

Summer Training
AT
MAX SMART SUPER SPECIALITY HOSPITAL
SAKET, NEW DELHI

(10th MAY 2021 to 2ND JULY 2021)

A Report

BY
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Under the Guidance of

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MBA-Hospital and Health Management

2020-2022



CERTIFICATE

OF ACHIEVEMENT



Max Institute of Medical Excellence

Certifies that

Mohit Saini

has completed Internship in the department of

Quality

at Max Smart Super Specialty Hospital, Saket, New Delhi

from 10th May 2021 to 02nd July 2021

A handwritten signature in blue ink, appearing to read "Vinitaa Jha".

Dr Vinitaa Jha

SVP Research & Education
Max Healthcare Institute Ltd

Acknowledgements

The summer training internship opportunity with **MAX SMART SUPER SPECIALITY HOSPITAL Saket, New Delhi.** was a great chance for learning, understanding and professional development. Being a management student, it helped me learn my duties as a professional, working in a healthcare setup. It has carved some wonderful memories in my life and assisted me with creating as management professional overall. I am also grateful for having a chance to meet so many people and professionals who led me through this amazing period of internship. This period helped me in sharpening my abilities.

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.

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MOHIT SAINI

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ABBREVIATIONS / ACRONYMS

NABH	National Accreditation Board for Hospital and Healthcare
IPD	Inpatient department
OPD	Outpatient department
ER	Emergency Department
LOS	Length of Stay
IHI	The institute of Healthcare Improvement
COW	Computer on Wheel
CSSD	Central Sterile Supply Department
BCMA	Bar Code Medication Administration
CMT	Crisis Management Team

Part 1 Observation learning

Section 1

Hospital Introduction.



Fig.1

Max Smart Super Speciality Hospital, Saket (a unit of Gujarmal Modi Hospital & Research Centre for Medical Sciences) is a 250-bedded hospital with 12 high-end modular operation theatres, an emergency department, and observation unit, 72 critical care beds, 18 HDU beds, an endoscopy unit, and an advanced dialysis department. It is a tertiary care hospital provided with 256 Slice CT Angio, 3.0 Tesla digital broad band MRI, Cath Labs with electrophysiology navigation, and a flat panel C-Arm detector. It offers services in the medical disciplines of Cardiac Sciences, Orthopaedics, Urology, Neurology, Paediatrics, Obstetrics, and Gynaecology, making them the best hospital in Delhi.

With the help of over 300 greatest specialist Doctors, qualified nursing staff, and state-of-the-art innovative medical tools, Max Smart Super Speciality Hospital, Saket aims to give the good quality standard of medical care to the patients, right from the admission and all the way to the patient discharge. Max Smart Super Speciality Hospital, Saket, provide the facility of joined medical care in a multidisciplinary setting provided by a faculty of highly qualified doctors, nurses, & healthcare professionals.

Max Smart Super Speciality Hospital, Saket, is a regional hub for complex procedures i.e. targeted cancer treatments, heart surgeries, neurovascular intervention , liver & kidney transplant, orthopaedic surgeries and fertility treatments.

Driven by Core Values...



Scope of Services

- Anesthesiology Services
- Cardiology Services
- Cardiothoracic Surgery Services
- Critical Care
- Day-Care Services
- Dermatology and Venereology Services
- Emergency Medicine Services
- Endocrinology Services
- General Medicine
- General Surgery Services
- Geriatrics
- Hepatology
- Hepato-Pancreato-Biliary Surgery Services

- Immunology
- Medical Gastroenterology
- Neonatology Services
- Nephrology Services
- Neurology Services
- Neuroradiology
- Obstetrics & Gynecology
- Oncology (Medical)
- Ophthalmology
- Orthopedics Surgery including Joint Replacement & Arthroscopic Surgery
- Otorhinolaryngology
- Pediatric Cardiology
- Pediatrics Services
- Plastic & Reconstructive Surgery
- Psychiatry Services
- Respiratory Medicine Services
-

Other Facilities

- Bronchoscopy & Endoscopy Suite
- Nutrition & Dietetics
- Urodynamics Lab
- Neuro Diagnostics lab
- Non-Invasive Cardiology
- Audiometry
- Pharmacy
- Physiotherapy



Fig

WAITING AREA



Fig 2

Bronchoscopy & Endoscopy



Fig 4

EMERGENCY

Section 2

Mode of data collection :- in hospital work in quality department data collection in two ways.

- (i) Computerized
- (ii) Manually

Data collection for the Mortality audit as per IHI tool Kit and review cases for return to OT and readmission are collected from BI software and excel sheet is downloaded by *PANTAH0*.

and for the Active files audit and any internally department audit is proceed mode of data collection manually.

Section 3

Observation learning.

At the time of summer internship, in the guidance of hospital mentor followed NABH 4th edition checklist in the emergency department for the audit and find some observation that are kept not maintain according to the NABH standard. These are noted as NON-Compliances and process audit of active files of IPD patients are done in floors. In pharmacy department process audit is done for the High Risk Medication how they are arrange the mediation separate storage with lock and key. LASA drug are mention with their stock and they followed the policy for arranging the drug in alphabetical way or some other categories are flowed like FSN, VED.

Emergency NABH 4th Edition Checklist

Table 1

AAC 1 c FMS 2 c, d	- Defined services are displayed prominently - Signposting and directional signages (bilingual) from approach road - Adequacy of access to Emergency (easy and unobstructed). Flow of patients, unobstructed
AAC 2 e COP 9 e COP 9 b	- Managing non-availability of beds - Admission criteria and priorities for ICU
AAC 3 a-e	- Patient transfer (in and out) / In case of transfer of patients: check stability/unstable/transfer notes/treatment summary. Discharge summary / transfer note copy retained. - Documented policies and procedures on transfer-in/transfer-out of unstable patients / transfer-out of stable patients - Referral of patients - Check identified staff responsible during transfer
AAC 4 a, b, c, g	- Predefined initial assessment - Time frame for doing and documenting initial assessment - Staff awareness on above policies
AAC 12 d	Structured clinical handover by doctors & nurses; transfer summary
AAC 13 d	Discharge summary for LAMA
COP 2 a-g	- Identified area for emergency care; defined no. of beds; adequate manpower - Policies/procedures/protocols for emergency care - Procedure for handling MLC cases (including capturing identification marks and police intimation) - Triage, contents of triage policy: categories, ask for demonstration - Staff awareness on the policies and procedures for care of emergency patients - Emergency care/ admission/ discharge documentation
COP 2 h AAC 3 e	Discharge note given – home, another hospital
COP 2 i CQI 3 a(i), h(iii)	- Quality assurance programme - Capture of quality indicators
COP 2 j	Policy on “dead on arrival”

Table2**Emergency NABH 4th Edition Checklist**

COP 4	- Disaster management plan - Mock drills of disaster management (at least twice a year) - Staff awareness on Disaster management plan
COP 5 a-c	- Documented policies and procedures on uniform use of resuscitation - Display of CPR protocols - The events during a CPR are recorded - Training in CPR – BLS / ALS
COP 6 a, b, e, f, g	- Documented policies and procedures for all activities of the Nursing Services in Emergency - Current standards of nursing services and practice - Nursing Plan of Care - Nursing Care documentation - Nursing empowerment
COP 7 a-g	- Documented procedures on various clinical procedures - Qualified personnel are performing procedures - Procedures on prevention wrong site, patient and procedure - Informed consent taken by the doctor performing the procedure - Adherence to standard precautions and asepsis - Monitoring of patients done during and after the procedure - Procedures are documented accurately in the patient record
COP 13 a-h	Moderate (conscious) sedation, monitoring, consent
MOM 3 b-g	Medication storage, inventory, expiry dates, storage conditions, emergency crash carts, LASA, high risk medications
MOM 4 a-h	- Prescription of medicines. Medication orders - High risk medications defined
MOM 6 a-h	- Medication administration. Staff interview on administration - Medication administration documentation
MOM 7 a-d	- Patient monitoring after medication administration - Check where close monitoring is required - Change of medications based on monitoring
HIC 2 c-f	- Instructions for hand washing displayed near every hand washing area - Adherence to safe injection and infusion practices - Sterilized sets: expiry dates, storage conditions
HIC 5 a, b	- Availability of hand hygiene facilities - Availability of PPEs, soaps and disinfectants; and their correct usage
HIC 7 b, c, f	- Storage of sterilised items - Re-use of instruments and equipments - Recall procedure
HIC 8 b, e	Segregation of bio-medical waste; Use of PPE
PRE 8 b, c, f	Communication with patients & relatives
	- Patient interview - Staff interview

NON-Compliances that I have noted in Emergency department.

- Re-assessment policy is not followed.
- Sometimes patients triage category and their bed occupied, doesn't match.
- Hand hygiene by nurses & doctors is not complied, infection control protocols not followed properly
- All the staff is not aware of policies and manuals.
- Around 58% of medical records from emergency doesn't contain ER- Initial assessment
- There is just 1% of compliance for writing of medication prescription in capitals
- No facility for admission and protocol for referral of major burns and Psychiatric patients.
- Spillage kit doesn't contain Yellow bag
- Housekeeping staff are dependent on Nursing staff for making freshly prepared sodium hypochlorite, to use in blood spillage
- There are 3-4 attendants standing along with one patient many times
- Near misses and incidents are mostly not reported
- Sentinel events are not reported and analyzed
- LAMA consent not explained properly.
- Hand over register is not maintained properly, there should be a proper register format for handovers in emergency.
- ER initial assessment sheet doesn't contain time of arrival and time of examination
- Narcotic medicines are not kept in Double lock system.

Mortality Audit as per IHI Tool kit

In MSSSH there is implantation of IHI mortality tool for the review the death of IPD patients. These deaths are categories in 3 categories according to the trigger that are filled in tool kit. After completing the tool kit they can do pear review of the case and if need they can do RAGM (Risk Analysis Group Meeting)

Using this tool, trained reviewers categorized patients who died during their hospitalizations, according to the following four categories upon admission:

Box 1: Admitted to an intensive care unit for comfort care only

Box 2: Admitted to a non-intensive care unit (for example, a medical/surgical floor) for comfort care only

Box 3: Admitted to an intensive care unit for active treatment

Box 4: Admitted to a non-intensive care unit for active treatment

In which I have studied about different kind of patient safety triggers/modules, the documentation Question and level of Suspected Categories.

Types of patient safety triggers/modules:

1. Care Module Triggers
2. Medication Module Triggers
3. Perinatal Triggers
4. Intensive care Module

5. Surgical Triggers

CONFIDENTIAL DOCUMENT

IMI Mortality Audit Checklist

Note: This document is part of the Quality Assurance Program. This document is not to be used or maintained outside of the quality assurance program.

Case number: _____ Date of Review: _____ Department: _____

Date of Admission: _____ Date of Death: _____ Time of Death: _____ Location: _____

Category of Admission: Through ER/Emergency Room/For Surgery

Age: _____ Gender: _____ LOS: _____

Admission Diagnosis: _____

Death Diagnosis: _____

Death Discharge: _____

	Comfort Care	ICU Admission	Box 1	Box 2
Test				
Comfort Care				

Patient Safety Triggers

Module	Plan	Adverse	Comments	Plan	Adverse	Comments
1. Date Module Triggers	Y/N	Y/N		Y/N	Y/N	
2. Code Blue or BRT team activation						
3. Status						
4. Any positive culture						
5. A Fall or Injury Studies for						
6. Transfer to ICU or Coronary						
7. Evidence in Management of						
8. Patient Status						
9. Readmission within 30 Days						
10. Readmission						
11. Transfer to Higher Level of						
12. All the admission and death						
13. diagnosis made						

1

IM/2014/1.0

Fig a

Module	Plan	Adverse	Comments	Module	Plan	Adverse	Comments
1. Case Module Triggers	Y/N	Y/N		1. Case Module Triggers	Y/N	Y/N	
2. Code Blue or BRT team activation				2. Code Blue or BRT team activation			
3. Status				3. Status			
4. Any positive culture				4. Any positive culture			
5. A Fall or Injury Studies for				5. A Fall or Injury Studies for			
6. Transfer to ICU or Coronary				6. Transfer to ICU or Coronary			
7. Evidence in Management of				7. Evidence in Management of			
8. Patient Status				8. Patient Status			
9. Readmission within 30 Days				9. Readmission within 30 Days			
10. Readmission				10. Readmission			
11. Transfer to Higher Level of				11. Transfer to Higher Level of			
12. All the admission and death				12. All the admission and death			
13. diagnosis made				13. diagnosis made			

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IM/2014/1.0

Fig b

IM/2014/1.0

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Category 1- Terminal condition at the admission. Includes patients for palliative care death in the ER for pronouncement of death only.

Category 2- Death that occurred possibly due to complicating factor. Death may not have been expected at the time of admission, but was expected at the time of death. Quality of may be issue.

Category 3- case of unexpected death. Death that occurred due to unexpected complication and/or Quality of care given was an issue.

And Ask the five “why’s” use extra sheet of paper.

Category E : Temporary harm to the patient and required intervention

Category F : Temporary harm to the patient and required initial or prolonged hospitalization

Category G : Permanent patient harm

Category H : intervention required to sustain life

Category I : Patient death

- **Case review of the patient Return to OT.**

IN MSSSH there is a criteria for the patients those who are coming return in OT after completion of 1st Surgery.

Where I have observed that there are different kind of reasons because of that patient require to return to OT to perform the 2nd procedure which can be planned by the doctor or it may be an emergency case (unplanned)

- **Case review of the patient that are coming for Readmission.**

These are the departments in which cases are review and update on Executive Dashboard per month.

- Cardiac Surgery
- Cardiology
- Ent
- Gastroenterology
- General Surgery
- Internal Medicine
- Interventional Neurology
- Minimal Access Surgery
- Orthopedics
- Plastic Surgery
- Pulmonology
- Surgical Gastroenterology
- Vascular Surgery

Using of COW (Computer on Wheel)

In MSSSH they are COW for reducing the medication error in admitted patient. COW run by a medication nurse. COW is used for scanning the barcode which is system generated when the patient is registered for the admission and the same barcode is used for the medication. All the admitted patients having a unique barcode for medication and same barcode is used by pharmacist after the indent written by nurse in CPRS.

All the process is computerized and software used for that process is BCMA (Bar Code Medication Administration)



Fig 5

Process audit of HIGH RISK Medication

High risk medicines are medications that have an increased risk of causing patient harm or leads to death if they are misused or used in inappropriate quantity. Errors with these drugs are not necessarily more common than other drug. As they have a very narrow margin of safety.

A process audit is performed in MAX Smart hospital for checking out the stock of high risk medication and they are kept in lock and key with storage criteria and arranged by high risk medication policy. LASA (Look a like and Sound a like) list is present and stock are maintained and awareness of staff about what are high risk medication.

Active Files Audit

Audit is a process used by healthcare professionals to approach , analysis and to improved care of patients in an organized way. Audit measures current situation against a defined

(desired) standard. Audit should be transparent and non-judgemental. The aim of audit is to find out the present condition compares with the desired standard or checklist. After audit preformed result can be used to plan improvements in the hospital.

These are the parameters that are followed in Active audit.

Table 1

DATE
UHID
NAME
CONSULTANT
RMO ON DUTY AT TIME OF ADMISSION
NAME OF THE AUDITOR
Initial Assessment (check for quality and completeness):
a. patient history/examination/vitals/provisional diagnosis documentation (within 24hrs)
b. documentation of any known allergies
c. medicine reconciliation documentation
d. care plan documentation
e. Time of admission in the ward
f. Time of Initial Assessment
g. TAT of initial assessment
h. care plan countersigned by the clinician in-charge within 24 hrs. if the treatment is initiated by the RMO
I. pain scoring by the nurses
j. nutritional assessment
k. Fall risk Assessment at each shift by the nurse (ALL patients)
l. DVT prophylaxis (within timeframe)
Informed consent form documentation
Continuity of care
a. Daily RMO progress notes (minimum twice daily)
b. Daily Consultant team progress notes (minimum twice daily)
C. Blood transfusion monitoring form (sign of nurse and doctor)
Statutory Consent forms
a. HIV/ PC-PNDT

Table 2

b. Invasive procedures & contrast media administration
c. Blood transfusion consent form
d. High risk procedure consent form
Handover Process
a. at the start of all nursing shifts
b. at the start of all RMO shifts
c. during transfer of patients from one department to another
Surgical files:
a. Informed consent form for surgery as well as anaesthesia (in ASA 4 and 5 pts, check if risks are explained)
b. Consent form for High risk surgery
c. Procedure specific consent form
d. Site Marking documentation by the Operating surgeon in ward/ pre operation area (or by team member)
e. Operation/ Procedure Notes
f. Post-Operative Orders (including Aldrete criteria)
g. Post operative pain scoring by the nurses in the ward
Family Meeting record form
MDT form
MLC FORM
ANY OTHER REMARKS

CSSD Department

The central sterile services department (CSSD), also called sterilization perform department (SPD), is an joint place in hospitals. CSSD comprises the service within the hospital in which receive, store, process, distributes and control professional supplies and equipment, both sterile and non-sterile to and from all the department of the hospital for the care and safety of patient. CSSD department are categories into four zones

- De-contamination zone
- Packing zone
- Sterile zone

- Store

Key Functions of the department

Adherence to equipment/instrument decontamination, processing, sterilization.

Equipment Handling

Proper receiving and issue process.

Complaints handling.

Equipment Breakdown Management

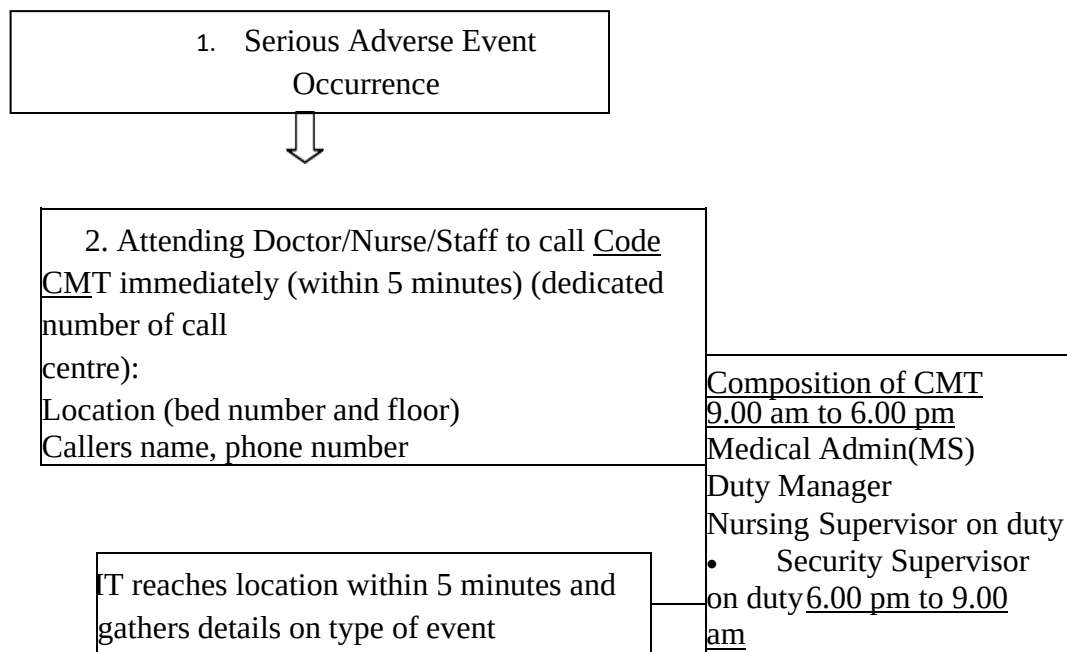
Maintain the preventive maintenance.

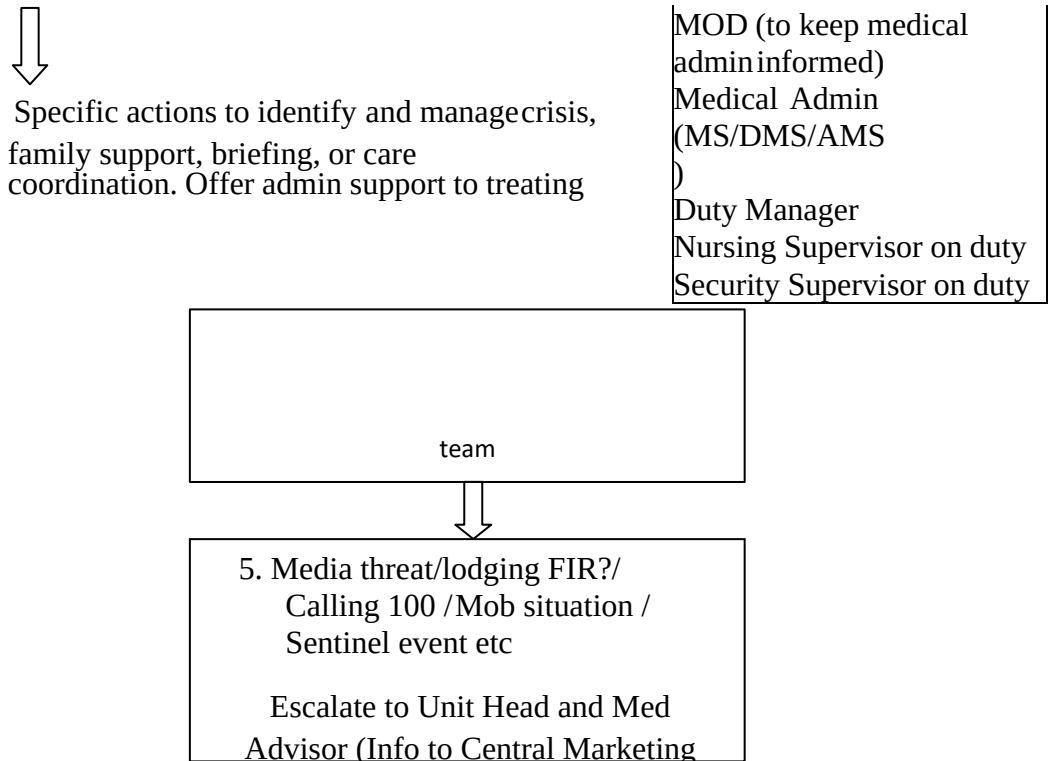
Crisis Management Team

Purpose:

- To provide a procedure for reporting and evaluating serious clinical and non clinical adverse events.
- To provide a procedure for handling communication to patients/family and public

Composition and Flow Process for Crisis Management Team (CMT)





1. All these incidents to be peer reviewed/ root caused within 72 hours & reports to be forwarded to respective Zonal Manager & Sr. VP. Medical Quality.
2. Legal opinion to be taken in appropriate cases.
3. Media Management by Marketing.
4. Ensure documentation and family briefing records are complete.
5. Cross reference: Serious Adverse Event Management Policy

Section 4

Conclusive learning

After Working in a Quality Department performed different kind of process audits and learned that how to improve the quality of healthcare services with the implementation of departmental policies according to NABH standards. After performed the audits in specific department the quality of work and awareness of staff is improved and their performance is also increased.

In the study of mortality audit as per IHI toolkit it gives an idea about reason of death of the patient whether it's a fault of the doctor and staff of the hospital or due to natural cause.

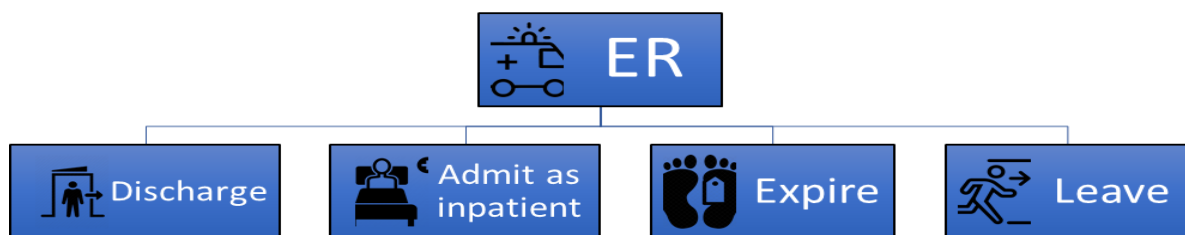
Section II

Project Report:

Retrospective study of length of stay (LOS) in Emergency Department

Introduction of Emergency department

Emergency department is one of the most important and sensitive departments of hospital, deals with patients during the most crucial phase after any disease or injury. Emergency department is that where attention to the patient needs is available round the clock, every day of the year. Also provides services as in the regular outpatient department outside the regular working hours. An emergency department, is a medical treatment facility specializing in emergency medicine, the acute care of patients who present without prior appointment; either by their own means or by that of an ambulance. After taking treatment from the ER department patient either shifted or transfer to higher unit and may go to home and also refuse the treatment and goes to lama.



Length of stay (LOS)

- Length of stay is a term commonly used to measure a single duration of hospitalization.

- In ER LOS is the time spent by the patient in the ER room calculated from billing to departure, admission or transfer.

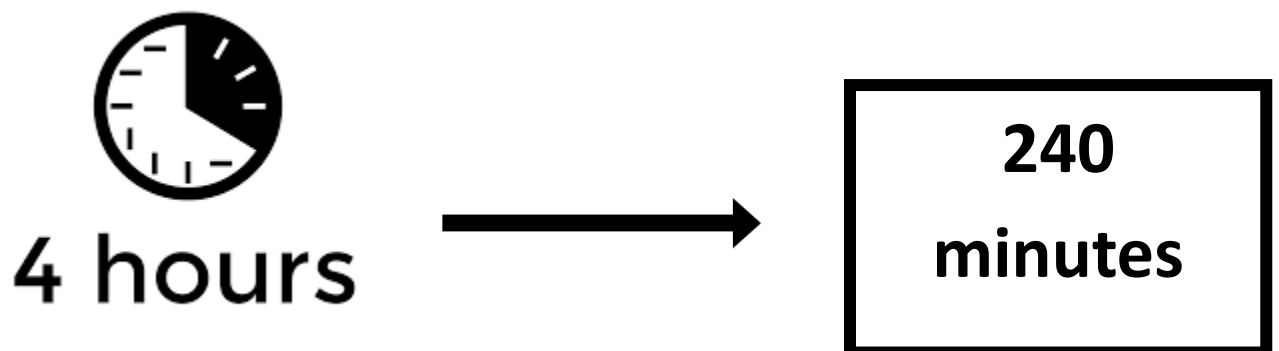
Variable - Time

Unit – in Mins

4-Hour wait

- The most corrective measurement of ER performance is the ‘4 hrs wait’ - the % of patients whose total time in ER is < 4 hrs.
- NHS England’s recent target is 95% of attendances should last < 4hrs, calculated from arrival to departure, admission or transfer.

% of patients above 240 mins $\leq$ 5%.



Source - <https://commonslibrary.parliament.uk/research-briefings/cbp-7281>

Literature review

AUTHOR	YEAR	PURPOSE	COUNTRY	TYPE OF STUDY	SUMMARY
Don Liew , Danny Liew , Marcus P Kennedy.	2013	Emergency department length of stay independently predicts excess inpatient length of stay	AUSTRALIA	Retrospective review	EDLOS correlates strongly with IPLOS, and predicts whether IPLOS exceeds the state benchmark for the relevant diagnosis-related group, independently of elderly status, sex and time of presentation to ED. Strategies to reduce EDLOS (including countering access block) may significantly reduce healthcare expenditure and patient morbidity.
J CONSIDINE, M KROPMAN, E KALLY, C WINTER	2008	To examine the effect of fast track on emergency department (ED) length of stay (LOS).	AUSTRALIA	CASE CONTROL STUDY 1 January and 31 March 2007	ED fast track decreased ED LOS for non-admitted patients without compromising waiting times and ED LOS for other ED patients.
Philip Yoon , Ivan Steiner and Gilles Reinhardt	2015	Analysis of factors influencing length of stay in the emergency department	CANADA	Retrospective review	Triage level, investigations and consultations are important independent variables that influence ED LOS. Future research is necessary to determine how these and other factors can

					be incorporated into a model for predicting LOS. Improved information systems will facilitate similar ED time studies to assess key processes, lengths of stay and clinical efficiency.
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Rationale

At any place it can be from < 1 hr to many hrs from when patients reach in the emergency department and are first assessed, to when their emergency medical treatment is given and they go home (discharged patients) or to be admitted in hospital . To check the organization and staff performance and to understand the patient's overall experience, it is important to note down the total length of stay of patients in emergency department. It helps to check how long newly footfall of patients wait for the doctor consultation in emergency department.

Different kind of factors increase the patient's total length of stay.

Example- At the time of treatment in emergency department, patient may also be waiting for their reports – results of lab, X-ray or Ct scan, doctor opinions.

It increase the LOS of the patient, if patient remain admitted in the ED and stand by for the bed availability in the hospital.

Length of stay of the admitted patient in emergency department is important however those patients who require to be admitted in the hospital then so me extra resources and services will also require which couldn't given by ED care.

And also treatment time and consultation will not be available for new patients those who require the treatment on urgent basis in emergency case.

Research Question

- **Retrospective study of Length of Stay in MAX SMART HOSPITAL and to study impact of covid-19 on the bed occupancy respectively.**

Objective

- To compare the LOS in ER of MAX SMART SUPER SPECIALITY HOSPITAL(MSSSH) Saket, New Delhi with international benchmarks for year 2020.
- To compare for critical and non-critical patients.
- To measure the median LOS of ER.
- % of patient getting discharge from ER only.
- To compare LOS in ER for critical and non-critical patients.
- To measure number and percentage of patient staying in ER beyond 240 mins

Section 2

Methodology

- **AREA OF STUDY:** Emergency department (MAX SMART HOSPITAL, Saket, Delhi.
- **DURATION OF STUDY:** 2 Month 10th May to 2nd July
- **TYPE OF STUDY:** Retrospective Study.
- **TYPE OF DATA:** Qualitative
- **TECHNIQUE:** Data collective from CPRS. ((Computerized Patient Record System)
- **TOOL:** Performing data analysis on secondary data of year-2020 received from CPRS

Measure – 4 Hour wait principle.

Computing total number of Patient in Emergency department.

Computing median LOS and % of patients beyond 240 mins for the year.

Computing LOS monthly data for both critical and non-critical patients separately.

Computing median value of year 2020 for both critical and non-critical patients separately.

Type of data- continuous (time).

Study period- 15/05/21 –1/07/21. (Retrospective)

- **SAMPLE SIZE:** Total no. of patient coming in Emergency Department in year 2020 was 5335.
- **DATA COLLECTION:** The study data was downloaded from BI software **PANTAH0** for the period JAN-DEC 2020.
- **DATA ANALYSIS Using :-** Microsoft Excel using Bar charts, pie charts etc.

Section 3

Data compilation Analysis and interpretation

Total Number of Patients in ER (Year 2020)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Patient	1480	1676	409	845	409	130	104	67	43	86	43	43

Table 1

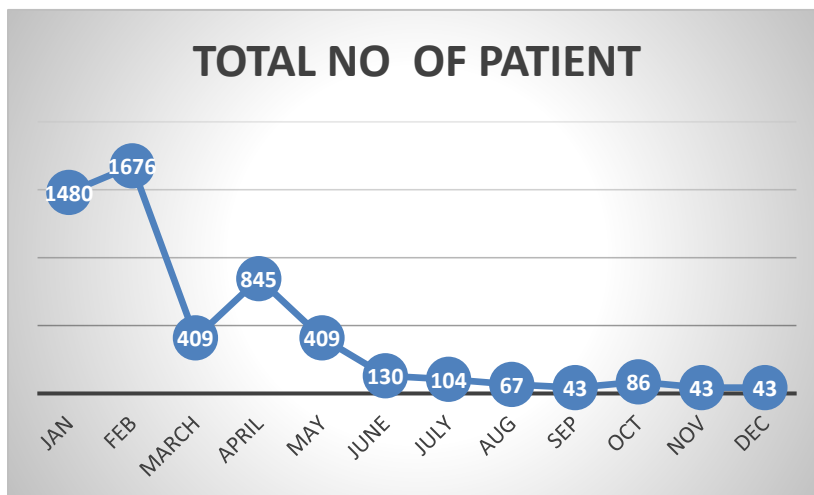


Fig 1

- In year 2020 a total no. of **5335 patients** arrived in ER.
- The no. of patients arriving in ER shows a step fall after March-April possibly due to Covid-19 and lockdown impositions.

Interpretation

From the above graph we can state the flow of patient in emergency department are decreased due to Covid-19 lockdown. The total number of patients coming in 2020 are 5335. And after April there is reduced in flow as the lines shows.

MEDIAN LOS IN ER (YEAR 2020)

Month	Median LOS in ER (in mins.)
Jan	134
Feb	131
Mar	168.5
Apr	149.5
May	189
Jun	168.5
Jul	111
Aug	312.5
Sep	603
Oct	653
Nov	603
Dec	162

Table 2

Type of data – Continuous (time)

Above 240 min – Aug, Sept, Oct, Nov.

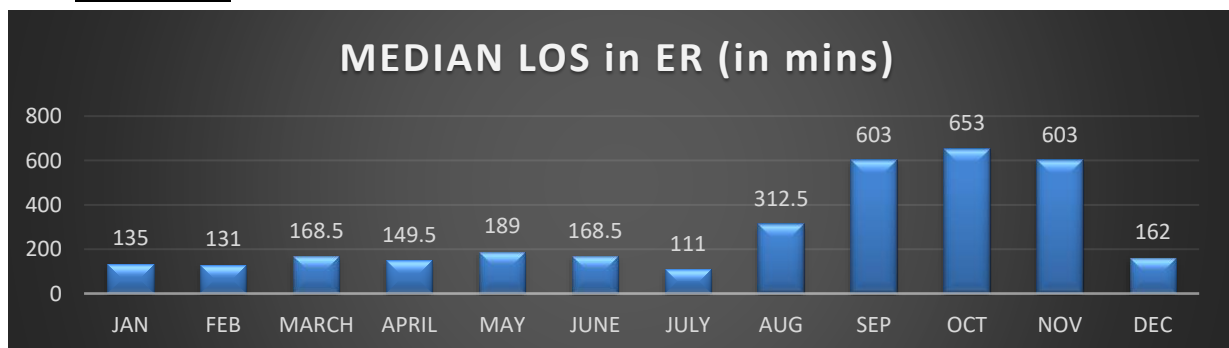


Fig 2

Interpretation

On observing the median Length of stay of the Emergency Department. It seems that from Jan to July the median value LOS is below 240. But from August to November median of LOS goes high beyond 240 marked as red.

Patient beyond 240

Month	Pt. Beyond 240
JAN	378
FEB	408
MARCH	36
APRIL	269
MAY	164
JUNE	36
JULY	54
AUG	36
SEPT	28
OCT	52
NOV	28
DEC	19

Table 3

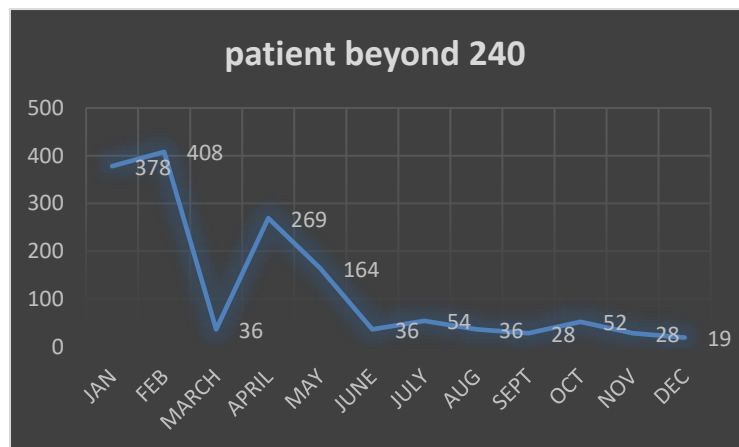


Fig 3

Interpretation

On observing the above data it seems that the in month of jan and feb there are high number of patient that are staying in emergency beyond 240 mins. But after the lockdown imposed. Only in April month there are high number of patient that are staying in ER department. After that there is no high number of cases as such shown in Jan ,FEB,& April.

**Measuring critical and non-critical Median Length of stay in Emergency department
(Monthly 2020)**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Critical	134	131	168.5	151	192.5	168.5	109	290.5	603	673	603	162
Non-critical	134	131	179	149	189	179	113	317	599	653	599	266.5

Table 4

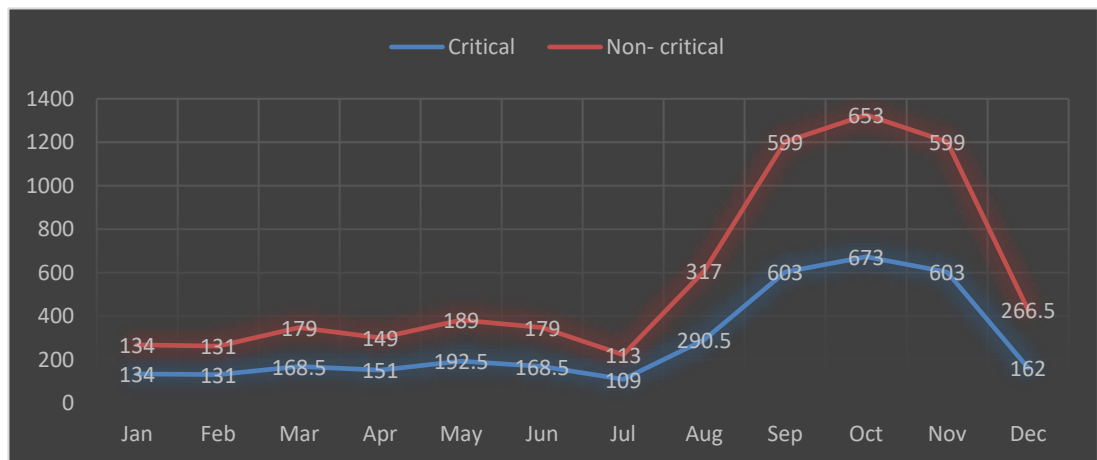


Fig 4

Interpretation

From the above graph it seems that from Jan to July the Median value of LOS in critical & non-critical patients are less than 240 but in August to December median value of LOS non-critical patients was continues increase beyond 240 mins

Median value of All the patients beyond 240 in ER department in year 2020

Median critical Patient in 2020	140
Median non-critical patient in 2020	141

Table 5

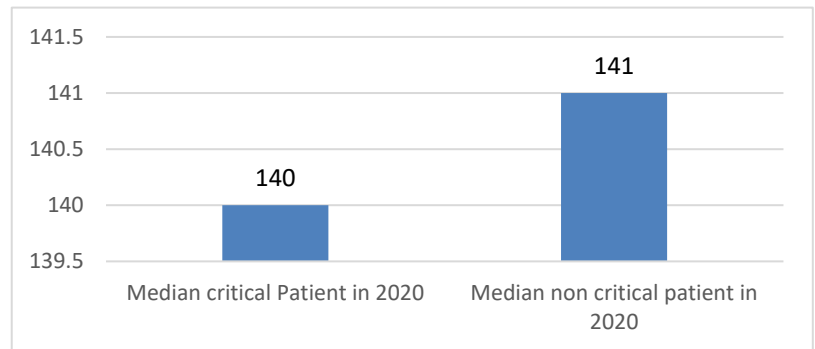


Fig 5

Interpretation

From the above graph it seems that the Median value of critical and non-critical patient in year 2020 is less than 240 mins.

Total number of patient 1525

Number of Admitted pt.	733	48.07%
Number of discharge pt.	757	49.64%
Number of Pt. goes lama	20	1.31%
Number of pt. expired	15	.98%

Table 6

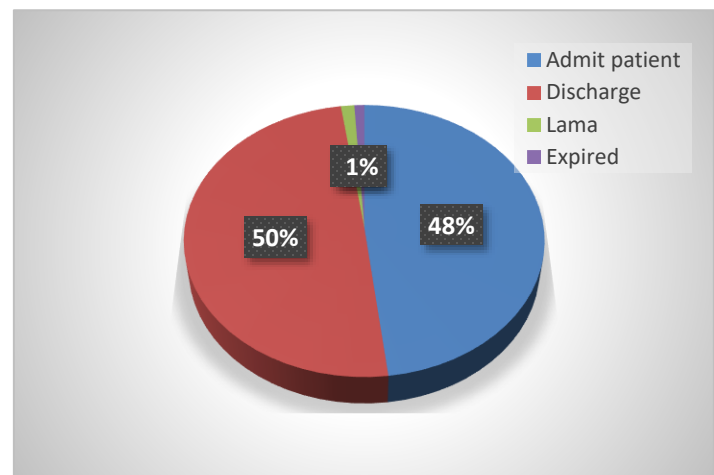


Fig 6

Interpretation

From the above graph we seems that the total number of patient that are staying beyond 240 mins in the ER department are 1525. In which 757 around 50% are those who are discharge from emergency due to some had mild symptoms, advice home isolation, some are discharge after the patient got stable and only 15 patients were expired in ER department who had stay beyond 240 mins. Out of 1525 patient only 20 patients are go to LAMA because of non-availability of bed.

Comparison

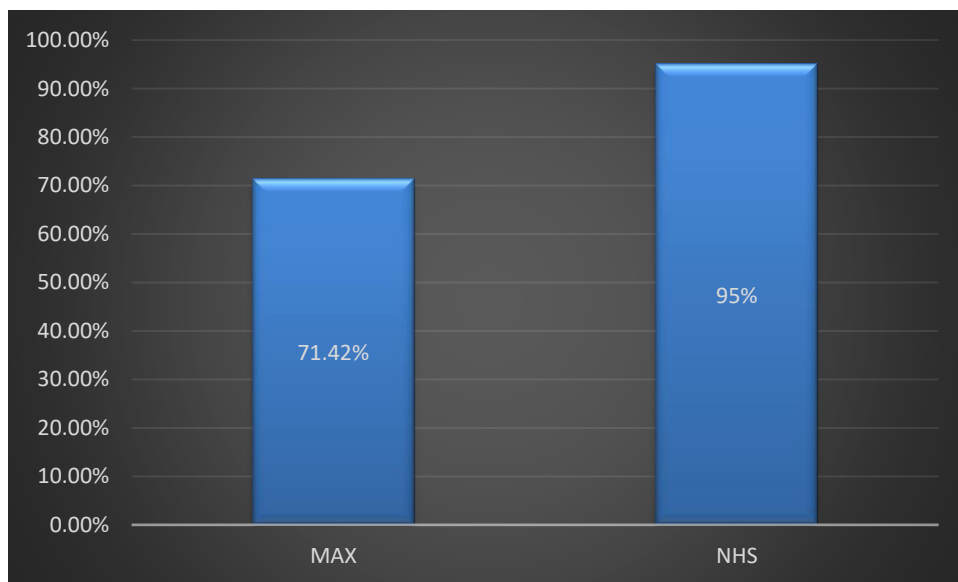


Fig 7

Interpretation

From the study on LOS in ER department in Max Smart hospital there were 5335 total patient that are coming in ER department in year 2020. From which 1525 patient that are

staying beyond 240 mins. in ER department. When I compared Max Smart hospital with NHS England in which 95% patients get shifted before 240 mins. only 5% patients are occupied bed in Emergency. And in MAX Smart Hospital they are on 71.42% patients that are shifted form Emergency department.

Source of NHS ENGLAND information.

https://mail.google.com/mail/u/0?ui=2&ik=cc2bb7df&attid=0.1&permmsgid=msg-f:1704084804787066867&th=17a62019f07957f3&view=att&disp=inline&realattid=f_koxxu6nr0

Section 4

Conclusion

From the above study it can be identify that significant proportions of patients have experienced a long time stay in the ED. Due to Covid -19 Pandemic and hospital converted in fully covid-19 center. All inpatient beds are occupied and delay in report of diagnostic check up were reported reasons for long stay in emergency department.

The causing factors which prolonged stay in emergency department –

Mentation on Presentation, Age, consultation time, no. of days in a week, diagnostic investigation, Nursing shift change, rural residency etc.

Administrative of the hospital are planning to take some initial steps to provide time- targeted services to the patient without affecting the care given quality which can improve LOS at ED that includes- consultation with doctor, treatment and discharged or transferred from emergency department .

The Quality of services provided by emergency department to reduce the length of stay of patients can be improve in following way –

Providing diagnostic treatment with priority to ER patients, adjustment of staff and treatment resource allocation and utilization to reduce the gaps during consultation time and shift change.

The flowing objective are taken and their result are concluded

1. Total patients :-

No. of footfalls in ER decreased after the incidence of covid-19 and lockdown imposition with 83% of the total patients of the year confined in the first quarter.

2. Median LOS :-

- Median LOS worsened towards the year end with highest in October (653 mins).
- 4 out of 12 months – August, September, October and November had median LOS > 240 mins(4hr

4. Comparison with NHS, England :-

- NHS target = 95%.
- MAX Hospital = 71.42%

5. Critical vs non-critical patients :-

- Median LOS for non-critical patients has more variation than that of critical patients with extreme values as follows-
- Critical patients – 109 mins (July) – 673mins (October)
- Non-critical patients – 113 mins (July) – 653mins (October)
- Median LOS was above 240mins in –

- critical patients (Aug, Sept, Oct, Nov) 4 out of 12 months.
- non-critical patients (Aug, Sept, Oct, Nov, Dec) 5 out of 12 months.

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