

From Arrival to Discharge: A Study on the Factors Affecting Length of Stay in a Yellow Zone.

Background:

The length of stay (LOS) in the emergency department (ED) is a crucial indicator of efficiency and quality of care. The yellow zone (YZ), designated for semi-critical patients, often experiences the longest LOS, leading to potential quality care compromises, increased staff burden, and higher operating costs.

Objective:

- 1) to compare the median LOS in the YZ of Hospital Serdang's ED between January-June 2022 and January-June 2023,
- 2) to identify factors associated with prolonged LOS in the YZ, including sociodemographic, clinical factor, presenting factor, and organizational factor, using data from January to June 2023.

Method:

This cross-sectional study analyzed data from randomly selected YZ patients at Hospital Serdang between January-June 2022 and 2023, extracted from the Hospital Information System. LOS was defined as the time from arrival at triage to the decision for admission or discharge. Key organizational factors examined included the number of consulting disciplines, the occurrence of nursing shift changes during a patient's stay, and the number of diagnostic tests performed. Clinical factors encompassed the number of comorbidities, the patient's presenting complaint, and the final diagnosis. Presentation-related factors included the time of patient presentation and the mode of presentation. Descriptive and univariate analyses were conducted using SPSS version 26.

Result:

The study included 839 patients, 417 from the year 2022 and 422 from the year 2023. The median LOS in the YZ was 5.28 hours (IQR: 3.81-7.53) in 2022 and 5.68 hours (IQR: 3.76-8.67) in 2023. Notably, patients requiring more than two departmental consultations experienced a 6.84-fold increase in the odds of prolonged LOS (95% CI: 2.94-15.90). Similarly, nursing shift changes during a patient's YZ stay were significantly associated with a 6.60-fold increase in the odds of a longer stay (OR = 6.60, 95% CI: 2.91-14.97).

Conclusion:

Organizational factors, particularly the number of consultations and nursing shift changes, significantly influence LOS in Hospital Serdang's YZ. Addressing these modifiable factors through targeted interventions could optimize patient flow, potentially leading to improved patient care, reduced healthcare costs, and enhanced staff satisfaction.

Keyword:

Overcrowding, emergency department, length of stay

