Economic impact of malnutrition
A European perspective

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Chairman
The European Nutrition for Health Alliance

IrSPEN 2013 Conference
March 5 & 6, 2013
Dublin, Ireland

ESPEN
THE EUROPEAN SOCIETY FOR CLINICAL NUTRITION AND METABOLISM

Outline

- Malnutrition: scope of the problem
- European Nutrition for Health Alliance
- Economics and malnutrition
- Current actions
- Summary

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Malnutrition: the problem

Malnutrition / at risk in Europe is reported present in

- 5% of the entire population
- 10% in those over 65 years
- 15% in ages 75-80 living at home
- 35-40% of all hospital admissions
- up to 60% in care homes
- Most are at home……

Malnutrition: important?

Malnutrition increases

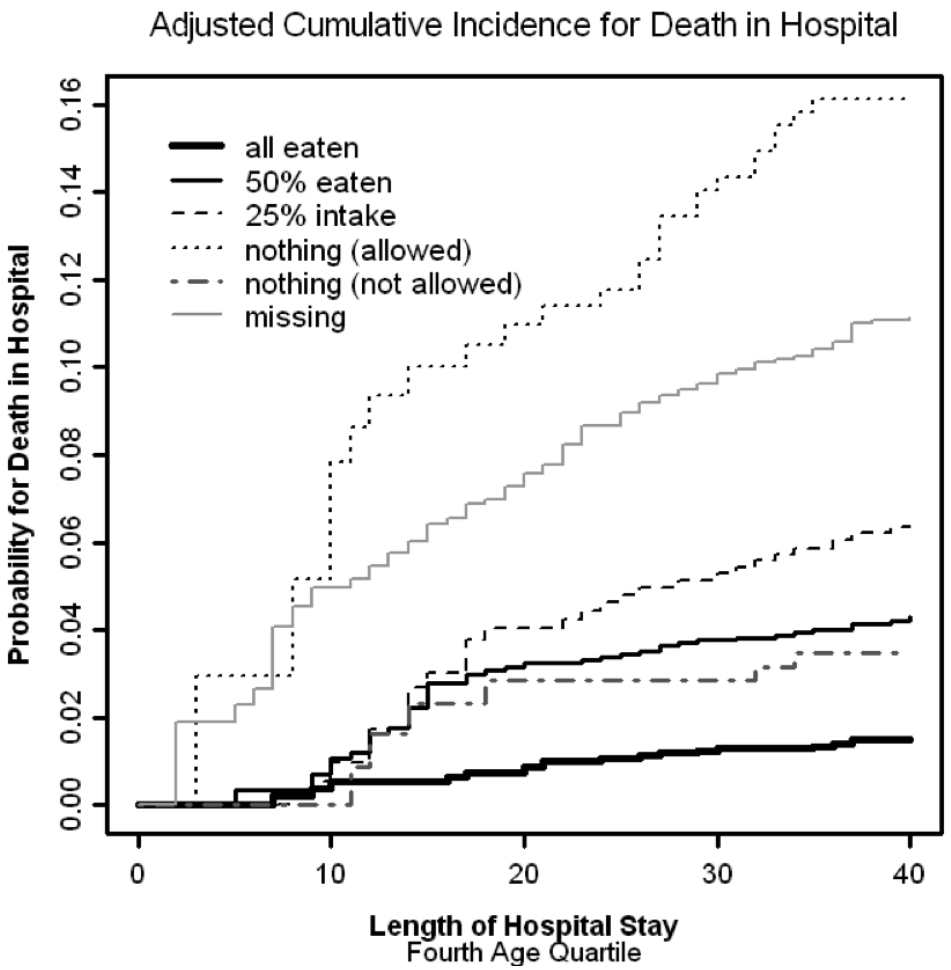
- need of care in all care situations
- risk for infections
- risk for complications
- need for treatments in hospitals
- length of stay
- risk of dying from diseases

Nutrition during nutritionDay

Intake of food	Patients (%)	Supportive nutrition (%)
Full portion	33	10
Half	23	14
Quarter	10	17
Nothing (allowed) Nothing (by order)	5 7	32 29

Hiesmayr et al, Clin Nutr 2009

Poor eating – higher risk



nutritionDay 2006

3200 patients
Ages 78 - 103

Hiesmayr et al, Clin Nutr 2009

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EU lobbying

First Aim: Create awareness of malnutrition in The European Parliament:

Strategy:

- Joining forces with other stakeholders
- European Nutrition for Health Alliance – ESPEN Chairing

The European Nutrition for Health Alliance
What is it ?

- UK Charity : trustees & partner organizations
- Alliance of key EU stakeholders in health and nutrition working to include under-nutrition and nutritional care into EU public health and health care policies + programmes
- Motor to support implementation undernutrition / nutritional care agenda.
- Focuses on the EU arena and implementation support to policymakers and stakeholders at country level

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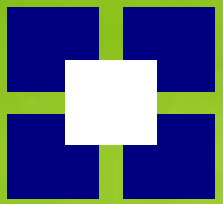
Call for Action: 2007 Prague Declaration ‘Determined to Tackle Malnutrition Together’



Association Internationale de la Mutualité

EU parliament breakthrough

October 2008 The European Parliament:

- Malnutrition & obesity key priorities in the 2008 – 2013 EU Health Strategy

EU: Pointing directions

- Urges the Commission to take a more holistic approach to nutrition and make malnutrition, alongside obesity, a key priority in the field of health, incorporating it wherever possible into *EU-funded research, education and health promotion initiatives and EU-level partnerships*;

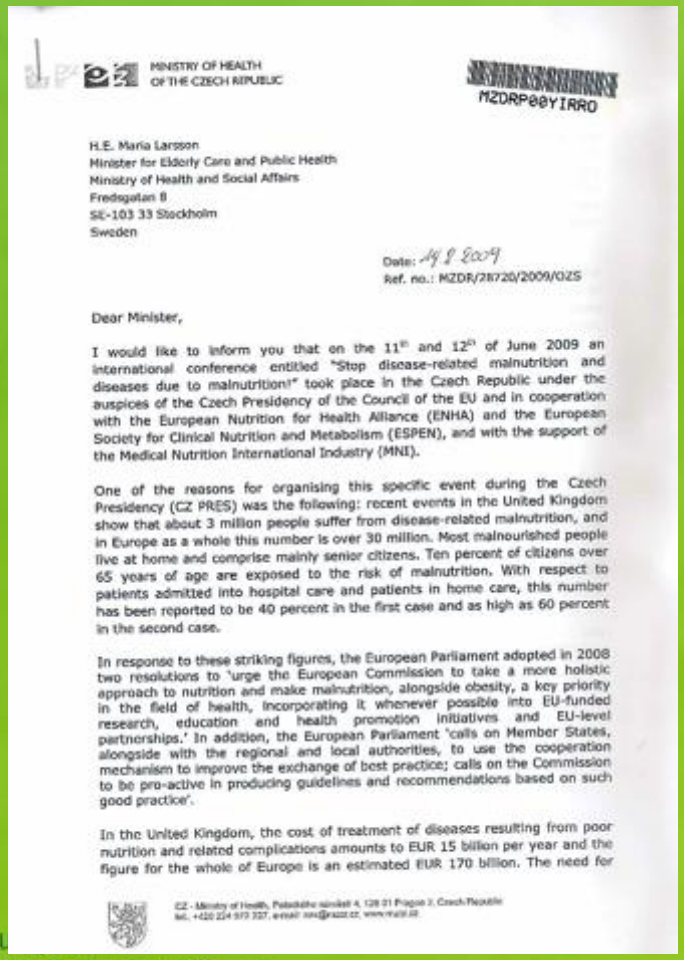
EU: Call to all:

- Calls on Member States, along with regional and local authorities, to use the cooperation mechanism to *improve the exchange of best practice*; calls on the Commission to be proactive in producing *guidelines and recommendations* based on such good practice;

MINISTERSTVO ZDRAVOTNICTVÍ
ČESKÉ REPUBLIKY

Czech EU Presidency Conference

11+12 June 2009, Prague - Cestlice



MINISTRY OF HEALTH
OF THE CZECH REPUBLIC

MZDRP00YIRRO

H.E. Maria Larsson
Minister for Elderly Care and Public Health
Ministry of Health and Social Affairs
Fredsgatan 8
SE-103 33 Stockholm
Sweden

Date: 4. 8. 2009
Ref. no.: MZDR/28720/2009/OZS

Dear Minister,

I would like to inform you that on the 11th and 12th of June 2009 an international conference entitled "Stop disease-related malnutrition and diseases due to malnutrition!" took place in the Czech Republic under the auspices of the Czech Presidency of the Council of the EU and in cooperation with the European Nutrition for Health Alliance (ENHA) and the European Society for Clinical Nutrition and Metabolism (ESPEN), and with the support of the Medical Nutrition International Industry (MNI).

One of the reasons for organising this specific event during the Czech Presidency (CZ PRES) was the following: recent events in the United Kingdom show that about 3 million people suffer from disease-related malnutrition, and in Europe as a whole this number is over 30 million. Most malnourished people live at home and comprise mainly senior citizens. Ten percent of citizens over 65 years of age are exposed to the risk of malnutrition. With respect to patients admitted into hospital care and patients in home care, this number has been reported to be 40 percent in the first case and as high as 60 percent in the second case.

In response to these striking figures, the European Parliament adopted in 2008 two resolutions to 'urge the European Commission to take a more holistic approach to nutrition and make malnutrition, alongside obesity, a key priority in the field of health, incorporating it whenever possible into EU-funded research, education and health promotion initiatives and EU-level partnerships.' In addition, the European Parliament 'calls on Member States, alongside with the regional and local authorities, to use the cooperation mechanism to improve the exchange of best practice; calls on the Commission to be pro-active in producing guidelines and recommendations based on such good practice'.

In the United Kingdom, the cost of treatment of diseases resulting from poor nutrition and related complications amounts to EUR 15 billion per year and the figure for the whole of Europe is an estimated EUR 170 billion. The need for

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healthcare also increases, both in hospitals (more frequent and longer hospitalisation periods, occurrence of infection-related complications) and in outpatient and home care. This unfavourable situation exists across Europe and if efforts are not made to address it, the problem will continue to grow due to negative population trends. Especially now, during the financial crisis, a way must be found to increase the efficiency of healthcare and solving this problem is one such way.

There was extensive discussion at the conference about patient nutrition in the area of hospital and outpatient care, the effect of poor nutrition on the state of health of patients in hospitals and the effect of poor nutrition on the progress of disease. Representatives of professional societies, healthcare institutions, health insurance companies, ESPEN, ENHA and the European ministers of health arrived at the unanimous conclusion that poor nutrition, including malnutrition of patients, is an urgent public health and healthcare issue in Europe. It is necessary to adopt appropriate measures to try to prevent poor nutrition from further threatening the quality of life of patients, causing unnecessary illness and mortality and decreasing the effectiveness of our European healthcare systems.

Enclosed with this letter are the most important recommendations declared at the conference. These conclusions were also briefly presented to the representatives of the Member States and the European Commission at the meeting of the Working Group for Public Health, which took place on 23 June 2009 in Brussels.

I would like to ask your country's active support in promoting debate on this issue in the framework of national and European public health and health care policy and activities.

The conference presentations can be obtained on: http://czpres.mzcr.cz/Pages/655-STOP-podvyzive-nemocnych-a-nemocem-z-podvyzivy.html

I would like to thank you for your attention and for your interest.

With cordial greetings from Prague,

Dana Jurásková
Minister of Health

The European Nutrition for Health Alliance

MINISTERSTVO ZDRAVOTNICTVÍ
ČESKÉ REPUBLIKY

Czech EU Presidency Conference

11+12 June 2009, Prague - Cestlice

STOP disease-related malnutrition and diseases due to malnutrition!

- Public awareness and education
- Guideline development and implementation
- Mandatory screening
- Research on malnutrition
- Training in nutritional care
- National nutritional care plans
- Malnutrition should be considered a key issue in forthcoming EU Presidencies

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Nutrition for Health Alliance

Progress & Support EP

EP plenary votes September 25 + October 9, 2008,'Together for Health' 2008 – 2013 and 2010 European Partnership Action Against Cancer:

- ***Urges the Commission .. to make malnutrition, alongside obesity, a key priority in the field of health …***

Nutrition Day Conference 2010
European Parliament - EU Presidency - ENHA - ESPEN

Chair EP Public Health Committee Alojz Peterle :

"Malnutrition requires a cross-cutting solution; a good first step would be mandatory nutrition risk screening across Europe,….."

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Strategic Alliance
World Health Organisation - Europe

✓ *Alignment work programmes & collaboration*

June 2012

World Health Organization
REGIONAL OFFICE FOR Europe

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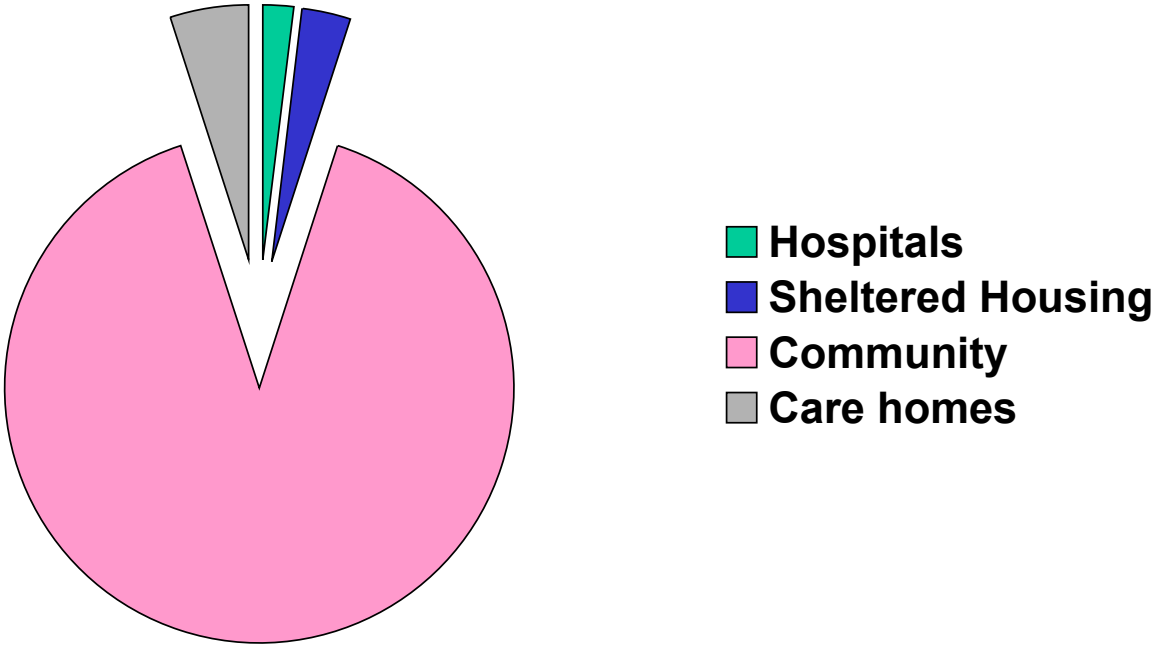
Were do we find the malnourished?

(Elia 2009)



At any given point in time, > 3 million people in the UK are malnourished or at risk of malnutrition. Most are in the community.

This transforms to > 33 million people in Europe…

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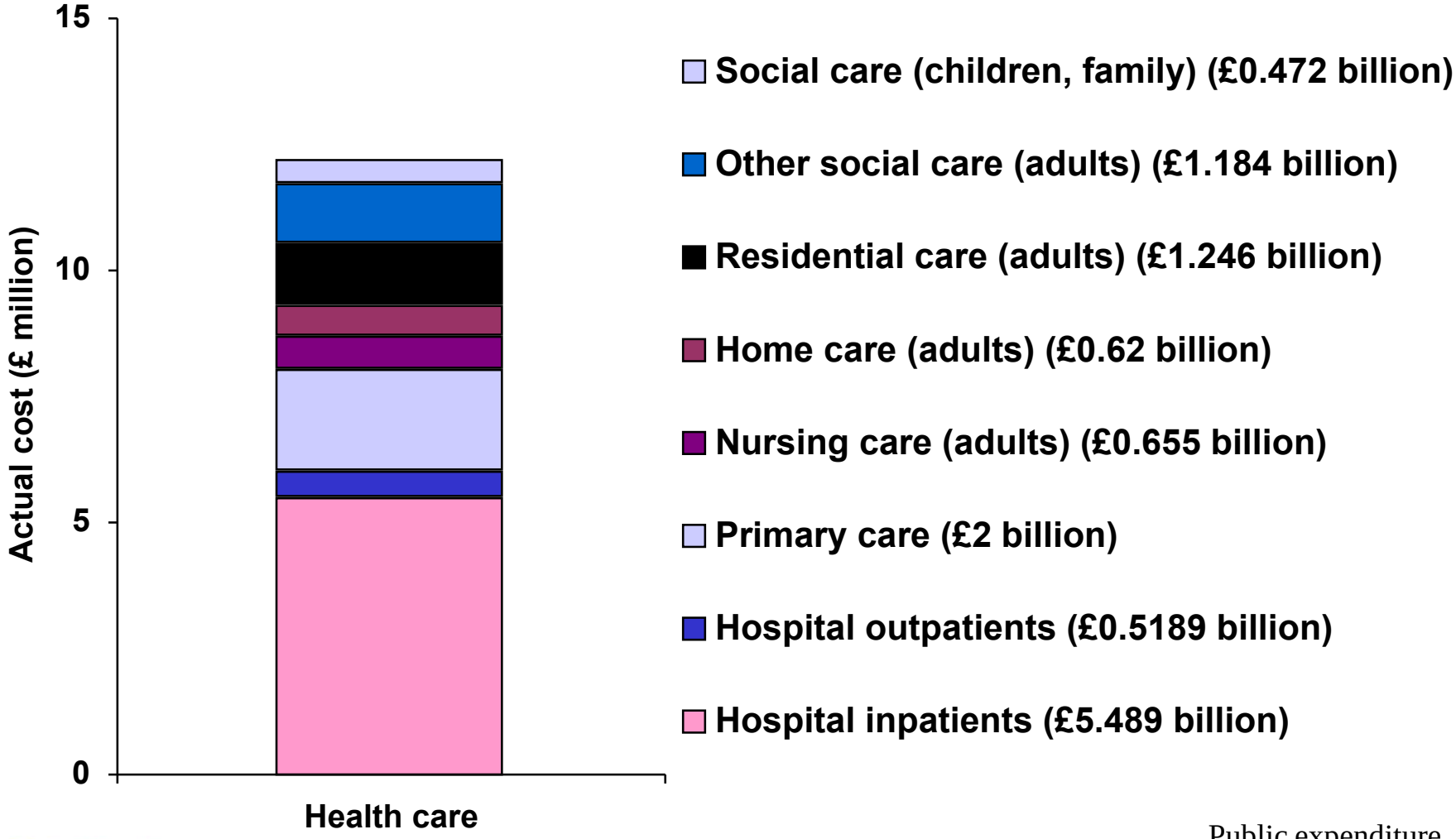
New health economic *evidence* (Elia & Stratton 2009)

New UK costs of malnutrition exceed £13 billion (€15,5 billion)*



Public expenditure

*Transformed to Europe €171 billion

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Malnutrition important?

Malnutrition increases

- need of care in all care situations
- risk for infections
- risk for complications (morbidity)
- need for treatments in hospitals
- length of stay
- risk of dying from diseases (mortality)

- ≈ 30 Million Europeans affected
- Cost for Europe ≈ €170 Billion / year

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Malnutrition
Under-nourished have double co-morbidity

Table 2
Patients' comorbidities at baseline.

Comorbidity	Percent of patients with comorbidities		*p* value
	Malnourished patients ($n = 1000$)	Non-malnourished patients ($n = 996$)	
Gastrointestinal disorder	43	11	<0.0001
Psychiatric illness	36	9	<0.0001
Musculoskeletal disorder	34	26	<0.0001
Pulmonary disease	25	19	<0.005
Skin disorder	23	7	<0.0001
Cancer	20	12	<0.0001
Cardiovascular disorder	20	12	<0.0001
Oedema	18	6	<0.0001
Benign tumours	17	3	<0.0001
Renal disease	12	10	ns
Anaemia	12	4	<0.0001
Endocrinological disorder	11	6	<0.0001
Cerebrovascular diseases	10	4	<0.0001
Hernia	9	1	<0.0001
Sleeping disorder	9	3	<0.0001
Diabetes	8	9	ns
Neurological disorder	8	3	<0.0001
Haemorroids and fissures	8	0	<0.0001
Peripheral vascular disease	7	0	<0.0001
Bone disease	7	4	<0.005
Dementia	7	2	<0.0001
Diverticular disease	7	2	<0.0001
Gynaecological disorder	6	1	<0.0001

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Guest J et al, Clin Nutr 2011; 30: 422-9

Malnutrition
Under-nourished have double care needs

Table 3
Mean 6-monthly levels of resource use per patient, except where percentages are provided (95% confidence intervals in parentheses).

Resource	Mean 6-monthly amount of resource use per patient		*p* value	Incremental 6-monthly amount of resource use following a diagnosis of malnutrition in the community
	Malnourished patients ($n = 1000$)	Non-malnourished patients ($n = 996$)		
GP consultations	18.90 (18.02; 19.77)	9.12 (8.62; 9.62)	<0.001	9.78 (9.45; 10.10)
GP domiciliary visits	0.13 (0.07; 0.19)	0.53 (0.35; 0.74)	ns	−0.40(−0.55; −0.30)
Practice nurse visits	0.01 (0.00; 0.02)	0.14 (0.09; 0.19)	<0.005	−0.13(−0.16; −0.10)
Dietician visits	0.06 (0.04; 0.10)	0.00 (0.00; 0.00)	<0.005	0.06 (0.06; 0.12)
Hospital outpatient visits	1.04 (0.92; 1.17)	1.04 (0.89; 1.21)	ns	0.00 (0.00; 0.00)
Percent admitted into hospital	13%	5%	<0.05	8%
Hospital admissions	0.24 (0.19; 0.31)	0.12 (0.08; 0.16)	<0.001	0.12 (0.10; 0.15)
Accident and emergency visits	0.02 (0.00; 0.04)	0.03 (0.02; 0.03)	ns	−0.01(−0.01; 0.00)
Drug prescriptions	29.26 (27.02; 31.48)	19.06 (17.65; 20.56)	<0.001	10.2 (9.29; 10.84)
Prescriptions written by the primary care team for tube and sip feeds	30.33 (16.56; 44.10)	0.00 (0.00; 0.00)	<0.001	30.33 (16.56; 44.10)
Prescriptions written by the primary care team for disease-specific nutrition (e.g. for celiac disease)	9.85 (1.77; 17.93)	0.05 (0.00; 0.05)	<0.02	9.79 (1.77; 17.88)
Prescriptions written by the primary care team for vitamin and mineral supplements	2.32 (1.10; 3.54)	0.83 (0.62; 1.04)	<0.001	1.50 (0.48; 2.50)
Diagnostic procedures (e.g. X-ray, electrocardiogram, biopsy, endoscopy)	0.72 (0.64; 0.80)	0.27 (0.23; 0.31)	<0.001	0.45 (0.41; 0.49)
Laboratory tests (e.g. haematological and biochemistry tests)	2.65 (2.41; 2.88)	1.21 (1.06; 1.36)	<0.001	1.44 (1.36; 1.51)
Therapeutic medical procedures (e.g. chemotherapy, radiotherapy, insertion of nasogastric tubes, blood transfusion)	0.36 (0.27; 0.44)	0.27 (0.18; 0.36)	ns	0.09 (−0.18; 0.45)
Medical devices (e.g. stoma devices, urinal devices, wound dressings)	12.10 (7.59; 16.61)	3.60 (2.03; 5.15)	<0.001	8.50 (5.46; 11.56)
Ambulance transport	0.01 (0.00; 0.02)	0.06 (0.00; 0.06)	ns	−0.05(−0.05; −0.05)

Guest J et al, Clin Nutr 2011; 30: 422-9

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Malnutrition
Under-nourished cost twice as much

Table 5
Mean 6-monthly cost of resource use per patient (percent of total cost in parentheses).

Resource	Mean 6-monthly cost per patient (£) and percent of total cost in parentheses		Incremental 6-monthly NHS cost (£) following a diagnosis of malnutrition in the community and percent of total cost in parentheses
	Malnourished patients ($n = 1000$)	Non-malnourished patients ($n = 996$)	
GP consultations	667.30 (38)	327.86 (44)	339.44 (34)
GP domiciliary visits	26.36 (2)	32.75 (4)	−6.39 (−1)
Practice nurse visits	0.19 (<1)	4.88 (1)	−4.69 (<1)
Dietician visits	4.58 (<1)	0.15 (<1)	4.43 (<1)
Hospital outpatient visits	99.40 (6)	72.99 (10)	26.41 (3)
Hospital admissions	306.90 (18)	114.44 (15)	192.46 (19)
Accident and emergency visits	1.57 (<1)	2.49 (<1)	−0.92 (−<1)
Drug prescriptions	190.19 (11)	112.17 (15)	78.02 (8)
Prescriptions for tube and sip feeds	66.25 (4)	0.00 (0)	66.20 (7)
Prescriptions for disease-specific nutrition	76.94 (4)	0.70 (<1)	76.21 (8)
Prescriptions for vitamin and mineral supplements	5.77 (<1)	2.24 (<1)	3.62 (<1)
Diagnostic procedures	106.88 (6)	46.90 (6)	59.98 (6)
Laboratory tests	31.04 (2)	12.69 (2)	18.35 (2)
Therapeutic medical procedures	43.85 (3)	9.14 (1)	34.71 (3)
Medical devices	125.38 (7)	8.77 (1)	116.61 (12)
Ambulance transport	0.39 (<1)	1.82 (<1)	−1.43 (−<1)
Total	1753.00 (100)	749.99 (100)	1003.01 (100)

Guest J et al, Clin Nutr 2011; 30: 422-9

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The cost of malnutrition in the community
Cost implications depend on the prevalence

Table 7
Resource implications and budget impact of malnutrition in the first six months following diagnosis in the community, stratified by incidence of malnutrition.

	Incidence of malnutrition					
	0.01	0.02	0.03	0.04	0.05	0.06
Number of newly-diagnosed patients	613,991.0	1,227,982.0	1,841,973.4	2,455,965.0	3,069,955.8	3,683,947.0
Number of GP consultations (million)	6.0	12.0	18.0	24.0	30.0	36.0
Number of hospital outpatient visits	2249.9	4500.0	6796.1	9100.0	11,342.3	13,615.0
Number of dietician visits	33,250.0	66,000.0	98,980.8	132,000.0	164,711.6	197,577.0
Number of hospital admissions	86,000.0	172,000.0	258,000.0	344,000.0	430,000.0	516,000.0
Number of drug prescriptions (million)	6.2	12.5	18.8	25.1	31.3	37.6
Number of laboratory tests (million)	0.9	1.8	2.7	3.6	4.5	5.4
Number of diagnostic procedures (million)	0.3	0.6	0.8	1.1	1.4	1.6
Total NHS cost (£ million)	615.9	1231.7	1847.5	2463.3	3079.2	3695.0

Range from £M600 (1%) to £M3700 (6%)

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Guest J et al, Clin Nutr 2011; 30: 422-9

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Original article

Estimating the costs associated with malnutrition in Dutch nursing homes

Judith M.M. Meijers [a,*], Ruud J.G. Halfens [a], Lisa Wilson [b], Jos M.G.A. Schols [c]

[a] Department of Health Services Research, School for Public Heath and Primary Care (CAPHRI), Faculty of Health, Medicine and Life Sciences, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands
[b] European Nutrition for Health Alliance, International Longevity Centre, London, UK
[c] Department of General Practice, CAPHRI, Maastricht University, Maastricht, The Netherlands

Results: The normal nutritional costs are 319 million Euro per year. The total additional costs of managing the problem of malnutrition in Dutch nursing homes involve 279 million Euro per year and are related to extra efforts in nutritional screening, monitoring and treatment. The extra costs for managing nursing home residents at risk of malnutrition are 8000 euro per patient and 10000 euro for malnourished patients.

Conclusions: The extra costs related to malnutrition are a considerable burden for the nursing home sector and urge for preventive measures.

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Meijers JMM et al, Clin Nutr 2011

The cost of malnutrition in Nursing home

Table 1
General costs for regular nutritional care in nursing homes.

	Total costs	Per patient
Total costs for nutritional screening per year (mean N of screening per year 3×)	€281,808.97	€4.70
Total costs for weight measurements per year (mean N of measurements per year 6.5×)	€1,151,617	€19[a]
Total Costs monitoring weight and nutritional intake per year	€11,774,134.88	€196.24
Total cost for meals per year (3×pd)	€306,588,000.00	€5,109.80
Total costs	€319,795,561.22	€5,329.93

Table 2
Extra costs per year for malnourished patients and patients at risk of malnutrition (excluding general nutritional costs).

Costs risk of malnutrition (N = 18240)	
Costs diagnostics	€12,163,964.97
Costs monitoring	€2,797,119.80
Costs treatment	€136,196,062.17
Costs MDO	€1,204,072.08
Total	€151,157,146.94
Costs per client	€8,287.12
Costs malnutrition (N = 12180)	
Costs diagnostics	€10,160,536.66
Costs monitoring	€701,224.90
Costs treatment	€116,997,270.50
Costs MDO	€1,218,768.96
Total	€127,859,032.06
Costs per client	€10,497.46
Total costs	
Total costs of preventing and managing malnutrition	€279,016,179.00

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Meijers JMM et al, Clin Nutr 2011

Effective management of malnutrition in the top 3 for cost saving guidance

CG34 Hypertension	£446,627
CG30 Long acting reversible contraception	£214,681
CG32 Nutrition support in adults	**£28,472** €34,166
TA111 Alzheimer's disease	£26,095
CG81 Breast cancer (advanced)	£15,080
TA152 Ischaemic heart disease (coronary artery stents)	£10,294

Top 6/19 sets of recommendations, savings per 100,000 population

NHS National Institute for Health and Clinical Excellence

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From R Stratton & M Elia

Cost savings with use of oral nutritional supplements in hospitals

- **'A small reduction in costs through intervention with oral nutritional supplements would result in large net cost savings'**

- **'Oral nutritional supplements can produce a net cost saving and be cost effective in selected patient groups'** ***Surgery (orthopaedic, gastrointestinal), elderly***

The average net cost saving with oral nutritional supplements ~£850 (€960) / patient

(reduced length of stay costs in analysis of RCT, Elia et al 2005)

From R Strattaon & M Elia

Spend on oral nutritional supplements to save money – budget impact models

- **Positive budget impact of using ONS appropriately as the costs of increased use of supplements are more than offset by a reduction in health care costs**

- €18 million (elderly, high risk malnutrition)

- €13.3 million (elderly, at risk of malnutrition)

- €604 million (all, at risk of malnutrition)

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Cawood et al, 2010; Nuijten & Freijer, 2010; Nuijten, 2010

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Key Objective 2011-2013

'Implement routine nutritional status and risk screening and follow up for all patients and people at risk across Europe'(*)

In parallel:

- 2011-2012: Continue to generate EU political support and key stakeholder involvement for nutritional screening and treatment
- 2012-2013: Drive and support implementation of national action plans

(*) ENHA position paper presented to the EP in May 2011

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European Innovation Partnership on Active and Healthy
Conference of Partners - Launch 6.11.2012, Brussels

EU Commissioner Neelie Kroes

- *EU-wide Public Private Partnership, to share knowledge and innovations*
- *Transform health and social care in Europe, economize health care spending*
- *1% savings on health care spending on ageing = 12 billion euro/yr*
- *Develop common solutions to improve older persons lives in Europe*

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European Commission

European Innovation Partnership on Active and Healthy

Ambition

2015: The project aims to deliver validated programmes for prevention of functional decline and frailty and malnutrition among older people supported by tools, networks and information across the EU.

Key action

Organize broad support from European policy makers, professionals and other stakeholders

Achievements up to now

- ✓ Key partner in the Action Group A3: "Prevention and early diagnosis of functional decline, both physical and cognitive, in older people".

European Innovation Partnership on Active and Healthy

What is the Action Plan A3 about?

- **Frailty, Undernutrition and functional decline are not inevitable consequences of Ageing**

- **Aims:**
- **Increase awareness of reasons behind problems and what we can do.**
- **Shift focus from treatment to prevention e.g. screening**
- **Define optimal approaches for prevention and treatment of frailty/dementia**
- **Identify and validate appropriate tools where necessary**

European Innovation Partnership on Active and Healthy

ENHA strategy and added value

- ENHA deliverables nutritional screening and care campaign contribute to EU objective
  „Adding 2 more Healthy Life Years“

- Chair Screening Work Package

- Support by key EU stakeholders incl EU Commission for ENHA campaign

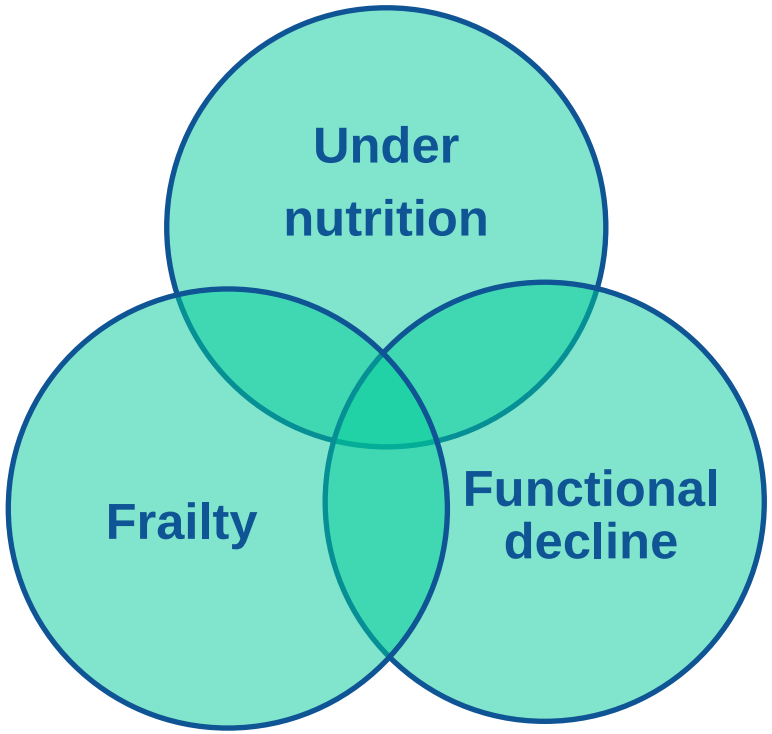
- Nutritional screening and care now key component of European Prevention and Disease Management policies

The European Nutrition for Health Alliance

European Commission

European Innovation Partnership on Active and Healthy

Structure



Seven General Objectives:

1. Management of Functional decline and frailty
2. Empowerment
3. Screening
4. Integrated Pathways of Care
5. Research & Methods
6. Sustainability
7. Co-operation (cross sector)

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Action Plan: Close up example

Objective 3 - **Promote systematic-routine screening for pre-frailty and Undernutrition**

Activity - To support the development of nutrition screening policy in EU member states

Benefits - Provides a policy for the development of national, local and regional implementation work by A3 partners

Deliverable

Implementation of nutrition screening policy in EU member states – 2 per year

- **Partners**
- **ENHA and A3 Partners**
- **ESPEN, EUGMS, MNI, EFAD, AIM, HOPE, IAGG, ENDA, PGEU …**

Fighting Malnutrition with a Multi-modal Strategic Approach:

The Danish Experience 2007-9

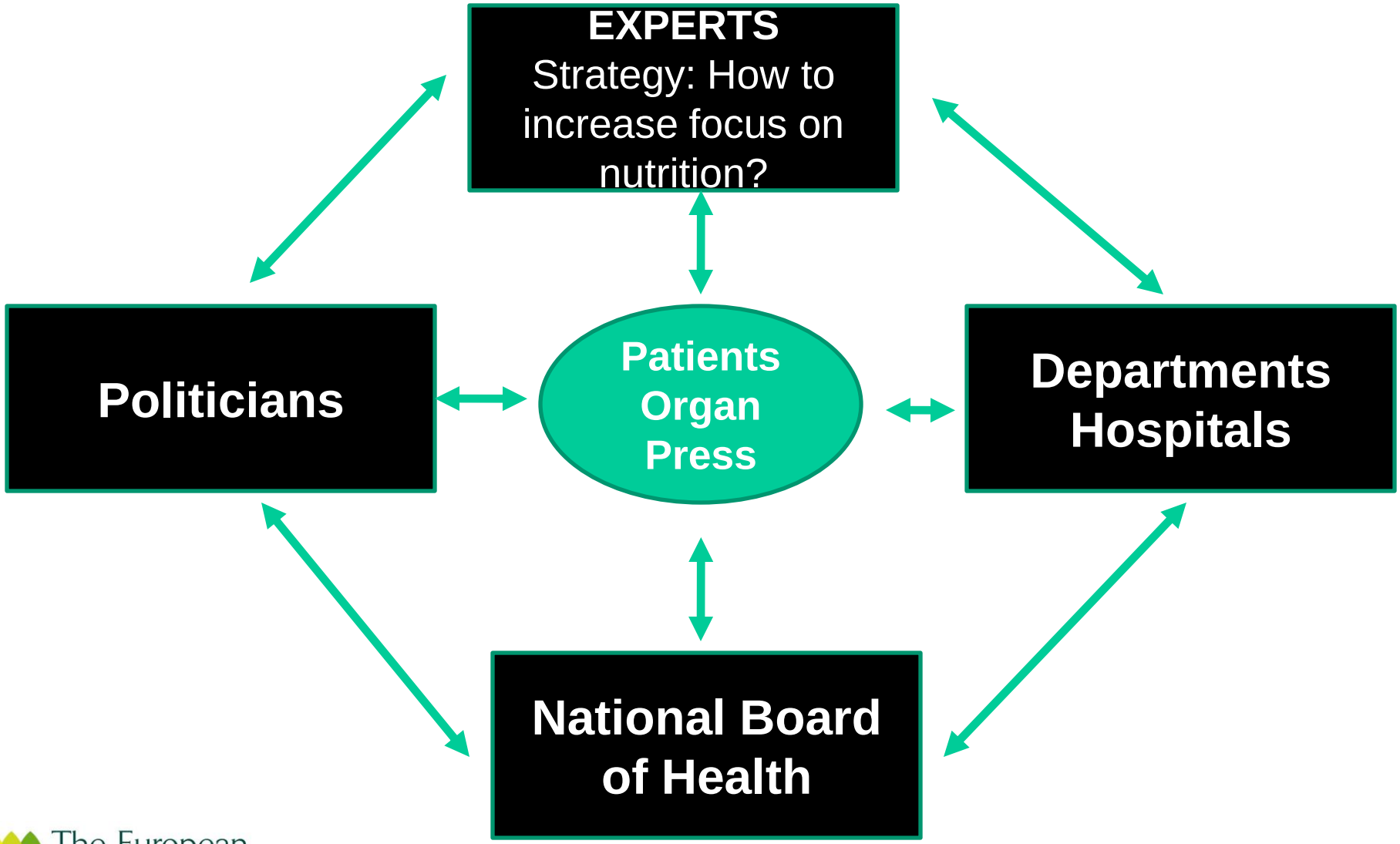
Rasmussen HH, Holst M, Beck AM, Andersen JR, Hejgaard T, Kondrup J on behalf of DAPEN and the Danish National Board of Health

From the mid-nineties a joint venture between the the **Danish Veterinary and Food Administration**, the **Danish National Board of Health (NBH),** politicians and an advisory board under the auspice of **DAPEN (Danish Society for Clinical Nutrition and Metabolism)** developed a strategic multi-modal approach to fight malnutrition including:

- ✓***The initiative "Better food for patients"***
- ✓***National guidelines***
- ✓***Accreditation of all Danish hospitals*** regarding undernutrition.

Contact person: Henrik Højgaard Rasmussen, Centre for Nutrition and Bowel Disease, Aalborg University Hospital, Denmark. E-mail: hhr@rn.dk

Initiatives and activities



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Strategy and interaction between actors

Experts

1990 –
Science - press

1995-2009
Advisary Board (DASPEN):

What is the problem?
Questionnaire-investigation

How big is the problem?
Prevalence-investigation

Can we solve the problem?
Tools, guidelines, education

Does it work ?
Implementation-strategy

Follow-up?
Re-measurements and strategy for improvement

Health care

1995
Organisation
Nutrition teams
Regional nutrition commitees
Quality databases

2003-9
National Board of Health:
(Better food for patients):
- **National Guidelines**
- **Catalogoue of ideas**
- **Grant for research**
- **DRG reimbursements**

www.sst.dk

Accreditation
2008
Standards for clinical nutrition
www.ikas.dk

Politicians

1994
Minister for Health:
Working group to review publicly provided meals

1997
National Food agency:
Economic implications
Nutrition higher priority

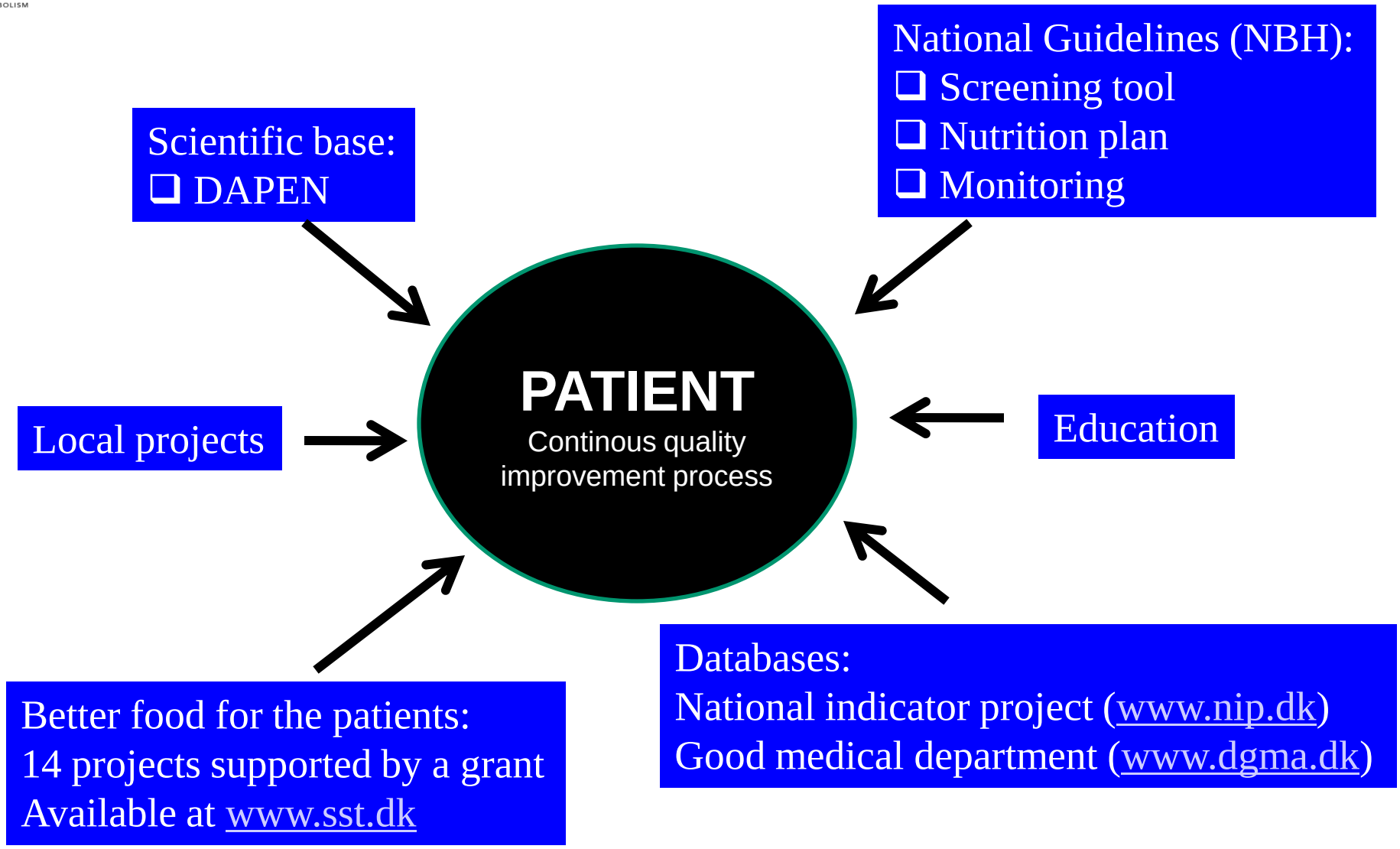
1999
Gouv'tl OOPS
implementation projekt

2001
Council of Europe:
Working group concerning European countries (barriers)

2003
Resolution

2005-9
Hearings
With government (in TV, radio, newspapers)

Implementation



Results

Documentation of variables	Pre-measurement* %	Re-measurement* %
Weight?	74	81
Height?	40	74
BMI?	0	56
Patients with weight loss < 3 months?	25	53
Patients with weight loss during hospitalization?	18	52
Energy intake < 1 week?	31	64
Energy intake in patients with decreased food intake?	43	69
Screening?	15	61
Nutrition plan?	34	86

*****Significant differences in all variables p < 0.05*

Rasmussen HH Clin Nutr 2006

Outline

- *Malnutrition: a Major medical and societal problem*
- *ENHA – umbrella for European actions*
- *Malnutrition is expensive & cost beneficial to treat*
- *Current: EU supported screening program*
- Summary

ESPEN
THE EUROPEAN SOCIETY FOR CLINICAL NUTRITION AND METABOLISM

Outline

- *Malnutrition: a Major medical and societal problem*
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Conclusions

- Malnutrition remains a major problem in Europe
- The costs of malnutrition is staggering
- The prevention and treatment of malnutrition is highly cost beneficial
- ENHA & ESPEN acts with stakeholders to have nutritional screening as standard in Europe
- ENHA and ESPEN are involved a several EU campaigns and actions related to nutrition

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