

Summer Training
in
Paras HMRI Hospital Patna

(April 1 to May 31st, 2015)

A Report

By
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MBA Hospital and Health Management
2014-2016

CERTIFICATE

This is to certify that the project work titled 'time motion study on emergency triggers' has been done entirely and submitted by, Dr. Anand Kumar, a student of Masters of Business Administration in Hospital and Health Management-19 th Batch from Institute Of Health Management and Research, Jaipur.

The study project was prepared in the internship period from April 6, 2015 to June 1, 2015 at Paras HMRI Hospital Patna Bihar. This is her original work.

I wish her all success for her future endeavors.



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PHPL/H.R./2015/221
June 2, 2015

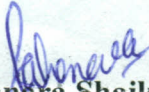
TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Anand Kumar has done Internship program in our organization from 6th April, 2015 to 1st June, 2015.

During the above period, he was found to be sincere, hardworking and responsible towards his work.

We wish him all the best in his future endeavors.

for Paras Healthcare Pvt. Ltd.


Jahannara Shaik
Manager- HR

ACKNOWLEDGEMENTS

I extend my sincere gratitude to the individuals listed below for their assistance and support during the course of this study. The completion of this project would not have been possible without their help. I express my sincere thank to Dr.Y B Sharma, Medical Director and Jahanara Shaik, HR Head for permitting me to undergo my training and to carry out the project.

I am thankful to Mr.Santosh Kumar Deputy Manager-quality And Abhishek kumar for supervising project and giving me new ideas and encouraging me in completing this project. His contribution to my project is immense.

I am also grateful to my mentor Prof. P. R. Sodani PhD, MPH, Dean Training, IIHMR University for their help and guidance for these projects.

And last but not the least I would like to thank the hospital staff for their great help and cooperation in completing my project.

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Abbreviation

- CMO- Causality Medical Officer
- CSSD- Central Sterile Services Department
- CTVS- Cardio Thoracic Vascular Surgery
- ED- Emergency Department
- ER- Emergency Room
- ENT- Ear Nose Throat
- EU- Emergency Unit
- HMRI- Hai Medical Research Institute
- ICU- Intensive care Unit
- IPD- In Patient Department
- LINAC- Linear Accelerator
- MRD- Medical Record Department
- MRI- Magnetic Resonance Imaging
- OPD- Out Patient Department
- OT- Operation Theater
- PET CT- Positron Emission Tomography

PARAS HMRI HOSPITAL



Paras Healthcare, an established group in Gurgaon & Delhi is now coming up with two hospitals – a 350 bedded at Patna and another 100 bedded at Darbhanga; with the aim of providing competitive, innovative, accessible & world class healthcare services to a wide spectrum of patient population in the region.

We are now inviting applications for our 350 bedded multi super specialty healthcare facility Paras HMRI at Patna which will have 100 critical care beds, 10 operation theaters, with two flat panel cath labs, two linear accelerators and advanced PET CT.

Overview of Paras HMRI Hospital, Patna

Paras HMRI Hospital is an initiative of the Paras healthcare. It is the first corporate hospital of Bihar and Jharkhand. The 350 bedded multi-specialty tertiary care institute with over 25 medical and surgical disciplines has been commissioned in accordance to the vision of Paras healthcare providing affordable healthcare facilities and expertise where the same is inaccessible or scarce. The hospital is the state of art of the facility with hi-tech latest infrastructure and equipments, offering clinical services in the fields of Oncology, Cardiac Sciences, Neurosciences, Orthopedics and Joint Replacement, Nephrology, Emergency care to name a few.

Spread across an area of 3, 25,000 sq ft. the hospital is the first in the region to provide a third generation comprehensive oncology treatment centre to the community. Paras HMRI is the first hospital of the region (Bihar, Jharkhand) to have a LINAC (Linear Accelerator) and PET CT. The hospital has a fully fledged cancer treatment facility that provides all treatment modalities surgical, medical and radiation therapy.

Paras HMRI is also the first hospital of the region to provide medical expertise in many disciplines- Endocrinology, Hematology etc. The hospital with its doctors of repute, nurses of extensive training and experience aim at delivering excellence to more than sixty lakh people of Patna and also cater to the adjoining areas of Uttar Pradesh, Jharkhand, Nepal and Bangladesh

Paras HMRI and Paras Healthcare believes in providing the right infrastructure aimed at improving clinical outcomes and enhancing the services delivery to patients.

Vision

To become preferred health care provider for all- Partnership in caring and curing. Providing excellent medical care to our customers through our faith in values, integrity, respect, teamwork & innovation to achieve complete patient satisfaction.

Mission

To provide competitive, innovative and accessible medical care to the patients. To facilitate improving the health of the patient by providing quality service through our professionals that is affordable and delivered **C**ompassionately, **A**ppropriately, **R**esponsibly and **E**fficiently.

Quality Policy

Providing uniform patient treatment and care, use of evidence based medicine and excellence in clinical outcomes.

Knowledge enhancement of our staff, clinicians and patients.

Delivering superior customer services and complying with statutory regulations.

PARAS HMRI – The Pioneer

- Region's 1st super - specialty hospital | 350 beds
- Proper beds for ICU attendants | 1st Time in India
- PET – CT | 1st installation of North & East India
- Elekta Infinity (Linac) – 1st installation in India Except NCR
- 3,25,000 sq. ft
- Over 25 Medical & Surgical disciplines
- Emergency Care & Advanced Trauma Center
- 2 Cath Labs – Flat Panel Ceiling Mounted latest in class
- Bachytherapy Bunker & Bachy OT
- 10 state of the art modular Operation Theaters
- 100 bedded ICU complex.
- 10 beds Dialysis Unit
- 10 beds Chemotherapy
- Emergency Triage with Minor OT
- 24 Hours services
 - Pharmacy
 - Clinical Lab & Blood Bank
 - Radiology & Imaging services
 - Ambulance services

Services in the Hospital

Super specialty Services in the Paras HMRI

- Institute of Oncology
 - Medical Oncology
 - Surgical Oncology
 - Radiation Therapy
- Institute of Cardiac Sciences
 - Interventional Cardiology
 - Nonintervention Cardiology
 - CTVS
- Institute of Neurosciences
 - Neurology
 - Neurosurgery
 - Neuro Intervention
- Institute of Orthopaedics
 - Joint Replacements
 - Spinal & Trauma
 - Arthroscopy

Clinical Services

- Plastic & Reconstructive Surgery
- General & Laparoscopic surgery
- Urology
- Nephrology & Renal Transplant
- Pulmonology
- ENT
- Ophthalmology
- Gynecology & Urogynae
- Physiotherapy
- Internal Medicine
- Endocrinology & Metabolic disorder
- Gastroenterology
- Nephrology
- Dermatology
- Psychology
- Psychiatry
- Haematology
- Dietetics
- Rheumatology

Support Services

- Laboratory Services (Biochemistry, Hematology, Microbiology, Histopathology, Immunology)
- Blood Bank (with components)
- Radiology & Imaging Department (1.5t MRI, Multi slice CT Scan, Cathlabs,
- X-Ray with CR systems, Ultrasound, Fluoroscopy)
- State of the art Operation Theatres
- Dialysis
- Sleep Lab

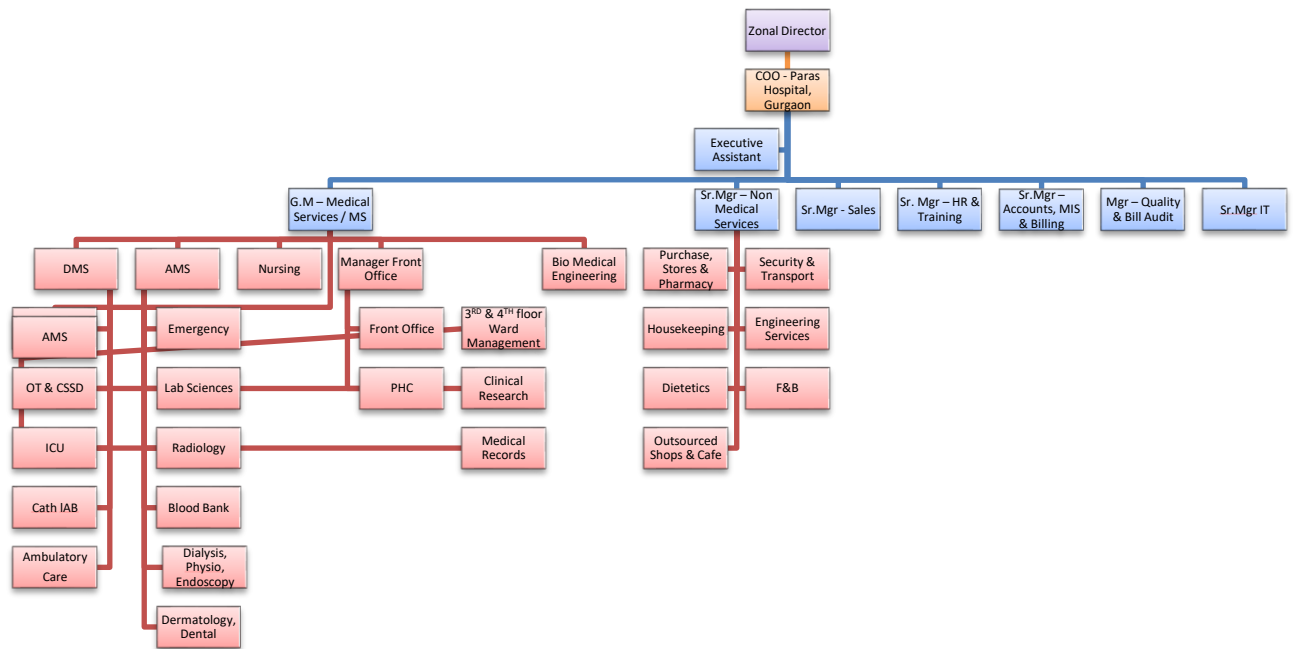
Floor wise Facility Distribution

Table No.1 floor wise facility distribution

First floor	Second floor and third floor
• Cardiology • Gastroenterology • Nephrology • Urology • Pulmonology • Oncology • Preventive Health Checkup • Physiotherapy • Dialysis	• Single room • Double room • VIP suite • General ward • Housekeeping office
GROUND FLOOR	FOURTH FLOOR
• Nuclear medicine • Radiation oncology • Emergency • Radiology • Admin dept • OPD • IPD • cafeteria •	• ICU FIFTH FLOOR • O.T SIXTH FLOOR • Marketing • I.T • CSSD • MRD • Quality

Organogram of Paras HMRI Hospital

Fig.1 Organogram of Hospital



Time Motion Study on Emergency Triggers

Introduction

Patient flow and long patient waiting times are important aspects of efficiency in the emergency room. The efficient use of emergency room resources can have a significant impact upon patient satisfaction, hospital public relations, quality of care, and cost containment. Understanding and quantifying the variables involved in this process can be beneficial in analyzing and improving efficiency. For the purpose of this study, patient waiting time is defined as the total amount of time the patient spends in the emergency room from the time the patient registers at the front desk to the time of final disposition. The terms emergency room (ER), emergency department (ED), and emergency unit (EU) are used interchangeably.

ED are the most vital component of hospital inpatient business. ED are right inside the front door of every hospital, and they generate thirty to forty percent of hospital total admissions and revenue. The flow of patients through any ED directly affects its quality of care, the safety and satisfaction of its patients and its hospital's revenue. It is critical that the flow be efficient.

Objectives

- To determine time motion study on emergency triggers.
- To identify key variables affecting patient waiting time.
- To recommend for smooth functioning of emergency department..

Need for Study

Patient flow and long patient waiting times in the emergency room are important aspects of efficiency that impact upon patient satisfaction, hospital public relations, quality of care, and cost containment. The purpose of this study was to determine which factors contribute to patient waiting time in the emergency room and how these factors can be addressed to improve the quality and efficiency of patient services.

Literature Review

A review of the literature on waiting time in the emergency room shows that past studies have examined numerous factors in an effort to determine the cause inherent to this problem. These factors can be classified into three general areas: structural, patient and process variables. Structural variables include size and /or type of emergency department layout or unit design, staffing levels, and skill levels of providers. The primary patient variable studied is patient acuity or classification. Other patient variables include age, gender and beneficiary status. Process variables involve patient flow and look at the it takes to complete registration, triage, treatment, diagnostic testing, consultation, admission, or discharge.

A time and motion study tracked 100 patients through the emergency department to identify sources of delay. Patients of high acuity had the shortest waiting times in all stages of the emergency patient encounter, while the patients of low acuity experienced the longest waits, especially when diagnostic test had to be performed.

Process variables and patient acuity in an attempt to establish criteria for correcting inefficiencies in the emergency department. Patient record to determine the amount of time each patient spent in triage, examination/treatment, and awaiting discharge. Each was assigned an acuity code ranging from 0 to 6 (least urgent to cardiac arrest). They also noted whether the patients had laboratory or radiology procedures, consultation, or were admitted to the hospital.

They found the average waiting time to be 150.16 min. The average time spent in triage was 15.38 min. The average time spent in the examination or treatment room was 2.12 hrs. The average time spent awaiting discharge was 10.03 min. Approximately 49% of the patients were discharge within the first two hours, 25% discharge between two and three hours, and 26% discharge after three hours. Of the latter group, 28 out of 45 patients had waiting times greater than four hours. Approximately 6% of the patients presented with life-threatening conditions or cardiac arrest. They conclude that long waiting times appear to be related to diagnostic testing, consultations, and admission to the hospital, but were not able to directly assess the contribution to long waiting time since the amount of time taken for these procedure was not recorded.

This study also identified staffing levels and patient acuity as other factors that delay patient waiting time, but did not attempt to quantify these variables. After thses prpblem were identified, modification were made in an attempt to improve patient waiting time.

Research Methodology

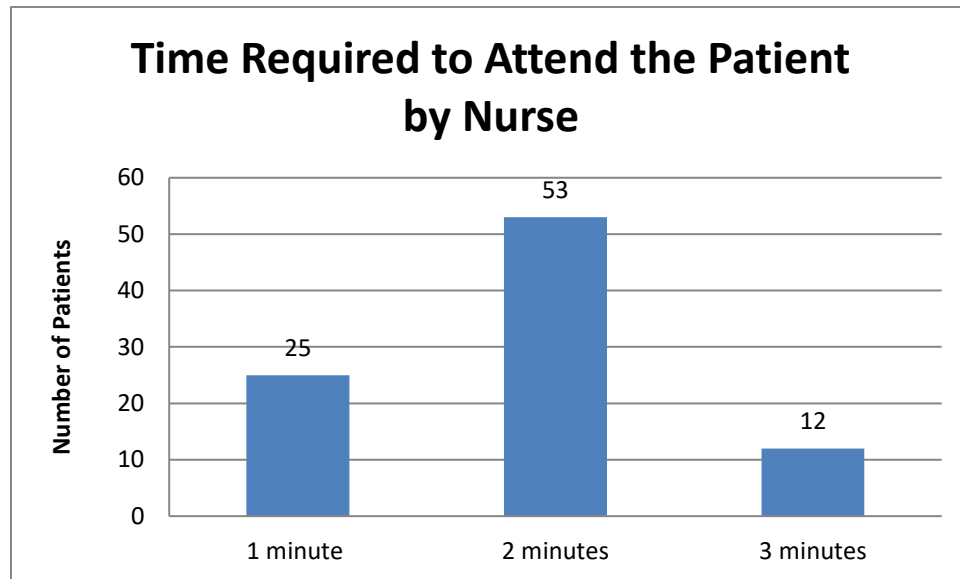
- **Study Area:** Emergency Department of Paras HMRI Hospital, Patna
- **Study Type:** Cross sectional descriptive study
- **Duration of Study:** 1 Month
- **Sample Size:** 100 patients
- **Method of data Collection:** The data collected will be quantitative in nature.
- **Data Collection Tool:** MS Excel Sheet was prepared to note down observation
- **Data collection Technique:**
 - Primary data: Observation and interaction with staff
 - Secondary data: Record review

Analysis and Interpretation

1. Time required to attend the patient by Nurse

Number of Patients attended by nurse within 1 minute is 25, within 2 minutes are 53 and within 3 minutes are 12. Average time to attend the patient by Nurse in Emergency Room is 2 minutes.

Graph No.1 Time required attending the patient by Nurse



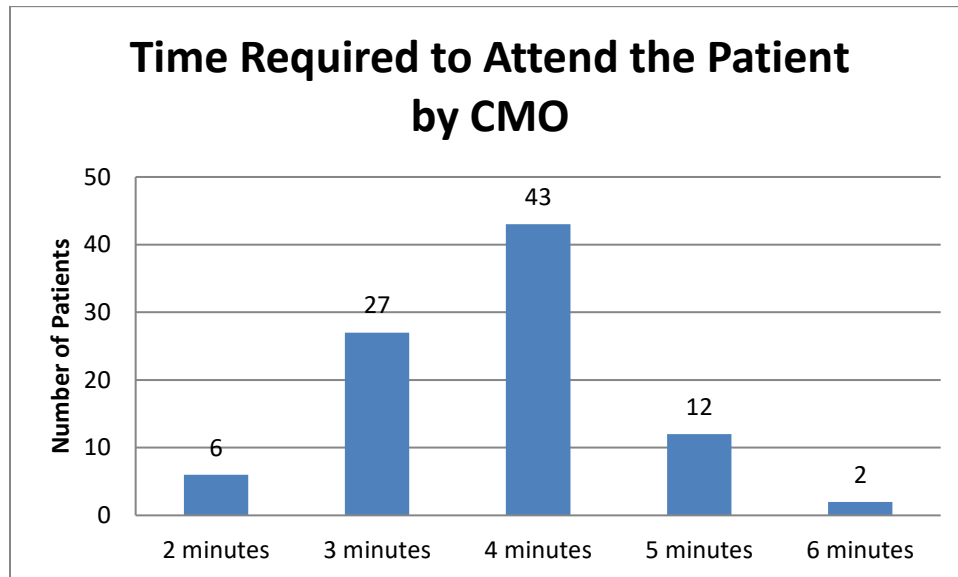
A criterion set by hospital to attend the patient by nurse is 2 minutes. Out of 90 patients 12 patients are attended within 3 minutes, which is 13%. Reasons for attending patients in 3 minutes are as follows

- Assessing another patient in observation room
- Improper duty roster
- Attending phone calls

2. Time required to attend the patient by CMO

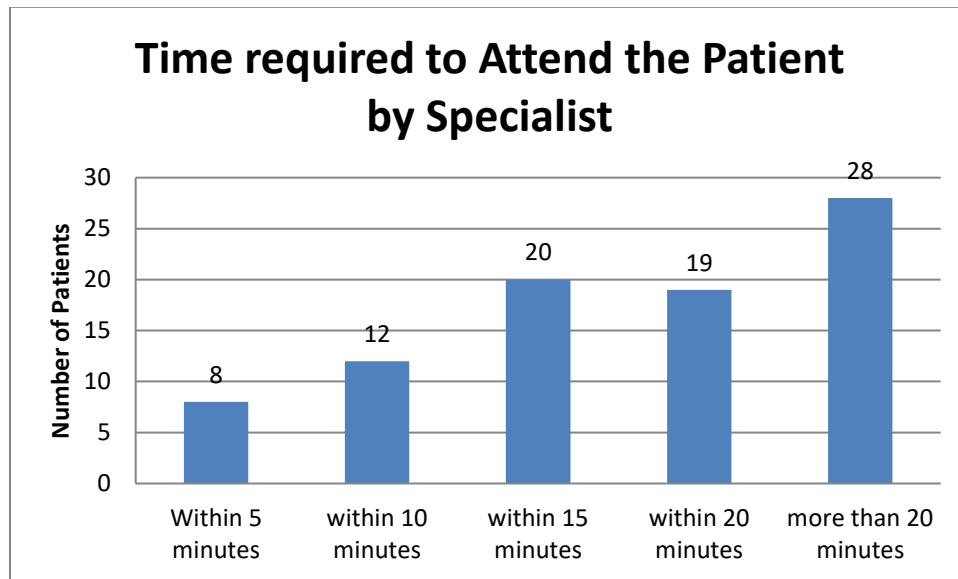
A criteria set by hospital to attend the patient by CMO is of 5 minutes. Average time for attending patient by CMO is 4 minutes. Number of patients attended within 2 minutes is 6, within 3 minutes are 27, within 4 minutes are 43, within 5 minutes are 12 and in 6 minutes are 2. So number of patient attended above the set criteria are only 2 and that is so least in number. There is no major issue with CMOs.

Graph No. 2 Time required to attend the patient by CMO



3. Time required to attend the patient by Specialist/ consultant

Graph No. 3 Time required to attend the patient by Specialist



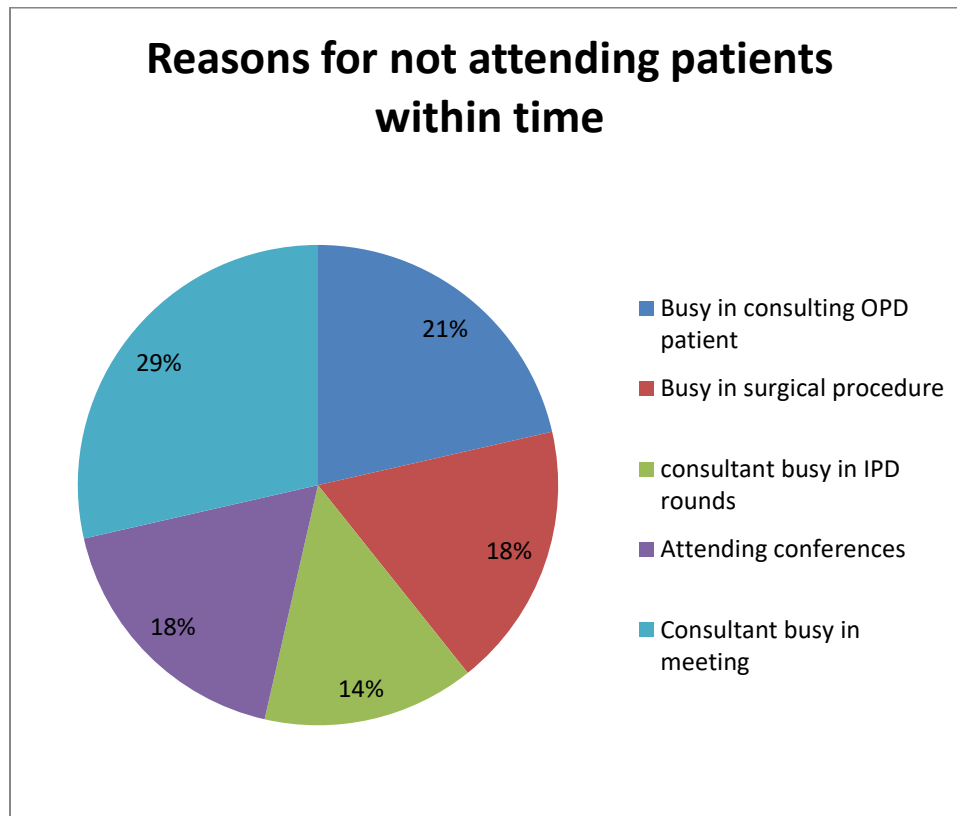
Number of Patients attended by nurse within 5 minute is 8, within 10 minutes are 12 and within 15 minutes are 20, within 20 minutes 19 and more than 20 minutes 28.

Average time to attend the patient by Consultant in Emergency Room is 16 minutes.

A criterion set by hospital to attend the patient by consultant is 20 minutes. Out of 90 patients 28 patients are attended more than 20 minutes, which is 32% of the total patient. Reasons for it are as follows

- Busy in consulting OPD patients
- Consultant were busy in IPD rounds
- Busy in surgical procedure
- Attending conferences
- Consultant busy in meetings

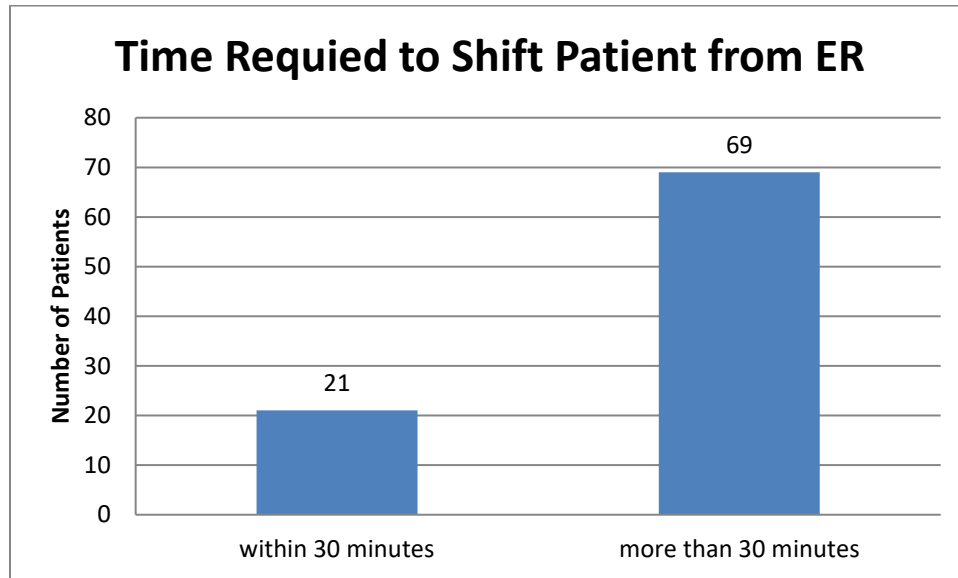
Graph no 4. Reasons for not attending patients within time by specialist



Out of 100%, busy in consulting OPD patient is 21%, busy in surgical procedure is 18%, consultant busy in IPD rounds is 14%, attending conferences is 18% and consultant busy in meeting is 29%.

4. Time required to shift patient from Emergency Room

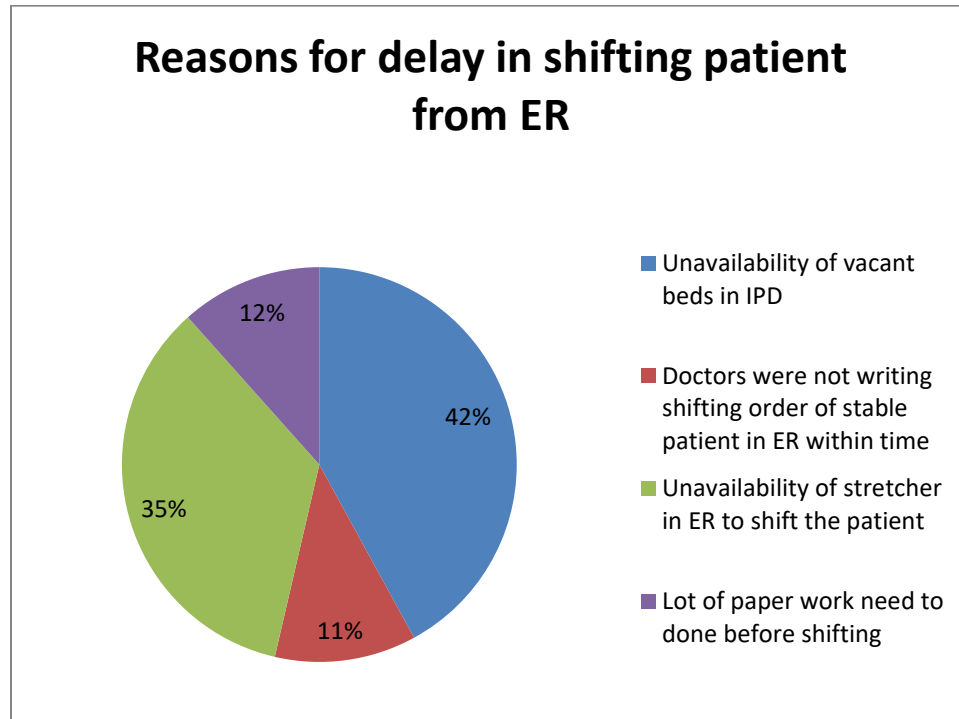
Graph no. 5 Time required to shift patient from ER



A criteria set by hospital to shift the patient from ER is of 30 minutes. Average time to shift the patient from ER is 97 minutes. Number of patients shifted within 30 minutes is 21 and more than 30 minutes are 69. So number of patient attended above the set criteria are 69 and that is so high in number. Reason for it is as follows

- Unavailability of vacant beds in IPD.
- Doctors were not writing shifting order of stable patient in ER within time.
- Unavailability of stretcher in ER to shift the patient.
- Lot of paper work need to done before shifting.

Graph no. 6 Reasons for delay in the shifting patient from ER



Graph shows that the reason unavailability of vacant beds in IPD is of 42%, unavailability of stretcher in ER to shift the patient is 35%, lots of paper work needs to be done before shifting is 12% and doctors were not writing shifting order of stable patient within time is 11%.

Major issue is with unavailability of vacant beds in IPD and unavailability of stretcher in ER which is almost of 77%.

Observation

- Average time to attend the patient by Nurse in Emergency Room is 2 minutes.
- Average time for attending patient by CMO is 4 minutes.
- Average time to attend the patient by Consultant in Emergency Room is 16 minutes.
- Average time to shift the patient from ER is 97 minutes.
- There was no major problem with CMO to attend the Patients.
- Major issue was with Specialist and shifting of the patient from ER.
- Major reasons of Specialist are as follows and they contribute 50% of total reason.
 - Busy in consulting OPD patients- 21%
 - Consultant busy in meetings- 29%
- Major problem of shifting of the patient from ER are as follow. They contribute 77% of the total reason.
 - Unavailability of vacant beds in IPD- 42%
 - Unavailability of stretcher in ER to shift the patient- 35%

Recommendation

- Specialist should be avoid for minor conferences and meetings those conducted in the hospital. There should be weekly meeting with the consultant/ specialist.
- There should be schedule planning for IPD round and OPD for each consultant of same department and who is attending OPD cases may responsible for attending emergency cases.
- At present in ER, 8 beds are available in observation room. Hospital can increase in number of beds according to patient load in ER.
- Hospital operational manager can ensure process flow of the discharge process and identify critical cause and can close the gaps to make availability of empty beds in the IPD.
- Hospital can arrange additional stretcher in ER as per patient load.

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