



# CASE STUDY

## St. Michael's Hospital - Dun Laoghaire

### Food Waste Reduction Programme Case Study



St. Michael's Hospital is an acute general hospital providing a range of services to the people of South Dublin and Wicklow. St. Michael's is part of the St. Vincent's Healthcare Group. The hospital has a significant elderly patient profile.

In 2011, the hospital's Catering Manager and Senior Dietician started a Food Waste Reduction Programme. This programme aimed to reduce the quantity of food waste generated by the hospital, but more importantly increase the nutritional intake of patients through increased food consumption by patients. As part of this work the Green Healthcare Programme undertook a detailed food waste survey and a general & healthcare non-risk waste survey, which provided a number of waste reduction recommendations. The food waste survey was repeated in 2013 to identify savings achieved.

This case study outlines the key measures implemented by the hospital to achieve these results. The hospital continues to monitor and review its food provision system, hoping to reduce food waste even further.

#### Food provision system in St. Michael's Hospital:

The hospital provides full in-house catering services to all patients, and a limited canteen service for staff and the public. A centrally plated system is in use at lunch. At breakfast porridge is provided in bulk to the wards, with bread and toast provided from the ward kitchen. A verbal menu system is in place, with ward catering staff asking patients in the morning what option they would like for lunch and tea that day. The hospital provides full meals for around 70 patients per day.



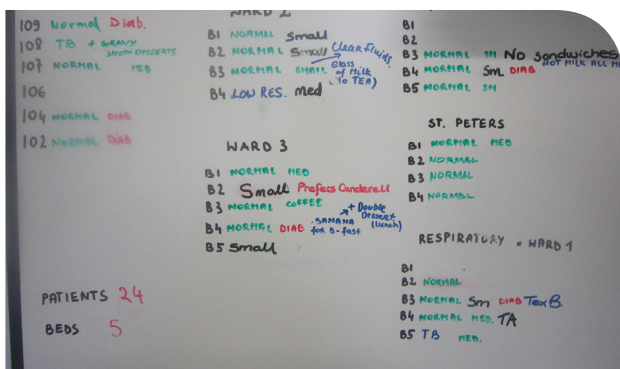
## FOOD WASTE REDUCTION MEASURES IMPLEMENTED

### Reduced the quantity of porridge provided to the wards at breakfast:

Enough porridge is still provided to ensure all patients who requested porridge receive a sufficient portion. Instead the quantity of excess or unserved porridge left over and disposed of after breakfast has been greatly reduced.

### Provide different sized portions for elderly male and female patients:

The hospital identified that the portion size of food provided to elderly patients had an affect on the quantity of food they ate. Providing a large portion of food had the opposite effect to what would be expected; the patient ate less. The patient often felt bad that they couldn't eat the food and lost their appetite. Consequently elderly patients are provided with smaller portions of food with a higher nutrient and calorie content or fortified food. Male patients are provided with a larger portion to take into account their higher calorie requirement.



All patient dietary requirements are outlined on white boards in the ward kitchen.

### Regular training of staff regarding the need to order the correct meal (size, consistency, etc.) for each patient:

All patient dietary requirements are outlined on white boards in the ward kitchen. Staff are regularly trained on, and reminded of the need to order the right type and size of meal for each patient. Where ward staff request additional food from that originally ordered (e.g. a diabetic dessert for a patient where a regular dessert option had been ordered), it is noted and staff are later reminded of the need to order the correct meal.

### Operate a protected meals policy:

The hospital has operated a protected meals policy for a number of years and this is actively enforced by management. Under the policy staff are required to assist in the feeding of patients, with the mealtime not seen as a chance by staff to catch up on other work.

### Reuse food from patient provision in chilled vending machine for out-of-hours meal provision:

The hospital provides a canteen service at breakfast and lunch, seven days a week. The hospital identified there was a demand for food from the evening and night staff. Rather than preparing additional food, the hospital re-uses any food remaining after the provision of patient meals. The food is placed into disposable containers, which are stored in a refrigerated vending machine. A microwave oven is provided for the re-heating of the meals. Not only is a food service provided to evening and night staff, but excess unserved food that would otherwise be thrown away is sold – making money from waste.

### Reduced quantity of milk provided in individual jugs:

At breakfast and tea individual jugs of milk are provided for hot drinks (tea coffee). The food survey observed that a large proportion of the milk provided in the jugs was not used and was simply poured down the sink. By simply filling the existing jugs less, the hospital reduced the volume of wasted milk substantially.

### Continual review of the nutritional content of food provided to patients and removal of foods where necessary:

*"Good nutrition is needed to ensure that the treatment the patient receives in hospital is as effective as possible. It must be recognised that providing nutritious and appetising food is a key part of high-quality, effective hospital treatment"* -

Food and Nutritional Care in Hospitals Guidelines for Preventing Under-Nutrition in Acute Hospitals, Department of Health and Children, 2009.

The hospital continually reviews the food used in meals to patients to ensure that the best nutritional content is being provided.

The hospital recently reviewed the provision of soup, of which an average portion contains 60 kcal. The hospital trialled the removal of the soup and observed that the patients ate more of their lunch, increasing their calorie intake by up to 30%. Some patients who only previously ate the low calorie soup were now eating a small lunch, greatly increasing their calorie intake.





### Increased recycling:

The waste survey undertaken by the GHCP identified the potential to improve the segregation of recycling in the different areas of the hospital. The hospital has implemented a number of measures to increase recycling including:

- Improved educational signage in ward kitchens where large volumes of recyclables are generated
- Training and awareness session with staff
- Introduction of additional recycling bins in the theatre

These small measures increased the number of recycling bins collected by 7%.



## RESULTS OF THE FOOD WASTE REDUCTION PROGRAMME

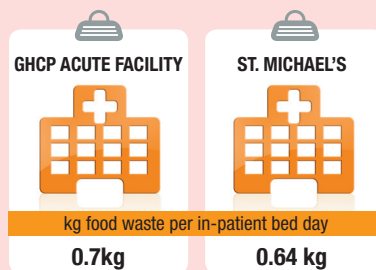
### TOTAL FOOD WASTE FROM WARDS



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

Scaling this for the year, it equates to savings of approximately 3.9 tonnes of valuable food waste or cost savings of €7,800 per annum.

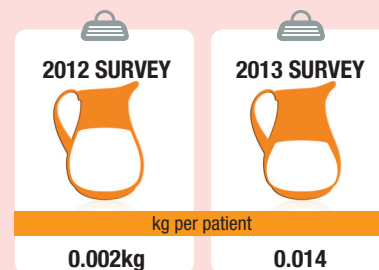
### LEVEL OF FOOD WASTE COMPARED TO OTHER HOSPITALS



The hospital produces 9% less food waste than the average GHCP facility.

This 9% is likely an under-estimate as a significant amount of food is prepared onsite (e.g. vegetables, meat, etc.) compared to the average GHCP facility.

### LEFT OVER MILK WASTE IN INDIVIDUAL JUGS



The volume of left over milk in individual jugs, that was disposed of to drain, was reduced by 44% in one example ward survey.

Scaled up for the year this equates to savings in the region of 250 litres per annum.

The quantity of food waste generated in the hospital is very favourable.