

## Healthy Food, Healthy Planet

Climate change and food production are connected in several ways. Around a third of all human-caused global greenhouse gas (GHG) emissions are linked to food (1). Animal-based foods, particularly red meat, dairy, and shellfish are associated with the highest food-related greenhouse gas emissions (2). Agricultural sector sources of greenhouse gases include methane from livestock and nitrous oxide from fertilizers (3). Deforestation for agricultural expansion and food-related transport also contribute to greenhouse gas emissions. Climate change affects the food supply chain by contributing to changes in the weather, such as extreme temperatures and rainfall, that may alter agricultural productivity, affect soil and water quality, and increase risks faced by agricultural workers and livestock, including increased exposure to extreme heat and disease carrying pests (4). Food and water insecurity resulting from climate change-connected drought and temperature changes could lead to malnutrition, rampant hunger, and intensify civil unrest and conflict in some regions of the world. Aquatic life could be endangered by warming oceans and higher carbon concentrations, and marine biodiversity may be compromised.

Health care facilities can switch to more environmentally sustainable food products in their cafeterias and vending machines, reduce and compost food waste, and select filtered tap water instead of bottled water, when possible, to help combat climate change. By making a dedicated effort to serve sustainably sourced foods, health care facilities have an opportunity to educate staff and patients about the benefits of a healthier and more environmentally sustainable diet, which may benefit their health long after their hospital visit ends.

### Interventions for Healthy and Sustainable Food in the Health Care System

- **Swap animal-based foods for more plant-based options**
  - The production of plant-based foods such as beans and vegetables uses less land and water and creates fewer GHG emissions than animal-based foods.
  - A 2020 study from the University of Michigan found that replacing half of all animal-based foods in the U.S. diet with plant-based foods could reduce food-related GHG emissions by 35% (5).
- **Reduce food waste by switching to a room service model where patients can order exactly what they want from a set menu**
  - Food-related waste accounts for roughly 10-15% of all hospital waste. After switching to a room service model of food service, the University of Vermont Medical Center saw a 20% reduction in food waste in just one year (6).
- **Purchase local produce**
  - Utilizing local produce allows health systems to cut down on emissions from food transport
  - Health systems may also supplement their produce purchases by growing their own fruits and vegetables.
    - The Boston Medical Center has a rooftop farm with more than 30 varieties of crops. The farm not only provides fresh produce to hospital cafeterias and a food pantry but also reduces storm runoff and the hospital's energy use. The farm yields over 5,000 pounds of fruit and vegetables every year, equivalent to \$18,000 of produce (7).
- The **Cool Foods Pledge** helps organizations commit to and achieve a science-based target to reduce the climate impact of the food they serve
  - Over 100 hospitals and health systems have signed the pledge to reduce food-related emissions by 25% by 2030 (8).
- Practice Greenhealth offers a free GHG emission calculator that health systems can use to measure the emissions of various food options and weigh the most efficient options for increasing sustainability and reducing emissions. Access the calculator [here](#).

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## Case Study: University of Wisconsin (UW) Health

UW Health's culinary services and clinical nutrition team serves inpatient and outpatient adults and pediatrics across three hospitals. The team prioritizes serving fresh, in-season produce sourced from local farms and businesses. UW Health has utilized the Practice Greenhealth GHG calculator to compare the environmental impact of using chicken or beans, or the change in emissions from removing a slice of cheese from a sandwich (9). UW Health has also focused on increasing plant-based options and offers free samples to staff and patients to increase familiarity with plant-based cuisine. Staff have highlighted their successes with serving plant-based options, noting this is partially due to marketing food as "plant-forward" rather than vegetarian to emphasize what is being added to the dish instead of playing into a perception that meat is being removed (10). The hospitals also use a room service model, in which patients order à la carte from a restaurant-style menu to reduce food waste.

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