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## Increasing the proportion of plant to animal protein in hospital patient menus: what do stakeholders think?

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Replacing dietary animal protein with plant protein has a positive impact on greenhouse gas emissions<sup>(1)</sup> and preventing death from chronic disease<sup>(2)</sup>. Despite being ideally situated to re-design menus, foodservices in hospitals have not focused on changing protein sources<sup>(3)</sup>. Implementation in hospitals requires cooperation from stakeholders across the foodservice system e.g., managers, dietitians, menu planners, purchasers, cooks. A qualitative descriptive study design using semi-structured interviews explored perspectives of hospital foodservice stakeholders on increasing the proportion of plant to animal protein in hospital patient menus and outlined actions required to do this. Interviews were based on participatory backcasting with a "desirable future" defined as hospital patient menus containing, on average, more plant-based protein foods (PBPF) (i.e., legumes, nuts, plant-based meat alternatives) than animal-based protein foods (ABPF) (i.e., beef, lamb, pork, poultry, fish, eggs, dairy) by the year 2050. Analysis was completed using a general inductive approach. Thirty-five stakeholders participated (foodservice dietitians n = 10; foodservice managers, n = 6; dietetic professional leads n = 4; chef/cooks n = 4; information technology n = 4; manager [contracts] n = 4; manager [other] n = 3). Most (n = 25) supported patient menu changes to increase the proportion of plant to animal protein foods, though all described barriers. Common concerns were that patients wouldn't eat the meals (n = 32), that menu re-design would have a negative impact on protein intake and malnutrition rates (n = 30), and that cost of PBPF was too high making the change unfeasible (n = 25). Benefits were an improvement in the nutrition profile of the menu and subsequent improvement to health (n = 16), lower cost of legumes compared to meat (n = 10), improvements in greenhouse gas emissions (n = 10) and opportunity to use the menu as an education tool (n = 8). We developed a model describing the required actions which began with a trigger for change followed by a cyclical design process, preparation, implementation and monitoring. The cyclical design process included stakeholder consultation, setting a target, choosing a strategy, developing a menu and recipes, finding product, planning the system and operation, and checking it worked. Participants valued gradual changes and maintaining choice during the change process. When prompted about specific strategies, stakeholders were most supportive of replacing ABPF with PBPFs in familiar recipes or replacing entire menu items (n = 21), adding PBPF options (n = 25), and moving PBPFs before ABPF-based items on the menu (n = 22). Hospital foodservices and policy makers wishing to increase the proportion of plant to animal protein in hospital patient menus can use the process and actions identified to plan pathways and communicate these to stakeholders. Future research should explore strategies for increasing the proportion of plant to animal protein while maintaining some ABPF on hospital menus, and evaluating effects of changes uptake, cost, estimated greenhouse gas emissions, satisfaction, dietary intake and health outcomes.

Keywords: plant-based; hospital; menus; foodservice

## **Ethics Declaration**

Yes

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## References

- 1. Kesse-Guyot E, Fouillet H, Baudry J et al. (2021) Sci Total Environ 789, 147901.
- 2. Sun Y, Liu B, Snetselaar LG, Wallace RB et al. (2021) J Am Heart Assoc 10(5), e015553.
- 3. Stephens LD, Porter J, & Lawrence M (2021) Sustainability 13(20), 11207.

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