Hospital foodservice interventions & their effect on nutritional outcomes of cancer patients

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Aim

Foodservice interventions are an integral part of nutrition care for patients with cancer. This systematic review aimed to determine the effect of foodservice interventions across a range of nutritional outcomes and satisfaction of hospitalised and ambulatory adult cancer patients.

Method

The review protocol was registered with PROSPERO (CRD42016045772). Studies that tested a foodservice intervention (e.g. menu and service modification, addition of oral nutrition supplements, or enhanced eating environments) and compared this with standard or usual care were eligible for inclusion. Six databases were searched with a defined search strategy focusing on the intervention and population; no date or language restrictions were applied. Inclusion criteria were applied to the title and abstract, then review of full text papers. Outcome data were combined narratively and, where possible, by meta-analysis using RevMan. Methodological quality was evaluated using the Cochrane risk of bias tool.

Results

From an initial collection of 4414 studies, 12 testing the effect of foodservice interventions in cancer patients were included in this review. Meta-analyses of energy and protein intake of four randomised controlled trials of oral nutrition support interventions were undertaken. These trials demonstrated significantly greater energy (Figure 1) and protein (Figure 2) intake in favour of the intervention. Positive effects on anthropometric and other nutritional outcomes were identified through the narrative synthesis of other included studies. Enhancing the patient focus of foodservice staff and point of service meal selection via an electronic cart both led to an increase in patient satisfaction compared to usual care.

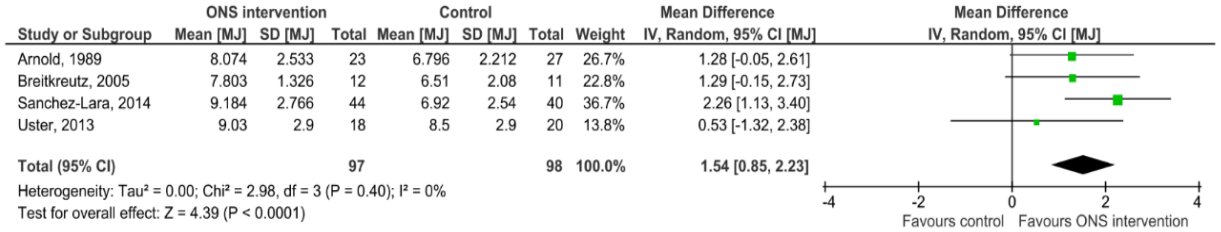

*Figure 1:Meta-analysis of the effect of oral nutrition support products on energy intake (MJ/day) in the management of adults with cancer**

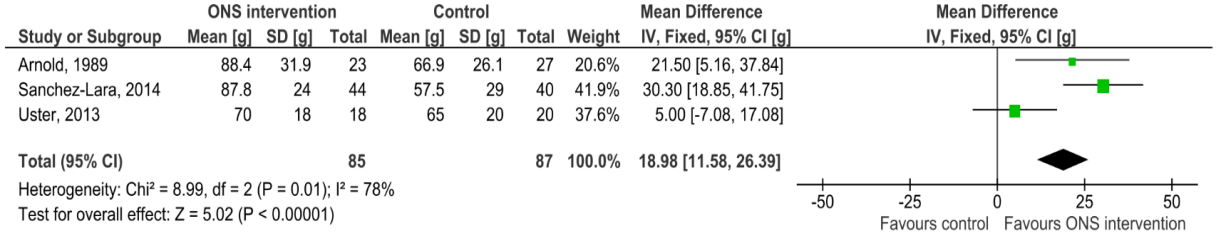

*Figure 2: Meta-analysis of the effect of oral nutrition support products on protein intake (g/day) in the management of adults with cancer **

Conclusion

Our review identified that foodservice interventions can improve clinical outcomes of cancer patients, both in inpatient and ambulatory settings. However, effective foodservice interventions for cancer patients remain under-researched, demonstrated by the limited foodservice studies published as full text papers. This problem is challenging to resolve since foodservice interventions are often led by dietitians and foodservice staff who may not have the time nor expertise to prepare scientific papers for peer review and publication. We encourage dietitians and foodservice staff to implement rigorous study designs to evaluate and publish interventions in this vulnerable clinical group.

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