



FOOD WASTE REDUCTION

Reducing food waste in Irish hospitals – recommendations from Green Healthcare programme



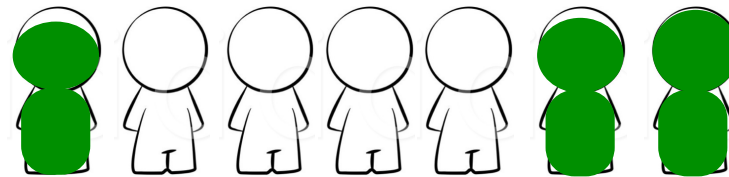
National Health Sustainability Office



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

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



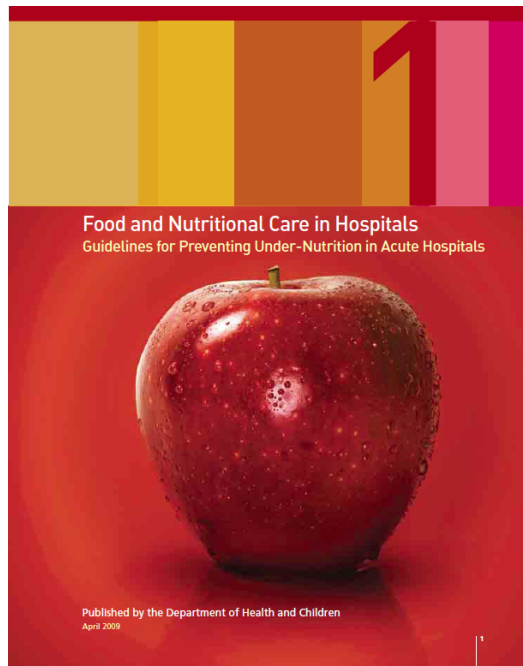
**0.8 billion
undernourished**

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

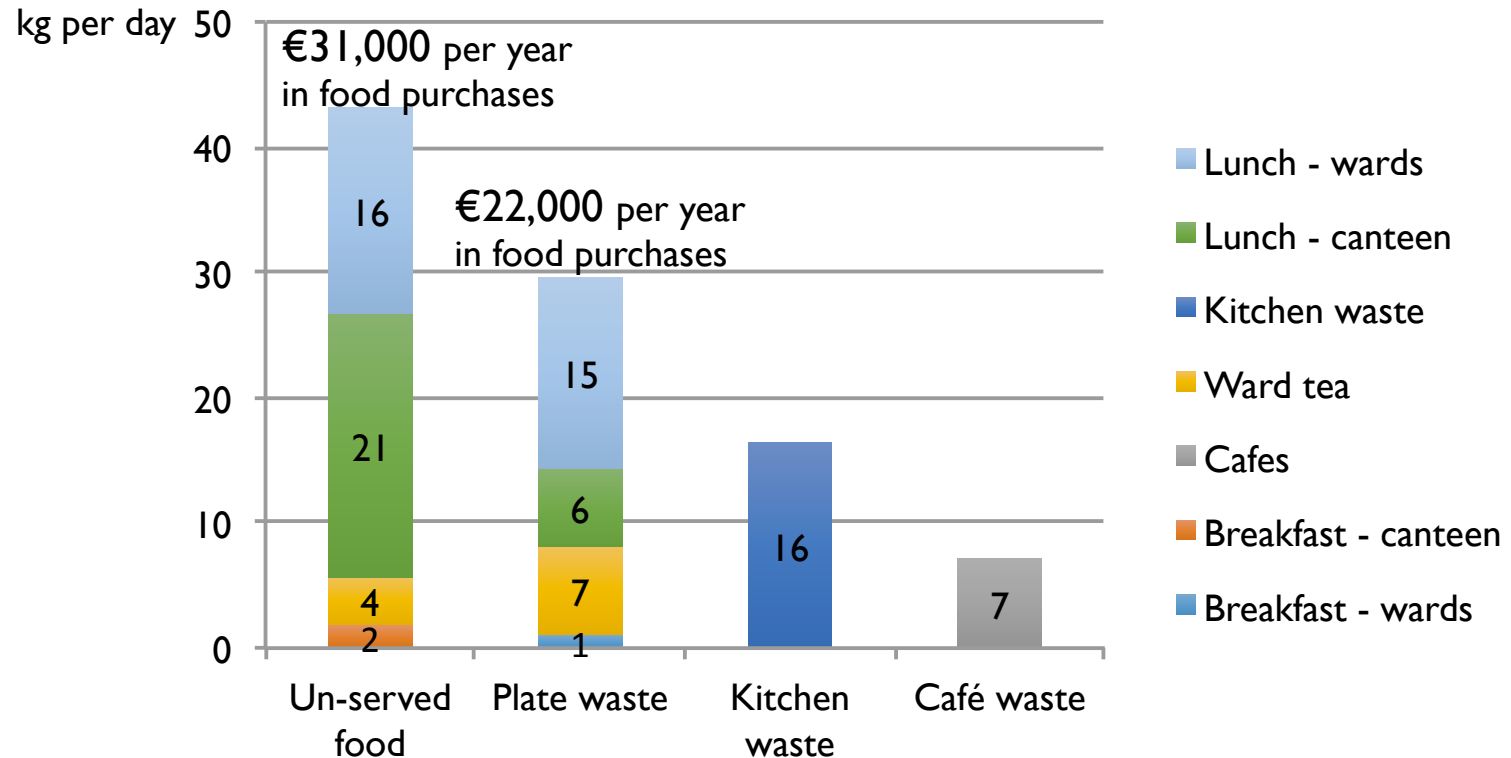
Untouched food portions (kg)



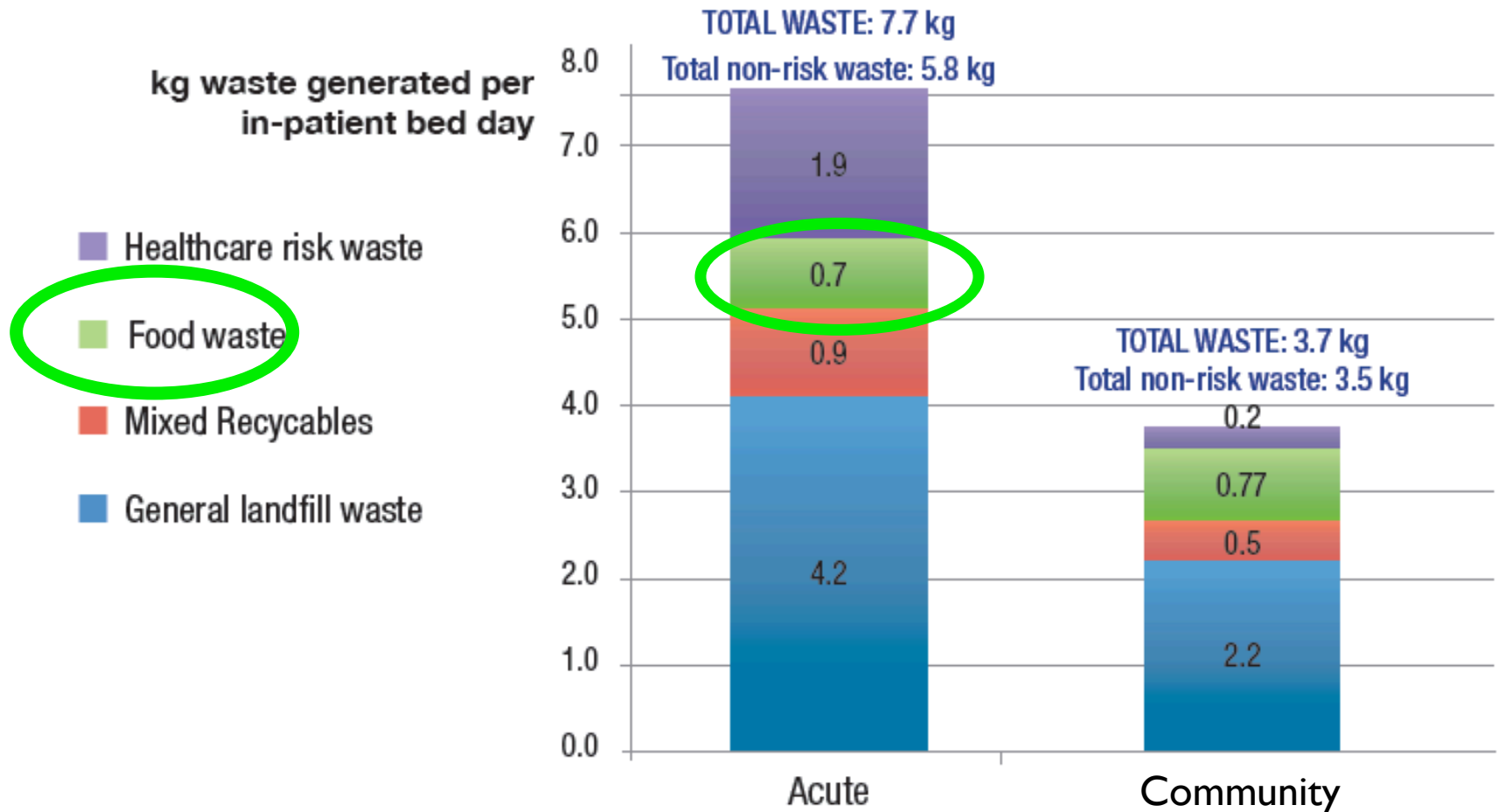
Unused condiments - butter, preserves, sugar, salt, juice etc. (numbers of items)



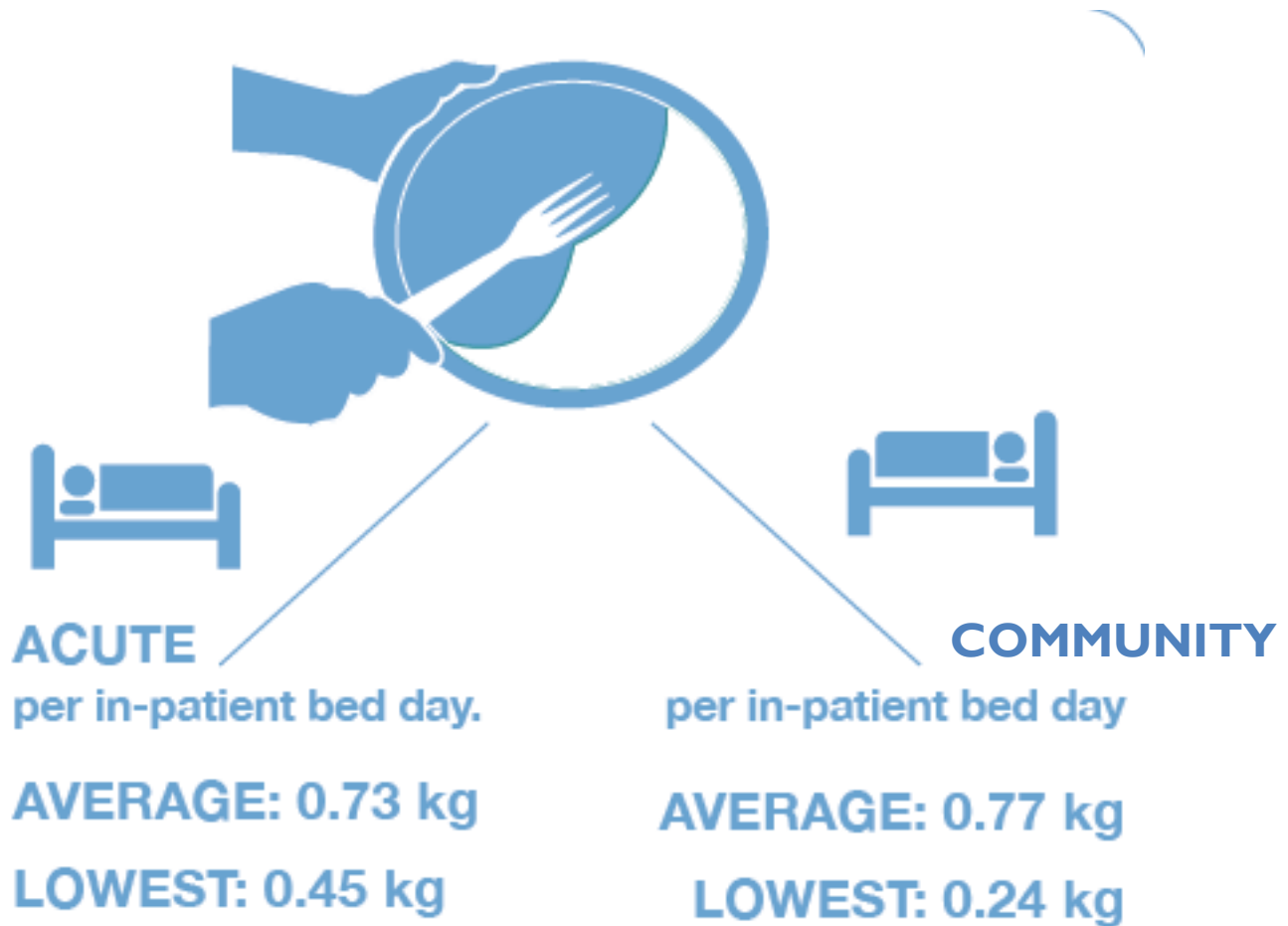
Example of survey results



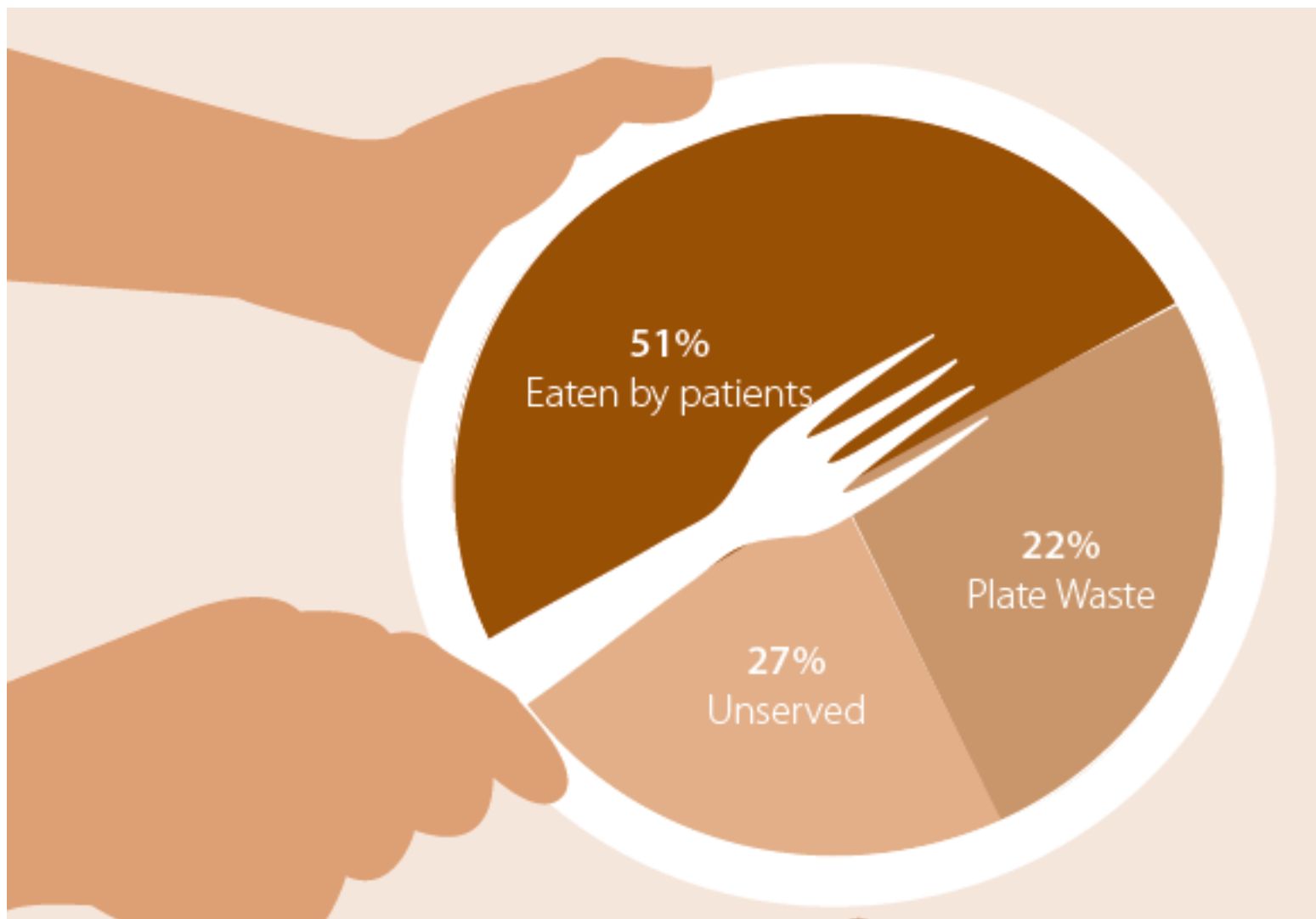
What is the typical amounts of waste from Irish hospitals?



Food waste



Average findings for food waste in Irish acute hospitals



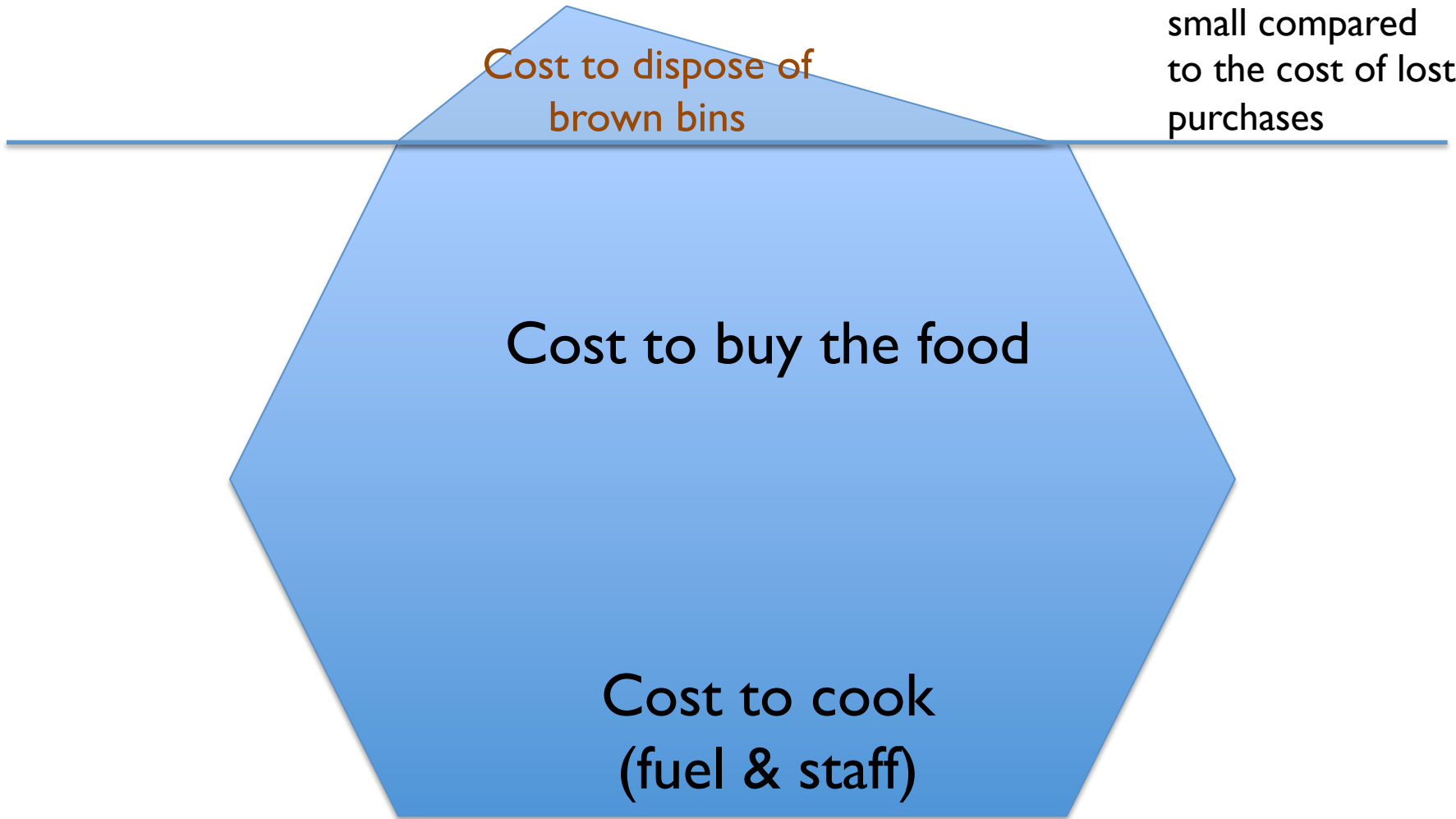
The “Iceberg” effect:

The cost of disposal is very small compared to the cost of lost purchases

Cost to dispose of brown bins

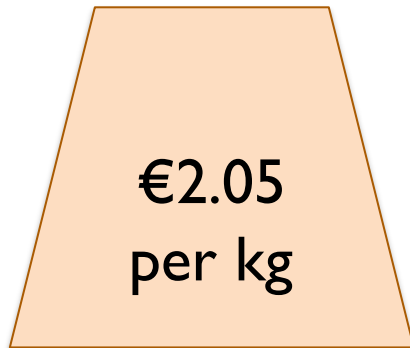
Cost to buy the food

Cost to cook
(fuel & staff)



The purchase cost of wasted food in Irish hospitals

Average purchase cost
of wasted food
with value:



70% food waste
has value

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



This means every **1 tonne** of food waste represents over **€1400** in lost purchases

Total estimated food cost for an example Irish hospital

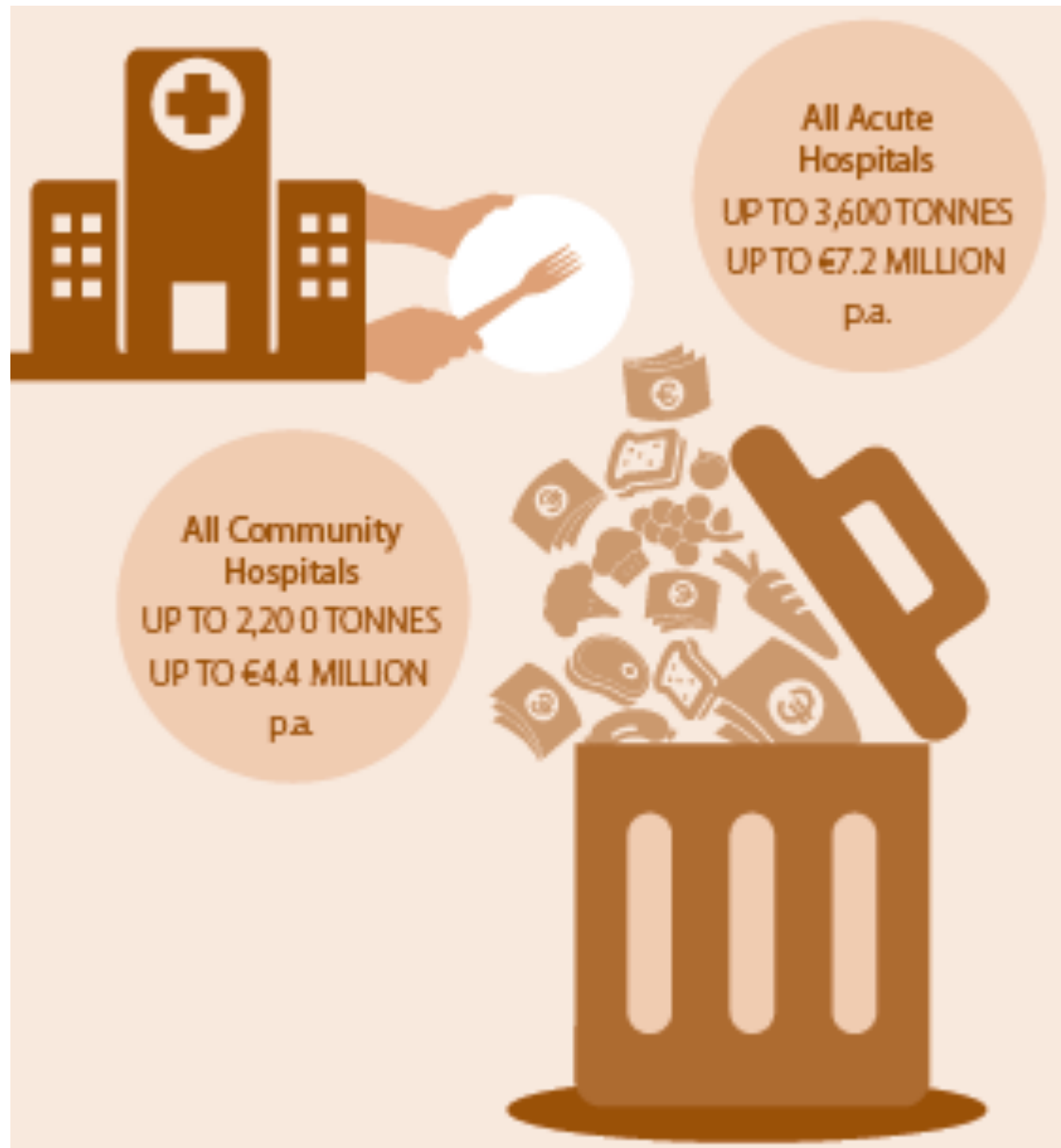
- A 240 bed acute hospital
- 2015: 27 tonnes food waste composting this costs **€4,000** a year
- Were lower than the average kg per bed day for food

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



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

2012 SURVEY



31.3 kg

2013 SURVEY



18.9 kg

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

www.greenhealthcare.ie www.hse.ie/sustainability



HOW TO GUIDE

Undertake A Detailed Food Waste Survey - Bulk



This 'How to' guide outlines how to undertake a detailed food waste survey operating a bulk food system. This 'How to' guide should be read in conjunction with the 'How to assess overall food waste' guide.

Relationship between food waste survey

Overall food waste survey (undertake food)

Depending on what system you operate

Detailed food waste survey - bulk food system

Detailed - central

What do I need to do a food waste survey?



A weighing scale (to weigh the waste)



CASE STUDY

Mayo General Hospital



Mayo General Hospital is a 205 inpatient bed acute hospital providing a wide range of services including medical, surgical, A&E, maternity, day care, etc. The Green Healthcare Programme (GHCP) undertook a detailed survey of it in May 2018, with the hospital observed to have one of the lowest levels of food waste in the country.

This case study outlines the steps taken by the hospital to prevent and reduce food waste generated in the provision of patient meals and staff and visitor meals.

Food services in Mayo General Hospital (MGH) are provided by an external food contractor - Aranmark Healthcare. When deciding to use an external private company to provide food services, the hospital wanted to ensure that nutrition and quality were not compromised for the sake of profit - a view shared by Aranmark Healthcare. Thus, the food provision contract requires a number of key performance indicators (KPIs) to be met by the contractor. These include budget, nutrition requirement, waste generation levels and patient satisfaction. The continual monitoring, attainment, and reporting to management of these KPIs by Aranmark Healthcare, ensure that the patients, visitors and staff of MGH are provided with an efficient, low food waste catering service.

MGH operates a cook-chill system where food is prepared in the main catering kitchen, chilled and then provided in bulk containers to individual ward kitchens. The chilled food is heated to serving temperature in Buldoge trolleys and then placed to patient's requirements.



FACTSHEET

FOOD WASTE IN IRISH HOSPITALS

This factsheet shows the quantities and types of food waste generated in Irish hospitals. This information is based on a series of surveys carried out under the Healthcare Programme. The nature of a hospital setting is such that food waste is inevitable. However, the EPA's Green Healthcare Programme found that there is always scope for some reduction in food waste generating associated savings.

What is the cost of food waste in all Irish healthcare facilities?

Scaling the results of the programme for the number of beds available of the quantity, and associated cost, of valuable food waste generated acute hospitals and PCCC facilities is as follows.



ACUTE

2,600 - 3,600 TONNES

UP TO



PCCC

1,800 - 2,200 TONNES

UP TO

A certain amount of food waste is inevitable in a hospital setting, the key is in identifying and implementing changes to try and realise some of it.

The cost of food waste!

The price to buy a kilogramme of food varies from high values for meat to lower prices for the likes of porridge and bread. On average, the price is a minimum of €2 per kilogramme. In addition, there are costs associated with cooking and management of food. Therefore, valuable food waste costs your facility a minimum of €2 per kilogramme.



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 work with a number of Green Healthcare Programme (GHCP) facilities, who were observed to operate best practice measures.

The nature of a hospital setting is such that some food waste is inevitable. For example, a patient feeling poorly who does not touch the meal they had ordered, or a patient is discharged early so that a meal already prepared is now surplus to requirements.

However, the EPA's Green Healthcare Programme has found that there is always scope for reducing food waste, regardless of the type of patient food systems in operation (bulk, centrally plated), and in many instances before the food even reaches the patient.



Nutrition and food waste - two sides of the same coin

Nutrition, as well as presence of malnutrition among patients, are very important considerations in the overall treatment and care of a patient. If something is not being eaten, i.e. if it is being wasted, it is not contributing to nutrition.

"Serving larger portions is not a valid strategy to improve energy intake" -

(Rate waste in Hospitals and Strategies for Change, P.G. Williams et al., University of Wollongong, Australia, 2011)

All food waste reduction measures, that affect portion size, should be undertaken in consultation with hospital nutritionists.

The Cost of food waste

Until relatively recently food waste was essentially unseen, as it was disposed of in the general waste or using macerators. With the advent of the Food Waste Regulations, managers began to see the volume of food waste generated and the cost to take brown bins away. The true cost of food waste decreases waste management costs and lies in the purchasing of the food itself, and the fuel and staff costs needed to prepare it.

The price to buy a kilogramme of food varies from high values for meat and fish to lower prices for foods like porridge and bread. On average, the cost to purchase food is €2 per kilogramme, so valuable food waste (see later), costs a minimum of €2 per kg.



10

eileen.oleary@ctc-cork.ie

Phone: + 353 21 4344864

GreenHealthcare

