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
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 Prevention

1. Identify amount of food waste being generated
2. Determine the types of food waste and amounts
3. Figure out the reasons **why** this is being generated
4. Come up with solutions to prevent this waste happening
Food waste types quantified – in surveys

Leftovers on plates (kg)

Prepared food that is un-served (kg)
Average findings for food waste in Irish acute hospitals

- 51% Eaten by patients
- 22% Plate Waste
- 27% Unserved
Example of survey results

- €31,000 per year in food purchases
- €22,000 per year in food purchases

kg per day

<table>
<thead>
<tr>
<th></th>
<th>Lunch - wards</th>
<th>Lunch - canteen</th>
<th>Kitchen waste</th>
<th>Ward tea</th>
<th>Cafes</th>
<th>Breakfast - canteen</th>
<th>Breakfast - wards</th>
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</thead>
<tbody>
<tr>
<td>Un-served food</td>
<td>16</td>
<td>15</td>
<td>21</td>
<td>4</td>
<td>7</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Plate waste</td>
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<td>6</td>
<td>7</td>
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<tr>
<td>Kitchen waste</td>
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<td>Café waste</td>
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</tbody>
</table>

kg per day 50
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
Hospital X compared to average Irish acute hospital benchmark

kg food waste in brown bins per bed-day

Hospital X: 0.45
Acute hospital average: 0.73
Food waste costs

- Cost to dispose of brown bins
- Cost to buy the food
- Cost to cook (fuel & staff)
How much €?

€10 in waste costs per lift of a bin

€100 in lost food 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 240 litre: 70 kg
€100 in lost food purchases

This means every 1 tonne of food waste represents over €1400 in lost purchases
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.
Total estimated food cost for Hospital Y, Dublin

- 2016: 70 tonnes food waste composting this costs ~€7,000 a year

Using “70% food waste having value” and €2 per kg average purchase cost:

- About €97,000 in food purchase costs lost to waste
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
    • Size of meals like lasagne, pasta
    • Scoop size and number
  – Plate size
  – Staff feedback - staff will know what works and what doesn’t
• Provision of bread & condiments on request from trolley rather than issuing automatically
  – Focus on main meal – largest amounts/savings
• Protected meal times
• Electronic Tablets for meal ordering
• Start measuring food waste weights – ideally by ward/area
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

Kg food waste from wards

<table>
<thead>
<tr>
<th></th>
<th>1st survey</th>
<th>2nd survey</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>31</td>
<td>19</td>
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</table>
**How to Guide**

**Undertake A Detailed Food Waste Survey - Bulk**

This 'How to' guide outlines how to undertake a detailed food waste survey in operating a bulk food system. This 'How to' guide should be read with the 'How to Assess Potential Food Waste Guide' (www.greenhealthcare.ie) and the 'Green Healthcare Guide' (www.greenhealthcare.ie). The case study outline below helps to guide the process.

**Case Study**

**Food Waste in Irish Hospitals**

This document outlines the quantities and types of food waste generated in hospital settings. The information is based on a survey of seven hospitals and case studies from various hospitals. The data collected includes the quantity of food waste generated and the waste disposal methods used.

**Factsheet**

**Food Waste in Irish Hospitals**

This document outlines the quantities and types of food waste generated in hospital settings. The information is based on a survey of seven hospitals and case studies from various hospitals. The data collected includes the quantity of food waste generated and the waste disposal methods used.

**Best Practice Guide**

**Food Waste Reduction**

This guide outlines actions to reduce the quantity of food waste generated in healthcare facilities. The information has been gathered through workshops with a number of Green Healthcare Programme (www.greenhealthcare.ie) facilities, who were observed to operate best practice measures.

**Contact Information**

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www.greenhealthcare.ie
www.hse.ie/sustainability
Green Healthcare & The National Health Sustainability Office Awareness Day

Tallaght Hospital
Friday, 28th April, 2017