



EPA Green Healthcare Programme
Food waste prevention in the healthcare sector in
Ireland

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Green Healthcare Programme

- Clean Technology Centre, CIT contracted by Environmental Protection Agency (EPA) to work in healthcare sector
- Set up under the EPA's National Waste Prevention Programme (NWPP)

Identify opportunities for:

- waste prevention
- cost savings



Clean Technology Centre (CTC), CIT



- Not for profit organisation, set up 1992
- Part of Cork Institute of Technology
- Work in area of waste prevention

Green Healthcare Programme

- 2009/2010: Pilot phase – 3 hospitals
- 2010: broadened to 18 facilities
- 2012: 30 facilities

Percentage of acute beds in Ireland included	50%
Acute beds in Ireland included	7988
Primary community continuing care (PCCC) beds included	742
No of individual surveys carried out	98

Green Healthcare Programme Work involved - Waste

- Surveys of amounts, character, sources:
 - Food waste
 - Risk waste
 - General waste
 - Recyclable waste
 - Hazardous waste (e.g. labs)
- Aim: identify potential for prevention & increased segregation



Since the food waste Regulations

- Up-side:
 - Can see amounts arising – incentive for reduction
- Current down-side:
 - Usually charged per lift - paying more per tonne than landfill in many cases

Food serving systems in hospitals

Main kitchen



Ward

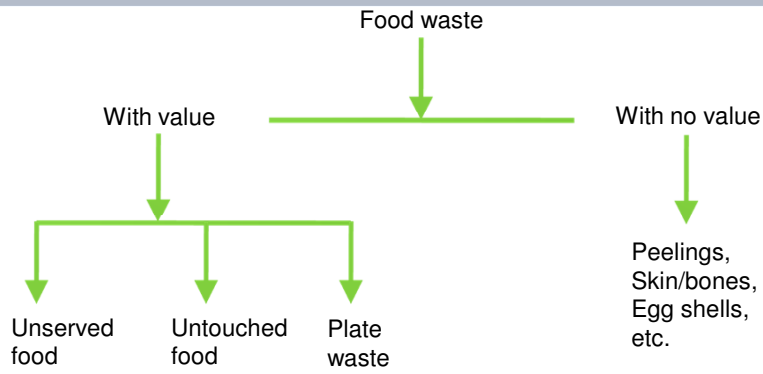
1) Bulk



2) Centrally plated



Types of food waste



FOOD PREPARED - NOT SERVED



UNTOUCHED FOOD



LEFTOVER FOOD ON PLATES



UNOPENED CONDIMENTS



Food waste with value – what value to use?

- Currently, using an average value of **€2 per kg** for purchase cost of food

Item	An example cost
Stewing steak	€4.65 per kg
Haddock fillets	€8 per kg
Potato	€0.50 per kg
Baton carrots	€1.05 per kg

Undertaking surveys during 2012 to refine cost of food per kilogramme in hospitals

Programme findings on food waste



Key findings – food waste

- Areas with main scope for reduction of waste:
 - Food prepared but not served
 - Portion sizes (meat portions, amounts on plates)
 - Segregation from landfill
- How meal ordering system works – in ward, & then in kitchen
- Biggest factor: communication & awareness
- Contract caterers vs in-house

Composition of food Waste – overall average

Un-served food	Untouched food	Plate waste	Total food waste with value
32%	4%	26%	62%

Costs identified..overall...

Current annual costs	Food waste with value (un-served; untouched; plate waste)	
	30 facilities surveyed	Estimated for all acute hospitals in the country
Cost per annum	€3,700,000	€6,200,000

Potential savings will be a sub-set of these costs

...in detail...

**Current annual costs
food waste with value**

Type of food waste	30 facilities surveyed	Estimated for all acute hospitals in the country
Un-served food	€1,800,000	€3,000,000
Un-touched food	€220,000	€400,000
Plate waste	€1,400,000	€2,300,000

Potential savings will be a sub-set of these costs

...in detail...

Current annual costs of un-used condiments

30 facilities surveyed	Estimated for all acute hospitals in the country
€270,000	€470,000

Food waste prevention measures made by hospitals



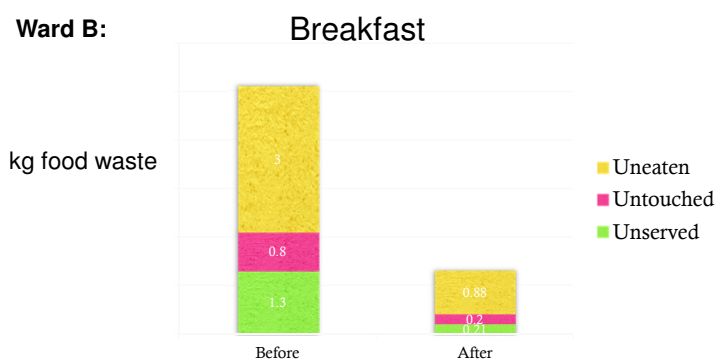
Example – acute hospital

- Acute hospital:
 - Food waste survey under the Green Healthcare programme;
 - hospital implemented changes;
 - resurvey by the Green Healthcare programme;

Example – acute hospital

- 2 wards surveyed on both occasions:
 - Ward A: food waste reduction: 5%
 - Ward B: food waste reduction: 64%
 - Annual savings for the 2 wards: €16,000
- Overall savings in food waste at the hospital:
 - estimate as 40% reduction - equiv to €90,000

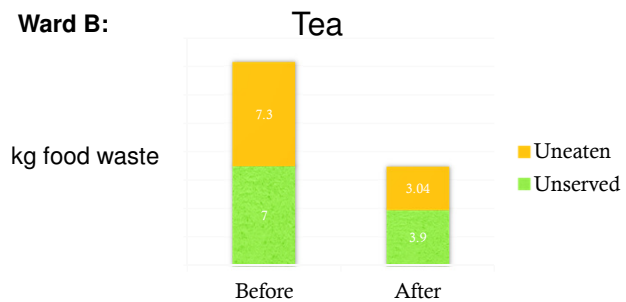
Improvements made by the hospital



Improvements made by the hospital



Improvements made by the hospital



Another example

- Food waste survey in a small acute hospital:
 - Food plate waste amounts at lunch relatively high
 - Hospital eliminated soup prior to lunch
 - Since this, the hospital reports that lunch food waste has reduced and nutritional intake would also have improved

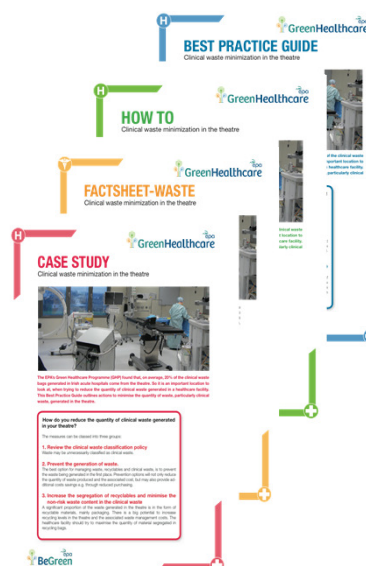
Examples – condiments



Recommended steps

- Measure food waste weights – ideally by ward
- Tackle 1st: food prepared but not served
 - Communication ward - kitchen
- Tackle next: portion sizes
 - Main meat portion size
 - Scoop number & size for veg, potato, etc.
- Don't forget: provision of bread; condiments (sugar, butter, etc.)
- Focus on main meal – largest amounts/savings

Green Healthcare programme Guides



www.greenhealthcare.ie

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