

SUMMER INTERNSHIP REPORT

AT

FORTIS MEMORIAL RESEARCH INSTITUTE (FMRI)

GURUGRAM

(APRIL 4th to JUNE 17th, 2022)

A REPORT ON

“TURN AROUND TIME STUDY ON EMERGENCY PATIENTS”

BY

MS. LAKSHITA NAGPAL

(PGDHM) POST GRADUATE DIPLOMA IN HOSPITAL AND HEALTH MANAGEMENT

2021-2023



International Institute of Health Management Research

New Delhi

Acknowledgement

First of all, I would like to thank God, for helping me start from the beginning till the end of my internship period.

I would like to thank **Ms. Shivani Dhir**, (SBU Head-Learning & Development) of Fortis Memorial Research Institute (FMRI), Gurugram for giving me the opportunity to do an internship within the organization to broaden my perception on how the real world in the field of healthcare looks like as well organizing the whole internship program.

I also would like to thank all the people that worked along with me with their patience & openness and an enjoyable working environment they created at FMRI.

It is indeed with a great sense of pleasure and immense sense of gratitude that I acknowledge the help of these individuals. I am highly indebted to **Dr. Priyanka and Dr. Nisha Sharma**, for the facilities provided to accomplish this internship.

I would like to thank my Head of the Department **Dr. Mohammed Hasnain Reza**, for his constructive criticism throughout my internship.

I would like to thank IIHMR-Delhi for this opportunity and **Dr. Nikita Sabherwal** for her valuable guidance to complete this internship in FMRI.

I am extremely grateful to Nursing team Head **Mr. Benu** and to all my department staff members and friends who helped me in successful completion of this internship.

I again thank my fellow trainees, for their good corporation during the training.

Finally, I would like to express my special thanks to my family and friends helping me in all aspects and appreciate me to spend my all time in the work place during our internship time.

June 17, 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Lakshita Nagpal** has undergone an internship in the "Department of Medical Administration" from April 04, 2022 to June 17, 2022 at Fortis Memorial Research Institute, Gurgaon.

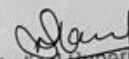
During this period, she exhibited a high level of professionalism and a tremendous zest for learning.

We wish **Lakshita Nagpal** all the best in her future endeavors.

With Best Wishes,



Shivani Dhir
SBU Head-Learning & Development



Head of Department
Fortis Memorial Research Institute
Sector - 44, Gurgaon - 122002
Haryana (India)



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PAN No: AABCF3718N

FEEDBACK FORM

(Organization Supervisor)

Name of the Student: Lakshita Nagpal

Summer Internship Institution: Fortis Memorial Research
Institute, Gurugram

Area of Summer Internship: Medical Administration

Attendance: Regular

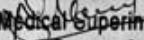
Objectives met: Completed project on TAT of patients at
different stages of Emergency.

- To study gap analysis in ER.
- To identify factor in influencing length of stay in ER.

Deliverables: Met all the objectives.

Strengths: Hard working, Sincere, determined.

Suggestions for Improvement: -


Assistant Medical Superintendent
Fortis Memorial Research Institute
Sector-44, Gurugram-122002, Haryana

Signature of the Officer-in-Charge (Internship)

Date: 16-06-22

Place: FMRI, Gurugram

CERTIFICATE OF APPROVAL

The following summer internship project of titled -TAT on Emergency Department at FMRI, Gurugram is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Hospital and Health Management** for which it has been submitted by **Lakshita Nagpal & Paras Arora**. It is understood that by this approval the undersigned does not necessarily endorse or approve any statement made, opinion made, opinion expressed, or conclusion drawn therein but approve the report only for the purpose it is submitted.



Dr. Nikita Sabherwal

Associate Dean (Training) & Associate Professor (Hospital administration)

Project Guide

Mentor

(IIMR Delhi)

FEEDBACK FORM

(IIHMR MENTOR)

Name of the Student: LAKSHITA NAGPAL

Summer Internship Institution: FORTIS MEMORIAL RESEARCH INSTITUTE, GURUGRAM

Area of Summer Internship: MEDICAL ADMINISTRATION

Attendance: REGULAR

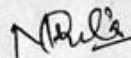
Objectives: COMPLETED PROJECT ON TAT - TURN AROUND TIME OF PATIENTS
AT DIFFERENT STAGES OF EMERGENCY.

- TO STUDY GAP ANALYSIS IN EMERGENCY DEPARTMENT.
- TO IDENTIFY FACTORS INFLUENCING LENGTH OF STAY IN EMERGENCY DEPARTMENT.

Deliverables: MET ALL THE OBJECTIVES.

Strengths: HARD WORKING, SINCERE, DETERMINED

Suggestions for Improvement: -



Signature of the Office-in-Charge (Internship)

Date: 29-07-2022

Place: IIHMR - DELHI

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Abbreviations / Acronyms

FMRI - Fortis Memorial Research Institute

APSIC - Asia Pacific Society of Infection Control

SSCL - Surgical Safety Check list

UAE - United Arab Emirates

AHA - American Heart Association

ED - Emergency Department

A & E - accident and emergency department

ER - Emergency Room

EW - Emergency Ward

HOD – Head of Department

TAT – Turnaround time

LMICs - low – and middle- income countries

ICU - Intensive Care Unit

PSUs – Public sector undertakings

LAMA – Leave Against Medical Advice

MLCs - Medico Legal Cases

NTL - Nursing Team Leader

GDA - General Duty Assistance

Fortis Healthcare Limited is one of the largest integrated healthcare delivery networks in Asia Pacific. The healthcare verticals of the company include diagnostics, primary care, day care specialty & hospital, with an asset base in three countries. Fortis Memorial Research Institute (FMRI) Gurugram, is a multi-super specialty, quaternary care hospital with an enviable international facility, reputed clinicians, including super-sub-specialists and specialty nurses, Neuro sciences, Oncology, Renal Sciences, BMT, Organ Transplants, Orthopedics, Cardiac Sciences, and Obstetrics and Gynecology. Set on a spacious 11- acre campus with a potential to grow to 1000 beds. The Emergency & Trauma Care Department at Fortis comprises of ACLS Certified post graduates who specialize in managing all types of emergencies. The center has Cardiovascular Life Support Ambulances which are well equipped with essential life support and are managed by highly experienced doctors and trained nurses round the clock. They provide all the specialized care, screening and environment that seniors appreciate and provide them a less chaotic and stressful experience while meeting their specific needs. This study was done to determine the turnaround time (TAT) of patients at different stages in emergency department and was carried out during the period of April 7 2022 – May 7 2022 at FMRI, Gurugram. The data collected was both primary and secondary. Total patients (n=1071): Admissions (56.5%), Discharge (43.5%), ICU Admissions (16.5%), Ward Admissions (39.8%), LAMA (4.3%), Internal MLCs (2.7%), Outside MLCs (0.7%), Brought Dead (0.5%), Expired in ED (0.3%), Chest pain (4.1%), STEMI (0.4%), Stroke (3.1%), Trauma (8.3%), Pending (1.6%), Child patients (13.7%). 15.7% cases were from emergency department registrations only and including IPD registrations, it was 25% out of total which included IPD (52%), Day care (32%) and emergency (16%). 100% of the patient's turnaround time from arrival to initial assessment was less than one hour. For admission request forum (ARF) to bed allotment, 31.9% were less than one hour, 29.8% were within two hours and 38.3% were more than two hours. For bed allotment to shift, 53.2% were less than 30 minutes, 31.9% were within an hour and 14.9% were more than one hour. Also, 31.2% of total patients spent more than 4 hours in emergency department. Workforce ratio was found out to be 1:9 (doctor: bed), 2:7 (nurse: bed) and 1:6 (GDA: bed). The major factors found for increased length of patient stay in ED were non availability of beds (82.9%), delay from investigation (6.9%), communication failure (3%), patients other than cash (3%) non-availability of GDAs / nurses (4.2%). Other issues related to housekeeping, lack of coordination, unavailability of assets at ER gate, ED overcrowding, no proper critical alert logs were observed. Approach to "Lean Management" can improve patient flow in ED. Workforce management, their proper training, proper no. of hiring can also be useful. Electronic transfer of medical records could be developed to further decrease the time wasting for transfer of medical records. Controlling overcrowding at emergency department is very imported and very much needy in FMRI.

INTRODUCTION

Emergency care systems address a wide range of common medical, surgical and obstetric conditions, including injury, complications of pregnancy, exacerbations of noncommunicable diseases (E.g., Asthma, heart attacks, strokes) and acute infections (E.g., Sepsis, malaria). With sound planning and organization dedicated staff, emergency care system has the potential to address nearly half of deaths and more than a third of disability in low – and middle- income countries (LMICs). Despite the potential benefit of an organized emergency care system, it remains underdeveloped in many countries. As a result, emergency care delivery is often compromised due to lack of supportive legislation, governance and regulation, gaps in funding and insufficient human and physical resources. The Emergency & Trauma Care Department at Fortis comprises of ACLS Certified post graduates who specialize in managing all types of emergencies. The center has Cardiovascular Life Support Ambulances which are well equipped with essential life support and are managed by highly experienced doctors and trained nurses round the clock. The team focus on providing the care to the patients starting from even before they reach the hospital, and hence improving the chances of patient survival. The world class trauma team is also skilled in treating high risk injuries such as serious road accidents, gunshot injuries, major burns and others. FMRI 's Trauma and Emergency Medicine Department is an American Heart Association (AHA) certified provider. The facility is operational 24/7 and follows international standards, and well-defined protocols laid down by the Fortis Hospital Emergency Unit. At FMRI, the core focus is on making the optimum use of available healthcare technology to treat patients quickly and effectively. As the preliminary objective of the department is to provide quickest and effective care to patients in emergency, the department is backed by advanced imaging and other specialized equipment at or near the patient's bedside, with immediate access to Operating Rooms. They provide all the specialized care, screening and environment that seniors appreciate and provide them a less chaotic and stressful experience while meeting their specific needs.

OBJECTIVES

PRIMARY OBJECTIVE –

- To determine the turnaround time (TAT) of patients at different stages in emergency department.

SECONDARY OBJECTIVES –

- To identify the factors influencing length of stay in emergency department (ED) at Fortis Memorial Research Institute, Gurugram,
- To study the current workforce in emergency department,
- To study the patient flow in emergency department and
- To perform the gap analysis of the processes in emergency department.

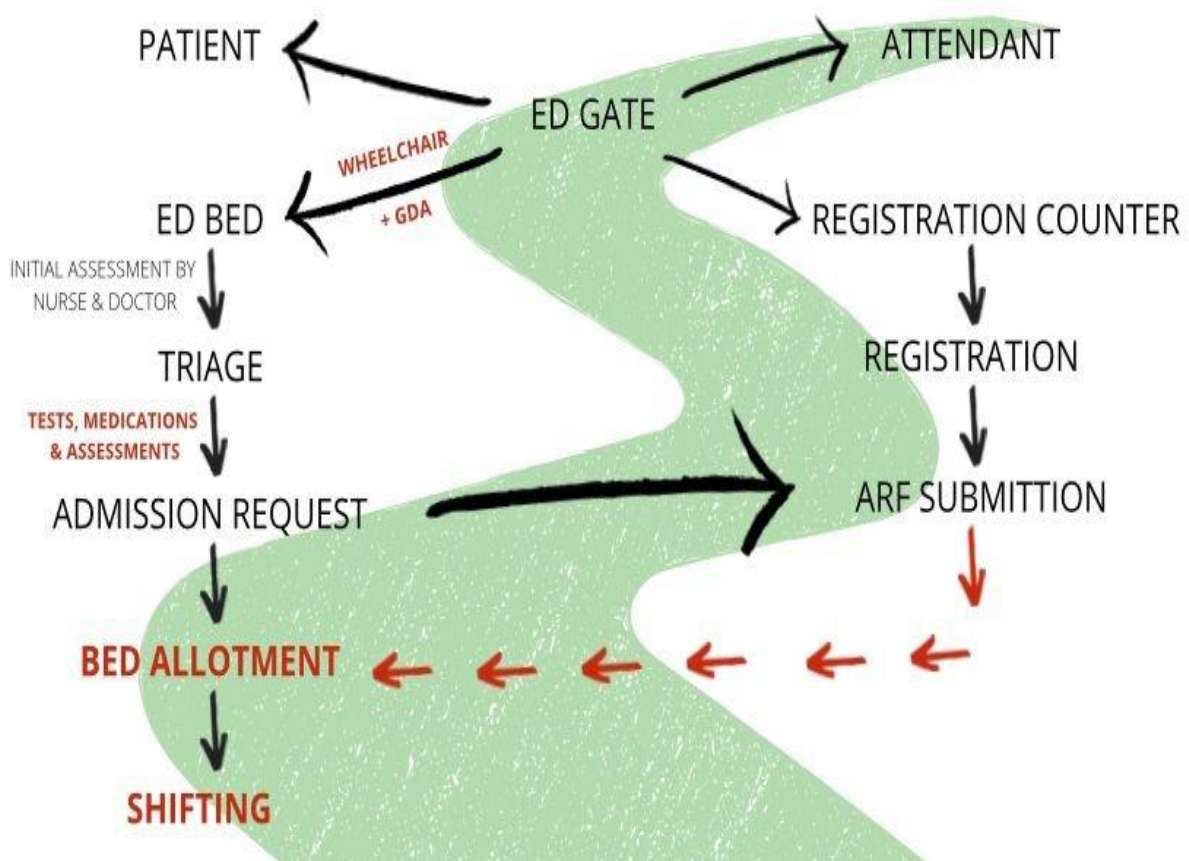
METHODOLOGY

A prospective qualitative & quantitative study was carried out during the period of April 7 2022 – May 7 2022 at Fortis Memorial Research Institute (FMRI), Gurugram. The data collected was both primary and secondary. Primary data was collected from the patients and their attendants arriving at the emergency department by direct observation and interaction whereas the secondary data was collected from the HIS and the emergency

department register. The sample considered was 1071 for determining the TAT of patients who spend more than 4 hours in ED whereas the sample considered for determining TAT of patients at different stages were 50 based on convenience sampling. The study was carried out by recording the findings in self-structured ED list and patient flow form. Data analysis was done through advanced Microsoft excel function

OBSERVATIONS, RESULTS & DISCUSSION

Patient Flow Plan



Following figures and graphs are based on the findings from both qualitative and quantitative components of the assessment research.

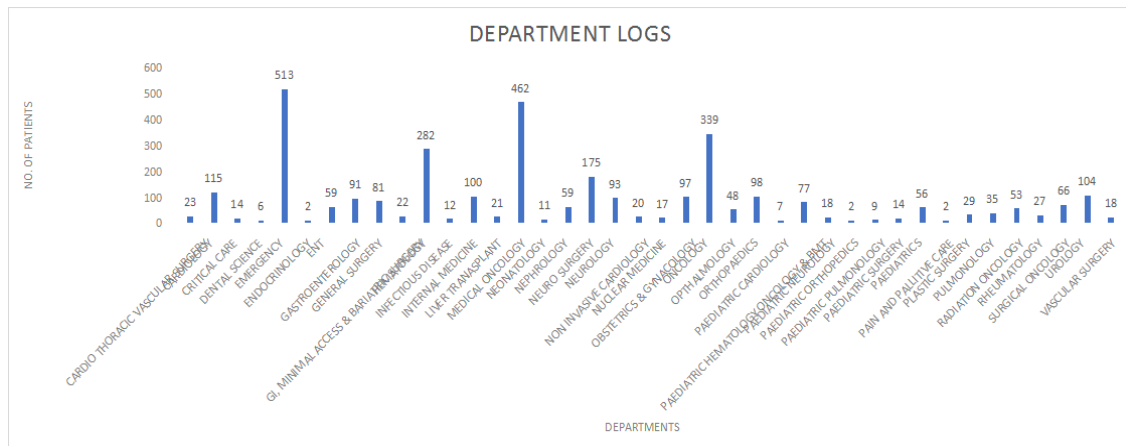


Figure – 1

Above figure –1 clearly represents department wise patients logs and the maximum number of patients, 15.6% (i.e., 513), arrived in the hospital during 7 April 2022 – 7 may 2022 are from Emergency department only. After observation, it was seen that these figures are not truly matched with the ED admission- discharge register. Reason behind that most of the cases from OPD got registered in emergency.

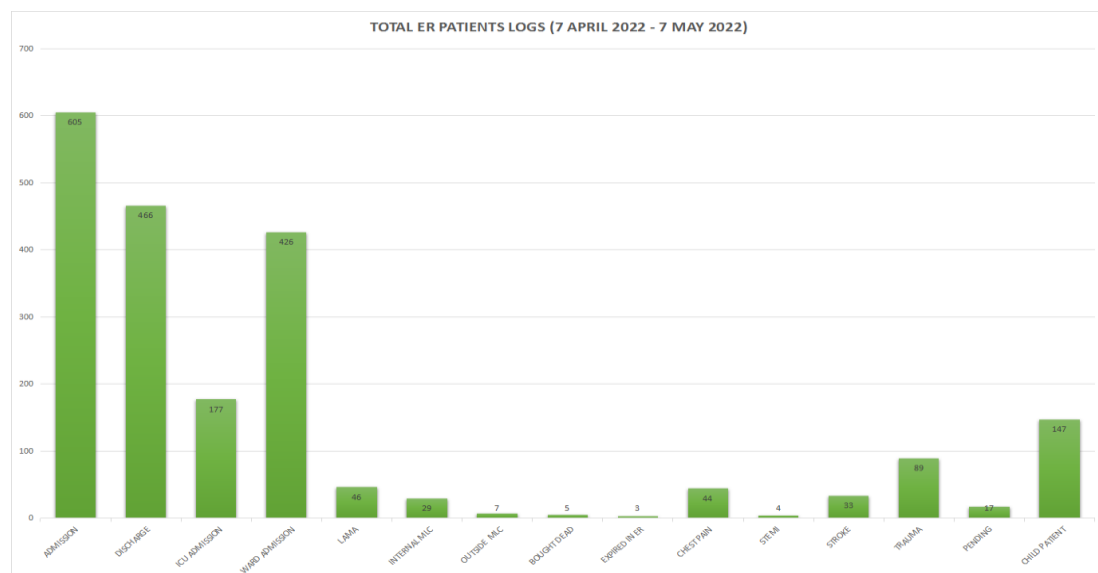


Figure – 2

Out of all 1071 patients came in ED, 56.5% (i.e., 605) were the admission cases, out of which 16.5% - ICU admissions & 39.8% - ward admissions and 43.5% (i.e., 466) were discharge cases. MLC burden was 3.3% (considering inside and outside MLCs). 4.3% cases left against medical advice (LAMA). 0.5% were brought dead cases and 0.3% cases were expired in ED. 4.1% cases were with chest pain, 0.4% - STEMI, 3.1% - stroke and 8.3% - trauma. 13.7% were pediatric patients.

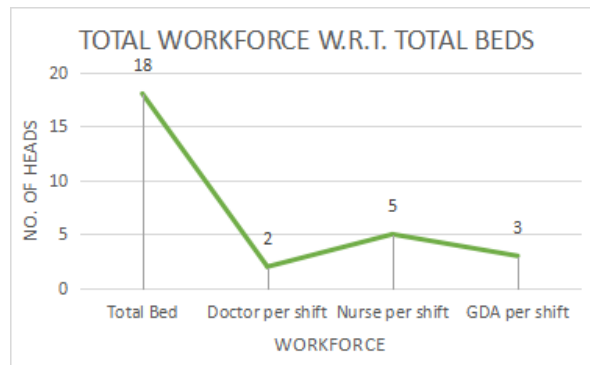


Figure – 3

Emergency department at FMRI is 18 bedded. Total workforce observed as follows: Doctors – 6 with HOD, Nurses – 20 with NTL, GDA – 8 with one general GDA. There are three shifts for staff- Morning, Evening and Night. During the study, average doctors per shift was 2 and doctor: bed ratio observed was 1:9, average nurses per shift was 5 and nurse: bed ratio observed was 2:7 & average GDA per shift was 3 and GDA: bed observed was 1:6.

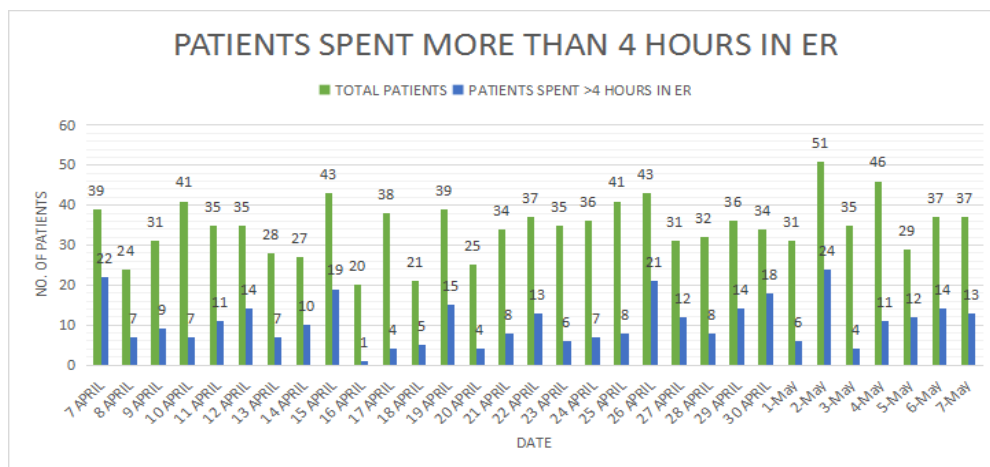


Figure – 4

As mentioned earlier, sample size considered for evaluating TAT of patients who spent more than 4 hours in ED were 1071 as mentioned in figure – 7. 31.2% patients spent more than 4 hours in ED. There are many reasons observed – 6.9% - delay in lab tests, sample collection delay shortage of nurses, 4.2% - shortage of GDAs, delay because of shift handovers, communication failure between staff or staff and patients, 3% - delay in non-cash payment, & 82.9% - non-availability of beds ultimately left no choice with the patient but to remain in the ED for hours until a bed opens for allotment.

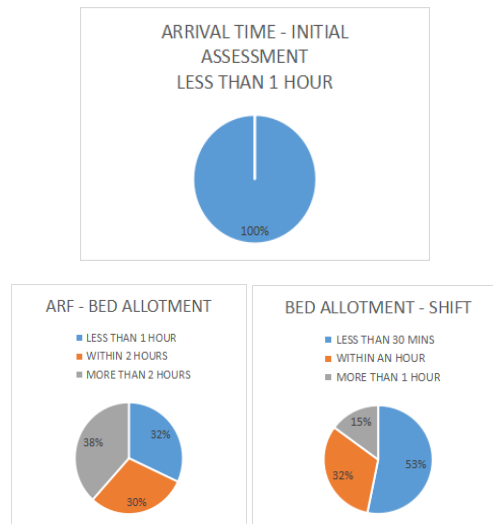


Figure – 5

For evaluating TAT for arrival – initial assessment, ARF – bed allotment and bed allotment – shift, sample size considered was 50. According to figure – 8, it was observed that (100% of the patient's TAT for arrival – initial assessment was less than 1 hour), for TAT of ARF – bed allotment (32% was less than 1 hour, 30% - within 2 hours and 38% - more than 2 hours) and for TAT of bed allotment – shift (majority of the patients' TAT was less than 30 minutes I.e., 53%, 32% - within an hour and 15% - more than one hour).

RECOMMENDATION AND CONCLUSION

Poor patient flow, and the resulting crowding shows an extensive barrier on the ED's ability to deliver high quality emergency and urgent care. Most of the problems found - Excessive patient waiting, slow investigation turnaround times, delay in shifting, poor communication, emergency overcrowding because of OPD direct registrations through emergency, no proper training of panic situations and keeping no record of critical alerts. Other issues related to housekeeping, lack of coordination, unavailability of assets at ER gate were observed. These all were the key factors intrinsic to the ED which affect patient flow. The use of doctor triage (1 / 2 / 3), rapid initial assessment, rapid tests and procedures, the application of lean management can improve the patient flow in ED. All these have been shown to improve patient flow. Proper workforce requirement must be fulfilled for staff's rights and satisfaction. Many times, international patients face difficulties in communication, hospital must provide all time pure assistance to the patients so as to remove this barrier. Dealing with overcrowding can also affect the functions of ED by various means - in terms of patient satisfaction, staff fatigue, communication and hospital brand.

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6. Emergency Department, Calderdale & Huddersfield NHS Foundation Trust, West Yorkshire, UK, Correspondence to: Paul Richard Edwin Jarvis, Emergency Department, Calderdale Royal Hospital, Dryclough Lane, Halifax, West Yorkshire HX3 0PW, UK, Received 2016 Feb 15; Revised 2016 Mar 2; Accepted 2016 Mar 2.
7. www.chthealthcare.com
8. www.fmri.in/about-us

ANNEXURE

- Time schedule

S.no.	Department Name	Dates of visit	Interacted with (name of designation)
1	Emergency	Every day after 11 am	HOD, staff, NTL
2	Health admin	Every day from 9 am – 11 am	AMS, DMS
3	HR	Every alternate Saturdays	HOD, Head of learning and development
4	Pharmacy supply chain	One week from 9 am -12 pm	HOD, staff

PATIENT FLOW IN EMERGENCY DEPARTMENT

PATIENT NAME / UHID _____

DATE & TIME OF ARRIVAL IN ER _____

MODE - Self / Attendant _____

If Self _____

If Attendant _____

CASE TYPE _____

Time of registration _____

(TAT) FOR REGISTRATION _____

PROBLEMS/ ISSUES FACED DURING REGISTRATION _____

ER BED TIME _____

INITIAL ASSESSMENT BY NURSE _____ (TAT) _____

INITIAL ASSESSMENT BY DOCTOR _____ (TAT) _____

TRIAGE CATEGORY- 1 / 2 / 3 _____

MEDICATIONS GIVEN PRESCRIBED BY DOCTOR - YES / NO

TESTS CONDUCTED MENTIONED BY DOCTOR - YES / NO

Medication and tests (TAT) _____

Patient condition _____

ADMISSION REQUEST - YES / NO

Factors that influence the time of admission request _____

IF ADMISSION REQUEST ACCEPTED -

Time of submission of ARF (Admission request form) _____

Time of acceptance _____

Time of bed allotment _____ (TAT) _____

Place of shifting and timings _____ (TAT) _____

ASSISTED BY JUNIOR DOCTOR / DOCTOR - YES / NO

IF ADMISSION REQUEST REJECTED -

Reason - _____

LAMA consent - YES / NO

Self-structured patient flow forum

[illegible]

Self-structured ED list

- Tables

1. PATIENT EPISODE TYPE

S.NO.	EPISODE TYPE	TOTAL
1	DAY CARE	1056
2	EMERGENCY	511
3	IPD	1710
		3277

2. PATIENT NATIONALITY

S. NO.	PATIENT TYPE	TOTAL
1	INDIAN	2736
2	INTERNATIONAL	541
		3277

3. PATIENT PAYMENT TYPE

S.NO.	PAYMENT TYPE	TOTAL
1	CASH	1287
2	INTERNATIONAL CASH	507
3	DOMESTIC INSURANCE	1078
4	GOVT. & PSUs	171
5	PRIVATE CORPS	84
6	TPAs - non GIPSA	116
7	INTERNATIONAL GOVT.	2
8	INTERNATIONAL TPA	32
		3277

4. HOSPITAL DEPARTMENT LOGS

DEPARTMENT WISE PATIENT LOGS (7 APRIL 2022 - 7 MAY 2022)				
CARDIO THORACIC VASCULAR SURGERY				23
CARDIOLOGY				115
CRITICAL CARE				14
DENTAL SCIENCE				6
EMERGENCY				513
ENDOCRINOLOGY				2
ENT				59
GASTROENTEROLOGY				91
GENERAL SURGERY				81
GI, MINIMAL ACCESS & BARIATRIC SURGERY				22
HEMATOLOGY				282
INFECTIOUS DISEASE				12
INTERNAL MEDICINE				100
LIVER TRANSPLANT				21
MEDICAL ONCOLOGY				462
NEONATOLOGY				11
NEPHROLOGY				59
NEURO SURGERY				175
NEUROLOGY				93
NON INVASIVE CARDIOLOGY				20
NUCLEAR MEDICINE				17
OBSTETRICS & GYNACOLOGY				97
ONCOLOGY				339
OPHTHALMOLOGY				48
ORTHOPAEDICS				98
PAEDIATRIC CARDIOLOGY				7
PAEDIATRIC HEMATOLOGY ONCOLOGY & BMT				77
PAEDIATRIC NEUROLOGY				18
PAEDIATRIC ORTHOPEDICS				2
PAEDIATRIC PULMONOLOGY				9
PAEDIATRIC SURGERY				14
PAEDIATRICS				56
PAIN AND PALLIATIVE CARE				2
PLASTIC SURGERY				29
PULMONOLOGY				35
RADIATION ONCOLOGY				53
RHEUMATOLOGY				27
SURGICAL ONCOLOGY				66
UROLOGY				104
VASCULAR SURGERY				18
			TOTAL	3277

5. ED LOGS

	TOTAL PATIENTS	TOTAL UNDER HEAD	IN %
ADMISSION	1071	605	56.5
DISCHARGE	1071	466	43.5
ICU ADMISSION	1071	177	16.5
WARD ADMISSION	1071	426	39.8
LAMA	1071	46	4.3
INTERNAL MLC	1071	29	2.7
OUTSIDE MLC	1071	7	0.7
BOUGHT DEAD	1071	5	0.5
EXPIRED IN ER	1071	3	0.3
CHEST PAIN	1071	44	4.1
STEMI	1071	4	0.4
STROKE	1071	33	3.1
TRAUMA	1071	89	8.3
PENDING	1071	17	1.6
CHILD PATIENT	1071	147	13.7

6. PATIENTS SPENT MORE THAN 4 HOURS IN ED

S.NO	DATE	TOTAL PATIENTS	PATIENTS SPENT >4 HOURS IN ER	PATIENTS SPENT >4 HOURS IN ER (IN %)
1	7 APRIL	39	22	56.4
2	8 APRIL	24	7	29.2
3	9 APRIL	31	9	29.0
4	10 APRIL	41	7	17.1
5	11 APRIL	35	11	31.4
6	12 APRIL	35	14	40.0
7	13 APRIL	28	7	25.0
8	14 APRIL	27	10	37.0
9	15 APRIL	43	19	44.2
10	16 APRIL	20	1	5.0
11	17 APRIL	38	4	10.5
12	18 APRIL	21	5	23.8
13	19 APRIL	39	15	38.5
14	20 APRIL	25	4	16.0
15	21 APRIL	34	8	23.5
16	22 APRIL	37	13	35.1
17	23 APRIL	35	6	17.1
18	24 APRIL	36	7	19.4
19	25 APRIL	41	8	19.5
20	26 APRIL	43	21	48.8
21	27 APRIL	31	12	38.7
22	28 APRIL	32	8	25.0
23	29 APRIL	36	14	38.9
24	30 APRIL	34	18	52.9
25	1-May	31	6	19.4
26	2-May	51	24	47.1
27	3-May	35	4	11.4
28	4-May	46	11	23.9
29	5-May	29	12	41.4
30	6-May	37	14	37.8
31	7-May	37	13	35.1
	TOTAL	1071	334	31.2

