

Factors associated with emergency department green zone utilization in hospital

ABSTRACT

Introduction: In hospital, emergency departments are highly utilized by patients. Overcrowding, congestion and long waiting time were among the issues highlighted resulting from it. In Selangor, there has been a steady increase in utilization of emergency department of government hospitals over the past five (5) years. Utilization of green zone was the highest in these hospitals. Being a department that provides a comprehensive emergency service and provides easy access for the community, issues of appropriateness utilization arise. This study aims to determine the level of appropriateness of green zone utilization by patients attending Emergency Department in Serdang Hospital and factors influencing its utilization. **Methodology:** A cross-sectional study was conducted in Emergency Department of Serdang Hospital. Sample sizes of green zone adult patients were obtained by systematic random sampling. Emergency Medicine and Trauma Services Policy Malaysia 2012 were used to classify patients to appropriate and inappropriate utilization of green zone. Pre-tested self-administered questionnaire were used to interview patients. Descriptive statistics, chi-square test and logistic regression used to analyse the data collected. Data analysis conducted using IBM SPSS Statistics version 22 and p value significant at <0.05 . **Result:** There were 793 (90.7%) patients in this study. It was found that level of appropriateness utilization in green zone emergency department was 83.6% appropriate and 16.4% was inappropriate. Median age of patients were 29 years old (IQR \pm 25th, 75th; 23, 40). Majority were Malays (74%). The results of chi-square test indicated that there were significant association between marital status ($p=0.032$), patients attending emergency department because treatment cost is cheap ($p=0.025$), emergency department operates 24 hours ($p=0.045$) and time of patient presentation to emergency department ($p=0.001$). From the study, the multivariate results revealed that the odds of married patients (AOR=1.481, 95% CI: 1.008, 2.174) to utilize the emergency department were higher than not married patients, the odds of patients utilize emergency department not because of the cheap treatment (AOR=1.614, 95% CI: 1.073, 2.469) was almost two times more and lastly the odds of utilization after office hours were two times more than during office hours (AOR=2.117, 95% CI: 1.388, 3.227). **Conclusion:** The study revealed majority of patients utilized green zone appropriately. Married patient, patient attend emergency department not because treatment cost is cheap and patient attending after office hour were significantly associated with appropriateness utilization of emergency department. Further study needed to determine the cause and effect relationship.

Keyword: Emergency department; Utilization; Appropriateness; Green zone