

Health Economics & Nutrition Economics

Cost & cost effectiveness nutrition therapy

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Chair ISPOR Nutrition Economics SIG

<http://www.ispor.org/sigs/NutritionEconomics.aspx>



Disclosure



Dept Health Services Research
CAPHRI School for Public Health and
Primary Care

Founder & Chair



Nutrition Economics Advisor

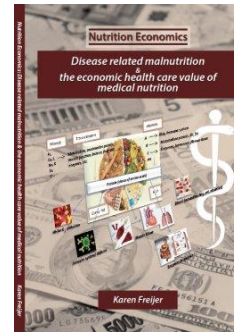


Physician & Nutrition

Education Commission

Outline

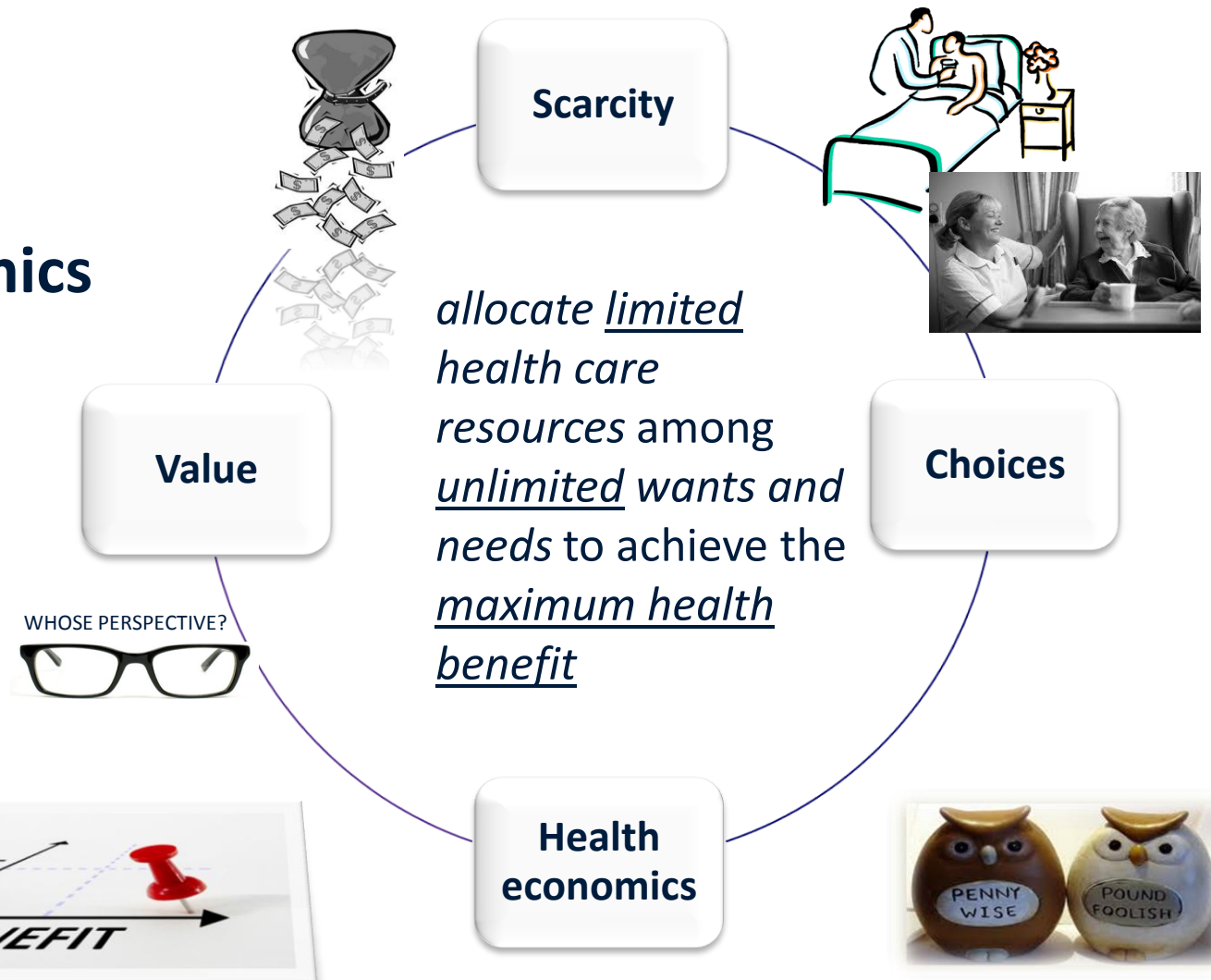
- Health Economics
- Nutrition Economics
- Cost effectiveness nutrition therapy & added value of dietitian



Economics

the study of the optimal allocation of limited resources for the production of benefit to society (Samuelson 2005)

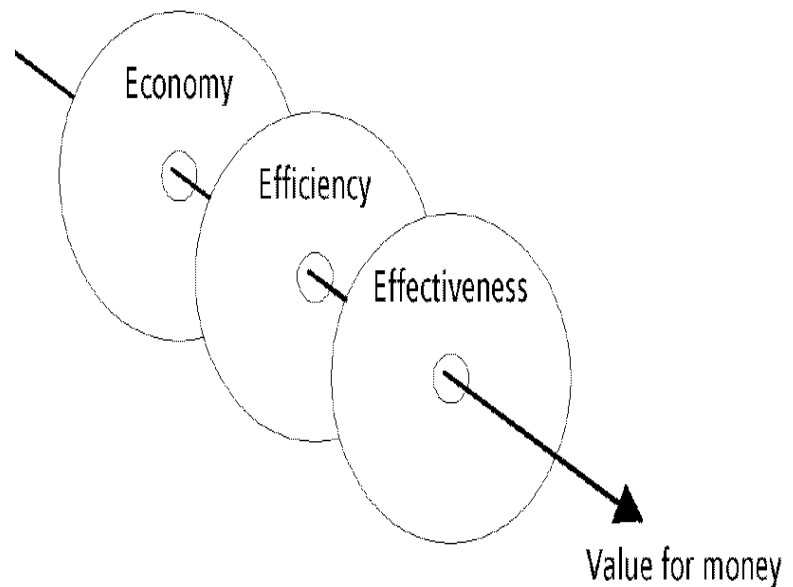
Health Economics



Economics

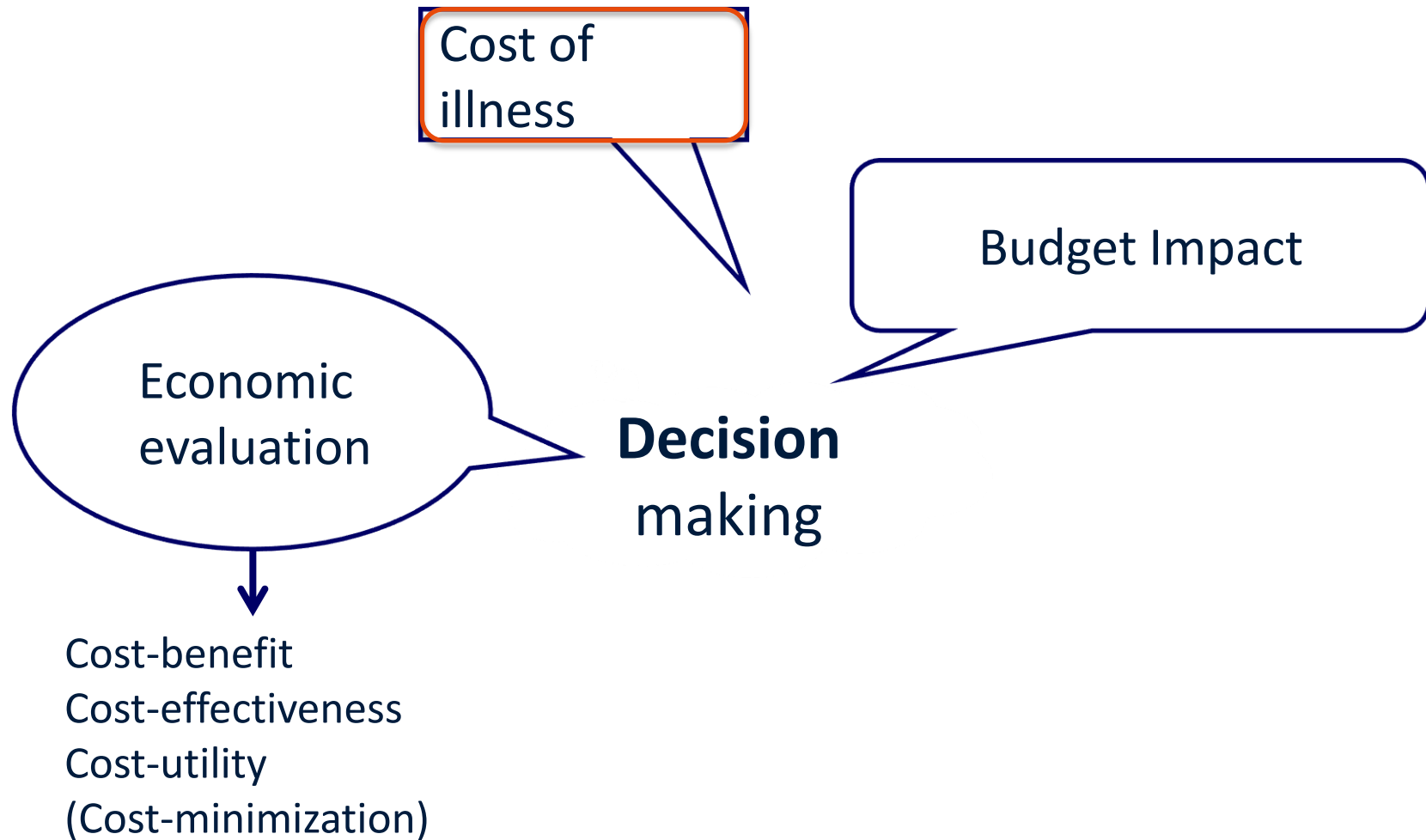
the study of the optimal allocation of limited resources for the production of benefit to society (Samuelson 2005)

Health Economics



the maximum health gain per SEK (value for money)

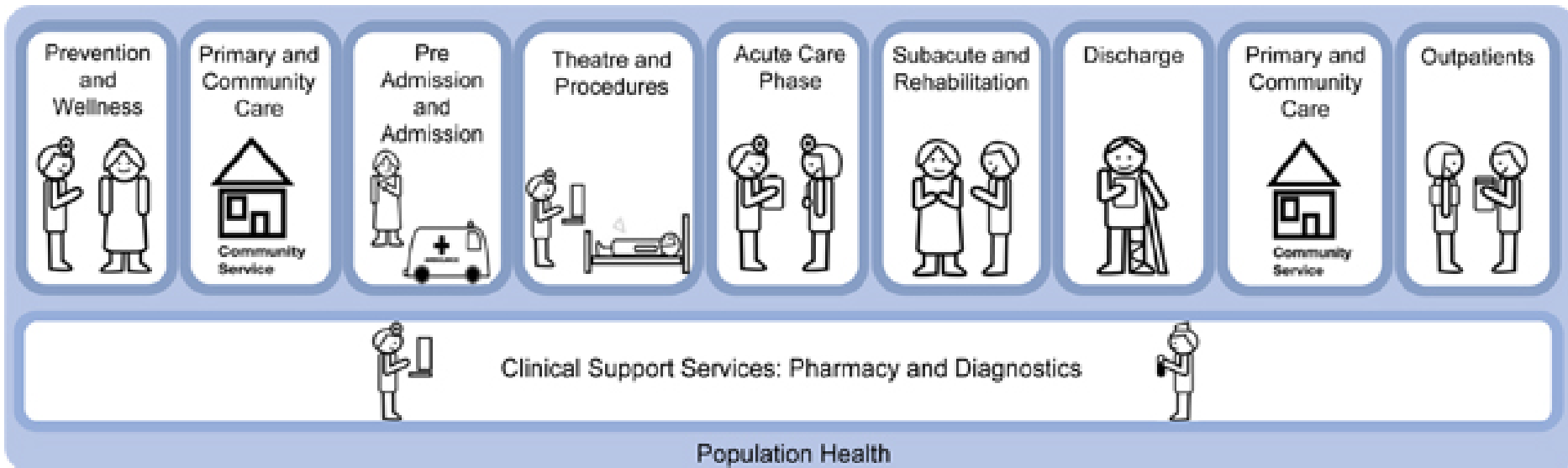
Basic concepts



Cost of illness

Q: Which data is needed to calculate the cost of influenza in NL?

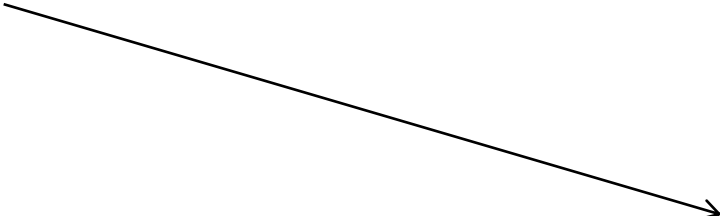
What happens to the patient and how often = costs



Cost of illness

Q: Which data is needed to calculate the cost of the flu in 1 country?

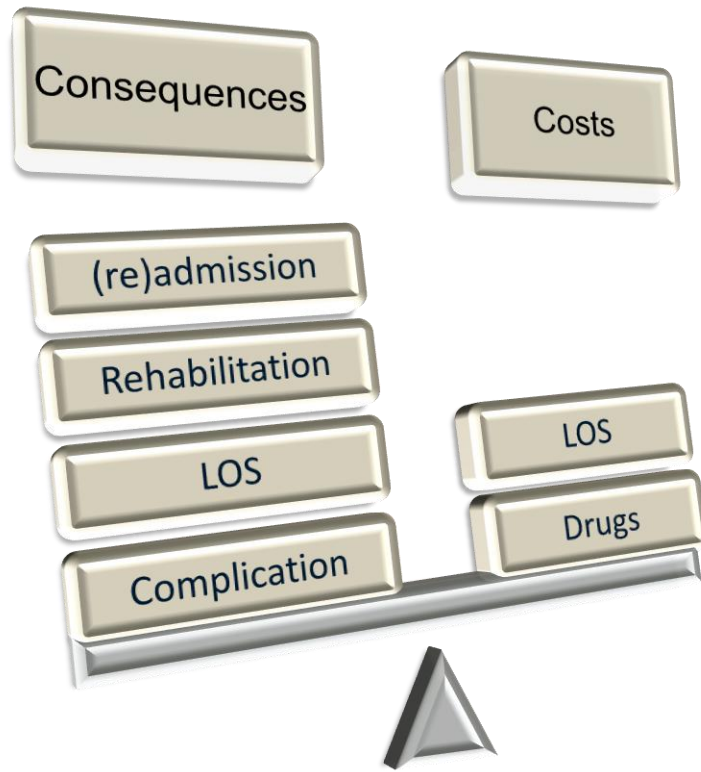
What happens to the patient and how often = costs

- Average duration (time = money)
 - Use of resources:
 - GP visits - how often during illness?
 - Medication – how much during illness?
 - Absence of work – how long?
 - Time of caregiver?
 - Prevalence of illness – total patients
- 1 week
 - 2 x GP = €40
 - 1 box aspirines = €1,50
 - Absence of work = € 481
 - Caregiver = €96
-
- Total costs €619**
per patient per week
- 5% of inhabitants = 850.000**
- 

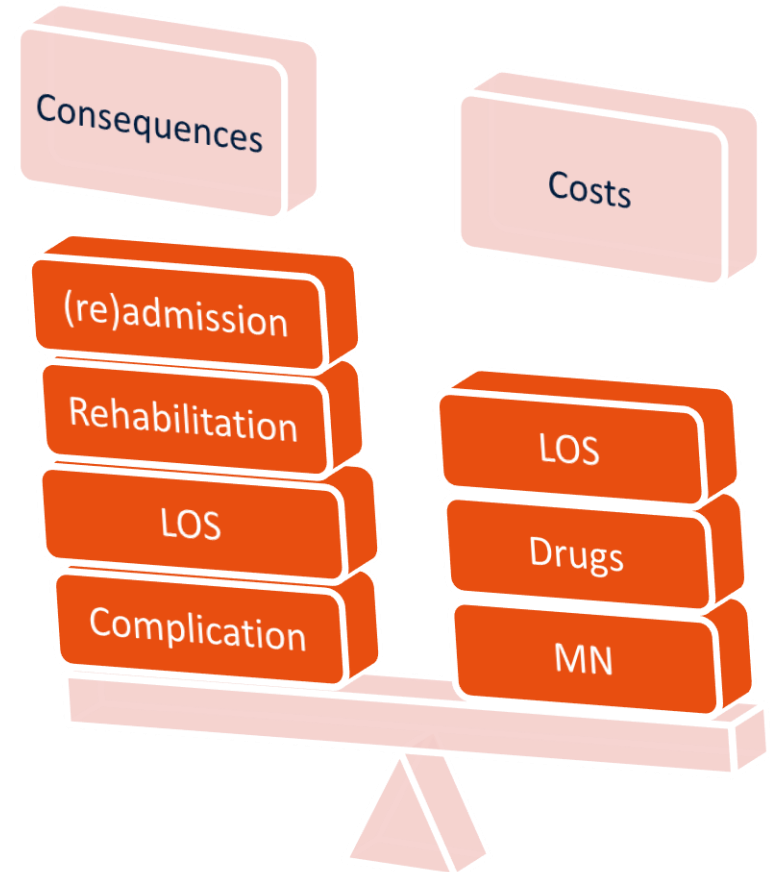
Cost of flu in NL = €526 million

Economic evaluation

Incremental = Δ costs/ Δ consequences (ICER)

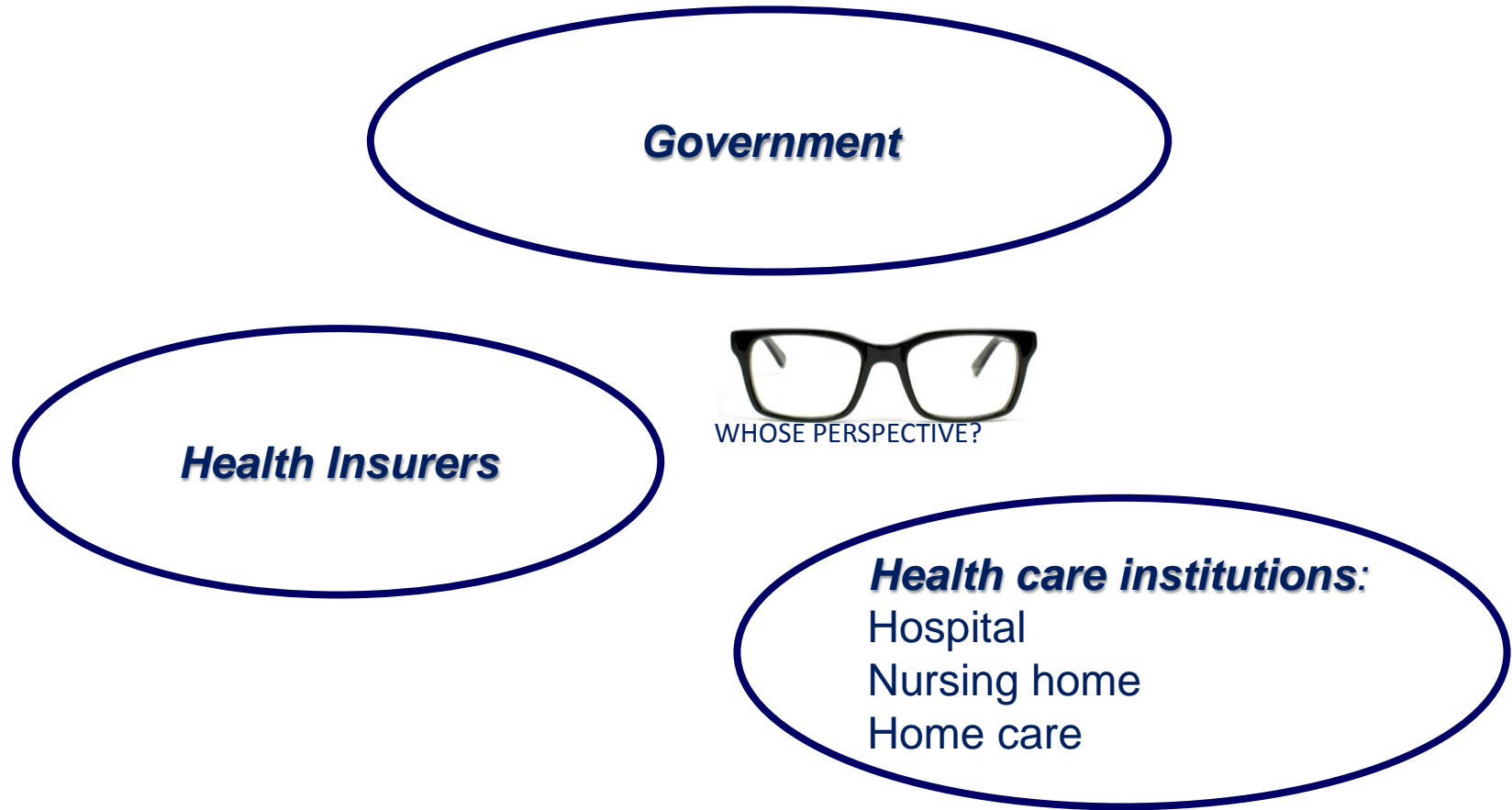


Intervention A







Intervention B

Perspectives and silos

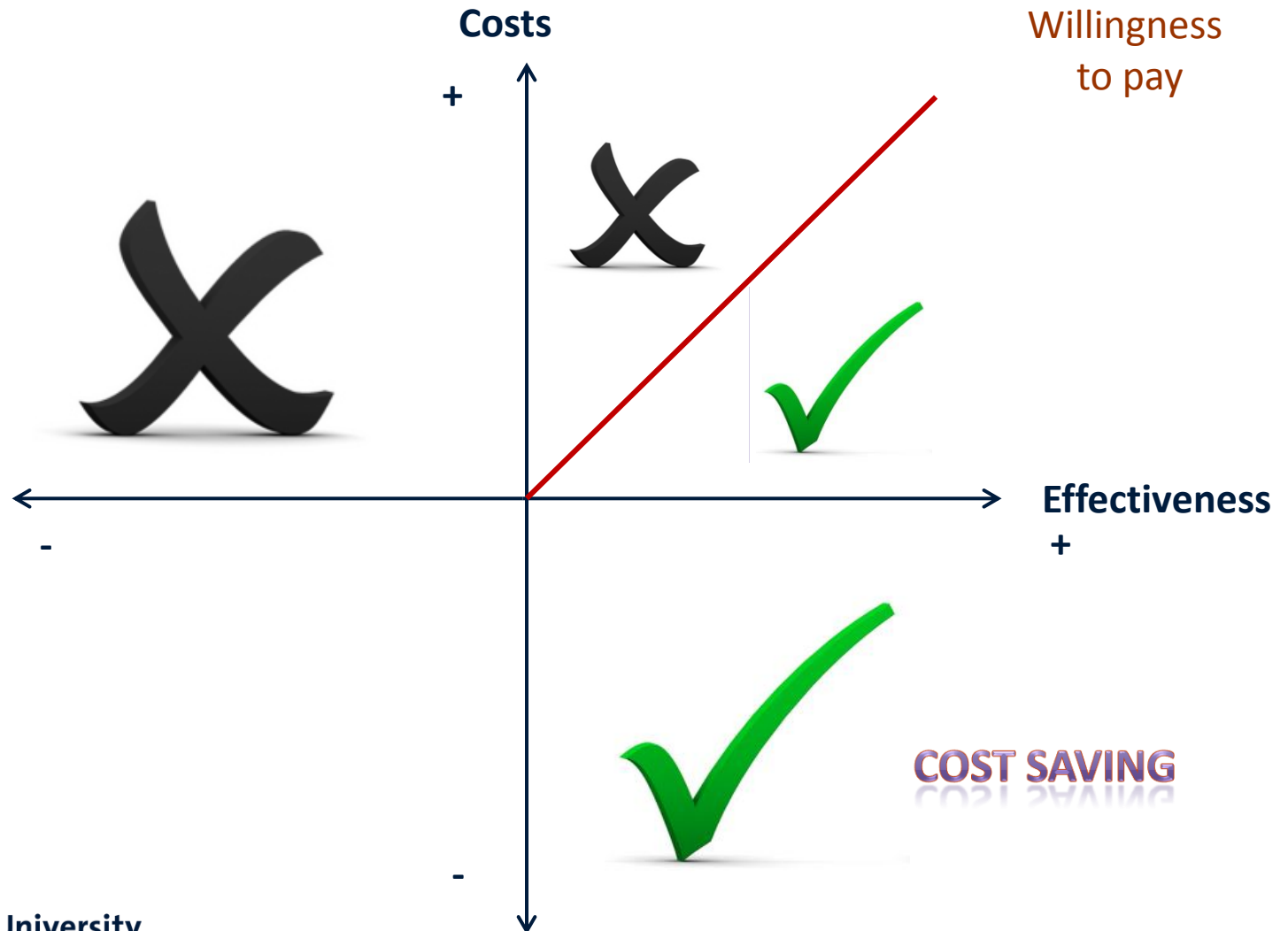


Type of costs - resource use

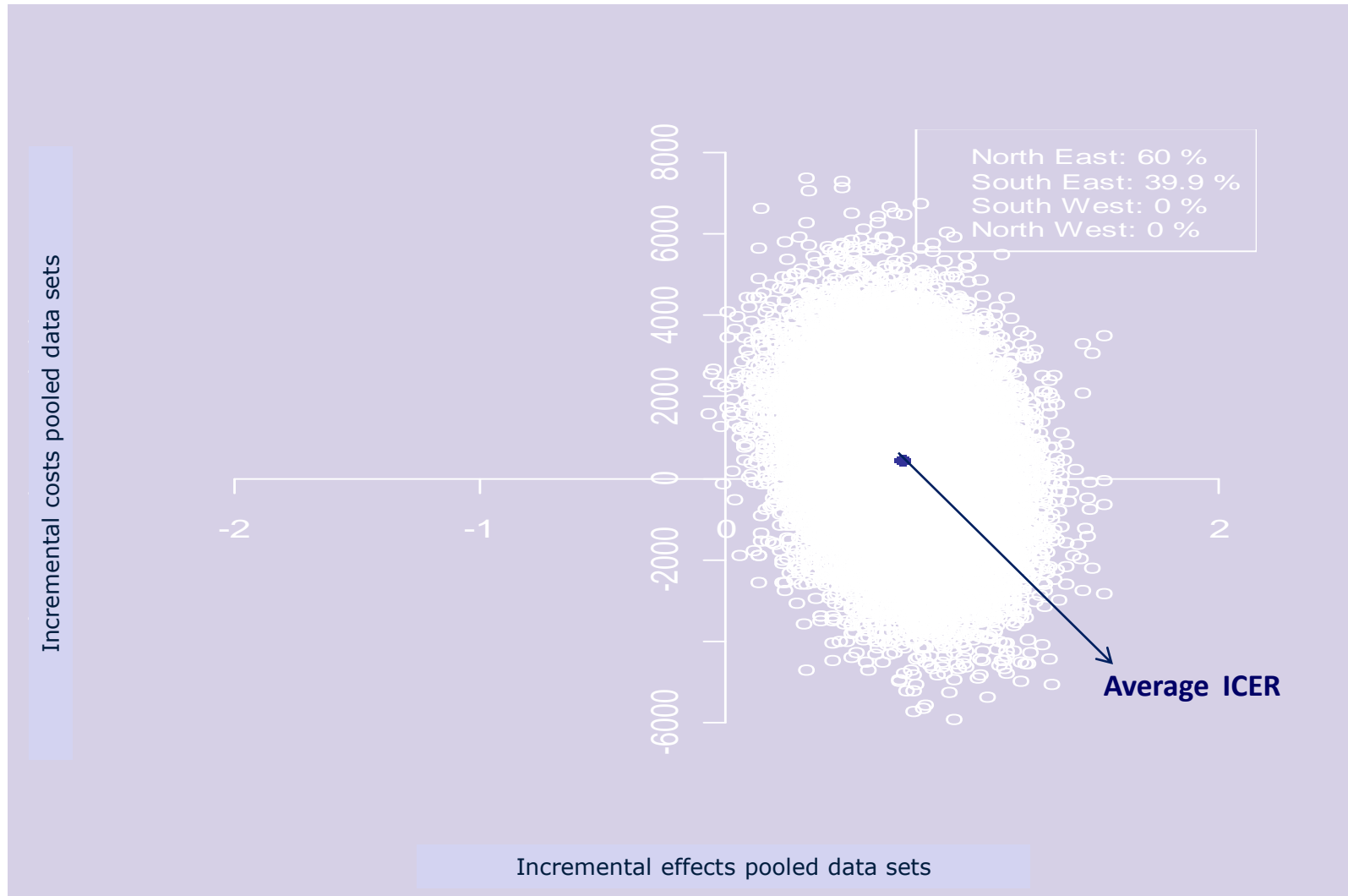
	Healthcare sector	Outside healthcare sector
	<p>Medical costs (for prevention, diagnostics, therapy, rehabilitation and care)</p> <p>Medical costs in life-years gained</p>	<p>Patient costs (time and travelling costs)</p> <p>Productivity costs, legal costs, special education</p>
Direct costs		
Indirect costs		

-  Society
-  Health care/ insurance
-  Health care provider

Cost effectiveness plane

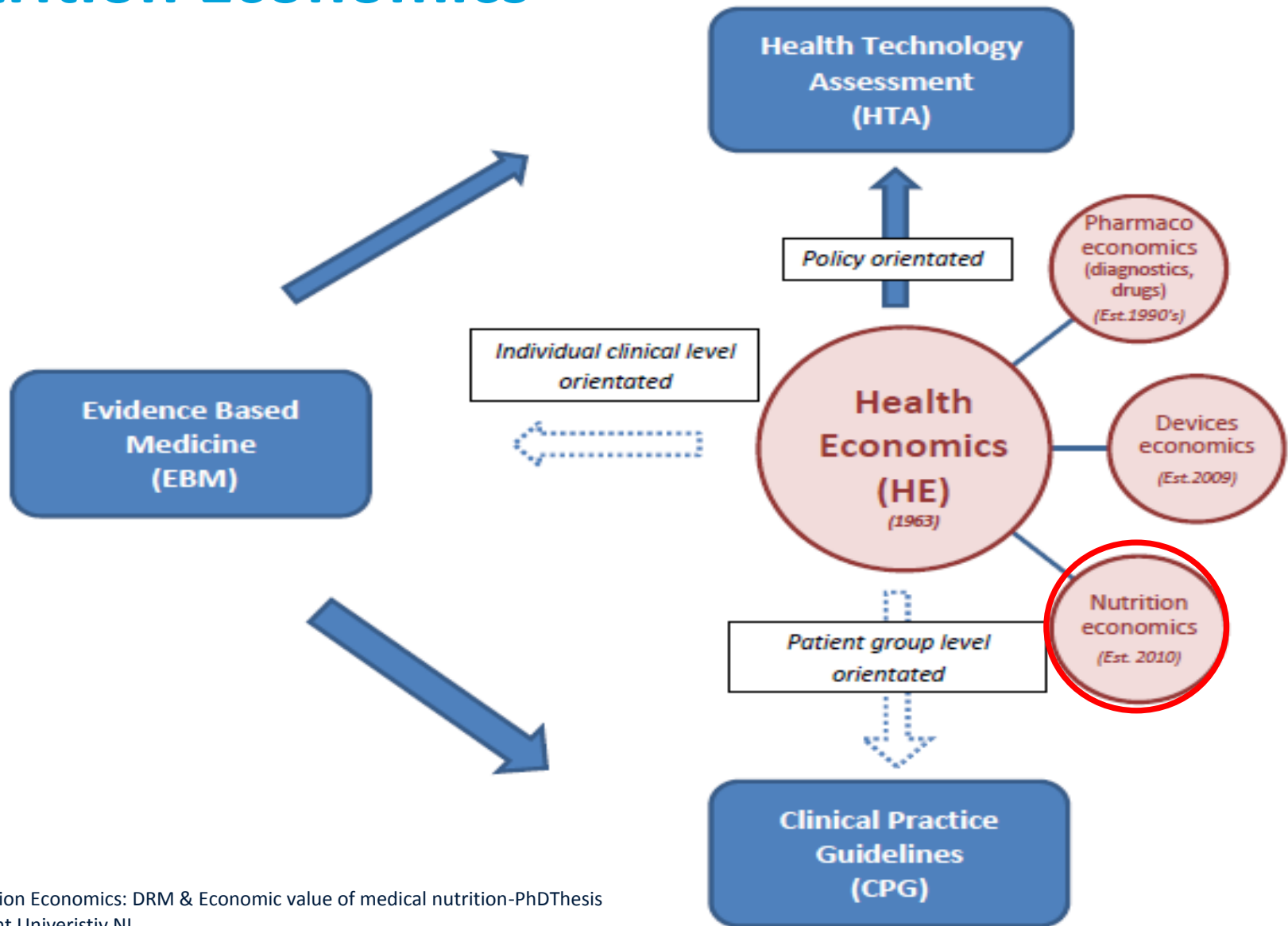


Cost-effectiveness plane - scatterplot



Cost-effectiveness plane for the difference in
Functionality Level elderly

Nutrition Economics



Nutrition Economics

- Merging of nutrition and health economics discipline
 - Interdependency between nutritional habits, health and public expenses
 - To illustrate health and economic aspects of specific changes in the daily nutrition and nutrition recommendations through the lens of cost-effectiveness
-
- Nutrition economics is defined as "**a discipline dedicated to researching and characterizing health and economic outcomes in nutrition for the benefit of society**"¹



(Medical) Nutrition

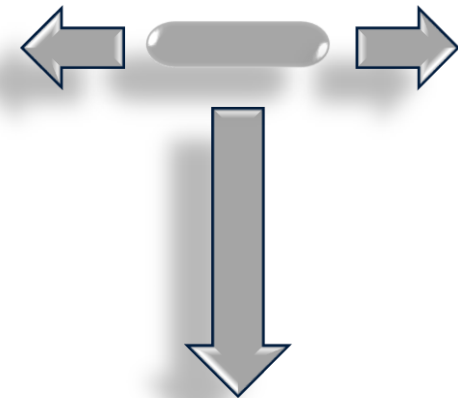
*Novel synergistic **combinations** of nutrients*



Nutrients focus on multiple physiological systems, safety has been proven

Pharma

*(New) Chemical Entity
(one compound)*



Focus on single intervention, adverse events

Nutrition Economics: An Introduction

ECONOMIC EVALUATION

Nutrition Economics – An Introduction

Karen Freijer, BHS*, Nutritionist and PhD candidate, School for Public Health and Primary Care (CAPHRI), Maastricht University, Maastricht, The Netherlands; **Irene Lenoir-Wijnkoop, MS***, Associate Professor Public Health Nutrition, Department of Pharmaceutical Sciences, Utrecht University, Utrecht, The Netherlands; **Mark JC Nuijten, MD, PhD**, Health Economist Consultant, Ars Accessus Medica, Jisp, The Netherlands; **Silvia MAA Evers, PhD**, Professor of Public Health Technology Assessment, School for Public Health and Primary Care (CAPHRI) of the Faculty of Health, Medicine and Life Sciences, Department of Health Services Research, Maastricht University, Maastricht, The Netherlands; Trimbos Institute, Netherlands Institute of Mental Health and Addiction, Utrecht, The Netherlands; **Elizabeth L. Molsen, RN**, Director, Scientific & Health Policy Initiatives International Society for Pharmacoeconomics & Outcomes Research (ISPOR), Lawrenceville, NJ, USA



KEY POINTS

- Nutrition Economics focuses on the interdependency between nutritional habits, health, and public expenses.
- There is no systematic approach or specific methodology to assess the impact of nutrition on health and health-related quality of life despite a clear need from policy makers.
- The establishment of an ISPOR Nutrition Economics Special Interest Group is underway to develop recommendations on economic evaluations to describe and quantify the costs (both the immediate costs of the intervention and downstream consequences) and effectiveness of nutrition interventions, as well as to assess the impact for individuals, the health care system, and society as a whole regarding disease-related malnutrition (DRM) as the initial focus.

Nutrition economics, as the name implies, is the merging of the nutrition and health economics disciplines to assess the impact of nutrition on health and disease and to illustrate the health and economic aspects of specific changes in the daily nutrition and nutrition recommendations through the lens of cost effectiveness. Nutrition economics is defined as “a discipline dedicated to researching and characterizing health and economic outcomes in nutrition for the benefit of society” [1]. This rising research field focuses on the interdependency between nutritional habits, health, and public expenses. It supports nutrition, health economics, and health policy development in an evidence- and health-benefit-based manner [1]. It will increase the understanding of nutrition's impact on health outcomes and of its absolute and relative monetary effect.

The nutrition field is extremely broad, with interventions from individual treatments to broad public health measures. Answers are needed to questions such as: How should the cost and effectiveness of nutrition interventions be quantified? How would one assess their impact on the individual, the health care system, and society as a whole?

Until now, no systematic approach or specific methodology has been developed to assess the impact of nutrition on health and health-related quality of life despite a clear need from policy makers. There are many challenges in nutrition assessment, from the difficulty in establishing a correlation between a product's consumption and future health status, to confounding factors and special methodological considerations, such as those encountered when assessing medical devices for reimbursement [2-4]. Economic evaluation will require a range of different approaches that compare nutrition-related costs to health outcomes, in order to sustain value-based decisions within systems providing health care.

With the increasing number of nutrition-related interventions and the consequent number of (economic) evaluations, the time has come to establish a group to develop evidence-based scientific guidelines for nutrition economic assessment.

the economic evaluation of disease-related malnutrition (DRM), meaning under-nutrition in health care [5-7].

The causes of DRM are multi-factorial. The metabolic stress on the body due to an acute or chronic disease resulting in catabolism is one of the most important and prevalent [8]. The effects of DRM can complicate the disease process by: weakness/fatigue, impaired functioning of organs, such as the heart, lungs, and GI system, and slower wound healing. Any of these effects results in a greater chance for clinical complications [7,8].

DRM thus leads to the increased likelihood of patient complications, as potential (re-) admission(s), and length(s) of hospital stay(s). Any of these results is associated with higher health care costs [8-9]. It has been calculated that approximately 33 million patients in Europe are suffering from DRM, at an estimated cost of €170 billion [11,12]. This is more than double the amount of money spent on obesity, based on figures from the UK [13].

Improvement in the quality or quantity of food supplied can ameliorate this type of under-nutrition. Unfortunately, in many cases, the patient cannot or will not consume a sufficient amount of nutrients needed to meet their increased nutritional requirements.

In the case of a disease treatment, it is important to consider additions to their daily nutrition or alternatives to improve nutritional intake, such as medical nutrition. Medical nutrition comprises parenteral nutrition (regulated in pharmaceutical legislation), as well as all forms of enteral nutritional support that are regulated as “foods for special medical purposes” (FSMP), as defined by the European Commission Directive 1999/21/EC, independent of the route of application [14].

FSMP is a special category for food that is intended for the dietary management of patients. This food is specially prepared, as formulated and used under



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ISPOR NUTRITION ECONOMICS SPECIAL INTEREST GROUP

Goal:

To develop a systematic approach or specific methodology for the assessment of nutrition in outcomes research.

Background:

Nutrition economics, as the name implies, is the merging of the nutrition and health economics disciplines to assess the impact of nutrition on health and disease and to illustrate the health and economic aspects of specific changes in the daily nutrition and nutrition recommendations through the lens of cost effectiveness. Nutrition economics is defined as "a discipline dedicated to researching and characterizing health and economic outcomes in nutrition for the benefit of society" [1].

This rising research field focuses on the interdependency between nutritional habits, health, and public expenses. It supports nutrition, health economics, and health policy development in an evidence- and health benefit-based manner [1]. It will increase the understanding of nutrition's impact on health outcomes and of its absolute and relative monetary effect.

(Excerpted from: [Nutrition Economics: An Introduction](#) published in *ISPOR CONNECTIONS* 2014;4:10-11.)

Working Group:

- [Medical Nutrition – Terms, Definitions, Regulations & Emerging Good Practices for Economic Evaluation](#)

If you would like to submit a new proposal for a manuscript and/or a tool, please send an email to: sigs@ispor.org

To join this SIG Working Group, see: [Join a Special Interest Group](#).



EUROPEAN
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THE ASSOCIATIONS
OF DIETITIANS



ISPOR NUTRITION ECONOMICS SPECIAL INTEREST GROUP

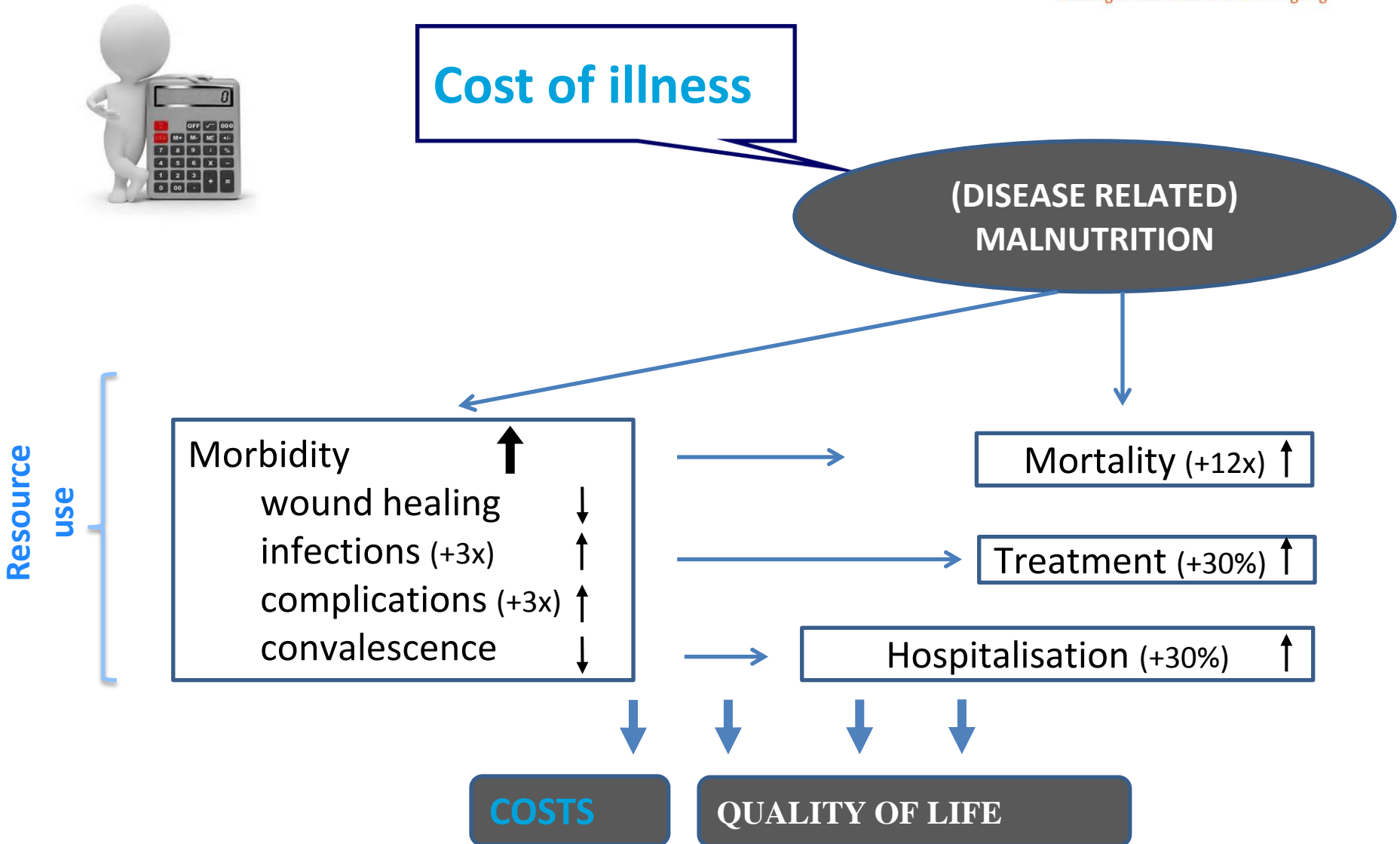
Measuring the Added Value Provided by Dietitians

Healthcare systems in Europe are facing challenges such as demographic change (aging, migration) and rising costs. In order to keep healthcare affordable, choices have to be made and it is therefore important to demonstrate the economic value of particular interventions, but also the economic value of disciplines such as dietetics that use health economics (HE) data to inform these choices.

This raises the fundamental question: how do we allocate limited health care resources when faced with unlimited wants in order to achieve the maximum health benefit? One of the ways to answer this question is by using an economic evaluation of alternative courses of action in terms of their costs and consequences. Such an evaluation is commonly called cost-benefit analysis (or sometimes cost-effectiveness or cost-utility). The analysis typically looks at the extra

EFAD Newsletter June 2016

www.efad.org

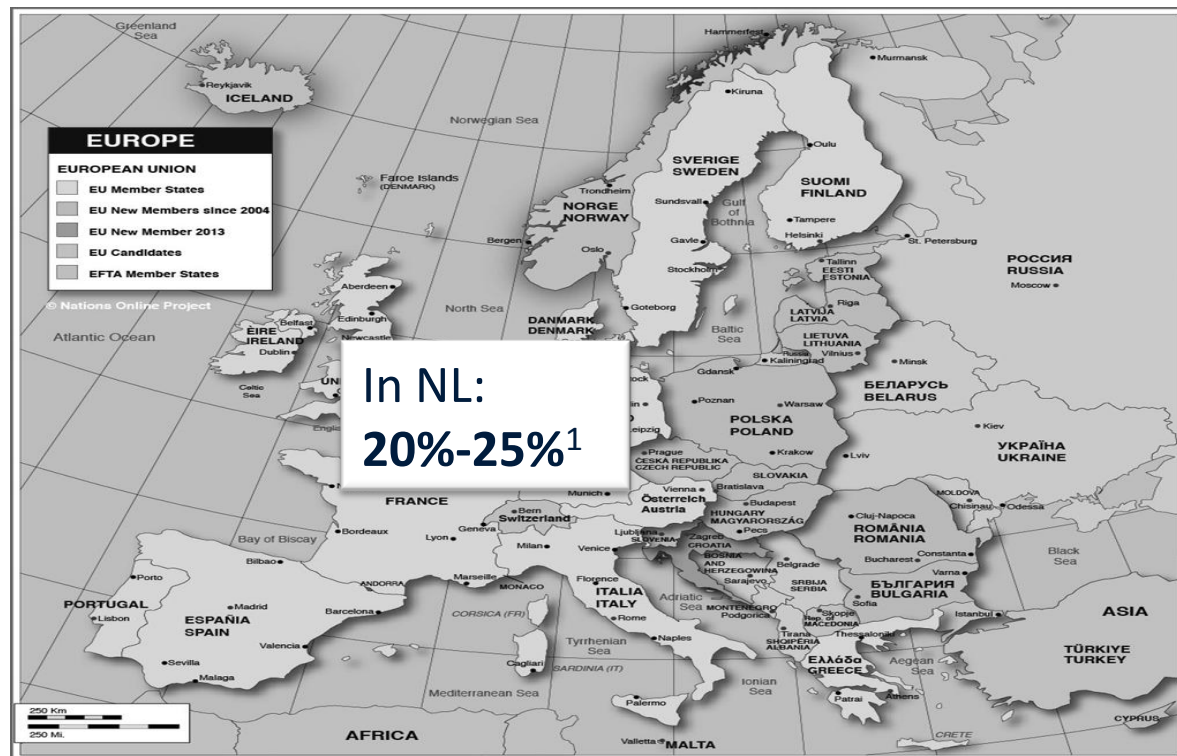





Cost of illness

(DISEASE RELATED)
MALNUTRITION

Prevalence



Type of costs - resource use



	Healthcare sector	Outside healthcare sector
Direct costs	Medical costs (for prevention, diagnostics, therapy, rehabilitation and care)	Patient costs (time and travelling costs)
Indirect costs	Medical costs in life-years gained	Productivity costs, legal costs, special education



Cost of illness

(DISEASE RELATED) MALNUTRITION

Table: Total additional costs of disease related malnutrition according to gender, age and healthcare sector * 1,000,000 (Euro 2011)

Age	<u>Men</u>		<u>Women</u>		<u>Total</u>
	>18 and <60	> 60	>18 and <60	> 60	All ages
Hospital setting	188	424	184	437	1,233
Nursing- and residential home setting	9	107	6	331	453
Home care setting	6	43	9	126	185
Total	203	574	200	894	1,871



Malnutrition in NL health care ~ €2 billion extra per year

HP/DE TIJD

ONDERVOEDING KOST NEDERLANDSE OVERHEID MILJOENEN PER JAAR

Artsen en verpleegkundigen zijn zich te weinig bewust van ondervoeding. Door dit probleem bij ouderen aan te pakken, kan de Nederlandse overheid 13 miljoen euro per jaar besparen.

Wie ziek is, loopt het risico ondervoed te raken. Dat komt doordat ons lichaam extra voedingsstoffen nodig heeft om het immuunsysteem te versterken en het herstel te bevorderen. Als patiënten niet genoeg eten, dan zoekt het lichaam zijn energie intern. “Dat leidt onder andere tot afbraak van de spieren, niet alleen van armen en benen, maar ook elders, bijvoorbeeld van ademhalingsspieren,” zegt Karen Freijer van de Rijksuniversiteit Groningen, die het probleem

Iedere dag sterft minstens één
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WEER D1

ZORG • Patient langer in ziekenhuis en meer complicaties • Kostenpost van 1,9 miljard groter dan die van obesitas

Ondervoeding kost kapitalen

door Wjlf Gerritsen

MAASTRICHT Ondervoeding bij patiënten kostte de samenleving vorig jaar volgens een „oorachtige schatting“ 1,9 miljard euro, ruim 1 procent van de uitgaven in de zorg.

Wetenschappers van het Maastrichtse universitaire onderzoekscentrum Caphri melden dit in het internationale vakblad Clinical Nutrition. Volgens hoofdautor Karen Freijer zijn de kosten van ondervoeding hoger dan de jaarlijkse uitgaven die gepaard gaan met obesitas (1,2 miljard euro).

Ondervoeding bij ziekte of na een operatie maakt de zorg duurder, omdat patiënten langer doorn hun herstel en langer in het ziekenhuis blijven. Ook treden meer complicaties op, wat tot extra kosten leidt. Volgens een meting van Caphri is bij nagenoeg één op de vier patiënten in ziekenhuizen en bij bijna één op de vijf cliënten in verpleeg- of verzorgingshuizen sprake van ondervoeding bij ziekte.

Freijer: Er is dan veelal sprake van een door ziekte veranderde stofwisseling met een verhoogde behoefte aan onder andere eiwit en energie. Als het lichaam te weinig eiwitten via de voeding binnenkrijgt, worden de eigen spieren als het ware „opgegeten“, om alsnog oer de benodigde eiwitten te beschikken.

Freijer wijst er verder op dat ziekte bij ondervoeding leidt tot afname van de weerstand, waardoor infecties makkelijker de kop kunnen optuigen en de wondgenezing vertraagt.

Volgens haar wordt ondervoeding bij ziekte nog te vaak onderzocht. De patiënten worden niet altijd herkend en op de goede manier behandeld.

„Om ondervoeding tegen te gaan, bieden ziekenhuizen patiënten snacks aan, als krukketjes en chocoleren, maar daar is het lichaam niet alleen op te wachten.“

Vernieuwing van de normale voeding, al dan niet aangevuld met supplementen, biedt volgens Freijer soelaas.

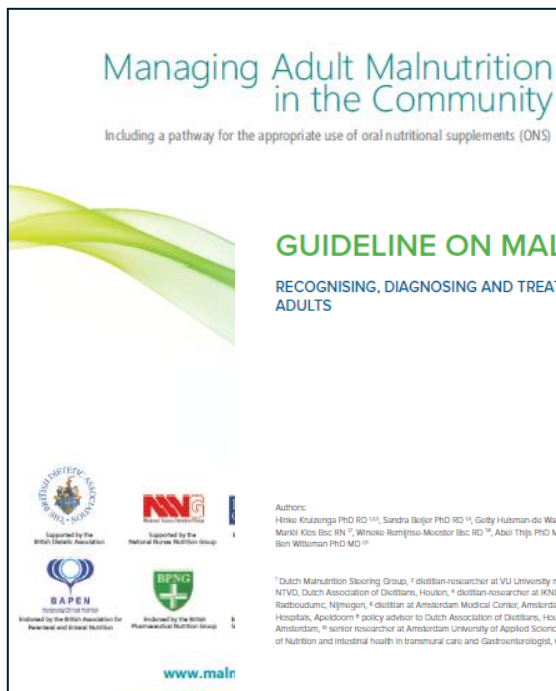
Economic consequences of DRM in EU

Country	Costs of malnutrition	Note
UK ¹	€19.6 billion	Public expenditure on malnutrition in 2011-12
Germany ²	€9 billion	Additional costs due to malnutrition across all care sectors in 2003
The Netherlands ^{3,4}	€1.9 billion (€8 billion)	Additional costs due to malnutrition in 2011 (total costs)
Republic of Ireland ⁶	€1.4 billion	Public expenditure on malnutrition in 2007
DK ⁶	€81 million	2014



Cost - effectiveness

(DISEASE RELATED)
MALNUTRITION



GUIDELINE ON MALNUTRITION

RECOGNISING, DIAGNOSING AND TREATING MALNUTRITION IN ADULTS

- **Early identification**
- **Screening**
- **A range of strategies to manage malnutrition, e.g. dietary advice and /or special (medical) nutrition**

Authors:

Hinke Kruisenga PhD RD^{1,2}, Sandra Beijer PhD RD^{1,3}, Gelly Hulsmans-Waal PhD RN^{1,4}, Cora Jonkers-Schultsma BSc RD^{1,5}, Mariëtte Kooij BSc RD^{1,6}, Witske Romijn-Mooster BSc RD^{1,7}, Abel Thijs PhD MD^{1,8}, Michael Tisdall PhD^{1,9}, Ben Witsman PhD MD^{1,10}

¹Dutch Malnutrition Steering Group, ²dielition-researcher at VU University medical center, Amsterdam, ³editor-in-chief NVO, Dutch Association of Dietitians, Houten, ⁴dielition-researcher at RIN, Utrecht, ⁵nurse-researcher at IQ healthcare, Radboudumc, Nijmegen, ⁶dielition at Amsterdam Medical Center, Amsterdam, ⁷nutrition nurse specialist for Gelle Hospitals, Apeldoorn, ⁸policy advisor to Dutch Association of Dietitians, Houten, ⁹internist at VU University medical centre Amsterdam, ¹⁰senior researcher at Amsterdam University of Applied Sciences, lecturer in weight management, ¹¹Professor of Nutrition and Intestinal health in transmemural care and Gastroenterologist, Gelderse Vallei Hospital, Ede

August 2017

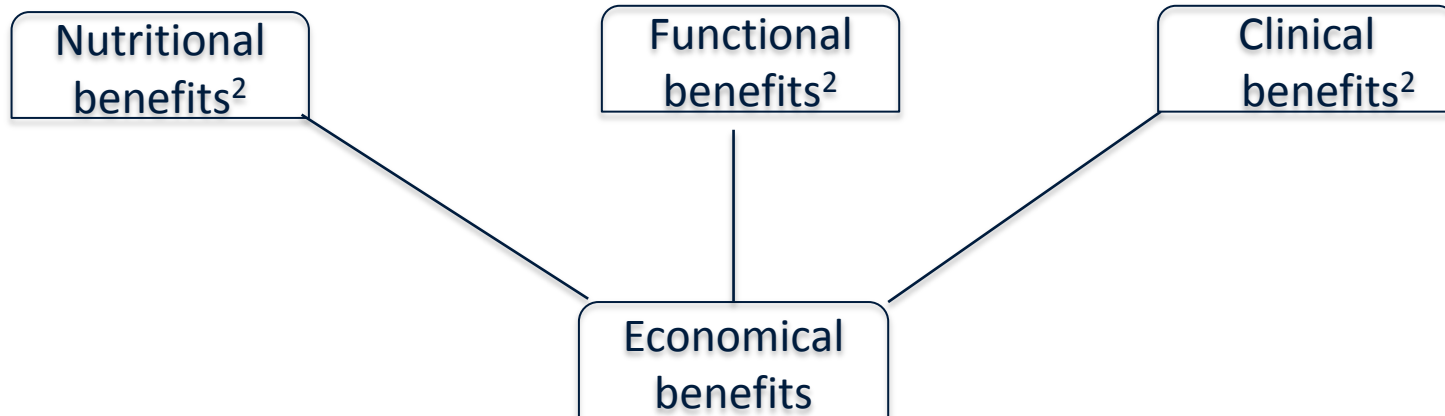
Translation: Alison Fisher (a.fisher@kcs4all.nl)





Cost - effectiveness

**(DISEASE RELATED)
MALNUTRITION**



Economic evaluation – syst reviews

Milte RK *et al.* European Journal of Clinical Nutrition (2013) 67, 1243–1250

REVIEW

Economic evaluation for protein and energy supplementation in adults: opportunities to strengthen the evidence

In summary, the available economic evidence indicates that protein and energy supplementation in treatment or prevention of malnutrition provides an opportunity to improve patient wellbeing and lower health system costs. health care funding. Future research should focus on the inclusion of high-quality comprehensive economic evaluations alongside

Review

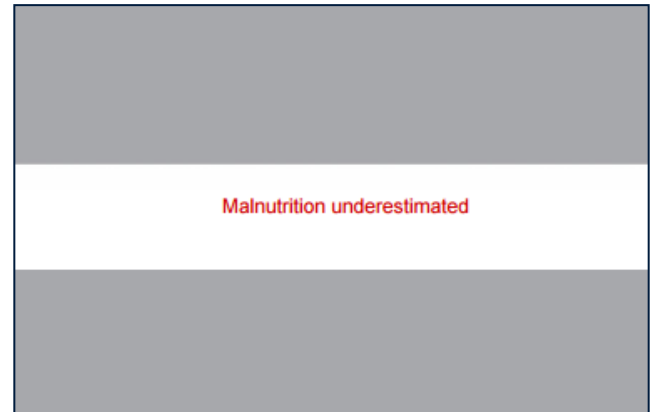
Freijer K *et al.* JAMDA (2014) 15, 17-29

The Economic Value of Enteral Medical Nutrition in the Management of Disease-Related Malnutrition: A Systematic Review

This review shows that the use of enteral medical nutrition in the management of DRM can be efficient from a health economic perspective.



Management of DRM – economic evaluation



The use of medical nutrition with sick and malnourished elderly persons results in net benefits between € 1,433 and € 3,105 per person. For each euro that is invested in the treatment of a malnourished person society saves € 1.90 to € 4.20.



Economic evaluation – meta analysis

Elia *et al.* Clinical Nutrition (2016) 35, 370–380

Meta-analyses

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

This review suggests that use of standard ONS in the hospital setting generally produce cost savings and are cost effective in patient groups with variable age, nutritional status and underlying conditions.

Mean cost saving: 12%
(£746) per patient

Cost saving (study level analysis) in favour of the ONS group by age, nutritional status and study design^{a,d}.

	% cost-saving (continuous data)			Cost saving (binary data)	
	N studies	Mean and SD	P value ^c	N studies favouring ONS/total N	P value ^d
<65 years	5 ^e	15.5 ± 7.5	0.010	5/5 ^f	0.063
≥65 years	7 ^g	9.8 ± 31.4	0.442	6/8 ^h	0.310
Malnourished	5 ⁱ	7.3 ± 37.9	0.688	5/7 ^j	0.219
Malnourished + non malnourished	6 ^k	14.6 ± 7.1	0.004	6/6 ^l	0.125
ONS v no ONS	10 ^m	12.4 ± 26.3	0.169	10/12 ⁿ	0.039
ONS v routine care	2 ^o	10.7 ± 0.149	0.006	2/2 ^p	0.500
Interventional studies	11 ^q	11.3 ± 24.8	0.162	9/11 ^r	0.065
Observational ± interventional studies	1 ^s	21.6		3/3 ^t	0.250

Economic evaluation – meta analysis

Elia *et al.* Clinical Nutrition (2016) 35, 125–137

Meta-analyses


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

This systematic review with meta-analysis suggests that use of standard ONS in the community, with and without additional use in hospital, can produce favourable financial outcomes and can be cost effective.

Meta analysis - reduction of:

- Complications (infections)
- Falls
- Functional limitations

Mean cost saving: 9% (< 3 months)
Reduction of hospitalisation – 5% (> 3 months)
16.5% ($p < 0.001$)



Economic evaluation – Care home

Elia *et al.* Clinical Nutrition (2017) in press

Original article

Cost-effectiveness of oral nutritional supplements in older malnourished care home residents

Marinos Elia ^{a,*}, Emma L. Parsons ^a, Abbie L. Cawood ^a, Trevor R. Smith ^b,
Rebecca J. Stratton ^a

^a Faculty of Medicine, University of Southampton, Southampton General Hospital, Tremona Road, Southampton, SO16 6YD, UK

^b Department of Gastroenterology, University Hospitals Southampton NHS Foundation Trust, Southampton General Hospital, Tremona Road, Southampton, SO16 6YD, UK

Conclusion: This pragmatic randomised trial involving one of the oldest populations subjected to a cost-utility analysis, suggests that use of oral nutritional supplements in care homes are cost-effective relative to dietary advice.

ONS + dietary advice is cost-effective
ICER = £10,961-£11,875/QALY

Treatment plan DRM

Intake vs requirement	Nutrition intervention by dietitian	Evaluation & action Hospital	Evaluation & action Nursing home	Evaluation & action Community care
100% of requirement	protein- and energy-rich nutrition	Globale monitoring (weegbeleid)	Globale monitoring (weegbeleid)	Patiënt houdt inname en gewicht bij ≤ 10 werkdagen (telefonische) evaluatie
75 - 100% of requirement	protein- and energy-rich nutrition, possibly supplemented with medical sipfeed	< 48 uur: evaluatie Continueren/ aanvullen met drinkvoeding	≤ 10 werkdagen: evaluatie Continueren of aanvullen met drinkvoeding	≤ 10 werkdagen: evaluatie Continueren of aanvullen met drinkvoeding
50 - 75% of requirement	medical sip and/or tube feed, to which protein- and energy-rich nutrition is added	< 48 uur: evaluatie Continueren of overgaan op sondevoeding	≤ 5 werkdagen: evaluatie Continueren of overgaan op sondevoeding	≤ 5 werkdagen: evaluatie Continueren of overgaan op sondevoeding
< 50% of requirement	complete tube nutrition is indicated, supplemented with whatever is possible orally	< 48 uur: evaluatie Continueren of orale voeding (drinkvoeding) indien mogelijk	≤ 2 werkdagen: evaluatie Continueren of orale voeding (drinkvoeding) indien mogelijk	≤ 2 werkdagen: evaluatie Continueren of overgaan op volledige sondevoeding of orale voeding (drinkvoeding)

Treatment plan DRM

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Supplementary feeding

“ Be cautious using enriched food that will only provide extra energy and/or protein but without sufficient amounts of vitamins and minerals”

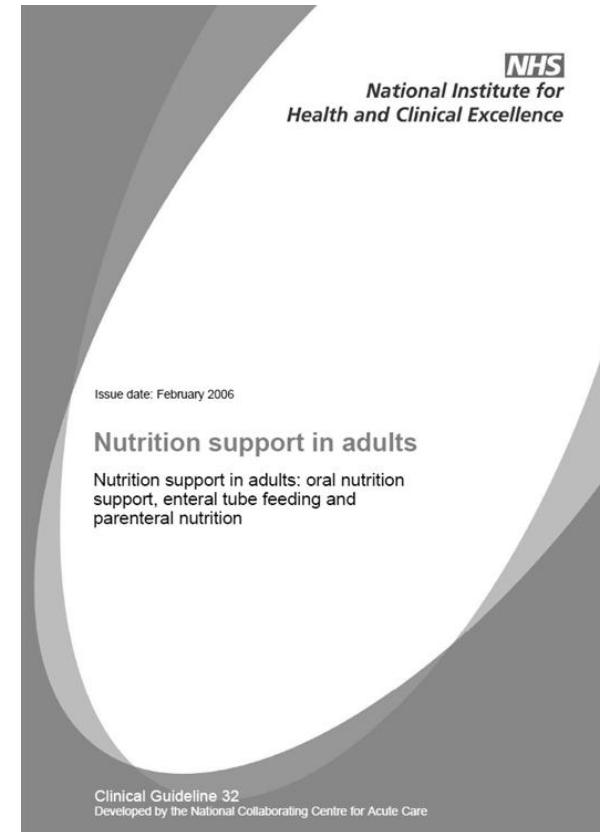
“Healthcare professionals should ensure that the overall nutrient intake of oral nutritional support offered contains a balanced mixture of protein, energy, fibre, electrolytes, vitamins and minerals.”



Zorgmodule Voeding def versie (2012)

Guidelines optimal nutrition (NL)

“...important that diet is full in essential nutrients (protein, vitamins, minerals)”



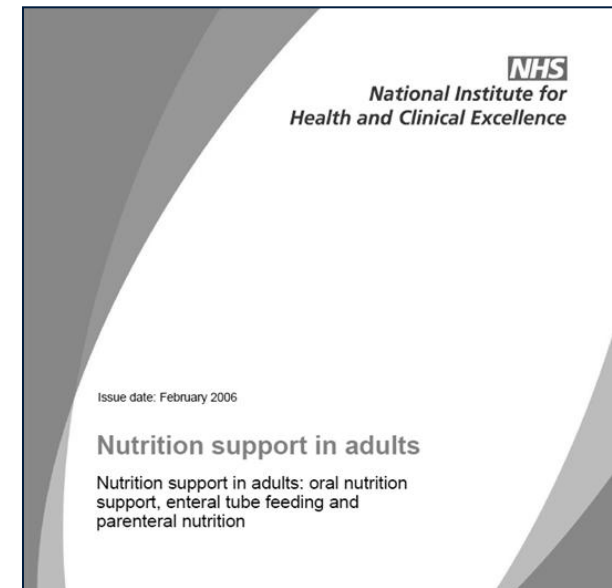
NICE 2006/2014

NICE National Institute for
Health and Care Excellence

Cost saving guidance

Quality standard QS24:

5th place in scale of achievable savings



Why does this guidance save money?	Estimated saving per 100,000 (£)	Impact level
assessment and treatment of malnourished patients. If this was fully implemented and resulted in better nourished patients then this would lead to reduced complications such as secondary chest infections, pressure ulcers, wound abscesses and cardiac failure. Conservative estimates of reduced admissions and reduced length of stay for admitted patients, reduced demand for GP and outpatient appointments indicate significant savings are possible.	-71,800	High

The Value of Dietetics for Malnourished Hospital Patients

De waarde van diëtetiek bij ondervoede patiënten in het ziekenhuis

For every € 1 spend on dietary advice, society saves (net/year):

Onco gastro/intestines, lungs:	€ 3 - 23	(€ 4-42 million)
Head/neck:	€ 2 – 5	(€ 1,5-4 million)
Elderly patients:	€ 1 - 2	(€ 15-78 million)

SEO-rapport nr. 2015-04

seo economisch onderzoek

Cost-benefit of dietitian

Cost-benefit analysis of dietary treatment

Treatment by the dietitian has various social benefits. The health of the patient (and his family) improves, such that costs of health care can be avoided and the production of the patient increases. The treatment of patients with obesity and obesity-related diseases creates social benefits of € 0.4 to € 1.9 billion over a period of five years. For every € 1 spend on dietary counseling of these patients, society gets a net € 14 to € 63 in return. € 56 in terms of improved health, € 3 net savings in total health care costs and € 4 in terms of productivity gains.

SEO Report No. 2012-76A

seo economic research



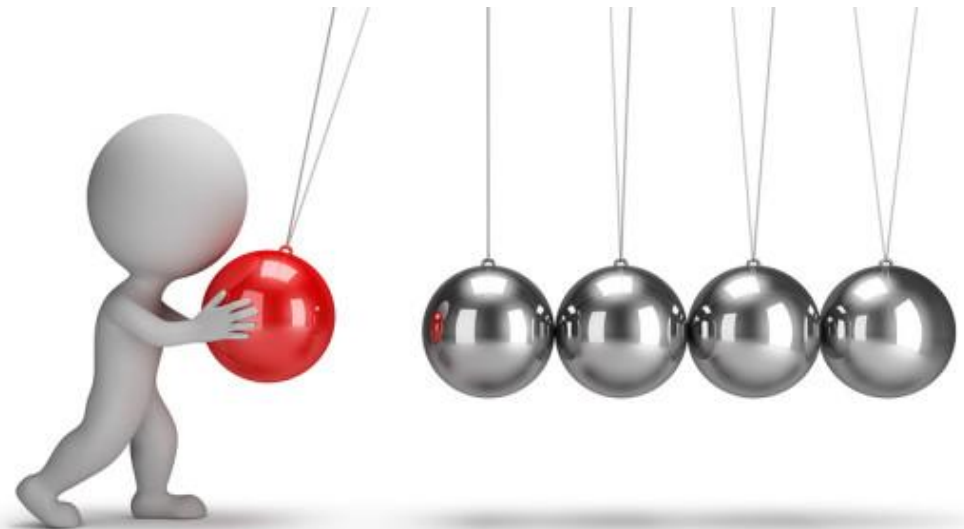
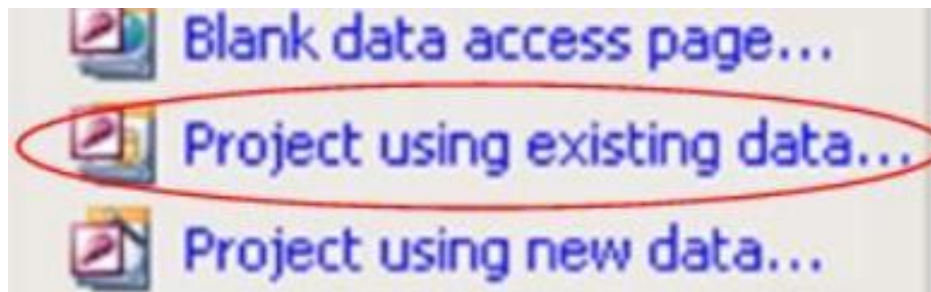
The Swedish Health Care System

by Anna H. Glenngård, Lund University School of Economics and Management

Three basic principles apply to all health care in Sweden:

1. *Human dignity*: All human beings have an equal entitlement to dignity and have the same rights regardless of their status in the community.
2. *Need and solidarity*: Those in greatest need take precedence in being treated.
3. *Cost-effectiveness*: When a choice has to be made, there should be a reasonable balance between costs and benefits, with cost measured in relation to improvement in health and quality of life.





**Keeping –extending
FTEs**

Dietitians are needed

**Cost-effectiveness/
cost savings**

Effectiveness nutritional intervention

Burden of a disease/condition



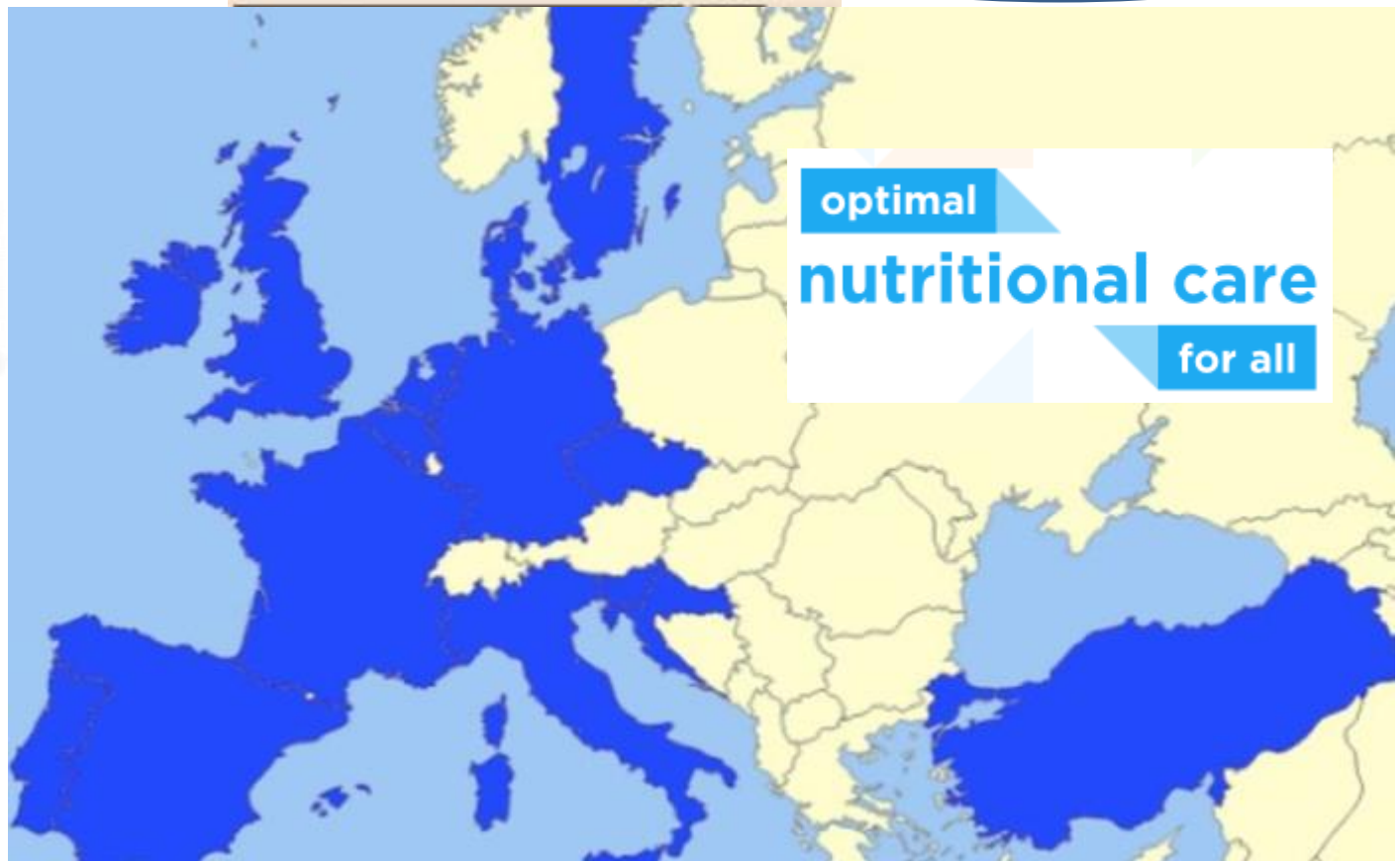
Cost of illness

Obesity

Diabetes

Falls

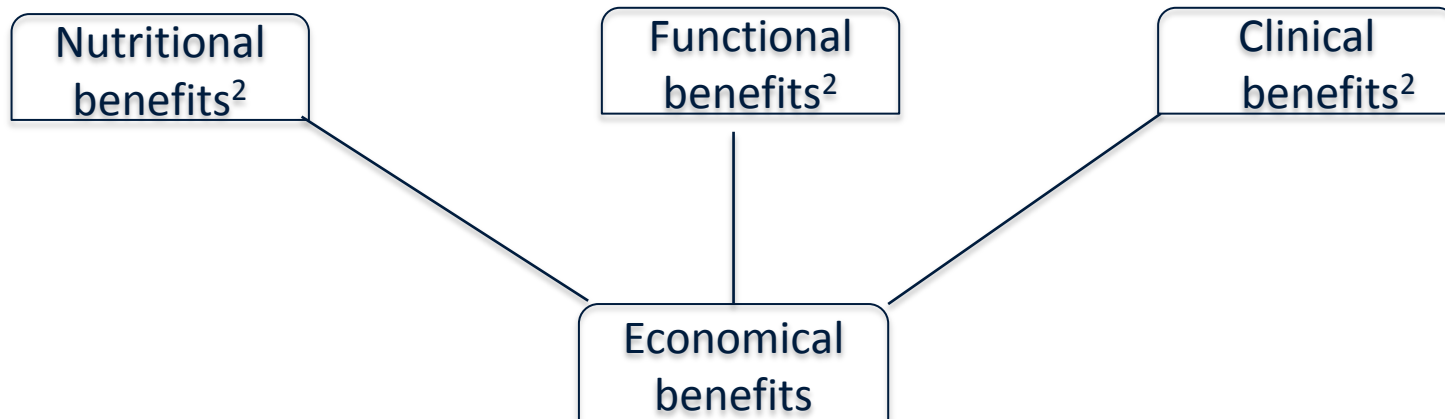
(DISEASE RELATED)
MALNUTRITION





Cost - effectiveness

(DISEASE RELATED)
MALNUTRITION



Cost effectiveness data

Milte RK *et al.* European Journal of Clinical Nutrition (2013) 67, 1243–1250

REVIEW

Economic
in adult

Cost-benefit analysis of dietary treatment

protein and energy supplementation
to strengthen the evidence

35, 125–137

Meta-analyses

A systematic
standard of
settings

and cost effectiveness of
interventions in community and

2016) 35, 370–380

Meta-analysis

seo economic research

A systematic review of the cost and cost effectiveness
standard oral nutritional supplements in the hospital

Freijer K *et al.* JAMDA (2014) 15, 17–29

Review

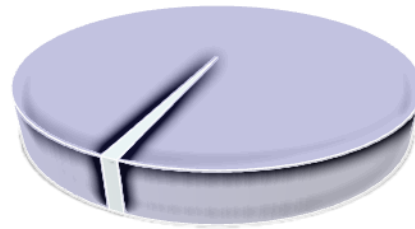
The Economic Value of Enteral Medical Nutrition in the Management
of Disease-Related Malnutrition: A Systematic Review

Malnutrition underestimated

seo economic research

Biggest Cost is the Consequence of Untreated Condition, Not Its Management

- Costs of Nutrition are a small proportion of healthcare budgets: 1-3% in Europe



- **Biggest cost is due to the consequences of DRM/obesity/DM etc**
 - Hospital (re-)admissions and LOS
 - Complications (e.g. infections)
 - Healthcare professionals
 - Medical treatments





Conclusie

Jaarlijks kan er € 741 miljoen bespaard worden aan zorgkosten door tussenkomst van paramedici. Dit blijkt uit SEO-rapporten van drie van de vijf beroepsverenigingen die zijn aangesloten bij PPN. Voor ergotherapie en huidtherapie zijn geen SEO-rapporten beschikbaar. Behandeling door een paramedicus levert de maatschappij aanzienlijke voordelen op. De gezondheid van de patiënt (en familie) neemt toe, waardoor zorgkosten kunnen worden vermeden en de kwaliteit van leven van de patiënt toeneemt. In cijfers uitgedrukt:

Savings due to dietary advice	€ 400 miljoen
Besparing door logopedie:	€ 105 miljoen
Besparing door ergotherapie:	€ 236 miljoen
Totale besparing minimaal:	€ 741 miljoen

Het nieuwe kabinet kan minimaal € 741 miljoen per jaar besparen door inzet paramedische zorg

PPN vraagt de informateur vier onderwerpen op te nemen in het regeerakkoord:

1. Versterking van de eerstelijns: betere en zichtbare positionering van paramedici naast de huisarts
2. Interdisciplinaire samenwerking in belang van de patiënt moet mogelijk zijn
3. Afschaffing eigen risico in de eerstelijnszorg
4. Verbeter positie van vertegenwoordiger beroepsgroepen ten opzichte van zorgverzekeraars.

How to proceed as a clinical dietitian?

➤ **Having right amount of dietitians to provide optimal dietetic care for the malnourished group**

- I Amount of admitted patients per year, per ward?*
- II Amount of malnourished patients in need for dietetic consultation (on yearly basis, per ward)*
- III What is needed (consults) to provide optimal nutritional care?*
- IV Is the dietetic department up to strength?*

Take home messages (1)

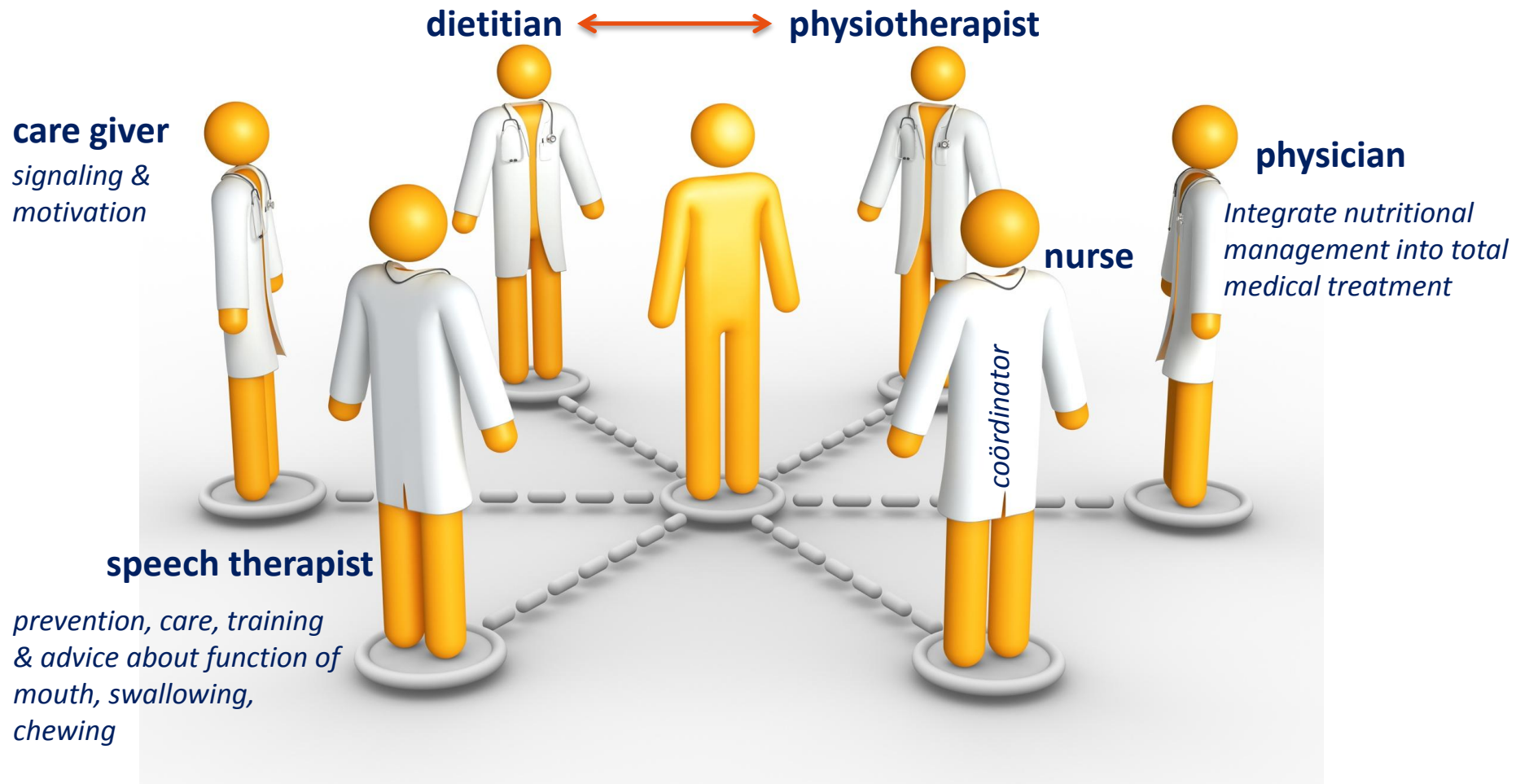
- **Cost of illness** → high *additional* costs
- **Optimal nutritional management** can **save costs** → **added value of dietitians!**
- **Nutrition Economics** → specific area within health economics
→ still in progress → join
<https://www.ispor.org/sigs/NutritionEconomics.aspx>
- Applying future Nutrition Economics guidelines
→ until then perform **high quality economic evaluations**
(use health economic evaluation guidelines & reporting standards)

Take home messages (2)

- ✓ Effectiveness and cost-effectiveness data are essential to underline our message
- ✓ Electronic patient charts have high potential. Correct and uniform registration is essential!
- ✓ Together is always better!



Multidisciplinary task division – collaboration



Toolkit nutrition economics on fightmalnutrition.eu

This toolkit will be explained during the EFAD conference on the 29th and 30th of September in Rotterdam, by dr. Karen Freijer, dr. Hinke Kruizenga and Sissi Stoven Lorentzen.

Introduction to Nutrition
Economics

DOWNLOAD

ISPOR Nutrition Economics
Special Interest Group

DOWNLOAD

Workshop report on NE (2011)

DOWNLOAD

The social costs and benefits of
dietetics for malnourished patients
in hospital

DOWNLOAD

Experts' view on NE in disease-
related malnutrition

DOWNLOAD

The costs of malnutrition and the
return on medical nutrition

DOWNLOAD

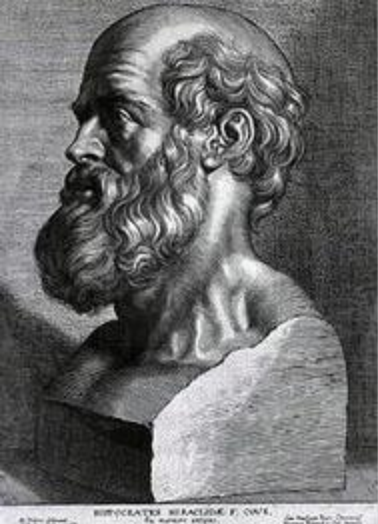
Thesis on Nutrition economics –
Karen Freijer

DOWNLOAD

Back



<http://www.fightmalnutrition.eu/toolkits/nutrition-economics-disease-related-malnutrition>



“Let food be thy medicine
and medicine be thy food”
– Hippocrates

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