

Effect of Malnutrition at Admission on Length of Hospital Stay among Adult Surgical Patients in Wolaita Sodo University Comprehensive Specialized Hospital, South Ethiopia: Prospective Cohort Study, 2022

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Abstract : Background: Malnutrition in hospitalized patients remains a major public health problem in both developed and developing countries. Despite the fact that malnourished patients are more prone to stay longer in hospital, there is limited data regarding the magnitude of malnutrition and its effect on length of stay among surgical patients in Ethiopia, while nutritional assessment is also often a neglected component of the health service practice. Objective: This study aimed to assess the prevalence of malnutrition at admission and its effect on the length of hospital stay among adult surgical patients in Wolaita Sodo University Comprehensive Specialized Hospital, South Ethiopia, 2022. Methods: A facility-based prospective cohort study was conducted among 398 adult surgical patients admitted to the hospital. Participants in the study were chosen using a convenient sampling technique. Subjective global assessment was used to determine the nutritional status of patients with a minimum stay of 24 hours within 48 hours after admission (SGA). Data were collected using the open data kit (ODK) version 2022.3.3 software, while Stata version 14.1 software was employed for statistical analysis. The Cox regression model was used to determine the effect of malnutrition on the length of hospital stay (LOS) after adjusting for several potential confounders taken at admission. Adjusted hazard ratio (HR) with a 95% confidence interval was used to show the effect of malnutrition. Results: The prevalence of hospital malnutrition at admission was 64.32% (95% CI: 59%-69%) according to the SGA classification. Adult surgical patients who were malnourished at admission had higher median LOS (12 days: 95% CI: 11-13) as compared to well-nourished patients (8 days: 95% CI: 8-9), means adult surgical patients who were malnourished at admission were at higher risk of reduced chance of discharge with improvement (prolonged LOS) (AHR: 0.37, 95% CI: 0.29-0.47) as compared to well-nourished patients. Presence of comorbidity (AHR: 0.68, 95% CI: 0.50-90), poly medication (AHR: 0.69, 95% CI: 0.55-0.86), and history of admission (AHR: 0.70, 95% CI: 0.55-0.87) within the previous five years were found to be the significant covariates of the length of hospital stay (LOS). Conclusion: The magnitude of hospital malnutrition at admission was found to be high. Malnourished patients at admission had a higher risk of prolonged length of hospital stay as compared to well-nourished patients. The presence of comorbidity, polymedication, and history of admission were found to be the significant covariates of LOS. All stakeholders should give attention to reducing the magnitude of malnutrition and its covariates to improve the burden of LOS.

Keywords : effect of malnutrition, length of hospital stay, surgical patients, Ethiopia

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