

SYNOPSIS

TITLE: UTILIZATION OF FMEA TOOL TO UNDERSTAND THE CAUSES AND ADVERSE EFFECTS FROM OVERCROWDING OF EMERGENCY DEPARTMENT AT HJ HOSPITAL, KINSHASA, DRC.

INTRODUCTION:

The study on utilization of FMEA to understand the causes and adverse effects of overcrowding in Emergency Department is a critical component for ensuring the efficient flow of patients in ED and thereafter the admission or discharge of patients based on diagnosis.

Failure Mode and Effect Analysis is a tool used to analyze potential failures out of the system with the least cost in terms of time and money.

FMEA defines the term “failure mode” to identify defects or errors in the process. In context of this study, potential errors included insufficient triage protocol, patient abusing ED system by admitting themselves without urgent life threatening issues and patients also admit themselves to ED to skip the waiting times for OPD and to receive immediate care, which is not ethical. Through this study we have worked upon solutions to prevent ED overcrowding and abuse.

RESEARCH QUESTION:

- **What is the conversion rate of ED patients to IPD?**
- **What are the gaps causing patients long stays in ED?**
- **What are root causes of patient taking exit from ED without receiving the required treatment ?**
- **What are the causes of overcrowding in ED ?**

OBJECTIVES:

- To understand the underlying causes of ED overcrowding and their adverse effects .
- To provide solutions to reduce Average Length of Stay (ALOS) of patients admitted in ED.
- The objective of the study is to analyze the ED patient’s conversion to IPD (Wards, OT and ICU).

HYPOTHESIS:

Patients receiving medical services in the Emergency department at HJ Hospital, Kinshasa is a prospective cohort study.

Higher the average length of stay of patients in ED, lesser is the admission rates, whereas lower is the ALOS of patient in ED generates higher admission rates due to Emergency bed availability.

MATERIAL AND METHODS:

STUDY DESIGN:

The following study is based on Prospective Cohort Study.

SETTING:

The study is conducted in Emergency Department of HJ Hospitals, Kinshasa, DRC.

STUDY POPULATION

- Inclusion criteria: The quarterly data analysis along with patient ALOS in ED was recorded. The patient admission in ED till the exit or admission to IPD is to be recorded through excel data tracker sheets. Each patient who refused to take further treatment were enquired about the valid reason for not receiving further treatment.
- Study tools: Patient admission and discharge data, patient refusal for treatment and conversion to IPD data collected through ED system HOPS (Hospital Operating system).
- Exclusion Criteria : patients who received immediate treatment and admitted to IPD without any longer waiting times.

DURATION OF STUDY: 3 months duration of sample data collected.

SAMPLE SIZE: 1500 sample of patients in the ED.

DATA COLLECTION PROCEDURE: The data will be collected through Hospital Operating system of Emergency department in coordination with Nursing in charge and In house doctors in ED.

DATA ANALYSIS PLAN: software used is HOPS(Hospital Operating System) FMEA – Failure Mode and Effect analysis is used to find gaps and provide suggestions to improve admission and satisfaction efficiency.

IMPLICATIONS OF RESEARCH: This research will be useful for the hospital to keep an account of the overcrowding causes and adverse effects in Emergency Department and to balance the gap between admission and bed management in providing quality care services.

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