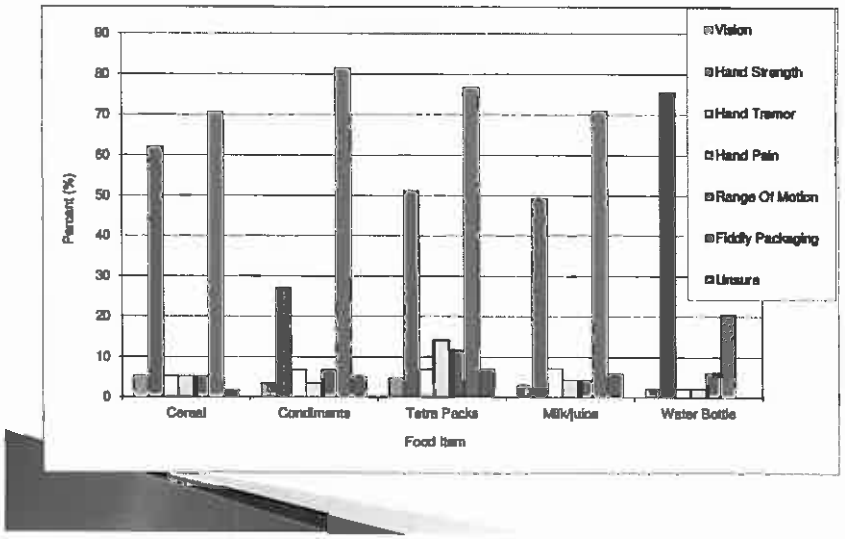
Beware, problems with packaging

- Reasons include: illness, fiddly packaging, ↓ hand strength & vision



Mean opening times (n=24)

Reasons for difficulty

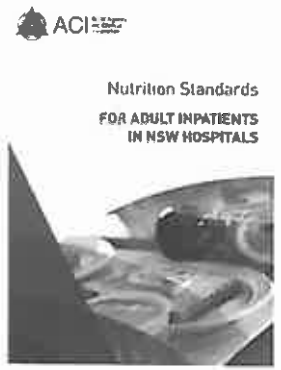


Opportunities to Improve Dietary Intakes

– Some Australian examples

Menu planning standards for hospitals

- WA Standards (2013, 2005)
- VIC Standards (2009)
- SA Standards (Draft 2009)
- **NSW Standards**
- **- endorsed (2011)**
- QLD Standards (2013)



http://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0004/160555/ACI_Adult_Nutrition_web.pdf#zoom=100

Therapeutic Diet Specifications for Adult Inpatients (NSW)

- Draft document
- Developed in 2010-11
- ~115 diets

http://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0006/160557/ACI_AdultDietSpecs.pdf#zoom=100

Implementation & Evaluation

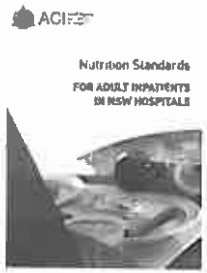
- The Standards need to be a 'live' document
  - Review of implementation
  - Regular monitoring of intakes
  - Ongoing revision and updating
- An opportunity to work together

Two further developments needed

- Project Proposal for Australian and New Zealand Hospitals Menu Planning standards
- Project Proposal for Australian and New Zealand Residential Care Menu Planning Standards

Menu focused

- 7 or 8 days in some settings
- Consideration about length of stay and needs of longer stay patients – many still 2 wks, some 3 or 4
- New menu standards for some states
  - Bands for menu standards - quality



The role of nourishing snacks

- Good source of protein and energy
- Texture modified options
- Varied
- Flavoursome
- Choose at time of service- mid meal trolley?
- Supplements & "everyday" nourishing options

Plunkett P, Walton K & Kennewell S (DAA Poster 2010). Snacks or Supplements: A review of hospital food choices at mid-meal times.

Technology assisted

- Paper, palm pilots, laptops for menu selections
- Food service & Dietetics software to manage diet and food service information –Current PhD in this area
- Communication between food service & the wards essential
- Choice on day of; or day before meal
- Many plated meals, some bulk service, some room service trials

Organisationally focused

Some Examples -

- Protected mealtimes – some hospitals – not easy
- Key role of feeding assistance & encouragement
- Bulk delivery for some wards – choice at point of service
- Nourishing snacks and mid meal trolleys
- Red trays and blue tickets for packaging assistance

Policy focused

Some Examples -

Nutrition policy

Menu Standards

Volunteer Feeding Assistance for the elderly in hospital

- Trained volunteers open packages, encourage and feed nutritionally vulnerable patients at lunch on weekdays – 1 aged care ward
- Previous pilot study of 9 patients reported significant improvements in protein intakes.
- Journal article:
  Walton K, Williams P, Bracks J, Zhang Q, Pond L, Smoothy R, Tapsell L, Batterham M & Vari L (2008). A volunteer feeding assistance program can improve dietary intakes of elderly patients. *Appetite*;51:244-248.

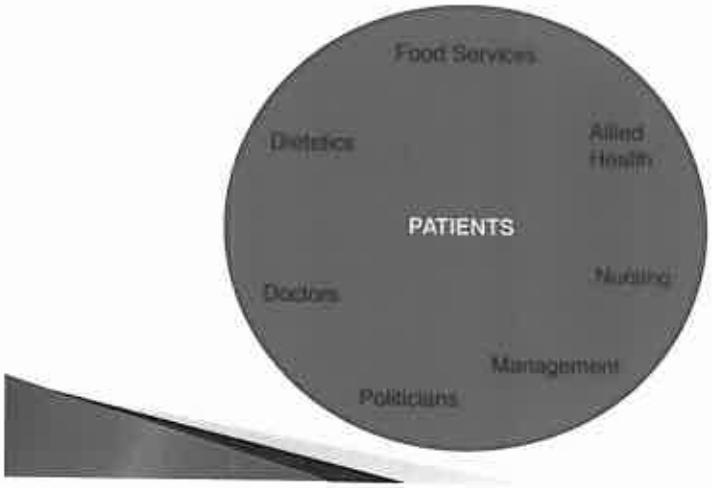
Follow up Study

- 2009-2010 study with 23 patients in 2 wards at Sutherland Hospital
- Significant improvements in protein (lunch and across day) & energy (lunch) intakes
- 396 kJ and 4.3 g extra at lunch
- 448 kJ over day and 8.7 g extra over the day
- ***Different types of assistance***

Journal article:
Manning F, Harris K, Duncan R, Walton K, Bracks J, Larby L, Vari L, Jukkola K, Bell J, Chan M & Batterham M (2012). Volunteer feeing assistants can improve the energy and protein intakes of hospitalised elderly patients - A Health Services Evaluation. *Appetite*; 59:471-477.

Team Approach

Aim to recognise food & nutrition services as a key component of clinical care



Making Every Mouthful Count

www.microsoft.com

The Art and Science of Food Service Dietetics

Recognising malnutrition

- Nutrition screening & referral on admission > Nutrition assessment
- Documenting Malnutrition in the medical record
  - sticker? *In Australia don't miss $1.85 million a year* (Gout et al 2009)
- Flagging those needing assistance (e.g. red tray)
- Weekly rescreening for those not referred
- Monthly nutritional assessment with a validated tool

Raising the profile of food services

Raising the profile of food services

- Protected meal times
- ↑ feeding assistance & access to packages
- Medical nutrition therapy (Lipski 2003)
  - Spend an extra $1 on food to save $5 on health care (Smith et al 1997)
- Variety of nourishing snacks between meals
- Serve size options
- Food fortification (e.g. soup, puree meals, potato)

Recommendations

- Food fortification
- Nutrition screening on admission/timely referral
- Additional feeding assistance & encouragement
- Additional staff and/or Volunteers
- 'Protected Mealtimes' Dining rooms where available
- Enhanced communication with food services

Recommendations

- Importance of varied nourishing snacks
- Targeted use of supplements & assistance
- Improved food & beverage packaging
- Effective methods of monitoring dietary intakes

Some final comments

- Feeding our ageing population is a priority
- We need to work together to utilise a toolbox of implementation strategies > "Food as Medicine"
- We need to work with health economists; measure intakes & get up to date cost-benefit studies
- We need a range of innovative strategies, advocacy & funding to address nutrition needs in hospital, aged care & the community

Wherever you practice
You can '*make every mouthful count*'

www.microsoft.com

Acknowledgements

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Future
Collaboration
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