

Improving Plant-Based Meal Uptake in Hospital Inpatients: A Quality Improvement Project at King's College Hospital

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Introduction

Hospital food service is a key opportunity to promote both patient health and environmental sustainability. Diets rich in plant-based foods are associated with lower risks of chronic diseases and can significantly reduce dietary greenhouse gas emissions [1]. The EAT-Lancet "Planetary Health Diet" recommends doubling consumption of fruits, vegetables, legumes, and nuts, while reducing red meat and sugar by over 50%, to improve health outcomes and environmental impact [1]. Aligning hospital menus with these guidelines could help achieve healthcare sustainability goals. The NHS has committed to a net-zero carbon footprint by 2045 [2], yet a recent analysis of 36 UK hospital menus found limited progress toward plant-forward offerings—42% of hospitals surveyed had no fully plant-based main entrée option on the dinner menu [3]. There remains untapped potential for hospitals to reduce food-related carbon emissions by increasing plant-based meal options [3].

Aim, Objective & Standard

AIM

Improve uptake of plant-based meals by inpatients to support patient choice, nutritional diversity, and a lower carbon footprint.

OBJECTIVE

Increase the percentage of plant-based main meals selected on target wards.

STANDARD / CRITERIA

Align with EAT-Lancet Planetary Health Diet [1]: *global consumption of fruits, vegetables, nuts, and legumes to double, and consumption of foods such as red meat and sugar to be reduced by more than 50%*.

Methodology

QIP at two inpatient wards (Denmark Hill, London), March–May 2024. Baseline: patient menu choices (veg vs non-veg mains) in March. Two PDSA cycles followed:

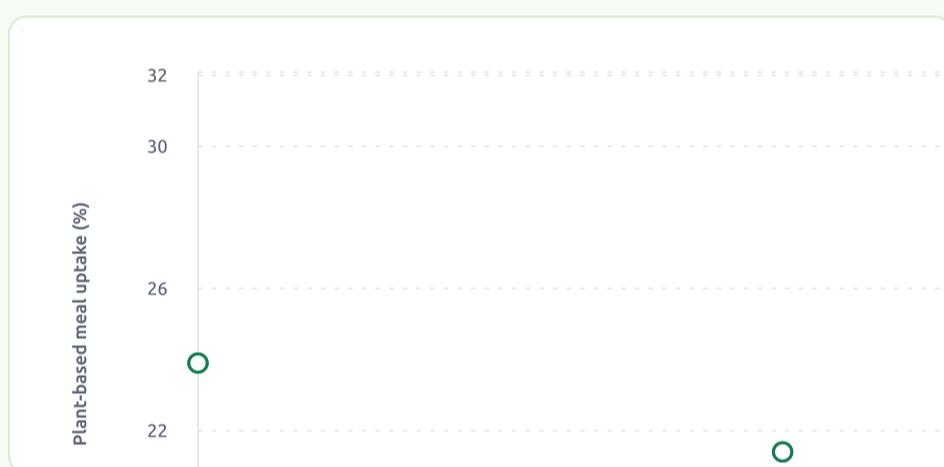
PDSA 1 — MENU REDESIGN

- Vegetarian options listed first (choice architecture; content unchanged).
- No labels added/removed; staff brief on layout (no formal training).

PDSA 2 — INFORMATION/EDUCATION CAMPAIGN

- Leaflet "Plant-Powered Plates" (health & environmental benefits) + gentle prompts.
- Four-week distribution to raise awareness and support menu changes.

Key Results



- Baseline:** 23.9% plant-based (516/2163).
- PDSA 1:** 21.4% (466/2179) — drop of ~2.5 pp; menu change alone insufficient.
- PDSA 2:** 22.6% (589/2612) — very minimal rise vs Apr; still ~baseline. **PDSA 1**
- Overall:** No significant net gain by end of Cycle 2 (~22.6% vs 23.9% baseline).
- Important:** Differences are very minimal and could plausibly be due to chance and/or month-to-month differences in patient case mix (short duration).

Discussion

- Menu re-ordering + short IEC had *very minimal* impact in isolation; likely within normal variation.
- Patient turnover and case mix varied — part of the difference may reflect chance rather than true effects.
- For nudges to work, patients must actually see and consider the menu; visibility and point-of-order workflow are critical.
- Education raised awareness but did not reliably change choices without human facilitation at ordering.
- Main learning:** Passive interventions alone are unlikely to produce meaningful change.

Limitations

- Short QIP duration; limited time for behaviour change to consolidate.
- Institutional change needs decision-maker support and frontline engagement; staff may need training and consistent messaging. **PDSA 2**
- Possible differences in meal availability/quality not assessed; negative experiences may deter selection.

Menu Snapshot



Extract from the redesigned menu highlighting plant-forward meal placement used in PDSA Cycle 1.

Recommendations / Next Steps

- Train ordering staff** to offer plant-based first with positive framing; script and coach prompts.
- Add **low-carbon icons** / clear labels; improve taste/appeal of veg dishes; consider small "default-veg" pilots.
- Run longer PDSA cycles; monitor fidelity (menu visibility, staff prompts) and case mix.

References

- EAT-Lancet Commission. *Summary Report*. <https://eatforum.org/eat-lancet/summary-report/>
- NHS England. *Delivering a 'Net Zero' National Health Service (Greener NHS)*. <https://www.england.nhs.uk/greener-nhs/>
- Holmes M, Wellstead A, et al. *How Sustainable Are Hospital Menus in the United Kingdom?* J Hum Nutr Diet. 2025. <https://onlinelibrary.wiley.com/doi/10.1111/jhn.70019>