

BUDGET ALLOCATION, MANPOWER, AND NUTRITIONAL FOOD: MAIN ISSUES IN ETHIOPIAN GOVERNMENT HOSPITALS

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Abstract

The provision of daily nutritional food for patients in hospitals is a major problem in many government hospitals in Ethiopia. This cross-sectional study investigated the current status and functioning of health facilities concerning daily dietary food provision for patients under healthcare treatments for various health reasons. Thirteen selected government hospitals administrated under regional and federal governments of Ethiopia were studied. The study aimed to generate evidence-based information on the current status and functioning of the health facility concerning daily dietary food provision. The results revealed that the daily provision of hospital patients' nutritional food dietary intake is still a major problem at the majority of the government hospitals in Ethiopia. Insufficient budget allocation, unskilled manpower, and less attention to hospital nutritional foods were common problems among the 13 governmental hospitals. The nutritional food services offered to hospital patients need to be improved, and necessary guidelines and procedures should be prepared and implemented in all hospitals. The study recommended that to improve nutritional food services, the government and other partners should closely work together.

1. Introduction

Nutritional food provision is a serious problem in developing countries. Hospital patients are easily vulnerable to malnutrition after being admitted to hospitals due to the lack of nutritional foods provided to them. The problem has resulted from the lack of knowledge backgrounds on the role of nutritional food in health care services. The hospital caregivers from low to top hierarchies are giving less priority to the importance of nutritional foods either to the limitation of background knowledge or insufficient budget allocation by the government for each hospital. Impaired nutrition is associated with prolonged hospitalization, poor patient outcomes, high mortality, and increased health costs. Nutritional assessment is very important in recognition of

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changes in the patient's nutritional status from admission to discharge and may promote early nutritional interventions by the health providers to prevent complications of poor nutrition.

The consequences of malnutrition can lead to health complications, reduced tolerance to treatment, prolonged hospital stay, higher economic cost, and higher mortality and morbidity. An early diagnosis is essential to initiate adequate nutritional food to enhance the patient's recovery time. Malnutrition is a medical condition caused by nutrient deficiency because of a diminished intake, an increase in losses, or increased requirements. The *prevalence of malnutrition in hospitals* can be influenced by the implementation of a variety of nutrition care strategies (O'Flynn, Peake, Hickson, Foster, & Frost, 2005).

Increasing appetite and nutritional food intake improves the health status and shortens the recovery time of the patients. This improvement is associated with a reduction in morbidity and mortality (Kenea, Garoma, & Gemedie, 2015). Patients who are well treated with high-quality nutritional food service can get fast recovery from their sickness than those who received medium-quality of nutritional food. On contrary, patients receiving lowquality of nutritional food stay longer time and are exposed to additional expenses.

Malnutrition is a state of nutrition in which a deficiency or excess or imbalance of energy, protein, and other nutrients, causes measurable adverse effects on tissue or body form function, and clinical outcome. Prior screening should be practiced to identify the patient's malnutrition level (Kruizenga, Seidell, de Vet, & Wierdsma, 2005). To minimize the level of patients' malnutrition, the provided meal should be safe and nutritionally good in quality. The rate of complications, mortality, and hospitalization is related to the malnutrition problem in hospitals (De Aquino & Philippi, 2011).

The process of food preparation and meal distribution may have a significant impact on the food intake of hospital patients who are likely to develop malnutrition. Nutritional risk is an important indicator used to predict the probability of clinical outcomes related to nutritional factors (Rasmussen et al., 2004). When patients are admitted to hospitals for various disease cases, the daily dietary nutritional food services had no priority and are not recognized as an integral and important part of clinical treatments. There is no least minimum standard nationally agreed with the guideline for admitted patients in governmental hospitals.

Only a few hospitals have tried to develop menu preparation guidelines for only internal consumption at their particular hospitals. Some hospitals were using any ordinary food for the patients purchased from the outsourced cafeteria found in hospital compounds. During the assessment, some hospitals were found to employ unskilled laborers for cooking and food deliverance from the kitchen.

Therefore, this study was conducted to assess the nutritional service status and investigate patient satisfaction with nutritional food services given to patients under medical treatments for various health issues.

1.1. General Objective

The main objective of this assessment is to generate evidence-based information on the current status and functioning of the health facility concerning daily dietary food provision and patients' satisfaction with caregivers and service provision delivered in a hospital during the particular staying time.

1.2. Methodology and Study Design

A cross-sectional design, with a mixed-method approach (both qualitative and quantitative methods), was conducted from February to May 2019. The qualitative data were collected from key informants and quantitative data were collected through a structured questionnaire.

1.3. Study Setting

The study covered 13 selected government hospitals administrated under the regional and federal governments of Ethiopia, i.e., (Addis Ababa, Tigray, Harari, Somali, Oromiya, Amhara, SNNP, Benishangul Gumuz, and

Gambella). The selected hospitals were two from the Addis Ababa city administration, two from Federal Referral Hospitals, and nine from regional administrations. Randomly and proportionally selected 400 patients have participated in the assessments.

1.4. Sample Size Determination

The sample size of 400 patients was determined using the single population proportion formula and proportional allocation to distribute the sample depending on the number of populations in each hospital.
$$N = \frac{(z \alpha / 2)^2 \times p}{d^2}$$

Assuming a z- value of 1.96 at 95% CI and d of 5%,

Where,

N = sample size. p=

prevalence. d=

margin of error.

z = level of confidence (1.96)² and taking 10% non-response rate.

The final sample size was 400 and data from these participants were collected from the medical, gynecology, and pathology wards.

1.5. Sampling Method and Data Collection Techniques

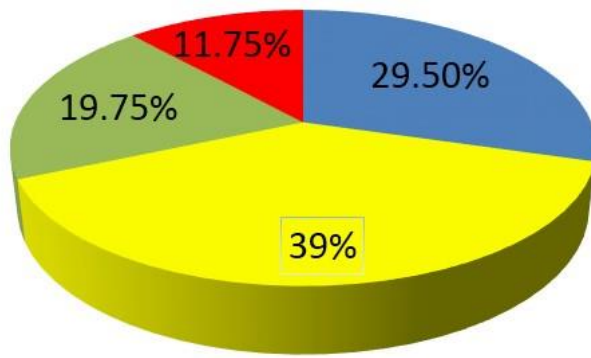
The patients were selected using the proportional sampling method. To adequately address the intended objectives, both qualitative and quantitative data were collected. Therefore, patients and key informants were the sources of data for the assessment. Quantitative data were collected through a structured questionnaire. The data set has consisted of the following parts: hospital patients' nutritional food status, the attitude of health caregivers toward patients' daily food services, and patients' knowledge capacity and their feelings on the services delivered to them. To complement the quantitative data; qualitative data were collected from key informants.

1.6. Data Analysis

The collected data were analyzed using STATA software for descriptive and regression analysis. Descriptive statistics were used to summarize the socio-demographic characteristics of the patients, satisfaction levels, and quality of food services. Regression analysis was used to evaluate the effects of variables on the hospital's nutritional food service status.

1.7. Ethical Considerations

To execute the assessment, standard questionnaires were prepared and submitted to the Research Ethical Review Committee of the Ethiopian Public Health Institute (EPHI). The Institutional Review Board (IRB) has approved the proposal with the Informed consent form made between the EPHI and the respondents. All interviews were based on the full willingness of the participants as per the consent agreement signed by each respondent.



■ 10-25 yr ■ 26-40 yr ■ 41-60 yr ■ >60 yr

Figure 1. Showing hospital patients by age group range.

2. Results

In this assessment, 400 hospital patients were involved. The minimum and maximum age range of the participants was 10 and 89 respectively. The mean age of the participants was 37.35 (± 16.59). The participants were categorized into four age groups i.e., (10-25, 26-40, 41-60, and >60) years. The majority of the respondents were in the age ranges of 26- 40 and the minority age group was >60 years as indicated above Figure 1.

Table 1. Socio-demographic characteristics of the hospital patient (n=400).

Characteristics		N (%)
Age	10- 25 years	118(29.50)
	26-40 years	156(39.00)
	41-60 years	79(19.75)
	>60 years	47(11.75)
Gender	Male	161(40.25)
	Female	239(59.75)
Marital status	Single	273 (68.25)
	Married	93 (23.25)
	Divorced	17(4.25)
	Widowed	17 (4.25)
Education	Illiterate	147 (36.75)
	Primary school	119 (29.75)
	High school	73 (18.25)
	Technical School	19(4.75)
	Others	42 (10.50)
Occupation	NGO	16 (4.00)
	Government	47 (11.75)
	Self	173 (43.25)
	Other	163 (40.75)

As shown above Table 1, the majority of the respondents were female 239(59.75%, illiterate 147 (36.75%), and unmarried (68.25%).

Table 2. Hospital staying time and dietary food provision status of patients.

Characteristics		N (%)
Hospital stay time	1-2 weeks	277 (69.25)
	2-3 weeks	91 (22.75)
	>3 weeks	32 (8.00)
Food rating compared to your home	Unchanged	134 (33.50)
	Less	54 (13.50)
	More	212 (53.00)
Type of diet you usually take	High protein	31 (7.75)
	No restriction	266 (66.50)
	I don't know	52 (13.00)
	With restriction	36 (9.00)
	Standard	15 (3.75)

As shown in the above Table 2, 277(69.25%), 91(22.75%), and 32(8.00%) 1-2, 2-3, and > 3 weeks had been under hospital treatments respectively. Nearly, half, or 212 (53.00%) of the participants responded that the hospital meal they used to get from their respective hospitals is more than what they consume at their own home. Among the respondents, 266(66.50%) were on a non-restriction diet and of them, 52(13.00%) had no idea about the daily food provision services.

3. Discussion

The assessment study showed that the overall patients' cumulative average satisfaction of the 13 governmental hospitals was 25.25%. This result is a good indicator for the government and others who have interested to conduct similar assessments to improve the nutritional service and health care system in hospitals.

Conducting such an assessment helps generate better information and evidence that will contribute to the formulation of nutrition policy and programs in the country. It is also important in raising the levels of nutrition service in governmental hospitals after providing the research output for policymakers and interested partners who have an intention to improve the current situation of the patients' poor condition of nutrition services and its provision procedures at the hospital level.

Table 3 presents the knowledge capacity of the hospital patients on the daily diet provision and the comments they have on the service provided to them and how they are satisfied in the service.

Table 3. Patients' knowledge capacity level on hospital internal services

Characterization	Response	N (%)
Hospital food is good	Agree	262 (65.5)
	Disagree	138 (34.50)
The dish and utensils are clean	Agree	336 (84.00)
	Disagree	64 (16.00)
	Agree	353 (88.25)

The staff who deliver my meal are neat and clean	Disagree	47 (11.75)
The hospital smell stops me from enjoying my meal	Agree	100 (25.00)
	Disagree	300 (75.00)
I am disturbed by the noise of finished meal trays	Agree	118 (29.50)
	Disagree	282 (70.50)
I can choose a healthy meal	Agree	86 (21.50)
	Disagree	314 (78.50)
The hot drink is at the right temperature	Agree	279 (69.75)
	Disagree	121 (30.25)
The meal test is good	Agree	261 (65.25)
	Disagree	139 (34.75)
The staff who take away the finished meal are polite	Agree	313 (78.25)
	Disagree	87 (21.75)
The hospital patients' menu has enough variety	Agree	142 (35.50)
	Disagree	258 (64.50)
The meals have an excellent and distinct flavor	Agree	245 (61.25)
	Disagree	155 (38.75)
I receive enough food	Agree	245 (61.25)
	Disagree	155 (38.75)
I feel hungry between meal intervals	Agree	102 (25.50)
	Disagree	298 (74.50)
Overall, the acceptability of the food is good	Agree	101 (25.25)
	Disagree	299 (74.75)

Some studies showed that many elderly hospitalized patients are still not being identified and are not having their nutritional needs (Rasmussen et al., 2004). In the selected hospitals, the hospital menu preparation was not based on guidelines and principles of hospital patients' nutritional food needs and preferences. Due to this limitation, hospital patients have been suffering from improper dietary intake provisions for a long time which could be a cause for late recovery. The assessments conducted by Bahirdar Felge Hiwot private wing hospital research results showed much variation in hospital patients' satisfaction levels 57.8% (Ambelie, Demssie, & Gebregziabher, 2014). The overall satisfaction level result obtained from the assessment conducted by the Ethiopian Public Health Institute in collaboration with the federal Ministry of health is 25.25%, which is the cumulative average of the 13 hospitals. This result is less than 50% from the Felege Hiwot private wing hospital. During the assessments, in-sufficiency budget allocation, unskilled manpower, lack of menu preparation guidelines, less attention towards nutritional food when compared to clinical services and nationally.

Lack of clear guidelines and procedures which could equally guide all the government hospitals were the main problem that couldn't be solved at the hospital level. Each hospital administrator and general service manager have strongly complained about this issue.

Similar research conducted at Zambia hospital by Dansereau et al. (2015) showed the overall number of patients was 35.70%. In our study, 61.25% of the hospital patients were satisfied with the portion of food they obtained from the hospital and this is almost comparable with Zambia's result of 67.30%. There was no significant association between variables sex and education, education and hospital stay time ($p>0.05$), and a significant association between age and education ($p<0.05$).

4. Conclusion and Recommendation

To improve the nutritional food services, from bottom to top or viscera the ministry of health and other partners should closely work together. Necessary guidelines and procedures should be prepared by professional experts and dispatched to each hospital with clear budget allocation and close monitoring and evaluation. The allocated budget for food items should be at least revised twice a year due to the food items' price fluctuation from time to time. The lack of skilled manpower in the nutrition profession, food preparation, and patient caretakers should be solved in all hospitals

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