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Importance of Plate Waste Assessment in a Hospital Kitchen

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ABSTRACT

Plate waste assessment is a methodology used in the hospital inpatient's kitchen to find out the amount of food that remains uneaten on the patients' plate after a meal. This article describes the importance of performing plate waste audits in hospitals and how a plate waste audit can be done. This article also explains on the key personnel's who can significantly contribute to plate waste reduction in a hospital kitchen set up.

Keywords: *Plate Waste, Plate Waste Audit, Hospital Kitchen, Dietitian.*

1. INTRODUCTION

Plate waste is a methodology used in the hospital inpatient's kitchen to find out the amount of food that remains uneaten on the patients' plate after a meal. Wasted food is not just a food that merely goes as a waste into the environment, it invariably affects the nutritional goals and targets set by the dietitians to be achieved on patients. High levels of plate waste lead to malnutrition-related complications. The primary objective of the hospitals to have in-house food service is to provide their in-patients with safe, hygienic and a well-balanced diet which will help the patients to recover soon. The nutrition professional (dietitians) are the key persons in planning a diet meticulously to meet the nutritional requirements specific health conditions of every individual patient. Diets provided in hospitals are regarded as an essential part of the treatment of patients and it's not just a regular restaurant food service that is rendered to the patients. Hence it becomes extremely important to perform regular audits on plate waste to ensure the diets that are sent to the patients are well received and consumed by the patients.

2. ROLE OF NUTRITION IN HEALTHCARE

Nutrition therapy plays an essential role in disease management both preventive as well as curative in a healthcare set up. Nutrition therapy is provided by the qualified dietitians. Dietitians use their expertise and skills to make sound clinical judgments to assess the nutritional requirements of the patients. Dietitians provide an essential nutritional care component for successful management of the patient's nutrition plan.

Nutrition care process (NCP) is designed to provide a standardized process for providing nutrition care to the patients. There are four steps in the nutrition care process as listed below

- Nutritional Assessment
- Nutritional Diagnosis
- Nutritional intervention
- Nutrition monitoring and evaluation

As the **first step** of nutritional care process; nutritional status of the patient is assessed by the dietitians. Nutritional assessment is a systematic approach to collect relevant data from the patients to determine or reassess whether there are any nutritional problems that exist.

The **second step** is the nutritional diagnosis. The purpose of a nutritional diagnosis is to identify and describe a specific nutrition problem that can be resolved or improved through treatment/nutrition intervention by a nutrition professional.

The **third step** is nutrition intervention. Nutrition intervention begins once the nutritional diagnosis is known. Nutrition interventions are envisioned to modify nutrition-related problem that currently exists. Intervention has two components such as planning and implementation

- Planning – Planning a tailor-made diet to meet the individuals' nutrient requirement
- Implementation –Implementation of the diet plan through appropriate hospital diet.

The **fourth step** is Nutrition monitoring and evaluation. The purpose of nutrition monitoring and evaluation is to determine and measure the amount of progress made for the nutrition intervention and whether the nutrition-related goals/expected outcomes are being met.

3. WHY CONDUCT PLATE WASTE AUDITS IN HOSPITALS?

Plate Waste Audits

Patient plate waste audits are a quick way to learn which kinds of food goes uneaten by the patients in a healthcare set up. The data gained from an audit can help the hospital kitchens to develop specific strategies to reduce plate waste. Most importantly, the audits identify why the patients are not eating certain food items and bring in a change to closely look at the menu design.

No matters how well a diet has been planned, it matters the most only when the patient consumes the food completely. Only then the nutrition goals of the patients are achieved. Plate waste assessment is one of the effective determinants of the level of acceptance of food by the patients. The reasons for the plate wastes in hospitals are portion size, appetite, food not up to their expected taste etc. By performing regular monitoring and audits, plate waste assessments provides inklings on the strengths and the weaknesses of the menu options available to the patients. The advantage of performing plate waste audit also allows identifying patients who have not eaten the food properly. Alternative options shall be provided if the patients have eating / swallowing difficulties such as providing texture modified diet or making changes in their menu without compromising on the nutrition quotient immediately. Plate waste assessments eventually ensure adequacy of nutrition support received by patients during their course of hospitalization.

4. HOW TO CONDUCT PLATE WASTE AUDITS IN HOSPITALS?

To decide on the meals to be surveyed

- First and foremost is to determine for which meal the plate waste is going to be conducted (Breakfast / Lunch / Snacks / Dinner).

Determination of the method of plate waste assessment

Two methods of plate waste assessments are

- **Weighing Estimation** - Accurate and exact assessment of the plate waste generated.
- **Visual Estimation** - Greater convenience and time-saving assessment.

Collection and Segregation of Wastes

For plate waste audits, there should be a separate audit station which should be away from the regular working area in such a way utmost attention is given to this exercise without any distraction. Secondly, there should be designated audit tables.

Audit Tables

There should be two audit tables where the stewards can come and place the trays brought from the patient bed side. The second table should be to separate food items from the trays to the waste collection buckets

Segregation of Wastes

First to determine which are the items going to be collected and audited for plate waste. For example, if auditing is done to find out the level of acceptance of vegetables by the patients then and when more than one vegetable is served to the patients then there should be two collecting bins marked as Vegetable A & Vegetable B so that the wastes are properly dropped into the appropriate bins.

Taking Pictures

Taking pictures of the trays which have not been touched by the patients at all. This will give an immediate idea as to what has gone to the patient so that when interacting with the patient, the dietitian will have a clear idea what has been served to the patient and will facilitate to make appropriate changes to the patient meal keeping in mind the items which the patient did not like.

Assessment

Based on the determination of the method of assessment, the wastes can either be weighed or visually estimated.

Actions Taken

Analyze the problem based on the results of the audits, identify solutions, implementation of corrective actions and review the results of the outcome. Audits reflect the strengths and weaknesses of the menu, patients likes and dislikes of one particular item may it be vegetables, may it be the cereal portions or the curries. Based on the results of the audits, the appropriate strategical change shall be adopted to reducing plate waste.

Comparative Audits

Reasons for performing plate waste audits are to create a strategical approach to find out the ways to reduce plate waste in hospitals. As a continuous improvement process, it is important to perform comparative audits whether there is a significant reduction in the plate wastes when compared with earlier audits.

5. KEY PERSONNEL WHO CAN SIGNIFICANTLY CONTRIBUTE TO PLATE WASTE REDUCTION ARE

- **Dietitians:** The entire operation of the kitchen is based on the menu that has been planned for the patients in the hospital kitchen by the Dietitians. Hence there should be a competent team of dietitians. The menu should be planned with an awareness that patients on hospital diet completely rely on the food provided by the hospital. Hence the menu has to be planned to take into consideration the dietary needs of the patient population. The number of cuisine options that should be available for the patients to choose should also be taken into consideration. Day to day interaction with the patients and knowing about the patient's intake will significantly reduce plate waste. Dietitians should use their communication skills to influence the patients and make them understand that how important it is for the patients to eat the meals for their speedy recovery.
- **Chef and Cooks:** Chefs and cooks coordinate the work of the kitchen staff and direct them on the preparation of meals. Meals that are prepared from the hospital kitchen should meet the palatability of the patients. Hence it becomes extremely important competent Chefs and Cooks are employed in the hospital kitchen who can cook the patient food with a greater degree of understanding the needs of the patients.
- **Guest Relation Executives (GRE):** Though dietitians are there to take care of the nutritional needs of the patients, Guest relation executives have a major role to play in identifying and understanding the patient's requirements and help the patients along with the dietitians. Guest relation executives are not dietitians. Guest relations executives are the patient satisfaction influencers/enhancers. GRE's should closely assess on the patient satisfaction aspect on the food the patients receive. If the patient is not comfortable, then GRE's are the first person to take note of the requirement and communicate to the dietitian to adjust diets to the requirements of the patient.

6. DISCUSSION AND CONCLUSION

The primary goal of the hospitals is to provide the patients with safe and hygienic food that are nutritious and well prepared. Hospital food service is unique in its nature. Hospital is a place where people who are ill come to treatment to be looked after by the doctors and nurses. During their course of hospitalization, the goal of hospital food service is to provide nutritious, safe and hygienic food which will help the patients with their recovery and health. However, patient's illness can affect their intake. Diets provided in hospitals are regarded as an essential part of the treatment of patients and hence it becomes extremely important to perform regular audits on plate waste to ensure the diets that are sent to the patients are well received and consumed by the patients. By performing regular monitoring and audits, plate waste assessments provides inklings on the strengths and the weaknesses of the menu options available to the patients.

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