

Getting a Taste for Food Waste: A Mixed Methods Ethnographic Study into Hospital Food Waste before Patient Consumption Conducted at Three New Zealand Foodservice Facilities

Sarah Goonan, MDiet, RD*; Miranda Miroso, PhD; Heather Spence, PhD, RD*

ARTICLE INFORMATION

Article history:

Accepted 11 September 2013
Available online 12 November 2013

Keywords:

Food waste
Foodservice
Hospital
Ethnographic
Mixed methods

Copyright © 2014 by the Academy of Nutrition and Dietetics.
2212-2672/\$36.00
<http://dx.doi.org/10.1016/j.jand.2013.09.022>

*Certified in New Zealand.

ABSTRACT

Foodservice organizations, particularly those in hospitals, are large producers of food waste. To date, research on waste in hospitals has focused primarily on plate waste and the affect of food waste on patient nutrition outcomes. Less focus has been placed on waste generation at the kitchen end of the hospital food system. We used a novel approach to understand reasons for hospital food waste before consumption and offer recommendations on waste minimization within foodservices. A mixed methods ethnographic research approach was adopted. Three New Zealand hospital foodservices were selected as research sites, all of which were contracted to an external foodservice provider. Data collection techniques included document analyses, observations, focus groups with kitchen staff, and one-on-one interviews with managers. Thematic analysis was conducted to generate common themes. Most food waste occurred during service and as a result of overproduction. Attitudes and habits of foodservice personnel were considered influential factors of waste generation. Implications of food waste were perceived differently by different levels of staff. Whereas managers raised discussion from a financial perspective, kitchen staff drew upon social implications. Organizational plans, controls, and use of pre-prepared ingredients assisted in waste minimization. An array of factors influenced waste generation in hospital foodservices. Exploring attitudes and practices of foodservice personnel allowed an understanding of reasons behind hospital food waste and ways in which it could be minimized. This study provides a foundation for further research on sustainable behavior within the wider foodservice sector and dietetics practice.

J Acad Nutr Diet. 2014;114:63-71.

WORLDWIDE, INCREASING ATTENTION IS PAID to the global issue of food waste, with growing concern around environmental, social, and economic costs.^{1,2} Although sometimes used interchangeably with the term food loss, food waste is most commonly defined as the waste generated toward the end of the food chain.³ National and/or sector waste volumes have previously been cited,^{4,5} and such figures reveal that foodservices are large generators of food waste. In hospital settings, it has been found that food contributes to up to 50% of the total waste stream^{6,7} and was the next largest component of the total combustible waste following plastics.⁸ The clinical condition of patients, environmental factors, food, and menu issues have been suggested as contributing factors to high waste rates in hospitals.^{9,10} The research focus on waste in hospitals to date has been based primarily on plate waste levels and the influence of food waste on patient nutrition outcomes.^{9,11-15} What is notably missing from the work on food waste in this setting is an understanding of waste generation at the kitchen end of the

hospital food system, with only two studies considering this.^{16,17} Dietetics practitioners and foodservice managers are often accountable for ecologically sound and viable decisions throughout the food system.¹⁸ They must, therefore, also find ways to manage the challenges of minimizing waste in the kitchen whilst achieving food safety and financial goals.^{5,19} The overall objective of our study was to gain an insight into how and why food is wasted before hospital patient consumption. Understanding this can facilitate recommendations to minimize the volume of preconsumption food waste to achieve more sustainable hospital foodservice systems.

METHODS

Recently, authors have acknowledged the need for carefully designed and conducted qualitative research in nutrition and dietetics, including foodservice settings.^{20,21} Qualitative research methodologies allow depth and breadth of understanding when exploring human behavior or other phenomena. For example, qualitative research methods have

been used to investigate compliance of behavior with identified food safety standards, hand washing behaviors, motivators and barriers to follow food safety practices, and manager and employee perceptions of food safety.²⁰ Despite this, research around food waste in foodservices remains predominantly quantitative. To gain an in-depth understanding of how and why food is wasted before patient consumption, we adopted a mixed ethnographic methodology. Although the term ethnography lacks a single standard definition, in terms of data collection it usually involves researchers participating in everyday (ie, natural) contexts for an extended period of time to watch what happens, listen to what is said, ask questions, and collect documents.²²

Study Location

Data were collected at three hospital foodservice sites in a major city in New Zealand over a 2-month period in 2012. Sites were selected because all three used a cook-fresh production system and conventional tray line service (ie, they prepared meals in the hospital kitchen that were then distributed to various parts of the hospitals), followed a similar 2-week menu cycle, and allowed access to a large group of foodservice personnel for interviews and focus group participation. During the preceding year, the average number of daily meals at each of the three hospitals was 1,752, 680, and 2,420. The lead researcher had previous foodservice experience at all sites and that enhanced the researcher's understanding of the foodservice environments.

Definition of Food Waste

Because the focus for this research was on investigating the latter part of the foodservice system (from procurement to service) the term *food waste* (as opposed to *food loss*) was used. This included all the kitchen waste that could be classified as either avoidable (ie, food and drink thrown out that was, at some point before disposal, edible in the vast majority of situations), or as possibly avoidable (ie, food and drink thrown out that some people eat and others do not, such as bread crusts, or that can be eaten when a food is prepared in one way but not another, such as potato skins). This definition excluded unavoidable waste arising from waste preparation in the kitchen (ie, waste that was not, and had not been, edible under normal circumstances [such as onion peels]).²³ The definition of food waste was provided to research participants, and to whom it was further emphasized that the focus was on food waste generated before the point of consumption (ie, before food carts were sent to the ward), thus excluding plate waste that returns from the ward.

Data Collection Process

Data collection involved the integration of four data collection techniques: document analyses, observations, focus group sessions, and one-on-one interviews. Ethical approval for the project was obtained by district health boards and the University of Otago's Ethics Committee. Written informed consent was obtained by all focus group participants and interviewees. The guides that were developed to structure each of the four stages of the data collection process were screened by a panel of experts (university staff) as well as reviewed by the catering company's manager and the hospital nutrition manager at each of the research sites.

Document Analyses

The first activity conducted was an analysis of existing documents. This involved exploration of existing records, including company policies and plans, production and service materials, waste records, and quality assurance tools and records. The lead researcher spent between 3 and 5 hours analyzing these documents at each site. Each session involved reading material, taking relevant notes, and, in some cases, clarifying details with the nutrition manager. A documentation analysis guide was developed from the literature to assist this process (Figure 1). This guide incorporated components of the foodservice systems model²⁴ as well as key elements of practice (images, materials, and skills).²⁵ In this case, where the practice being studied was the generation of food waste, the elements of research interest included any existing written recordings of staff images of food waste (such as staff perceptions and attitudes toward waste), food waste management materials (such as plans, policies, quality controls, and communication resources), and notes related to the related food waste management skills of staff (such as competence and procedures for forecasting and for following specified waste management procedures).

Observations

The second activity conducted was observations of food waste generation practices. This included observing events such as sandwich preparation, nutritional supplement preparation, menu processing, lunch production, lunch service, lunch post-service, dinner menu processing, dinner production, dinner service, dinner postservice, and forecasting. Breakfast meal services were not observed due to practical constraints on the researcher's time. The observations were made under natural (everyday contexts) settings and approximately 9 hours was spent at each site (9 AM to 6 PM). Recommendations for observational data collection of Singleton and colleagues²⁶ was adopted in this study. This included keeping a running description of the day's observation (eg, notes on the setting, people, individual actions, and group behaviors), recording ideas and notes for further information use (eg, spontaneous ideas related to data collection and data analysis such as potential questions for focus groups or interview), noting personal impressions and feelings experienced (eg, that may have indicated biases clouding the observations), and making methodology notes that included any ideas related to the techniques used to conduct research (eg, difficulties in collecting data and biases that might be introduced by the data collection techniques). The same guide that was designed for the document analyses was also used to guide the data collected from the observations (Figure 1). Brief conversations with foodservice personnel allowed clarification of happenings observed when necessary.

Focus Group Sessions

For the third activity we conducted one focus group session at each of the three sites. A total of 22 people participated in one of these three focus group sessions. Participants were identified as individuals with the most involvement in and relevance to food waste-related activities and included supervisors, cooks, menu processors, and kitchen assistants. The decision to exclude catering company management was

Download English Version:

<https://daneshyari.com/en/article/2653231>

Download Persian Version:

<https://daneshyari.com/article/2653231>

[Daneshyari.com](https://daneshyari.com)