

Internship training

At

Paras hospital Gurgaon

On

QUALITY IMPROVEMENT IN EMERGENCY ROOM

By

Dr.Mayuri Mehta

PG/14/032

Under the guidance of

Dr. A.K.Agarwal

Post-Graduate Diploma in Hospital and Health Management

2014-2016



**International Institute of Health Management Research**

**New Delhi**

PHPL/HR – Comm./2016/130

April 14, 2016

WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr Mayuri Mehta** has successfully completed her training, in the Quality Department of our organization from **February 9, 2016 till April 14, 2016**.

She took up the assignment in **“Quality Improvement in Emergency Room”**. She has duly submitted her project of dissertation report in the training department of our hospital.

During her training period she was found to be sincere and efficient in her work.

We wish her all the best for her future endeavors.

For Paras Hospitals



Ranshu Aggarwal  
Assistant Manager - HR



PARAS HOSPITALS  
PARAS HEALTHCARE PVT. LTD.  
Registered Address: C Block, Sushant Lok, Sector-43, Gurgaon, Haryana, India  
Tel.: +91-124-4585555 | Fax : +91-124-4585572  
E-mail : info@parashospitals.com | www.parashospitals.com

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Dr. Mayuri Mehta student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at Paras Hospital, Gurgaon from 9th Feb 2016 to 15<sup>th</sup> April 2016.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfilment of the course requirements.

I wish him all success in all her future endeavours.



Dr. A.K. Agarwal  
Dean, Academics and Student Affairs



Dr. A.K. Agarwal  
IIHMR, New Delhi

### Certificate of Approval

The following dissertation titled "QUALITY IMPROVEMENT IN EMERGENCY ROOM" at "PARAS HOSPITAL, GURGAON" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Dr. A. K. Aggarwal

Dr. Suresh K Gupta

Dr. Manoj Dey

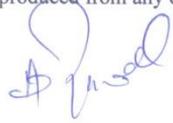
Dr. N. S. Singh 18/5/16

Chairman

### Certificate from Dissertation Advisory Committee

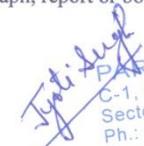
This is to certify that **Dr. Mayuri Mehta**, a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He/ She is submitting this dissertation titled “**QUALITY IMPROVEMENT IN EMERGENCY DEPARTMENT**” at “**PARAS HOSPITAL,GURGAON**” in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health and Hospital Management**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.



Dr. A.K Agarwal,  
Dean Academic and Student Affairs,

IIHMR,New Delhi



PARAS HOSPITALS  
C-1, Sushant Lok, Phase-1  
Sector-43, Gurgaon-122002  
Ph.: 0124-4585555  
Fax: 0124-4585572

Organization Mentor Name & Designation

Name - Jyoti Singh  
Designation - Quality Manager

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT  
RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled Quality Improvement in Emergency Room and submitted by Dr. Mayuri Mehta Enrollment No. PG/14/032 under the supervision of Dr. A.K.Agarwal for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from 9<sup>th</sup> Feb 2016 to 15<sup>th</sup> April 2016 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

*Mayuri*

Signature

## FEEDBACK FORM

Name of the Student: Mayri Mehta

Dissertation Organization: Paras Hospitals, Gurgaon

Area of Dissertation: Quality Department

Attendance: Regular

Objectives achieved: ① Quality Improvement in  
Emergency Dpt. ② Medical Files Documentation  
③ Front Office Audit

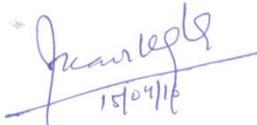
Deliverables:

① Recommendation for ER, Front Office Dpt.

Strengths: ① Punctual ② Meets deadlines  
③ Innovative

Suggestions for Improvement: ① Understand the process flow  
of other departments.

Signature of the Officer-in-Charge/ Organization Mentor (Dissertation)

  
15/04/16

Assistant Mgr  
Quality Assurance

Date: 15/04/16  
Place: Gurgaon

## ACKNOWLEDGMENT

On the very outset of this report, I would like to extend my sincere and heartfelt obligation towards all the personages who have helped me in this endeavour. The internship opportunity I had with **Paras Hospital, Gurgaon** was a great chance for learning and development.

I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this internship period.

First and foremost, I would like to express my sincere gratitude to **Mrs. Jyoti Singh**, Head of Department, Quality, Paras Hospital Gurgaon.

At this juncture I feel deeply honoured in expressing my sincere thanks to **Ms. Akanksha Sharma** (Assistant Manager- Quality Department) who in spite of being extra ordinarily busy with her duties, took time out to hear, guide and keep me on correct path and providing valuable insights leading to the successful completion of my project.

I would also like to thank all my mentors at Paras Hospital, Gurgaon for their critical advice and guidance without which this project would not have been possible.

I express my gratitude to my college **International Institute of Health Management and Research, New Delhi** for arranging summer training in good schedule. I also extend my gratitude to my project guide **Dr. A.K. Agarwal**, Dean Academics and Student Affairs, IIHMR Delhi for his co operation, help and encouragement.

I perceive this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in best possible way and I will continue to work on their improvement in order to attain desired career objectives.

Hope to continue co operation with all of you in the future.

Thanking You

Sincerely

Mayuri Mehta

30/04/2016

## DECLARATION

I, Dr Mayuri Mehta, student of International Institute of Health Management Research, New Delhi, hereby declare that I have completed my projects titled 'quality Improvement in Emergency Room' in Paras Hospital, Gurgaon from February to April 2016. The information submitted herein is entirely true and original work.

The projects were undertaken and carried out by me, under the guidance of **Mrs. Jyoti Singh** (HOD; Quality Department), **Ms. Akanksha Sharma** (Assistant Manager- Quality Department), and it has not been submitted to any other university or institute or published earlier.

Place- New Delhi

Date- 30/04/2016

## TABLE OF CONTENT

<b>S.NO</b>	<b>CONTENT</b>	<b>PAGE NO</b>
1	Section 1- Introduction & Organizational Profile	6
2	Section 2- Mode of Data Collection	10
3	Section 3- Task Assigned and Key Learning	11
4	Section 4- Good/Adverse Event	15
5	Section 5- Project- Project 5.1- Quality Improvement in Emergency Room	16
6	Section 6- Audit- 6.1- Front Office Audit	30 30
7	Section 7-Annexure Annexure 7.1- Check list Quality Improvement in ER	32 32

## **LIST OF ABBREVIATIONS**

BLS- Basic Life Support

BME- Bio Medical Engineering

ER- Emergency Room

CQI- Continuous Quality Improvement

CSSD- Central Sterile Supply Department

CT- Computerized Tomography

HOD-Head of Department

IPD- Indoor Patient Department

ICU- Intensive Care Unit

LAMA- Leave Against Medical Advice

LOS- Length of Stay

MRI- Magnetic Resonance Imaging

OT- Operation Theatre

OPD- Out Patient Department

PET- Positron Emission Tomography

PICU- Paediatric Intensive Care Unit

TAT- Turn Around Time

## SECTION 1- INTRODUCTION & ORGANIZATIONAL PROFILE

### PARAS HOSPITAL GURGAON

**Paras Hospitals, Gurgaon** is the 250 bedded flag ship hospital of Paras Healthcare. It is a state of the art multi super specialty hospital providing a complete spectrum of advanced medical and surgical interventions with a comprehensive mix of inpatient and outpatient services.



Since its inception in 2006, Paras Hospitals has been moving forward with the vision to provide competitive, innovative and accessible medical care to its patients. The hospital offers around 55 super specialties under one roof and is supported by a team of doctors of international and national repute.

Paras Hospitals, Gurgaon, is also the first NABH accredited corporate hospital of Haryana. It is also the first hospital of the region to have a NABL accredited laboratory.

Paras Hospitals initiated with focus on neurosciences, joint replacement and mother & child care. Today there are around 55 speciality departments including minimal invasive surgery, gynaecology & obstetrics , ophthalmology, dermatology, endocrinology, rheumatology, cosmetic and plastic surgery, to list a few.

Supported with expertise and cutting edge technology, Paras Hospitals, Gurgaon has one of the leading Neurosciences centres in the region with all the facilities under one roof. It is also one of the few centres where deep seated tumours are operated upon. Moreover, it is the first private hospital in Delhi NCR to have a standalone Image Guided Tumour Navigation Surgery Technology.

Paras Hospitals understands and abides by its motto-Partners in Health– and aims at becoming the ultimate care giver for the community. The hospital with its remarkable patient care services, excellent community interface & quality healthcare provides affordable services to the society at large.

### **PARAS LOGO**



### **PARAS VISION**

Paras Hospitals aspires to be the preferred healthcare partner for the community. We will initiate all our endeavors based on the 3 tenets of healthcare – Affordability, Accessibility and Quality.

## **PARAS MISSION**

Our mission is to provide the best quality medical service with utmost responsibility and compassion. Our management ensures that every patient gets the best possible treatment whether preventive or diagnostic.

## **SPECIALITIES**

- Critical Care
- Dentistry
- Dermatology
- Emergency Medicine
- Endocrinology
- ENT
- Gynaecology
- Haematology
- Internal Medicine
- Lab Sciences
- Mother and Child
- Nutrition and Dietetics
- Obstetrics
- Ophthalmology
- Paediatrics
- Physiotherapy
- Psychiatry and Psychology
- Pulmonology
- Radiology
- Rheumatology
- Plastic & Reconstructive Surgery
- Vascular & Endovascular Surgery
- Vascular and Non Vascular Interventional Radiology
- Neurosciences
- Cardiac Sciences
- Orthopaedics & Joint Replacement
- Renal Sciences
- Cancer Care
- Gastroenterology and GI Surgery
- General and Laparoscopic Surgery
- Minimal Access & Bariatric Surgery
- Spine Services

## FLOOR WISE DISTRIBUTION OF DEPARTMENTS

FLOOR	DEPARTMENT
GROUND FLOOR	Admission, Reception, OPD Billing, OPD, Sample Collection-Lab, Pharmacy, Radiology, Emergency
FIRST FLOOR	OT Complex, Recovery Room, CTVS ICU, MICU, SICU
SECOND FLOOR	Service Floor
THIRD FLOOR	Labour Room, NICU, PICU, Ward, Private Rooms, International Floor
FOURTH FLOOR	Private Rooms, CCU, HDU
BASEMENT 1	Dental, PHC, Administration, Dermatology, Cosmetology, IPD billing, Dialysis, Physiotherapy, IT, Food & Beverage, Laboratory, Corporate Office
BASEMENT 2	CSSD, Laundry, MRD, Bio Medical Engineering, LP Pharmacy, Stores, Mortuary

## **SECTION 2-MODE OF DATA COLLECTION**

The core department allotted was Patient Safety and Quality Department in Paras Hospital, Gurgaon.

**Study Area-** Patient Safety and Quality Department (the core department), Blood Bank, Laboratory Services, CSSD, Pharmacy, Preventive Health Check Ups, Patient Care Services, Day Care, Housekeeping, Store and Purchases, Medical Record Department of the hospital.

**Study Design-** Cross Sectional

**Study Period-** 1stFeb to 15th April 2016

**Data collection-** Data was collected from various departments through observation

### SECTION 3-TASK ASSIGNED AND KEY LEARNINGS

Understanding of various departments by observing them like Human Resource Department, Marketing Department, Operations Department, Blood Bank, Linen and Laundry Etc.

S.NO	DEPARTMENT	ACTIVITY ASSIGNED	KEY LEARNING
1	Patient Safety and Quality	1.Introduction to CESC(Clinical Excellence Score Card) 2. Root Continuous Quality Improvement 3. Under taken project-Quality Improvement in Emergency Room 4. Audits- a. Front Office Audit b. In patient File Audit c. OT notes Audit d. Patient Identification Audit	1.Importance of Quality and Patient Safety Department and its functioning 2. NABH Accreditation 3.Usage of various Quality Tools like Fish Bone chart for root cause analysis, checklists for auditing, usage of IT for maintaining the records and also for analysing them 4.Understanding of Hospital Infection Control Department 5. Understanding regarding Internal and external audits 6. Understanding how quality department is related to various other departments of the hospital.
2	Human Resources Department	Observational Activity	1.Understanding of various bands in the hospital as per the job description and salary determination 2.Understanding regarding how to make Job Descriptions for the employees and its importance in record maintenance 3. Understanding of Basics of Recruitment Process
3	Marketing Department	Observational Activity	1.Branding and promotion 2.Online marketing through website 3.Corporate link ups 4.Prepare brochures and pamphlets

4	OPD	Observational Activity	Information about reception, appointment, registration-OPD, Diagnosis, generation of UHID(Unique Hospital Identification Number), Billing-OPD, Diagnostics, Emergency, Report/Document Delivery
5	IPD	Observational Activity	Information about functioning of nursing stations, nurse-patient ratio, admissions, discharges, patient care coordination like resolving patient issues regarding patient care services, nursing care, medication and work flow of wards
6	Emergency and Critical Care	Observational Activity	Information about hierarchy, staffing pattern, basic functioning and process flow, distribution of triages, emergency registration and initial assessment parameters Information about the type of ambulances Disaster management plan  Project undertaken- Quality Improvement in ER
7	ICU	Observational Activity	Information about hierarchy, staffing pattern, basic functioning and process flow, maintenance of record in HIS
8	Radiology	Observational Activity	Information about hierarchy, staffing pattern, basic functioning and process flow. Usage of mini PACS(Picture Archiving and Communication System) which consists of CT,MRI, Ultrasound, X-ray, Dexa Scan, C-arm Modalities
9	Laboratories	Observational Activity	Understanding about the processing of samples kind of machinery, process flow

			from receiving of the sample till the generation and distribution of the reports.
10	Linen and Laundry		Information about hierarchy, staffing pattern, basic functioning and process flow. Mechanism of receiving dirty and used linen and delivery of clean and sterile linen.
11	Housekeeping & Bio Medical Waste Department	Observational Activity	Maintenance and cleaning of hospital, process of cleaning, sponging and other daily routine activities related to patient, general process flow, staffing pattern and basic functioning are also observed. Colour coding for disposal of biomedical waste .Mechanism and segregation of waste disposal.
12	Medical Record Department	Observational Activity	Maintenance of IPD files of discharged patients, ICD-10 coding of particular disease.
13	Blood Bank	Observational Activity	Procedure for counselling of blood donation .Process of issue and donation of blood, compatibility reports, work flow of blood bank HIS.
14	CSSD	Observational Activity	Information about hierarchy, staffing pattern, basic functioning and process flow. Working of equipments used. Receiving of used and soiled instruments and OT linen and issuing of sterile instruments.
15	Operation Theatres	Observational Activity	Understanding about the voice modulated OT's , how the patient is received, identified and how post op care in

			recovery room
16	Store and Purchase	Observational Activity	Understanding of purchase, receiving of instruments, equipments and items of raw materials, consumables, printing and stationary, medicines and other essential goods required by the hospital
17	Engineering	Observational Activity	Understanding of maintenance of electric and water supply, air conditioning and refrigeration and sewage treatment plan
18	Finance	Observational Activity	Understanding of maintenance of records, payments of bills and expenses on time. Monitoring cash flow/funds, payment of salaries to employees
19	Information Technology	Observational Activity	Maintenance of software's of hospitals and their modification as per the requirement of the hospitals
20	Food and beverages	Observational Activity	Understanding of hierarchy, staffing pattern, basic functioning and process flow.

## **SECTION 4- GOOD/ADVERSE EVENT DURING DISSERTATION**

### **ADVERSE EVENT DURING DISSERTATION**

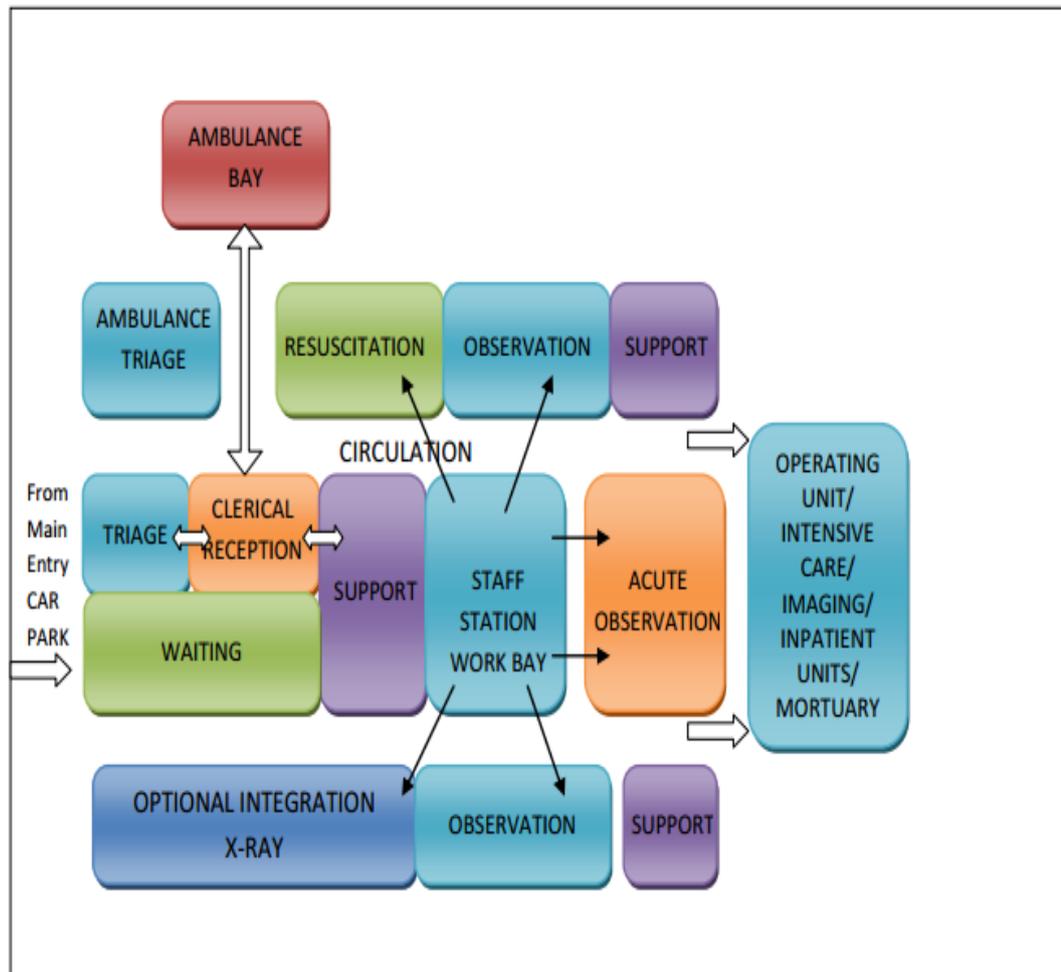
Fire in NICU because of short circuit. Code RED announced. No Neonate got injured/harmed/burnt. Staff was prompt and handled the situation very well.

## SECTION 5- PROJECT

### 5.1-QUALITY IMPROVEMENT IN EMERGENCY ROOM

#### **INTRODUCTION-**

Emergency Department is one of the most important departments of the hospital. The aim of Emergency Department is to immediately attend the patients in need and to borrow the consultant's time to save/treat the patient within the golden hour period. It is important for the staff of the Emergency Department to be proactive and work efficiently complying with the recognised care standards. Quality maintenance is one of the key areas which should be kept in mind by the staff of the Emergency Department .The six dimensions of quality (safety, effectiveness, patient-centeredness, efficiency, timeliness and equity) are compromised in cases of long wait of patients in Emergency Room which could be because of several reasons thereby resulting into decreased patient satisfaction, inconvenience to patients and attendants, delay in treatment and loss of revenue for the hospital.



## **Quality Indicators for Emergency Department are-**

Turn Around Time of the Staff

Length of Stay of patients in ER

Leave Against Medical Advice (LAMA)

Return to ER within 72 hours

The **Benchmark** set by the hospital as per NABH guidelines for above mentioned Quality Indicators are as follows

Turn Around Time of the ER Physicians and Nurses - 1 minute

Turn Around Time of Consultants- <15 mins

Length of Stay of patients in ER – <2 hours

Minor OT of The ER is one of the vital areas of the department as a lot of minor procedures are carried out every day in Minor OT such as Biopsies, DJ Stent removal. As minor surgical procedures are performed it is important for the department to up keep Minor OT same as Major OT as it could be a potential source for infection to the patients.

Ambulance on the other hand could be a Life Saving Measure for someone in need of medical assistance by the fact how fast it reaches the patient, whether it is fully equipped or not, has all the Emergency Medications and BLS/ACLS trained staff. Therefore, it is important to for the ER Department to keep a check on Ambulance on a daily basis.

## **PROBLEM STATEMENT**

Emergency Department is one of the important departments apart from OPD when it comes to admitting the patients in the hospital. Therefore, it is important for the Emergency Department to be at par with their services for providing best of the services to the patient's thereby increasing patient satisfaction and decreasing length of stay by providing timely treatment and admission to the concerned departments with the advice of the consultants within the golden hour to limit the suffering to the patient as well as counsel the patient so that they don't leave the hospital without being seen or against the medical advice.

## **RATIONALE OF THE STUDY**

A large number of studies conducted across the country and worldwide are available on various indicators of quality, quality improvement, Turn Around Time and management of Emergency Room. Improper management of Emergency Room results into decreased efficiency, hampered quality, decreased patient satisfaction, delayed admission thereby leading to revenue loss to the hospital. The aim of the study is to evaluate the performance of Emergency Room through observation considering quality indicators as well as general observations on daily basis and to give suggestions for improvement.

## **REVIEW OF LITREATURE**

In a review article; Adrian Boyle et al on Emergency Department Crowding: Time for Intervention and Policy Evaluations emphasized on how crowding in Emergency Department is becoming a recognized problem and how the hospitals need to work on it<sup>1</sup>. In an another article by Assaad Sayah et al on Minimizing ED Waiting Times and Improving Patient Flow and Experience of Care; the authors after conducting a pre and post intervention analysis compared and evaluated the improvement in operational efficiency of Emergency Department<sup>2</sup>. A study conducted by Yu Jin Lee et al on Emergency Department Overcrowding and Ambulance Turnaround Time described that overcrowding is negatively associated with the turn around interval<sup>3</sup>. In a review article Analysis of the Literature on Emergency Department Throughput by Leslie S.Zun concluded that there is a lot of variation in Emergency Departments of various institutes and recommended strategies for improvement<sup>4</sup>. A study on Measuring and Improving Quality in Emergency Medicine by Louis Graff et al critically evaluated how quality in emergency medicine can be measured and how quality improvement projects can positively affect the care of emergency patients<sup>5</sup>. A study conducted by Christopher M et al on Continuous Quality Improvement Reduces Length of Stay for Fast-track Patients in an Emergency Department concluded that formal application of CQI techniques in Emergency Room can change the patient flow and reduce Length of Stay for Fast-track Patients<sup>6</sup>. In a study conducted on Benchmarking and Quality Improvement: The Harvard Emergency Department Quality Study by Helen R Barstin et al concluded that benchmarking led to small, though significant improvement in compliance with process-of-care guidelines and patient-reported measures of quality<sup>7</sup>. In a study conducted by Jan Mainz on Defining and classifying clinical indicators For Quality Improvement concluded that monitoring health care quality is impossible without the use of clinical indicators<sup>8</sup>.

## **AIM-**

To evaluate the performance of Emergency Department of the hospital and to suggest measures for improvement.

## **OBJECTIVES-**

- To estimate the TAT of ER Physicians , Staff and Consultants.
- To determine the response of staff towards ambulance calls and the quality of Ambulance service.
- To determine the causes of patients leaving the ER without getting admitted in the hospital for further treatment.

## **METHODOLOGY-**

- **Study Design-** Descriptive Cross Sectional Study
- **Study Population-**Patients visiting Paras Hospital's ER
- **Study Area-** Emergency Room
- **Sampling Method-** Convenience sampling(Non Probability)
- **Sample Population-**Patients requiring admission in ER
- **Sample Size -**60
- **Data Collection Tool-** Check list
- **Data Collection Time Period-**15<sup>th</sup> Feb 2016 to 5th March 2016
- **Variables-** Patient In Time, Doctors TAT, Nurses TAT, Consultants Visit, Ambulance Call Received ,LAMA

## **RESULTS**

### **GENERAL OBSERVATIONS**

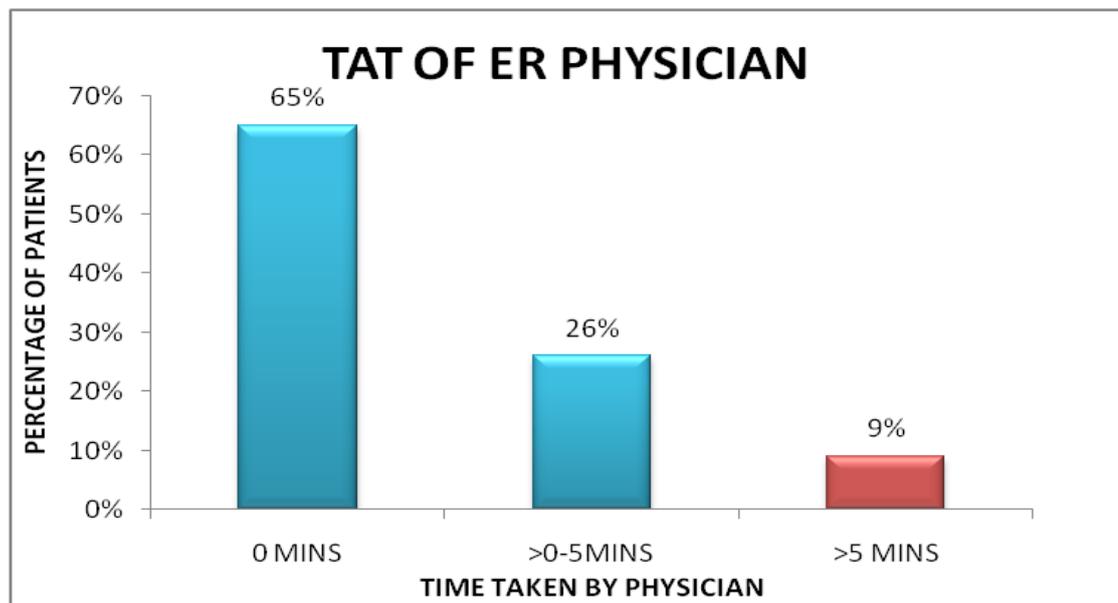
- Delayed filling of assessment sheet by the doctors and staff.
- Improper hand hygiene practices by the staff.
- Improper Bio Medical Waste Disposal practices.
- Discrepancy in medicines billed for the patients in Emergency Room.
- No proper counselling to the patients and their attendants leading to arguments over Emergency Department Billing.
- Improper infection control practices-
  - ✓ Mopping not done properly near patients bed side.
  - ✓ No fumigation of Emergency Room.
  - ✓ Soiled and blood stained curtains.
  - ✓ Improper cleaning of equipments and crash cart in ER and in Minor OT.
  - ✓ Staff using blood stained trays for keeping gloves, cotton, syringes etc.
  - ✓ Patient's attendants having lunch on patients bed in Day care.

- ✓ Used needles found with glass and red broken bangles on funnel of hypochlorite bottle.
- Movement of other staff from Emergency Department.
- Security issues- one and more attendants allowed in Emergency Room with the patient.
- Movement of OPD patients through Emergency Room.
- Admission of OPD patients through Emergency Room.
- Equipments not calibrated as per due date.
- Treatment given to patients in Day care without Doctors Initial Assessment.
- Improper documentation- no culture reports available when asked.

**As per the study the following results were obtained-**

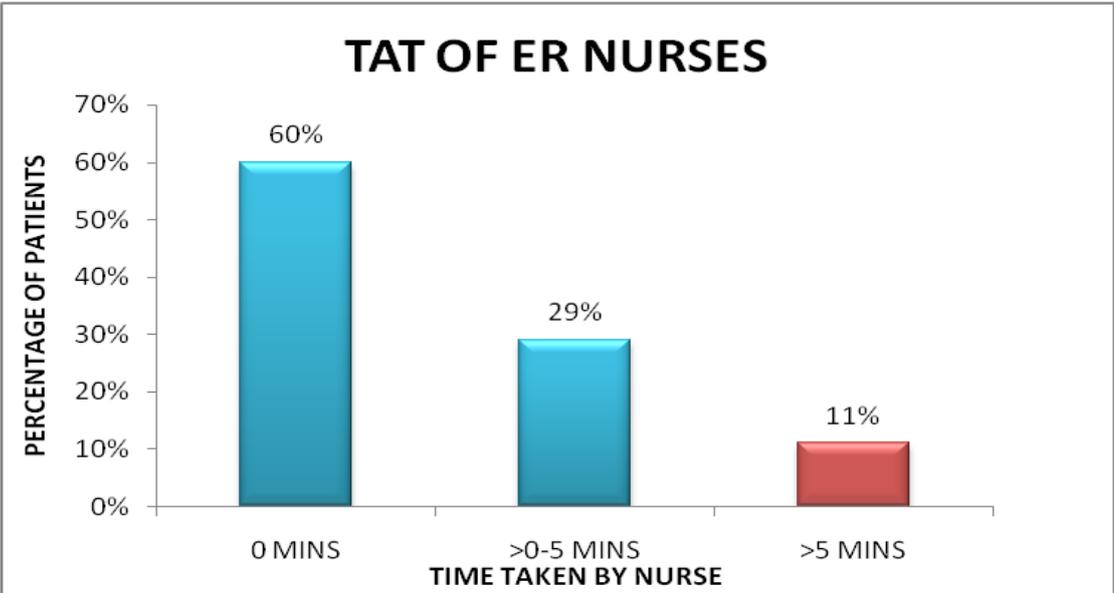
The ER Physician attended the patient immediately in 65% of the cases; however in few cases the ER Physicians attended the patient after 5 minutes from the time patient moved into the ER (Figure1).

**FIGURE 1**



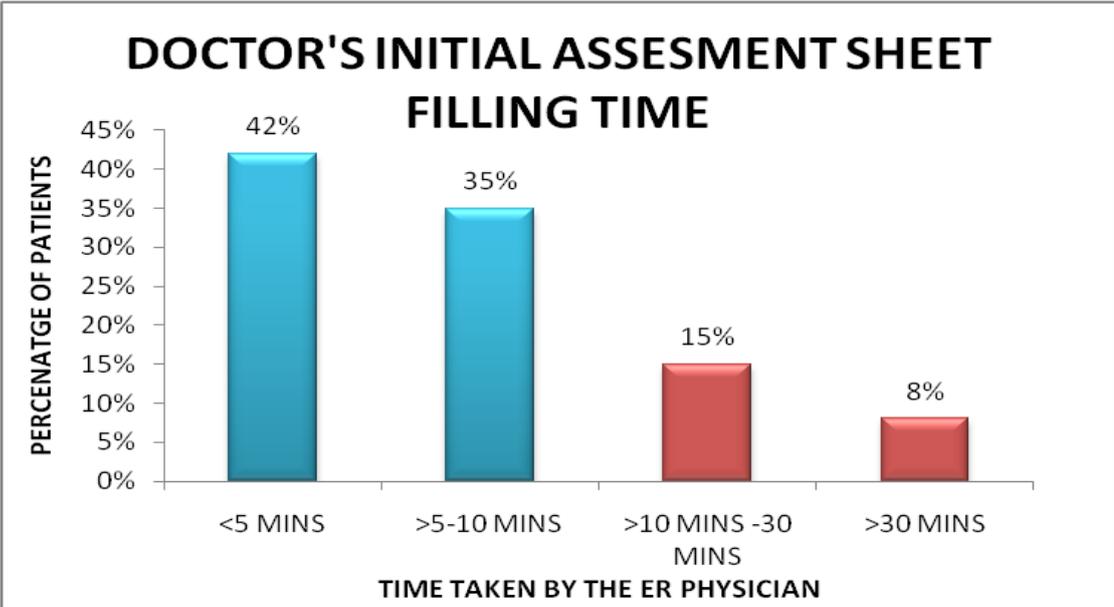
The Turn Around Time of Staff of ER was 0 minutes in 60% of the cases; however it was more than 5 minutes in few of the cases (Figure 2).

**FIGURE 2**



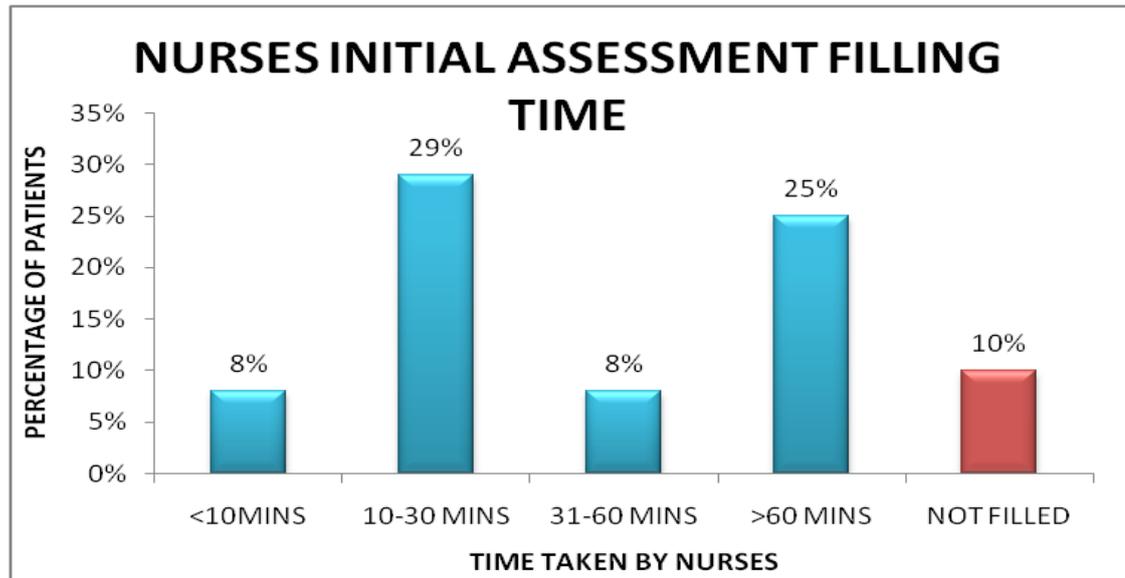
Only in 36 % cases, the ER Physician started filling the Initial Assessment Sheet in less than 5 minutes; however in most of the cases time taken was more than 5 minutes (Figure3).

FIGURE 3



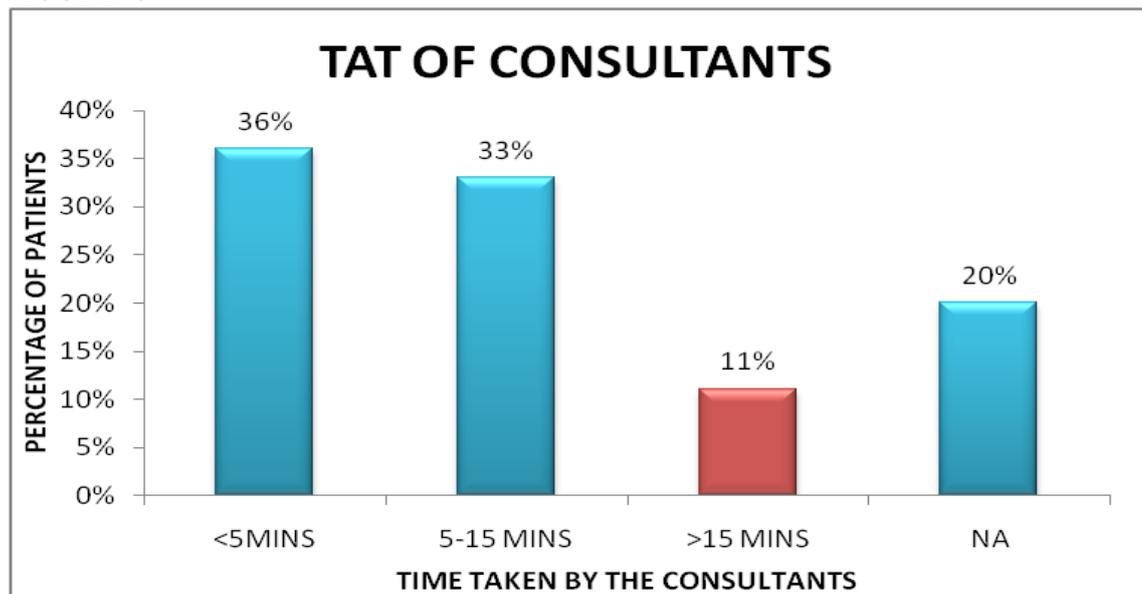
Only in 8% of cases the nurses started filling the assessment sheet in less than 10 minutes of attending the patient and in rest of the cases it was more than 10 minutes; in 10 % cases sheet was not filled and patient was either discharged or admitted without filling the nursing assessment sheet (Figure 4).

FIGURE 4



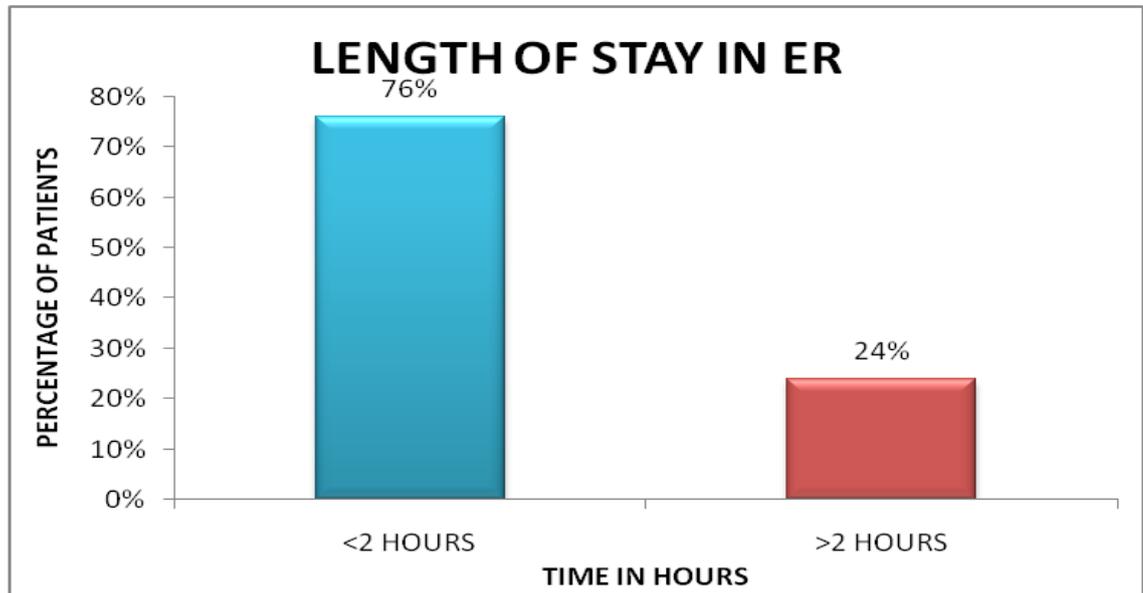
As per the study; the consultants Turn Around Time for consultant was less than 15 minutes in approximately 70% of the cases and in 11% of cases it was more than 15 minutes out of which few were more than half an hour Figure 5).

FIGURE 5



Out of the 60 cases reviewed; 38 cases got admitted in the hospital through ER, out of which 24% cases had Length of Stay of more than 2 hours (Figure 6).

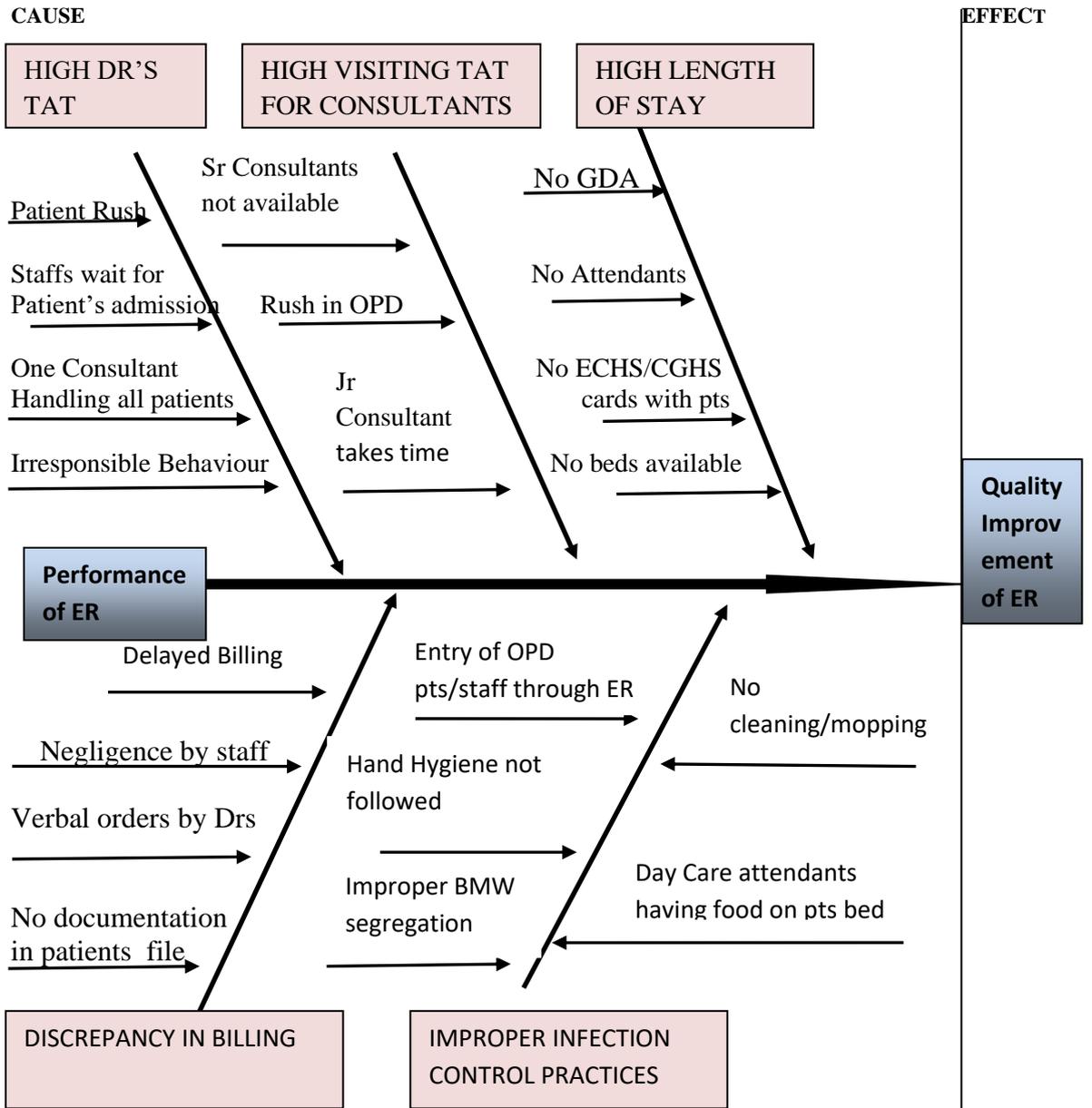
FIGURE 6



Average TAT for the above mentioned parameters are mentioned below-

PARAMETER	AVERAGE TAT
ER PHYSICIAN	1 MIN
NURSES	1 MIN
ER PHYSICIANS ASSESSMENT SHEET FILLING START TIME	13 MINUTES
NURSES ASSESSMENT SHEET FILLING START TIME	45 MINUTES
TOTAL FORM FILLING TIME BY ER PHYSICIAN	7 MINUTES
CONSULTANTS	11 MINUTES

## ROOT CAUSE ANALYSIS –FISHBONE DIAGRAM



## **LAMA**

Out of the 60 cases observed in the ER during the study; 6 cases took LAMA (Leave Against Medical Advice) and patients who were in ER but not a part of the study (8 patients); the reasons for LAMA for both were-

<b>REASON</b>	<b>NO OF CASES</b>
No bed available	5
No counselling by the Doctor	3
Financial Reasons	3
Attendants not willing for admission	3

## **RETURN TO ER WITHIN 72 HOURS**

During the study, one patient returned back to ER. Patient came for dressing early in the morning and returned back to ER within few hours with complaint of pain in the same region (Hip Joint).

## **AMBULANCE QUALITY REPORT**

During the study period, 10 ambulance calls were received out of which Ambulance was not sent in 4 cases and the reasons are

- ✓ Non availability of Ambulance(one Ambulance was not working for approximately 10 days)
- ✓ Telephone not working properly

## **AMBULANCE AUDIT**

- Driver didn't have registration certificate( sent for renewal)
- Driver had a valid Driving License
- Driver had diary maintained having details about receiving and dropping patients through Ambulance
- Driver didn't know the complete steps of BLS
- The medication bag for ambulance was not locked and there were discrepancies in check list of the bag

## **DISASTER PREPAREDNESS**

### **EXTERNAL DISASTER**

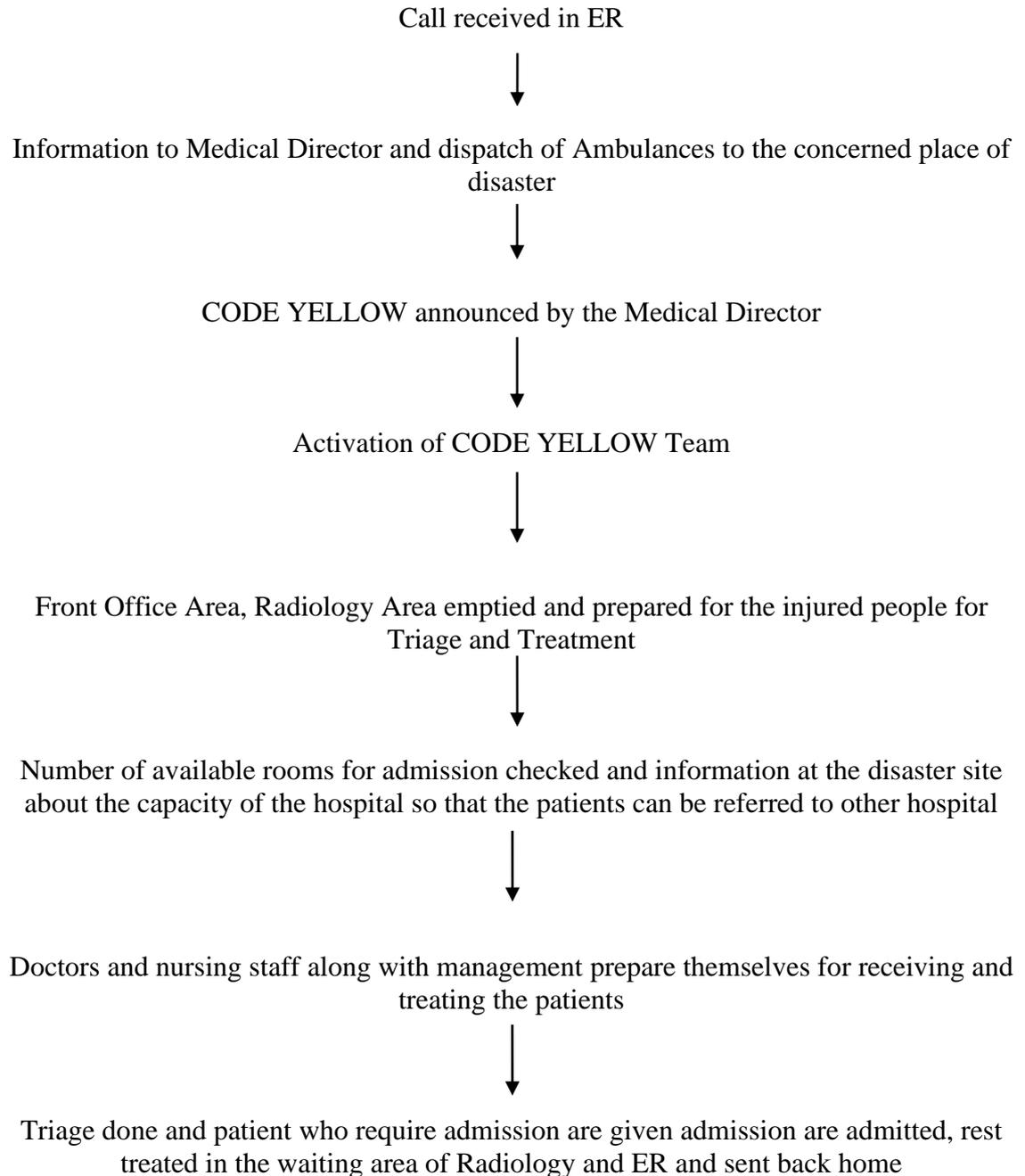
The hospital has its own Disaster Manual with all the Protocols in place. As the ER area of the hospital is small, the hospital uses its reception area and radiology waiting area in case of disaster for Triage and Treatment of the patients. However there is no additional bed space.

CODE YELLOW is announced in case of external disaster.

The hospital Disaster Team plays a major role in case of disaster which comprises of the following members.

- 1-Medical Director
2. Head Operations & Quality
3. Deputy Medical Superintendents and Quality Managers
4. Resident Medical Officers
5. Anaesthetists
6. Causality Medical Officers
7. Surgeon/Physician/Orthopaedician
8. Pharmacist
9. Nursing staff
10. Laboratory in charge
11. Security supervisor
12. Front Office Staff

## **WORK FLOW OF HOSPITAL IN CASE OF EXTERNAL DISASTER**



## **CARDIO PULOMNARY RESUSCITATION**

The ER staffs are well trained in providing BLS/ACLS. Regular trainings are being conducted for the staff in the hospital. However, the Ambulance driver didn't know the steps of BLS when asked.

During the course of study, one patient required Resuscitation in ER, and the patient revived in few minutes.

## **RECOMMENDATIONS**

<b>PROBLEM AREA</b>	<b>RECOMMENDATIONS</b>
Documentation	Sensitization of the staff ER Committee Meeting
Improper Infection Control Practices	Regular Training Pre and Post Test Regular Audits by Infection control team
Improper Patient Counselling	Strengthening ER communication
Security Issues	Regular Training ER Committee Meeting
Equipments not calibrated as per due date	Regular check of equipments and information to BME
Management of Day Care	Sensitization of staff ER Committee Meeting

### **FOLLOW UP STUDY**

Follow up was conducted after the presentation of data in Grand Quality Review.

### **METHODOLOGY**

- **Study Design-** Descriptive Cross Sectional Study
- **Study Population-**Patients visiting Paras Hospital's ER
- **Study Area-** Emergency Room
- **Sampling Method-** Convenience sampling(Non Probability)
- **Sample Population-**Patients requiring admission in ER
- **Sample Size** -20
- **Data Collection Tool-** Check list
- **Data Collection Time Period-**6<sup>th</sup> April 2016 to 12<sup>th</sup> April 2016

### **RESULTS**

Improvement was seen in the department in certain areas.

Average TAT showed some improvement.

PARAMETER	AVERAGE TAT
ER PHYSICIANS ASSESSMENT SHEET FILLING START TIME	5 MINUTES
NURSES ASSESSMENT SHEET FILLING START TIME	5 MINUTES
TOTAL FORM FILLING TIME BY ER PHYSICIAN	7 MINUTES

## CONCLUSION

As per the findings of the study, TAT of ER department are not within the range of the benchmark set by the hospital. Also, a lot of problem areas were identified apart from TAT related to infection control, ambulance, management of day care and documentation. . However the department improved as observed during the follow up study. It is important for the department to continue working towards these issues so as to improve its performance and thereby increased patient satisfaction for betterment of the hospital.

## LIMITATIONS

- The sampling method was convenience sampling.
- The data was collected during day time, however managerial issues arise in the night time more than in day time.
- Sample size for follow up was small.

## REFERENCES

1- Adrian B, Kathleen B, Ian H, Paul A. Emergency Department Crowding: Time for Interventions and Policy Evaluations. Emergency Medicine International Volume 2012, Article ID 838610.

2- Assaad S, Loni R, Karthik D, Lisa K-R, Luis F.L. Minimizing ED Waiting Times and Improving Patient Flow and Experience of Care. Emergency Medicine International Volume 2014, Article ID 981472.

- 3- Yu J L, Sang D S, Eui J L , Jin S C, Won C C. Emergency Department Overcrowding and Ambulance Turnaround Time. June 26, 2015.PLOS ONE. DOI:10.1371/journal.pone.0130758.
- 4- Leslie S.Z. Analysis of the Literature on Emergency Department Throughput. Western Journal of Emergency Medicine. May 2009.Volume X, No.2.
- 5- Louis G, Carl Stevens, Daniel S, JoAnne F. Measuring and Improving Quality in Emergency Medicine. Academic Emergency Medicine 2002; 9:1091–1107.
- 6- Christopher M.B, Fernandes, James M, Christenson, Ann P. Continuous Quality Improvement Reduces Length of Stay for Fast-track Patients in an Emergency Department. Academic Emergency Medicine. March 1996. Volume 3/No.3.
- 7- Helen R B, Alasdair C, Gary S, Donald W R, Paul D C, et al. Benchmarking and Quality Improvement: The Harvard Emergency Department Quality Study. Am J Med. 1999; 107:437– 449.
- 8- Jan Mainz. Defining and classifying quality indicators for quality improvement. International Journal for Quality in Health Care 2003; Volume 15, Number 6: pp. 523–530.

## SECTION 6-AUDIT

### 6.1 - FRONT OFFICE AUDIT REPORT

The Front Office is the first point of contact for the patients visiting the hospital. The Front Office Staff motivates and guide the patients visiting the hospital. They solve the problems of the patients and act as a reference point for them. The department can certainly generate a good image for the establishment in their manner of dress, communication, personal conduct and efficiency. It is a critical department in view of its revenue generating capacity and influence in image building, the staff working in it assumes a special importance.

#### **ATTRIBUTES OF FRONT OFFICE PERSONAL**

- Good Behaviour
- Smiling face
- Problem solvers
- Personal grooming and hygiene
- Good communication skills
- Confidence
- Efficient

**AIM-** To assess the performance of staff of Front Office Department.

#### **METHODOLOGY-**

Data was collected through observation over a period of 18 days mostly during the peak hours in the day. Queuing Time was noted of 3 guest's everyday and average Queuing Time was calculated.

#### **OBSERVATIONS**

The Front Office staffs were observed over a period of 18 days to assess their performance. The following observations were obtained-

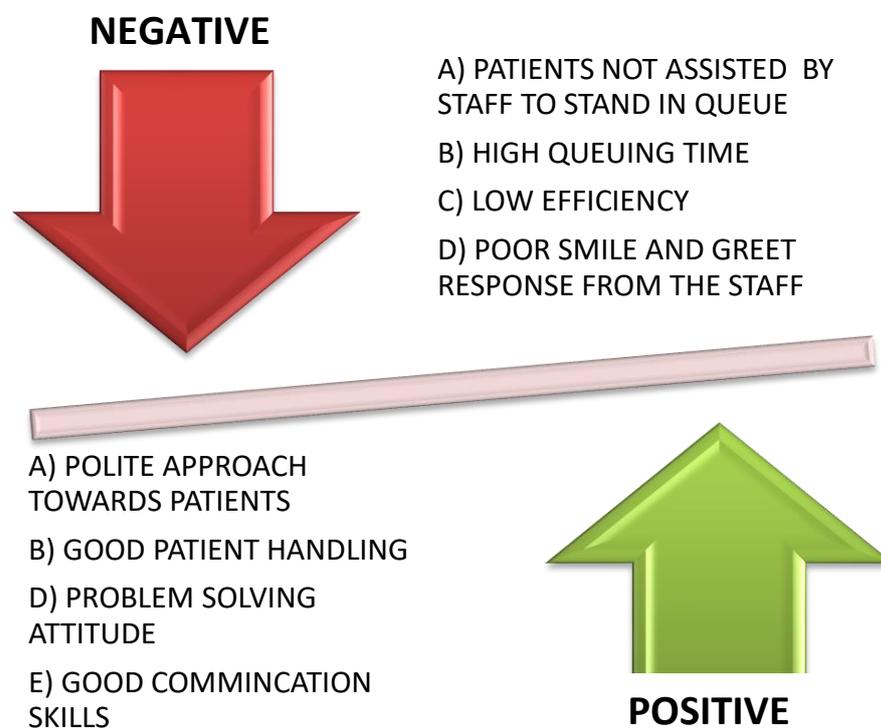
##### **POSITIVE OBSERVATIONS**

- ✓ Front Office staffs behaviour was good; they were courteous and polite.
- ✓ Staff solved queries of all the patients and listened to them patiently.
- ✓ Staffs communicate very well with the patients.

##### **NEGATIVE OBSERVATIONS**

- ✓ Staff didn't smile or greet any of the patients.

- ✓ Patients were not in queue most of the times at Report Collection Counter and sometimes at Billing Counter.
- ✓ Queuing Time of 30 patients was observed and average Queuing Time was 8.03 minutes.
- ✓ Efficiency of staff is average as they take a longer time for billing and counselling therefore the Queuing Time also increased.
- ✓ Staffs are well groomed; they were in formals during the observation period however they were not in formals on one of the Saturdays.



**RECOMMENDATIONS**

- Activeness from the Front Office Managers side so that the department functions well.
- Staff to be more enthusiastic and should manage not only the queries of the guests at the counter but also the guests standing in the queue.
- Training to the staff on how to greet and behave with the guests visiting the hospital.
- Regular audits and team building exercises.

**SECTION 7- ANNEXURE**

**7.1- CHECKLIST FOR PROJECT QUALITY IMPROVEMENT IN  
EMERGENCY ROOM**

PARAMETERS	PATIENT 1	PATIENT 2
DATE		
S.NO		
BED NO		
PATIENT IN TIME		
INITIAL ASSESMENT BY DR STARTED AT		
EMO'S TAT		
ASSESMENT BY NURSE STARTED AT		
NURSES TAT		
DR STARTS FILLING ASSESSMENSHEET		
TAT FORM FILLING		
DR COMPLETES FILLINGASSESMENT SHEET		
FORM FILLING TIME		
NURSE STARTS FILLING ASSESMENT SHEET AT		
TAT FORM FILLING NURSING		
CONCULTANT CALLED AT		
CONCERNED SPECIALITY VISITED AT		
CONSULTANTS TAT		
ADMISSION ADVISED AT		
PATIENT MOVED AT		
LOS		
REMARK		