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What a waste – FoodServInSPIRe project at Aalborg University Hospital



929 beds

74500 admissions/year

560000 ambulatory visits

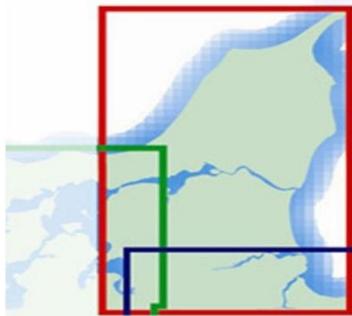
6500 employees



Aalborg University Hospital
Centre for Nutrition and Bowel Diseases - CET



AAU-MENU



FOOD+DESIGN
Center for Food Science, Design and Experience

Nor



Food waste from a Danish hospital kitchen

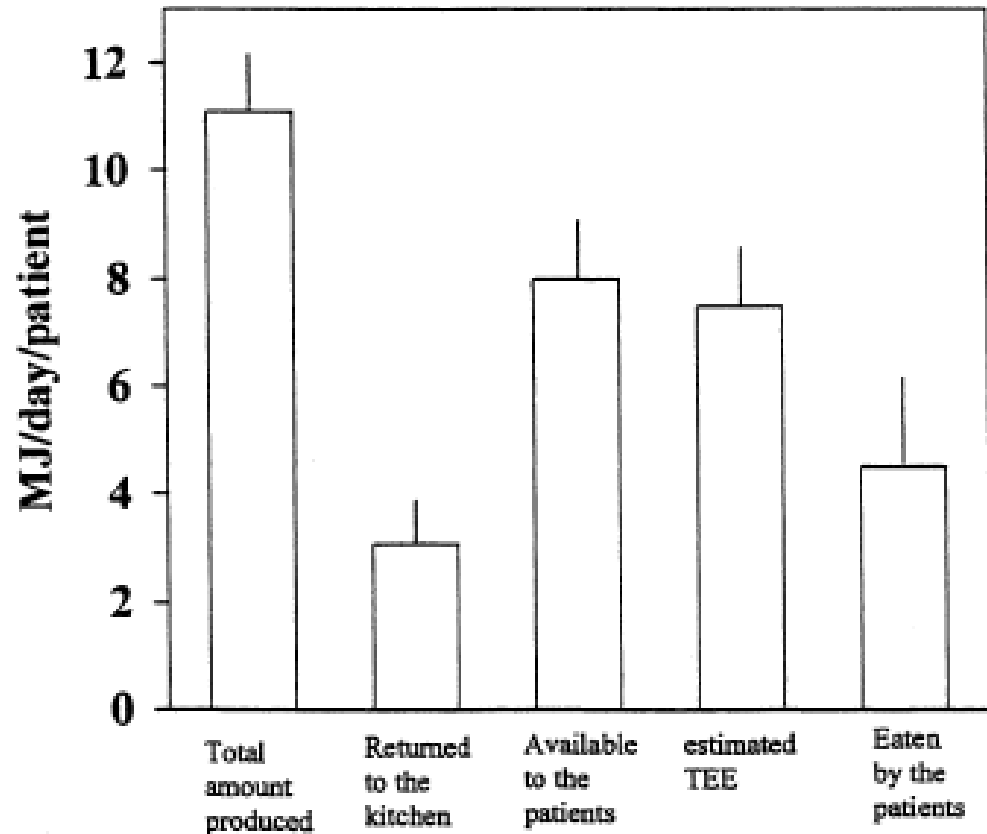
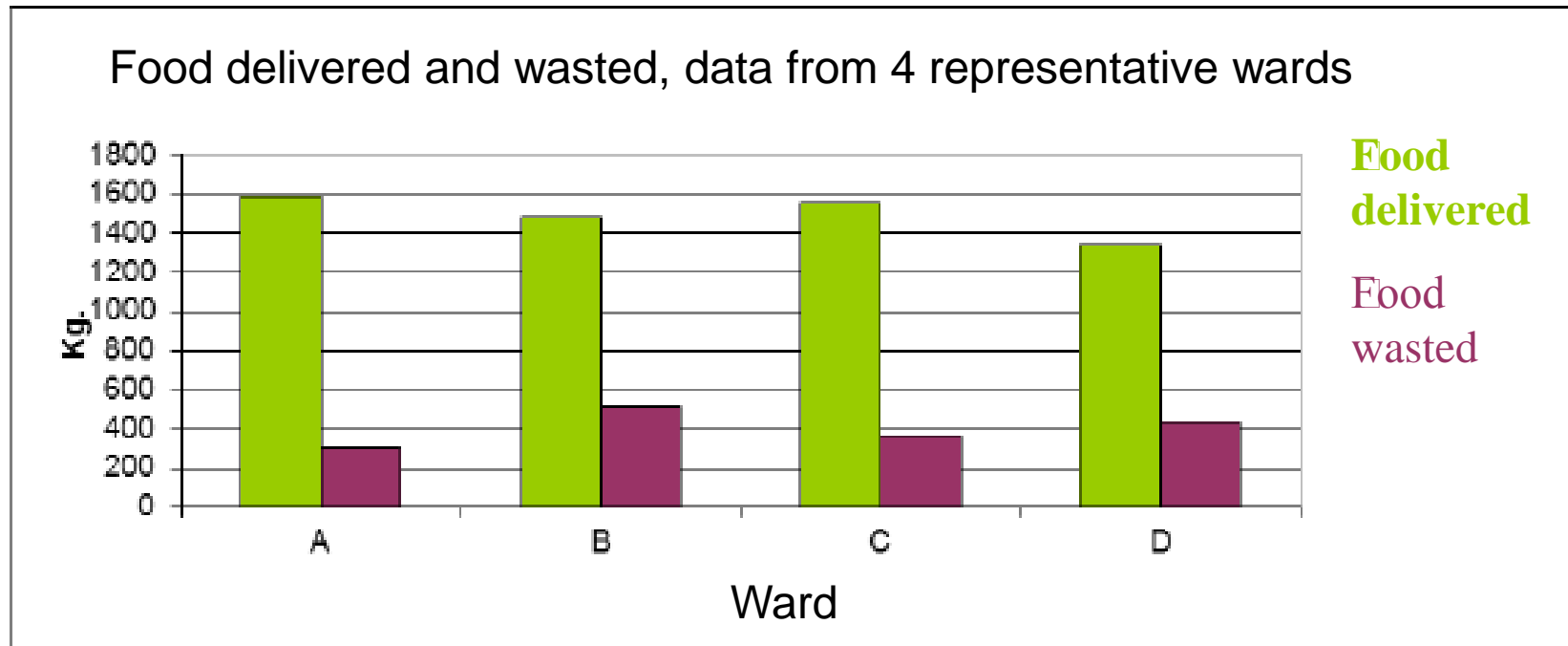


Fig. 1 Energy content, given as MJ/day/patient in the total amount of food produced, the amount of food returned to the kitchen uneaten, and the amount available to the patients on the ward (from study I); also the estimated TEE and the amount of energy actually eaten by the patients (from study II).

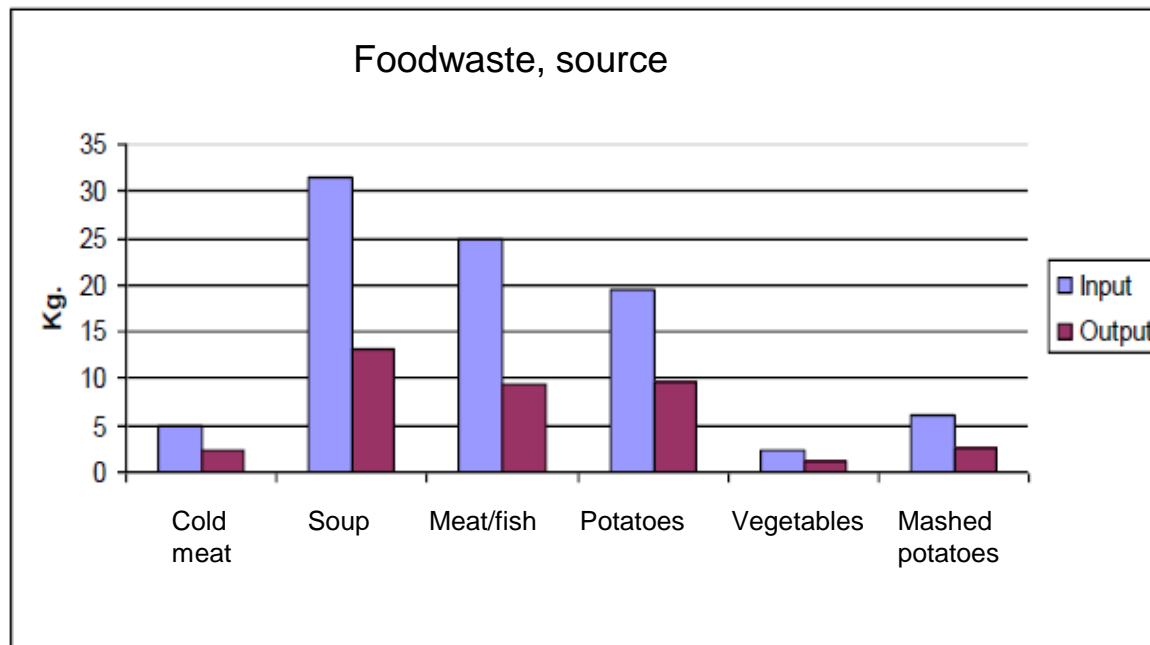
Trolley waste – experiences from a pilotproject in North Denmark Region



Total: 27,2 % waste

Kollerup SS & Larsen SB, 2012

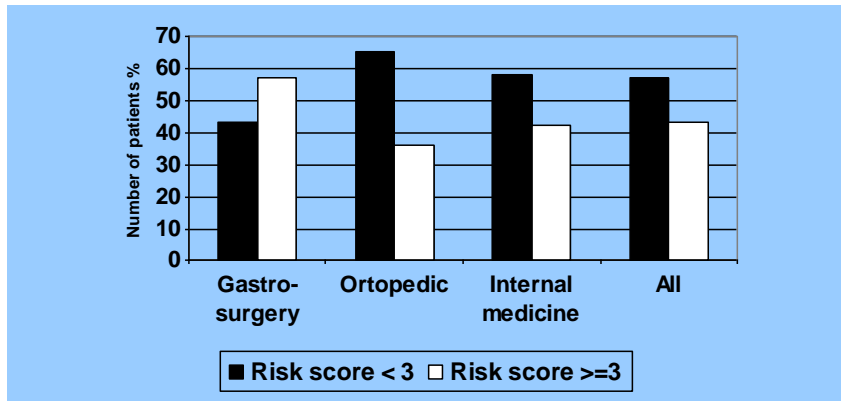
Trolley waste – experiences from a pilotproject in North Denmark Region



Kollerup SS & Larsen SB, 2012

The other side of waste – patients in hospitals are at nutritional risk...

Incidence in Danish hospitals:



Rasmussen HH, 2004

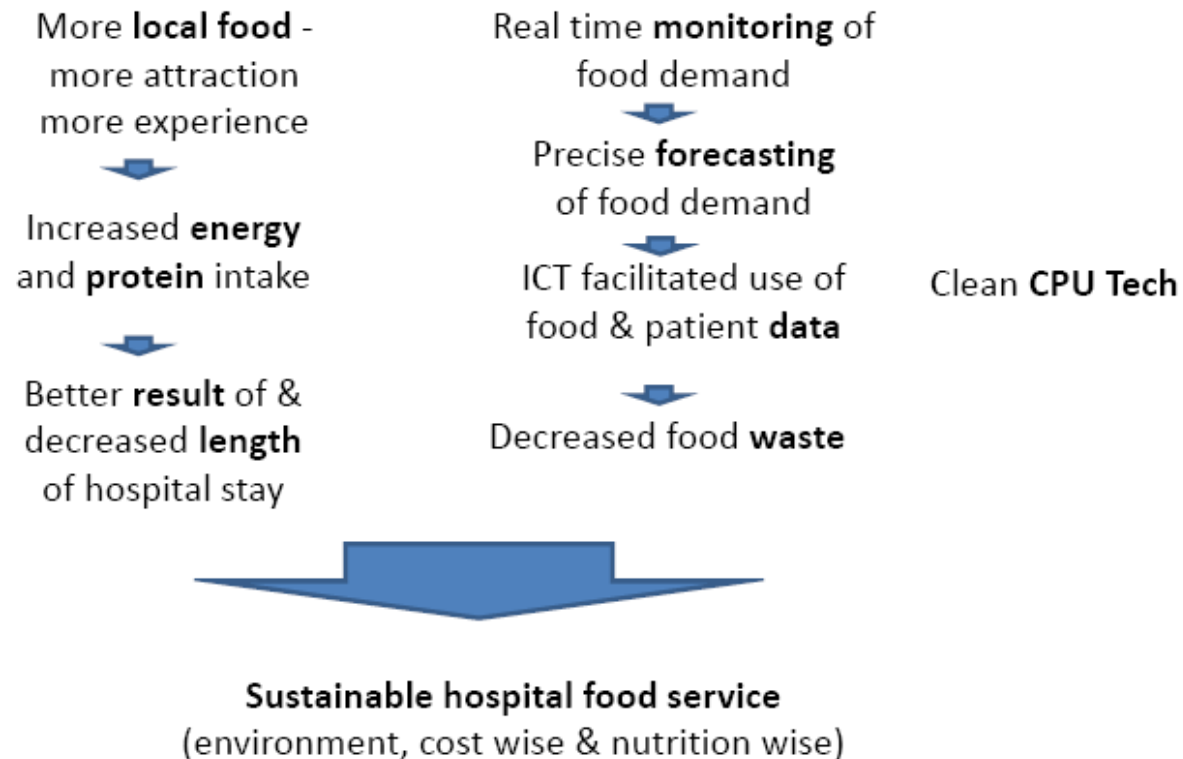
Patients¹ nutritional intake at Aalborg University Hospital:

	2009	2010	p >
Energy > 75 %	52	68	0.007
Protein > 75 %	33	52	0.001

¹Patients at nutritional risk (NRS-2002)

Unpublished data from the MORE project

FoodServInSPIRe project conceptual framework



INSPIRE - platform for research based innovation and problem solving in the food industry.
To improve the productivity and global competitiveness of the Danish food sector.

Research based innovation in three areas:



FoodServInSPIRe



Better food
at hospital

Facts about inSPIRe

- 5 years
- DKK 126 millions
- 5 universities
- 5 GTS institutes
- 16 food or ingredient companies
- 13 companies within or associated to food areas
- 11 interested SMEs

FoodServinSPIRe



Better food
at hospital

Implementing local and organic foods

**Optimizing
patients
nutritional intake**

ICT to:

- Forecast demands
- Register intake/
plate waste

**Reducing food
waste**

3 ph.d. students:

Dorte Ruge

Dwi Budungisari

Kwabena Ofei

FoodServInSPIRe project

workplan 1/2

- Identification of sources of food waste in selected hospital foodservice environments
- Investigation on legal aspects of local food supply concepts
- Investigation on cooking routines in hospital catering production unit (HCPU)
- Development of local food supply concept in cooperation with FoodServInSPIRe
- Mapping of IKT routines in selected hospital foodservice environments
- Development project: Alternative use of by products
- Study: waste dependency of "convenienceness"

FoodServInSPIRe project workplan 2/2

- Development of model for realtime monitoring of food demand based on
 - Food status: Remote food outlets at ward
 - Patient status: Preferences & nutritional status on admission
- Development of intervention
- Baseline study (pre – intervention)
- Follow-up study (pre – intervention)

FoodServinSPIRe: Integrated Modelling of Hospital Food Service Production Chains

We have data/knowledge about:

- Pt. nutritional status and nutritional needs (NRS-2002)
- Nutritional components of foods and meals
- Production system

We need more (precise) information about:

- Nutritional intake
- Individual preferences
- What kinds of food/meal generate most waste
- Waste and relation to nutritional status, preferences, production system, serving system, ordering system, staff knowledge, pt. knowledge...

