

**PP121 BASELINE
PERFORMANCE METRICS AT
THE INITIATION OF LEAN
PROCESS IMPROVEMENT TO
REDUCE EMERGENCY
DEPARTMENT LENGTH OF
STAY OF PATIENTS ADMITTED
UNDER MEDICAL DISCIPLINE
IN AN URBAN ACADEMIC
HOSPITAL**

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INTRODUCTION

Lean principles have been in use nearly half a decade to increase efficiency in the manufacturing industry and now are widely applied in the services sector, including health care. A process improvement program based on lean methods to reduce length of stay and improve patient flow for acute admissions through the Emergency Department (ED) was applied in an urban academic hospital. This is a report of a preliminary study outlining in detail the full processes of care from presentation to admission to a medical ward, focusing on throughput times.

MATERIALS AND METHODS

A cross-sectional sample was assembled consisting of consecutive adult patients presenting to the ED and later admitted to a medical ward from 1st January 2018 till 20th January 2018. Data was collected from the hospital electronic medical record and ED nursing patient tracking form.

RESULTS

A total of 461 patients met the inclusion criteria. Total ED LOS was 654.5 minutes (IQR 444.5, 1071.7) which is equivalent to 10.9 hours. Most of the bed bookings occurred during the night shift. An average of 19.7 beds is

needed daily but only 50% of the bed demand is met. This causes a cyclical pattern whereby the peak of access block occurs midweek and resets by the weekend.

DISCUSSION

Medical patient lodgers had to wait almost 11 hours before they physically leave ED, comparable to the results of a similar study in Korea in 2017. A survey from 83 EDs in Australia found that caring for patients waiting for beds represented 40% of the workload of ED staff. ED overcrowding is also associated with increased mortality, longer length of stay, and higher costs for admitted patients. Effective strategies with high level management involvement is currently being planned to overcome this issue.