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Friday, June 9, 2017

(Room 1)

11:00 - 11:55 WS #27: Cost Effective Nutrition in Hospital and the Community

12:05 - 13:00 WS #35: Cost Effective Nutrition in Hospital and the Community
(Repeated)

**NEW
EVIDENCE**

Cost Effective Nutrition in Hospital & in the Community



What is Malnutrition?



What is Malnutrition?

A state of nutrition in which a **deficiency of energy, protein and/or other nutrients** causes measurable **adverse effects** on tissue/body **form** (body size, shape and composition) and **function** and on **clinical outcomes**

Malnutrition is a common clinical and public health problem, affecting all ages and all care settings.



*Putting patients at the centre
of good nutritional care*

Malnutrition- another weight program

<https://www.youtube.com/watch?v=6DNGKCI-7Aw>

Ref: www.espen.org

What is the prevalence of Malnutrition in older New Zealanders?

LiLACS NZ: BOP/Lakes¹

at **HIGH** nutrition risk:

49% of Maori

38% of non Maori

BRIGHT TRIAL²

62% at moderate/ high nutrition risk

35% at **HIGH** nutrition risk:

27% at MODERATE nutrition risk

Canterbury³

31% at **HIGH** nutrition risk

23% at risk of poor nutrition

Hawkes Bay⁴

56.5% at nutrition risk

33% at **HIGH** risk

23.7% at risk

Common factors associated with high nutrition risk in NZ

- Women
- Living alone
- Eating alone
- Multiple medications
- Depressive symptoms
- CVD
- Diabetes
- Perception of own weight
- Low milk product intake

Ref: 1. Wham et al, J Nutr Health Aging. 2014 2. Wham et al, J Nutr health Aging Vol 18, 7 2014. 3. Watson et al. Nutr & Dietetics, 2010. 67 84-89. 4. McElnay et al. J prim Health care vol 4, 4, Dec 2012



Almost one quarter of elderly people in New Zealand are malnourished, with more at risk

<https://www.tvnz.co.nz/one-news/new-zealand/almost-one-quarter-elderly-people-in-new-zealand-malnourished-even-more-risk-study>

Ref: TVNZ One News Friday 26th May 2017

**NEW
EVIDENCE**

Cost Effective Nutrition in Hospital & in the Community



NEW
EVIDENCE

The cost impact of medical nutrition in the management of disease related malnutrition in hospital & community

2 Systematic Reviews*:



Hospital



Community



**NHMRC Guidelines rank systematic reviews as highest level (1) evidence*



Reviews were undertaken according to recommended procedures



PRISMA

TRANSPARENT REPORTING of SYSTEMATIC REVIEWS and META-ANALYSES



Reviews focused on STANDARD ONS

Included: Studies of commercially available, ready to consume, multi nutrient (complete & incomplete), liquid or semi solid products providing a mix of macronutrients & micronutrients produced by medical nutrition manufacturers.

Excluded: Studies of disease related formulas adapted for the needs of specific diseases and/or digestive or metabolic disorders and immune modulating formulas. Powder ONS.

A systematic review of the cost and cost effectiveness of using standard oral nutritional supplements in the **hospital** setting.

Elia et al Clinical Nutrition (2015) 1-11





Although there is substantial information about the beneficial effects of nutritional support on clinical outcomes, there is much less information about its economic consequences

- This is the most comprehensive review to date showing that managing malnutrition with oral nutritional supplements benefits the whole healthcare system.
- A systematic literature search retrieved 22,819 potential studies, of these, **9** multi-country publications (4 full texts papers, 2 abstracts, 3 reports) were finally identified for analysis in this review.

These included studies from UK, Switzerland, Belgium, USA & Australia.

Most of these analyses identified were from detailed reports by national organisations (NICE & BAPEN)



Primary & Secondary Outcomes measured:

Primary outcome measures:

- Cost
- Cost effectiveness

Secondary outcome measures:

- Functional effects
- Clinical effects



Results of the Hospital systematic review: **Significant cost savings with use of ONS**

- Cost analyses comparing ONS with no ONS (or routine care), resulted in a mean **cost saving** of **12.2%** for the ONS group.
- Cost savings were found to be associated with favourable outcomes such as **reduced complications, reduced mortality and reduced hospital LOS with earlier discharge to home.**



Significant reduction in LOS with ONS

- **Hospital LOS was reduced by 2 days** corresponding to a 13% reduction, generating a saving of around 10% of total healthcare costs.
- 83% of studies had a shorter average LOS in the ONS group.

provides savings and better patient care

- The proportion of **total complications was reduced by 35.3%** in the ONS than the control.
- **Mortality was reduced by 35%** in the group who received ONS.
- The use of nutritional support prevents **pressure ulcers, releases bed days and provides hospital savings¹. (AUS)**
- **Gaining Quality Adjusted Life Years**



1. Banks et al 2013

provides savings in abdominal surgery

In **abdominal surgery** patients:

- ONS results in an average **cost saving in the UK of £746 per patient**. Adjusting for inflation, savings in 2017 could be more than £1014 per patient.
- Equivalent 2017 savings in NZD of over \$1820 per patient*.



*Exchange rate as of 7 June 2017 at £1 (GBP) = \$1.80 NZD

Use of ONS is cost effective

- Fewer deaths (saves 1 in 3 deaths)
- Fewer complications (saves 1 in 3 complications)
- Shorter hospital stays (discharged 2 days sooner)
- Prevent Pressure Ulcers & release hospital beds
- Gain QALYs





Consistent Results

- There is a need for **routine nutritional screening**, & **increased awareness** about the importance of nutrition in clinical practice, to help reduce the burden of untreated malnutrition
- Standard ONS consistently produced **cost savings and cost effective outcomes** in patient groups with variable age, nutritional status & underlying conditions.



A systematic review of the cost and cost effectiveness of using standard oral nutritional supplements in the **community & care home** settings

Elia et al Clinical Nutrition (2015) 1-13





Systematic Review consisted of:

- 19 multi-country Publications:
 - 9 full text papers
 - 9 abstracts
 - 1 report with retrospective analysis of 6 RCTs.

These included studies from UK, USA, Germany, Netherlands

Most of these analyses identified were from detailed reports by national organisations (NICE & BAPEN).



Primary & Secondary Outcomes measured:

Primary outcome measures:

- Cost
- Cost effectiveness

Secondary outcome measures:

- Functional effects
- Clinical effects



Results of the Community systematic review: **Cost savings with ONS supplementation**

- Overall average **cost saving of 8.1%** with ONS
- Median cost saving of **9.2%** in studies where **ONS supplementation <3 months**
- Median cost saving of **5%** in studies where **ONS supplementation $\geq$ 3 months**



Meta-analysis showed that ONS significantly reduced hospitalisation

- **16.5% reduction in hospitalisation** with ONS group.
- Investment in the community produced a cost saving for the hospital.





Clinically relevant outcomes for the ONS group:



Improved Quality of Life



Reduced falls



Reduced infections



Reduced functional limitations



Reduced minor post operative complications



Use of ONS in the community helps people stay there!

- Saves 1 in 6 hospitalisations
- Better quality of life
- 8% reduction in healthcare costs





The **cost of ONS intervention** in the **community** is on average **< 5% of total costs**, yet this investment **reduces hospitalisation by 16.5%!**





Conclusions

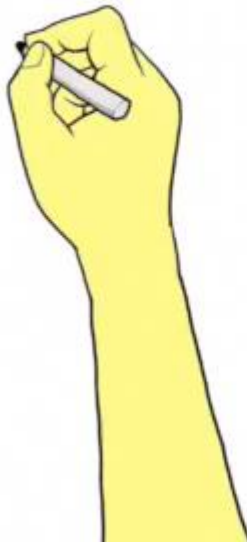
The most comprehensive multi country review to date showing that managing malnutrition with Standard ONS benefits both hospital and community

Most of the cost savings are driven by better patient outcomes

Using ONS to manage malnutrition can produce an average cost saving of 10% compared to standard care

The use of Standard ONS in both hospital & community produces an overall cost saving and are cost effective in the management of malnourished patients

Summary cartoon showcasing the negative consequences of malnutrition and the cost effective management with ONS





Find out more about the new systematic reviews

The systematic reviews were undertaken by experts in clinical nutrition and health economics in a variety of healthcare settings and disciplines from across Europe.

Full text of both reviews is available via the following links:

- A systematic review of the cost and cost-effectiveness of using standard oral nutritional supplements in the **hospital** setting
- A systematic review of the cost and cost-effectiveness of using standard oral nutritional supplements in the **community and care home** settings

For a brief **overview of the key findings**:

- Summary of the systematic review of the cost and cost-effectiveness of using standard ONS in the **hospital** setting
- Summary of the systematic review of the cost and cost effectiveness of using standard oral nutritional supplements in the **community and care home** settings.