

Service evaluation of a low-carbon emission menu in a rehabilitation hospital



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Introduction

- NHS food and catering service contributes ~6% to total NHS greenhouse gas emissions⁷.
- Mildmay Mission Hospital volunteered to pilot NHS England's new low-carbon emission recipes.

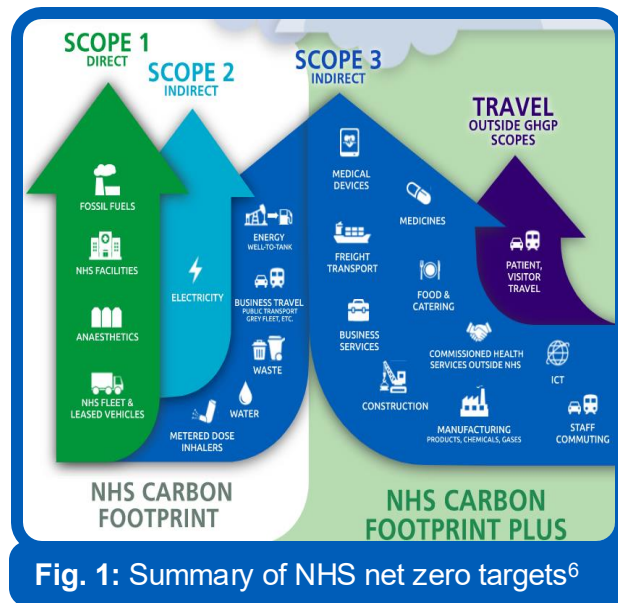


Fig. 1: Summary of NHS net zero targets⁶

Method



1) Development of 3-week cycle menu



2) Audit of 3 patient lunchtimes ($n=38$ meals)



3) Patient survey ($n=11/16$ patients) adapted from PLACE⁸



4) Nutritics v6 analysis of KgCO₂e

(7) NHS England (2022). Delivering a 'Net Zero' National Health Service. NHS England. Available from: <https://www.england.nhs.uk/green/nhs/publication/delivering-a-net-zero-national-health-service/> [Last Accessed: 28/05/2024]

(8) PLACE (2023). PLACE 2023 September – Ward Food Assessment. NHS Digital. Available from: <https://digital.nhs.uk/data-and-information/areas-of-interest/estates-and-facilities/patient-led-assessments-of-the-care-environment-place> [Last Accessed: 10/01/2024]

Results



Served Portions

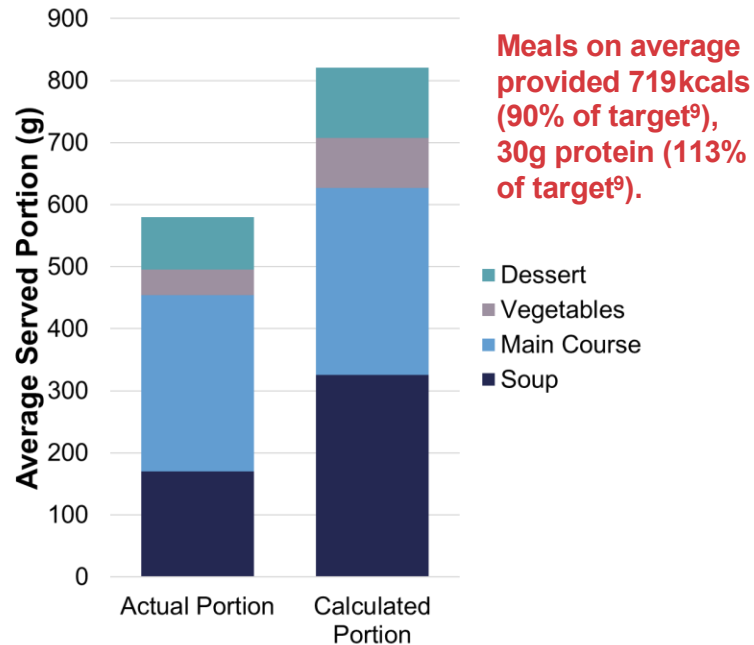


Fig. 2: Average served portion (g) stratified by meal component after the launch of the low carbon emission menu.

Plate Waste

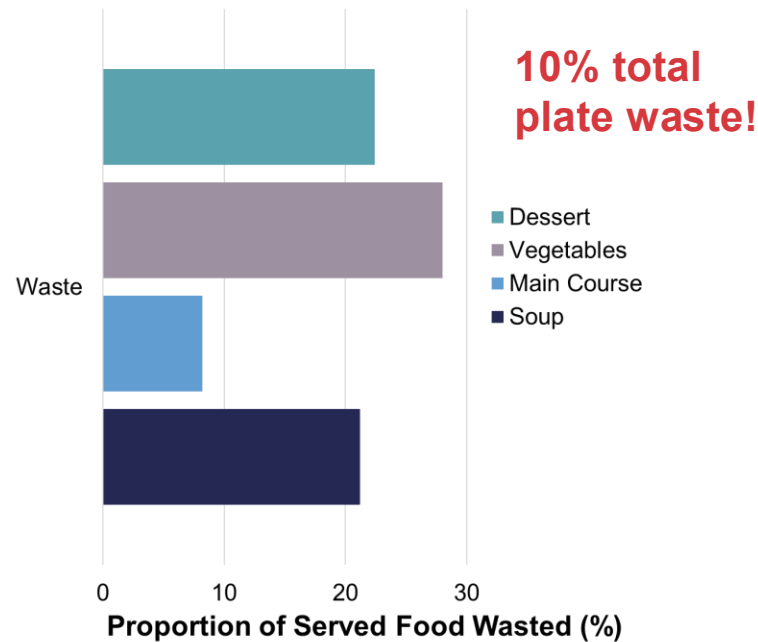


Fig. 3: Average proportion (%) of served food that became plate waste stratified by meal component – conducted after launch of low carbon emission menu.

Impact on Carbon Emissions

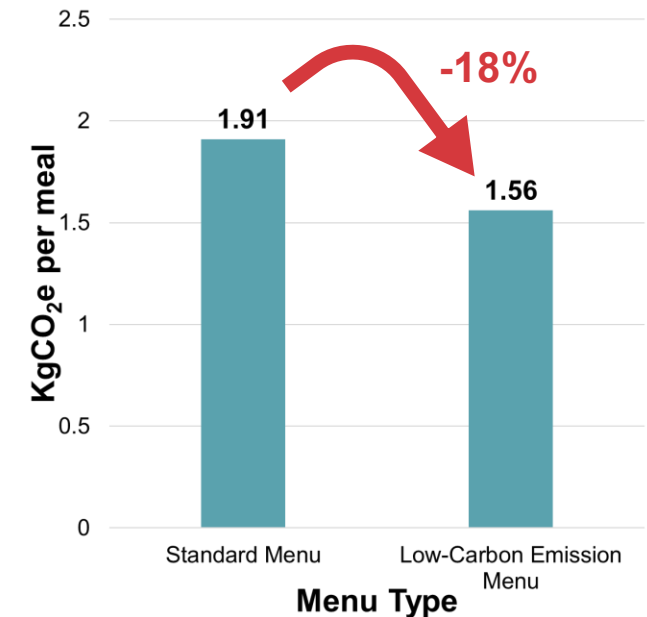


Fig. 4: Average carbon footprint (KgCO₂e) per meal pre/post launch of the low carbon emission menu.

Patient Satisfaction:

- 64% (7/11) “very satisfied” or “satisfied” with the taste and appearance of the meals.
- 45% (5/11) “satisfied” with meal choice and 45% (5/11) “dissatisfied” or “very dissatisfied” with meal choice.

Discussion



- Quantitative analysis of the menu, plate portions and plate waste
- Able to meet nutritional targets
- Maintains good standard for taste and appearance of meals



- Small sample size
- Patient dissatisfaction with meal choice, choice matters!¹⁰
- Limited applicability to larger hospitals

WINTER MENU ECO-FRIENDLY AND SEASONAL

WEEK 1	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
SOUP	 Winter vegetable v	 Tomato and red pepper	 Cauliflower, broccoli and potato v	 Curried carrot and butterbean	 Butternut squash and lentil	 Creamy Irish potato	 Parsnip and sweet potato
VEGETARIAN MAIN	 Mince quorn and bean chilli with rice VSEP	 Cauliflower macaroni cheese pasta V	 Vegetable curry and raita with rice S	 Creamy mushroom stroganoff with pasta VS	 Herby falafel with ratatouille with new	 Vegetable Singapore noodles V	 Quorn and vegetable casserole with mash
MEAT MAIN	 Chicken massaman curry with rice E	 Smoked haddock and cheese omelette and spicy potato wedges EP	 Sweet and sour chicken with rice	 Beef and lentil Bolognese with spaghetti	 Chicken chasseur with new potatoes	 Tuna and broccoli pasta bake S	 Shin beef and vegetable pie with mash
DESSERT	 Winter fruit crumble with custard V	 Ginger cake	 Blueberry flapjacks	 Raspberry brownies	 Carrot cake	 Apple cake	 Strawberry Cheesecake

Conclusion

A complete low-carbon emission menu is highly feasible in a rehabilitation hospital setting.