

From Arrival to Discharge: A Study on the Variables Affecting Length of Stay in Emergency Departments.

Abstract Overcrowding Serdang LOS

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Introduction

The length of stay (LOS) in the emergency room is a critical performance measure for treatment effectiveness and quality.

The yellow zone in the emergency department (ED) is the semi-critical zone with the longest patient waiting time compared to other zones.

Prolonged (LOS) leads to reduced quality of care and exposure to a higher mortality risk for patients, putting additional strain on the ED staff and increasing the ED's operating costs.

Objective

1. This study aims to compare the trend of median and prolonged LOS in the first six months of 2022 and 2023 in the yellow zone ED Serdang Hospital and,
2. Association between sociodemographic, clinical, patient presentation, and organizational factors and prolonged LOS from January to June 2023.

Methodology

The study employed a retrospective approach to examine 422 randomly selected attendees of the Yellow Zone in 2023 and 417 in 2022. Data were collected from Hospital Serdang's Hospital Information System (HIS). Descriptive, univariate, and bivariate analyses were conducted using SPSS version 26.

Result

The results demonstrated an improvement in the trend of the attendees in the yellow zone observed within the anticipated time frame (2 hours). In 2023, compared to 2022, there was a 4% reduction from 97% to 93%. The median LOS for yellow zone attendees in 2023 was 5.68 hours.

There was a significant relationship between patients' number of comorbidities and organizational factors, which included the presence of medical officer shift changes, the presence of nurse shift changes, the number of discipline-providing consultations, the number of blood tests, and the number of radiological images with the prolong LOS in the yellow zone.

Discussion and Conclusion

This study found that organizational factors are essential in ED overcrowding. Standardizing diagnostic flow, establishing specific holding areas, and improving coordination and communication collectively may reduce the LOS in the ED, enhancing overall patient flow and care quality. This study could be the foundation for future studies focusing on ED management in overcoming overcrowding.

Keyword

Overcrowding, emergency department, length of stay