FOOD WASTE REDUCTION
Reducing food waste in Irish hospitals – recommendations from Green Healthcare programme
Difference between food *produced* at farm level and food *actually consumed*: 1.3 billion tonnes annually - or roughly one third of all food produced for human consumption is wasted

FAO, 2011, 2012

0.8 billion undernourished

7 billion of us… and growing

1.9 billion overweight & obese

Climate change – reducing arable land

Western-style diet – increasing in popularity
“In general, food waste is a major clinical problem because it reflects inadequate food intake”

Food and Nutritional Care in Hospitals. Guidelines for Preventing Under-Nutrition in Acute Hospitals

Ireland - Department of Health 2009
Food serving systems in Irish hospitals

1) Plated at the ward

2) Plated centrally (in main kitchen)

Each system can be: ‘Cook fresh’ or ‘Cook – chill’
Food waste types quantified – in surveys

Leftovers on plates (kg)

Prepared food that is un-served (kg)
Food waste types quantified

Untouched food portions (kg)

Unused condiments - butter, preserves, sugar, salt, juice etc. (numbers of items)
Example of survey results

€31,000 per year in food purchases

€22,000 per year in food purchases

kg per day

Un-served food
Plate waste
Kitchen waste
Café waste

Lunch - wards
Lunch - canteen
Kitchen waste
Ward tea
Cafes
Breakfast - canteen
Breakfast - wards

€31,000 per year in food purchases

€22,000 per year in food purchases
What is the typical amounts of waste from Irish hospitals?

TOTAL WASTE: 7.7 kg
Total non-risk waste: 5.8 kg

- Healthcare risk waste: 1.9 kg
- Food waste: 0.7 kg
- Mixed Recycables: 0.9 kg
- General landfill waste: 4.2 kg

TOTAL WASTE: 3.7 kg
Total non-risk waste: 3.5 kg

- Healthcare risk waste: 0.2 kg
- Food waste: 0.77 kg
- Mixed Recycables: 0.5 kg
- General landfill waste: 2.2 kg
Food waste

ACUTE
per in-patient bed day.
AVERAGE: 0.73 kg
LOWEST: 0.45 kg

COMMUNITY
per in-patient bed day
AVERAGE: 0.77 kg
LOWEST: 0.24 kg
Average findings for food waste in Irish acute hospitals

- 51% Eaten by patients
- 22% Plate Waste
- 27% Unserved
The “Iceberg” effect:

Cost to dispose of brown bins

Cost to buy the food

Cost to cook (fuel & staff)

The cost of disposal is very small compared to the cost of lost purchases.
The purchase cost of wasted food in Irish hospitals

Average purchase cost of wasted food with value:

€2.05 per kg

70% food waste has value

30% is “value-less” (peelings, teabags, etc.)

Full 140 litre food waste bin:

€100 in lost food purchases

This means every 1 tonne of food waste represents over €1400 in lost purchases
Total estimated food cost for an example Irish hospital

- A 240 bed acute hospital
- 2015: 27 tonnes food waste composting this costs €4,000 a year
- Were lower than the average kg per bed day for food

Using “70% food waste having value” and €2 per kg average purchase cost:
  - About €38,000 in food purchase costs lost to waste (this is “total cost”, will never realise all of this as savings)
Findings nationally for Irish hospitals – purchase cost of wasted food

- All Acute Hospitals: Up to 3,600 tonnes, up to €7.2 million p.a.
- All Community Hospitals: Up to 2,200 tonnes, up to €4.4 million p.a.
Key Observations across Irish hospitals

• Regardless of system - scope for food waste reduction
• Communication ward-to-kitchen is key - make sure menu system works
• Food prepared but not served – good potential for reduction – worth quantifying
• Portion sizes:
  – Main meat portion
  – Plate size
  – Size of meals like lasagne, pasta
  – Scoop size and number
  – Staff training & awareness – communication ward-kitchen
• Provision of bread & condiments on request from trolley rather than issuing automatically
  – Focus on main meal – largest amounts/savings
  – Start measuring food waste weights – ideally by ward
• Protected meal times
• Electronic Tablets for meal ordering
Case Study: St. Michael’s Hospital

- Reduced quantity of porridge provided to wards
- Provided different sized portions for elderly patients
- Regular staff training
- Reuse unserved food in chilled vending machine
- Reduced quantity of milk provided in individual jugs
- Continual review of the nutritional content of food provided

![TOTAL FOOD WASTE FROM WARDS](image)

**2012 SURVEY**
31.3 kg

**2013 SURVEY**
18.9 kg

The quantity of food waste generated in the wards reduced by 12kg or 40%.