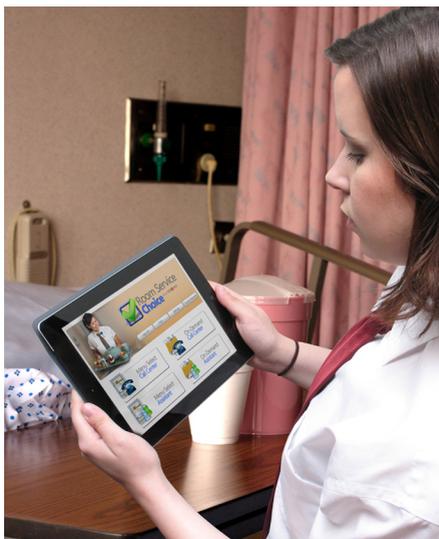


## Room Service Improves Nutritional Intake 17%, Study Confirms

The Journal of the Academy of Nutrition and Dietetics has published the first-ever comprehensive peer-reviewed study confirming the room service model of patient food service improves nutritional intake. This research, conducted at the Mater Hospitals in Brisbane, Australia, also confirms room service boosts patient satisfaction scores while reducing plate waste and meal costs.

Total mean plate waste decreased from 29% (in the traditional foodservice model) to 12% (with room service). Other measures showed similarly impressive improvements.

Mater Private Hospital Brisbane piloted patient room service in 2013, employing CBORD's Nutrition Service Suite® with Room Service Choice®. Expanding the service to their public acute care adult hospital, Mater Hospital Brisbane, provided a unique opportunity for a comparative study.



## Addressing Malnutrition in Hospitals

Clinical dietitians have been struggling to address hospital malnutrition, and poor food intake has been recognised as a key risk factor resulting in greater mortality and morbidity, increased lengths of stay, and increased costs. Maximising patients' nutritional intake therefore is a primary goal. Giving patients some choice in meal ordering, especially choice regarding the time of day a meal is delivered—which is the chief benefit of the room service model, is an effective way to increase the amount of food patients consume.

While room service has long been recommended as a way to improve patient satisfaction and food waste, no previous study had been able to demonstrate the impact of room service on patients' nutritional intake, until now. The new study states: "Comparison of nutritional intake between a traditional foodservice model and room service showed statistically significant increases with room service in both energy and protein intake."

## The Impact of Technology

Mater Hospitals knew a technology solution was necessary to achieve their goals of increasing nutritional intake and patient satisfaction, while reducing plate waste and meal costs. After an exhaustive competitive process, they chose CBORD as the preferred vendor based on the decades of experience gained from designing the industry's most capable and robust platform to support the complex room service process.

"The CBORD software solution (or combination of solutions) will assist hospitals to meet nutritional and regulatory standards, which now is almost impossible without technology," said study co-author Kirsty Maunder. Managing multiple complex diet orders is a challenge that most hospitals cannot successfully meet without a system to integrate their nutritional and food production processes with information from the patient's health record.

Room Service Choice is a web-based mobile meal ordering application accessible from any browser. This allows hospitals to offer staff-assisted entry of patient meal selections at the bedside or in a call centre for on-demand room service delivery. Once the patient has eaten, staff observe and record their intake using the Mobile Intake® application. This model of providing patients with a choice in meal ordering, then following up with intake recording, has been shown to improve patient outcomes.



# Room Service Improves Nutritional Intake and Increases Patient Satisfaction While Decreasing Food Waste and Cost

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## ABSTRACT

**Background** Room service is a foodservice model that has been increasingly implemented across health care facilities in an effort to improve patient satisfaction and reduce food waste. In 2013, Mater Private Hospital Brisbane, Australia, was the first hospital in Australia to implement room service, with the aim of improving patient nutrition care and reducing costs.

**Objective** The aim of this study was to comprehensively evaluate the nutritional intake, plate waste, patient satisfaction, and patient meal costs of room service compared to a traditional foodservice model.

**Design** A retrospective analysis of quality-assurance data audits was undertaken to assess patient nutritional intake between a facility utilizing a traditional foodservice model and a facility utilizing room service and in a pre–post study design to assess plate waste, patient satisfaction, and patient meal costs before and after the room service implementation.

**Participants** Audit data were collected for eligible adult inpatients in Mater Private Hospital Brisbane and Mater Hospital Brisbane, Australia, between July 2012 and May 2015.

**Main outcome measures** The primary outcome measures were nutritional intake, plate waste, patient satisfaction, and patient meal costs.

**Statistical analyses performed** Independent samples *t*-tests and  $\chi^2$  analyses were conducted between pre and post data for continuous data and categorical data, respectively. Pearson  $\chi^2$  analysis of count data for sex and reasons for plate waste for data with counts more than five was used to determine asymptotic (two-sided) significance and *n*-1  $\chi^2$  used for the plate waste analysis. Significance was assessed at  $P < 0.05$ .

**Results** This study reported an increased nutritional intake, improved patient satisfaction, and reduced plate waste and patient meal costs with room service compared to a traditional foodservice model. Comparison of nutritional intake between a traditional foodservice model (*n*=85) and room service (*n*=63) showed statistically significant increases with room service in both energy (1,306 kcal/day vs 1,588 kcal/day;  $P=0.005$ ) and protein (52 g/day vs 66 g/day,  $P=0.003$ ) intake, as well as energy and protein intake as a percentage of requirements (63% vs 75%;  $P=0.024$  and 65% vs 85%;  $P=0.011$ , respectively). Total mean plate waste decreased from 29% (traditional foodservice model) to 12% (room service) ( $P < 0.001$ ). Patient satisfaction ratings indicated improvement with room service across all Press Ganey meal scores: 68th to 86th percentile overall; 64th to 95th percentile for “quality of food”; and 60th to 99th percentile for “flavor of food.” Evaluated during comparable times of the year, patient meal costs decreased by 15% with room service.

**Conclusions** A patient-centered foodservice model, such as room service, can improve patient nutritional intake and enhance patient satisfaction in a budget constrained health care environment.

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