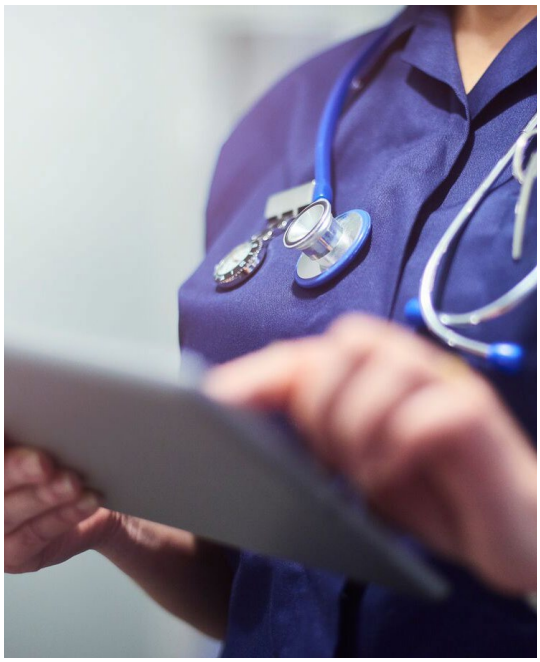
Sustainable Healthcare Toolkit

Reducing the environmental footprint of food and drink



Purpose

Meeting targets for reducing greenhouse gas emissions in many countries is likely to require significant changes to diets. It is relatively well-established that dietary changes which reduce emissions are also likely to be desirable from the standpoint of their nutritional content, impact on health outcomes, and general wellbeing.[29,30]

The purpose of this toolkit is to provide guidance and examples of how to reduce the environmental impact of food and drink in healthcare settings without negatively affecting patient and staff health or quality of care, as well as accommodating for personal and cultural food preferences.

Background

Our diet can pose a greater risk to morbidity and mortality than alcohol, drug, and tobacco use combined.[1] Globally, seven of the top 10 causes of death are linked to diet.[25] A high intake of meat, especially processed red meat, has been linked to increased risk of cardiovascular disease, stroke, diabetes, and all-cause mortality.[22,23,24]

As an example, if the average UK diet followed the World Health Organization (WHO) nutrition recommendations for preventing disease,[31] almost seven million years of life lost prematurely to food-related non-communicable diseases could be saved over the next 30 years and, at the same time, reduce the greenhouse gas emissions associated with diets by 17%.[2]

Food systems, from production to consumption, contribute up to 26% of greenhouse gas emissions - with intensive livestock production the biggest contributor[25] – and contribute to biodiversity loss and natural resource depletion.

The Food and Agriculture Organization of the United Nations (FAO) defines sustainable diets as having four dimensions: nutrition and health; financial; social and cultural; and environmental.[19].

There are several different approaches that can be taken to reduce the environmental impact of food and drink in health and care settings. This toolkit focuses on:

1. The approaches and strategies to reduce waste; for example, using digital ordering systems and repurposing surplus food.
2. Embedding a culture of sustainable nutritional health in health and care settings.

Reduce Food Waste

Food waste in healthcare settings can occur as plate waste, production waste, or unserved food. Around one-third of food produced globally is wasted,[11] and the healthcare sector is a large contributor:

- In 2018, the estimated total food wasted by the health sector in the UK was 120,000 tonnes – a cost of £230 million[8]
- One systematic review involving 80 studies worldwide concluded that reducing food waste is a key means of addressing the environmental impact of food in health and care settings.[9]

There are many reasons for food waste in healthcare settings including inappropriate portion sizes, and delays in updating the catering team on patients being discharged or required to be nil by mouth.[10] Opportunities to address the issue of food waste in healthcare include the following:

1. Repurpose surplus food

There are opportunities to reduce how much surplus food is wasted by looking for ways in which to donate or repurpose excess unserved food safely. For example:

- Unopened dry goods could be donated to local food banks
- Partnerships with food surplus companies such as TooGoodToGo or Olio
- Excess cooked and chilled foods could be donated to local soup kitchens.

In Bupa Villages and Aged Care Australia, nine care homes have had liquid composters installed that can break down waste into a liquid form in hours, which is then removed into the wastewater system. Every 100kg of waste generated prior to food composting is being reduced to 63kg at the trial facilities, reducing waste going to landfill. In the UK in 2021, 100% of food waste from Bupa Care Homes and the Cromwell Hospital was diverted from landfill and recycled into green energy.

Kitchen staff must comply with food law and ensure that the food supplied to any third party is safe.

2. Improve accuracy of food procurement

In several hospitals in Europe, Australia, and North America, digital ordering is helping healthcare teams to minimise food waste.[32] Digital ordering systems have the potential to better cater for allergies, be mapped to patient care plans, provide menus tailored to dietary needs or personal preferences, and minimise the time between ordering and meal service.

Food service digitisation is a useful tool to predict food usage while also offering environmental and financial benefits, including:

1. No need to print menus
2. Reduced staff time in processing and collating menu choices to the kitchen teams

Efficiencies can be made across the whole catering process, from menu planning and ingredient purchase to stock management.

One systematic review found that electronic bedside meal ordering systems positively impacted patient dietary intake, patient satisfaction, plate waste, and costs compared with traditional menus.[12]

Embed a culture of sustainable nutritional health

1. Focus on nutrition to support patient and resident health

Offering patients good nutrition and hydration in health and care settings has the potential to play a key role in recovery. Early nutrition intervention in hospitals to prevent malnutrition has been linked to reduced recovery times and length of stay[3], which optimise the care pathway and reduce environmental impact. For example, one estimate suggests that an acute care unit generates 5.5kg of solid waster and 45kg of CO2 emissions per patient per hospitalisation day, and so shortening recovery time could have a positive impact on limiting a hospital's carbon footprint[5].

The Alliance to Advance Patient Nutrition has created a care model to drive improvement in patient nutrition. They recommend that the whole clinical team, from the nurses and carers who perform an initial nutrition screening, to the pharmacists who evaluate drug –nutrient interactions, understand their role in patient nutrition, which could involve:[28]

- provision of food and drink that meets the patient's nutritional requirements
- diagnosing under-nourished patients and those at risk
- rapidly implementing nutrition interventions and continued monitoring
- communicating nutrition care plans
- developing comprehensive discharge care and education plans.

In New York and California, recently signed legislation now requires hospitals that provide inpatient or residential care to offer plant-based meals which are nutritionally equivalent to other menu items.[13,14] These meals must also be "wholesome food of such variety as may be most conducive to good health." This service is offered at no additional costs to the patient beyond the price for a comparable non-plant-based food option.

2. Offer nutritious food to support staff in reinforcing a culture of health

In 2018, an Ipsos poll found that doctors and nurses were the most trusted professionals in the world.[27.] Healthcare staff thereby have a unique opportunity to educate patients on the inseparable link between their diet, their health, and the health of the planet.

One of the strongest options for advising and educating patients about sustainable diets is leading by example. The Horder Healthcare Centre, an independent healthcare organisation and charity in the UK, recently achieved a 'Food for Life Served Here Award', which recognises caterers who are serving meals that use less, better quality meat, responsibly sourced fish, and locally sourced ingredients. Patients, staff, and visitors can be reassured that food on the menu in "Food for Life Served Here" accredited hospitals are freshly prepared and made from ingredients that are good for our climate, nature, and health.[20] Patients, staff, and visitors all eating from the same canteen also reinforces a 'whole-hospital approach.' [26]

The European Commission's Green Public Procurement Criteria for food in healthcare facilities recommends the following specific actions:

	Specify minimum percentages and/or award points for seasonal products that support the local economy
	Introduce contract clauses on minimising food and packaging waste, ensuring that single-use materials are replaced with reusable alternatives
	Promote plant-based diets among patients and employees by adding new ingredients incrementally, and raising awareness about how plant-based dishes can be prepared at home
	Promote the availability and accessibility of drinking water to patients, staff, and visitors, encouraging the use of reusable water bottles
	Apply selection criteria for caterers based on their use of appropriate environmental management measures
	Provide healthier options in vending machines and consider introducing environmental criteria to reduce energy consumption and waste generation.

Getting Started

Collect data	Agree on a common method of recording food waste and monitoring the sustainable procurement of nutritious food to target areas for improvement.
Assign a project team	Nominate and provide training for a cross-functional team to champion sustainable food options, with a focus on nutrition.
Raise awareness	Add consistent, clear, and simple messages to menus to support people's understanding of the relationships between food, health, and sustainability.
Set targets	Using the data collected, set realistic objectives in line with business targets. For example, aim for more plant-based menus, zero food waste going to landfill, and ban highly processed foods
Monitor standards through audit	Begin with an assessment of the current food options and aim for an accreditation in nutrition, quality, and/or sustainability. Audits should be regular to ensure continuing high standards.

Further Reading and Information

1. The **Greener NHS** programme has produced the Independent Review of NHS Hospital Food which recognises that the collaboration between catering leads, dieticians, and suppliers will help provide healthier, locally sourced food for patients, staff, and visitors, while cutting emissions related to agriculture, transport, storage, and food waste across the supply chain.

2. The **European Society for Clinical Nutrition and Metabolism (ESPEN)** has proposed evidence-based recommendations regarding the organisation of food catering, the prescriptions and indications for diets, and the monitoring of food intake at hospitals, rehabilitation centres, and nursing homes, all of which take into account the patient perspective.

3. The **Centers for Disease Control and Prevention (CDC)** offers a Toolkit for Creating Healthy Hospital Environments: Making Healthier Food, Beverage, and Physical Activity Choices. This provides guidance to hospital nutritionists, human resource, health staff, and others who wish to promote and support healthy food and beverage options in hospitals. It includes information about engaging stakeholders and assessing needs, and also assessment tools for food and beverage environments.

4. The Food and Agriculture Organization of the United Nations (FAO) has analysed 83 national dietary guidelines and found that the following are recommended for health and/or environmental reasons:[19] 96% recommend reducing salt intakes; 94% recommend increasing fruit and vegetable consumption; 93% advise cutting down on fat or changing the types of fats consumed (e.g., replacing animal fat with vegetable fat); 24% recommend reducing or limiting meat intake, with some of these distinguishing between red and processed meat.

5. Health Care Without Harm's website includes a number of case studies linked to Healthy Food in Health Care, including an example from Boston where one community health innovation involves a hospital rooftop garden.

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