Summer Training

at

Narayana Super -specialty hospital, Gurugram, Haryana

(May 20th To July 9th , 2021)

A REPORT

ON

Analysis of Turnaround Time in Discharge Process of Inpatient Department .

By

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Under Guidance of

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MBA HOSPITAL & HEALTH MANAGEMENT

2020-2022

Institute of Health Management Research

The IIHMR University , Jaipur

2021

NH Narayana
Superspeciality Hospital
Unit of Narayana Health

CERTIFICATE

It is to certify that Ms. Shabya Singh, Student of MBA Hospital & Health Management, IIHMR University, Jaipur has successfully completed her internship at Narayana Super-speciality hospital, Gurugram.

This is the bonafide record of work carried out by him under my supervision and guidance during the summer training from May 20 to July 9, 2021.

Authorized Signatory 09/07/2021

Narayana Superspeciality Hospital, Gurugram
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NH Narayana
Superspeciality Hospital
Unit of Narayana Health

NSH/HR/TC/2021/26

July 9, 2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Shabya Singh** has successfully completed her training from May 20, 2021 to July 9, 2021 in **Patient Care Relations** department of Narayana Superspeciality Hospital, Gurugram.

During the period of her training with us her performance was good and she was found punctual, hardworking and inquisitive.

Any information used to complete the project is the intellectual property of Narayana Superspeciality Hospital, Gurugram and hence should not be used for any other purpose.

We wish her the very best for all her future endeavors.

For, **Narayana Hrudayalaya Ltd.**

Neha Saurabh Chaddha

Neha Saurabh Chaddha
Manager - Human Resources

ACKNOWLEDGEMENT

The Internship Opportunity I had with **Narayana Super Specialty Hospital at Gurugram** , Haryana was great learning experience . Therefore I consider myself as fortunate individual to be part of it . I am also grateful for getting an opportunity to meet so many wonderful people and professionals who led me during my entire summer training period .

I express my deepest thanks to my mentor **Mr. Abhinaw Ojha , DM PCS NH** , Gurugram for providing necessary suggestions and guidance and arranging all facilities to make my summer internship effective and easy.

I feel deeply privileged in expressing my gratitude to **Dr Devi Shetty (Chairman, NH group) , Mr. Lucky Goyal (Non medical head, NH, Gurugram) , Mr. Amit Bhura (Facility Director NH, Gurugram) and Mrs. Ruma Saxena (GM, Human Resources)** for giving me this opportunity & guidance which was extremely valuable for my study .

I express my sincere thanks to all HOD and NH staffs for being so cooperative to assist in my project work precisely. Without their cooperation and warm attitude , this project would have been a distant dream.

I see this opportunity as a platform in my career development. I will strive to use gained skills and knowledge in the best possible ways and I will continue to work on it and will improve in order to attain my desired career objectives. Hope to continue cooperation with all of you in the future.

Last but not least , my sincere gratitude to my Mentor , **Dr Seema Mehta** , for her constant support , guidance throughout my summer internship.

Sincerely

SHABYA SINGH

Roll no - 1189

MBAHM 25, IIHMR University , Jaipur

Date- 13/07/2021

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ACRONYMS-

NH – Narayana health

MICU – Medical Intensive Care Unit

SICU- Surgical Intensive Care Unit

CCU – Critical Care Unit

CTVS- Cardiothoracic and Vascular Surgery

OPD – Out Patients Department

IPD- Inpatients Department

LAMA – Left Against Medical advice.

DOR- Discharged on Request.

DAMA- Discharge against medical advice

CGHS – Central government health scheme

ECHS- Ex- servicemen contributory health scheme

TPA- third party administration

DGHS- Directorate general of health services

1. INTRODUCTION

Narayana Health is the second biggest chain of hospital in India . Its headquarter is present in Bangalore and have many branches all over India and now in abroad too. Its one of the world's most economical , is set to emerged as a global industry model for its ability to reconcile quality , affordability ,scale , transparency , credibility and profitability with all super- specialty tertiary care facilities that the medical world offers. The rich comes to NH for world's best medical care and the poor comes to NH for the world's kindest care and no one is turned away for lack of money. The founder of NH , Dr Devi Shetty believes in creating relationship with patients & that's why NH is never believed in marketing .

Narayana Health Group of hospitals is racing toward the goal of providing Healthcare to everyone . NH group currently offers super- specialty tertiary care facilities in various areas of specialization, which include Cardiac Surgery, Cardiology, General Medicine, Gastroenterology, Vascular and Endovascular services, Urology, Nephrology, Neurosurgery , Solid Organ transplants for kidney , liver , heart and bone marrow, Endocrinology services, Cosmetic Surgery and Rehabilitation and Oncology services for almost each type of cancer including head , neck, breast, cervical , lungs , and gastro intestinal cancer.

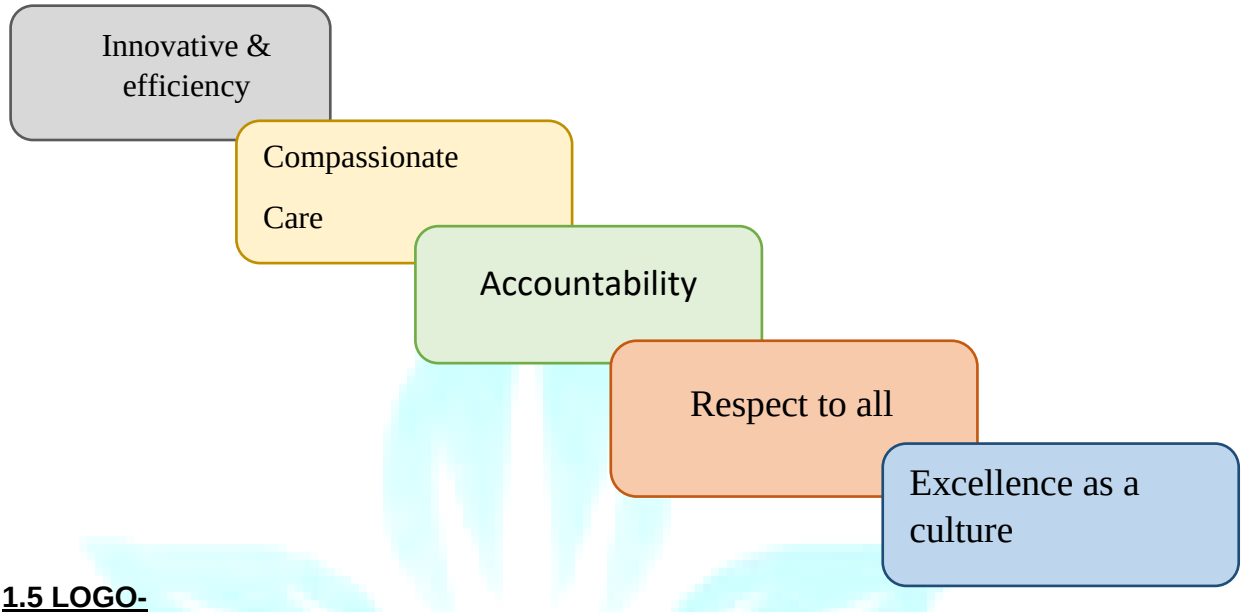
1.2 VISION

To provide a high quality healthcare , with care and compassion , at an affordable cost on large scale .

1.3 MISSION –

" A Dream of Making Quality Healthcare Available to the masses Worldwide"

1.4 CORE VALUE : I -C-A-R-E



1.5 LOGO-

Narayana in Sanskrit means the preserver of the universe matches with the NH ethos of being committed to the health of every life. In the logo of NH there isn't any space which shows no discrimination while catering to the health needs of every individual. The 3 leaves represent the core value of NH - compassion, quality, Affordability.

NH, Gurugram is one of among the branches of NH. Its situated near DLF Cyber City , Gurugram & is NABH accredited world class medical facilities serve to the needs of patients. Featuring experienced medical professionals and the latest in medical infrastructure , the hospital represents NH's commitment to best medical care and patient service.

Narayana super-specialty hospital provide services to both out patient and inpatient and have 24*7 Trauma care ,dialysis services, radiology services – 128 Slice CT Scan , 3.0 Tesla MRI and pharmacy services and round the clock critical care ambulance . Its 215 bedded super-specialty hospital with world class ICU , 6 Modular OTs , Advance Critical Care Unit and Dialysis Unit , 2 state -of- art Cath labs with Rota Ans IVUS facilities, fully equipped Lab Medicine and Blood Bank and well equipped Physiotherapy & Rehabilitation department .

2. FLOOR WISE FACILITY DISTRIBUTION –

2.1- LOWER BASEMENT – Oncology OPD (Head & Neck surgery, Breast Oncology, Medical Oncology, Gynae Oncology),Radiation, Parking , Maintenance .

2.2- UPPER BASEMENT – HR Department , Marketing Department , IPD billing , Gastroenterology OPD, Physiotherapy , IPD – Pharmacy, CT MRI , Dental, HODs Offices , Liver Transplant unit.

2.3- GROUND FLOOR – Medicine OPD, Orthopedics OPD , Cardiology OPD, Pulmonology OPD, ENT , Pediatrics OPD, Day Care, Laboratory, Sample Collection , Emergency , Echo Room, Radiology , Front office , TPA office , OPD admission and billing desk , OPD Pharmacy , Back office, Cafeteria , Waiting hall, international marketing office.

2.4- 1ST FLOOR – Kidney transplant unit , Dialysis , Neuro Department , Urology OPD, Gynecologist, Dermatologist, Suite & Private & Semi – Private wards , Dietician Room, Nursing Station (A & B Wing).

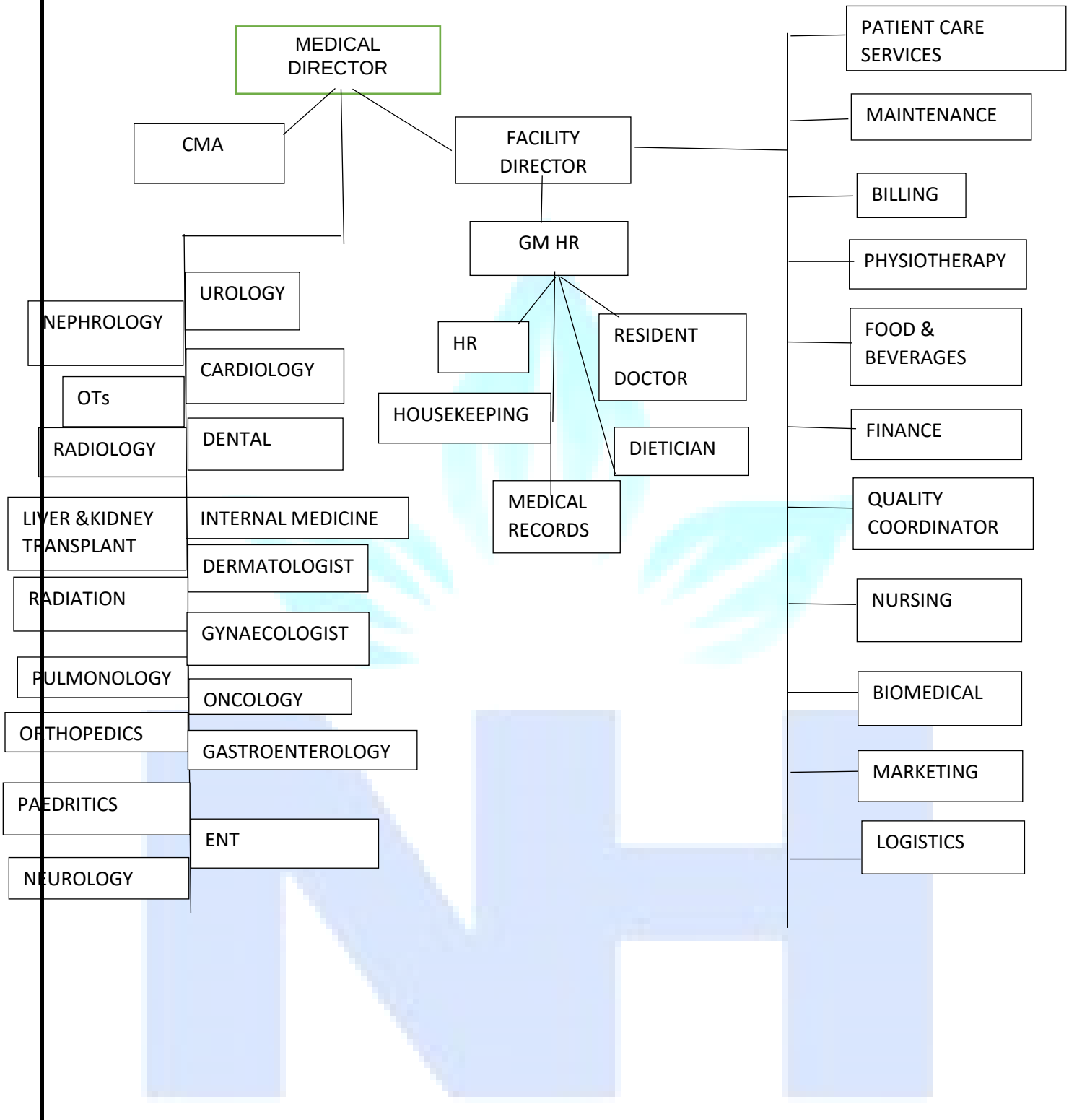
2.4- 2nd FLOOR – OT (5) , Cath lab , SICU, CTVS, CCU, OT Pharmacy , Anesthesia OPD, Pre and Post Operia.

2.5- 3RD FLOOR – Canteen , Nursing Superintendent office, Biomedical , MRD , IT Department , ICN & Nursing education .

2.6- 4TH FLOOR- General – male & female, Private, Semi private Wards, Onco day care, Floor manager office, MT office , Duty Doctor Office , Nursing Station (A & B wing).

2.7- 5TH FLOOR – MICU , LAB , Blood Bank .

3. FLOW CHART OF ORGANOGRAM OF NH , GURUGRAM



4. DEPARTMENT WISE OBSERVATIONS AT NARAYANA HOSPITAL, GURUGRAM

4.1.HUMAN RESOURCES-

- HEAD OF DEPARTMENT – MRS . RUMA SAXENA
- Its located in the upper basement of the hospital.
- Functions of HR Department –
    - Attendance management
    - Salary management
    - Performance appraisal
    - Recruitment and selection
    - Leaves management
    - Development and training of employees.

- NH Gurugram follows 6 shifts system with shift being-
    - 8 am – 4 pm
    - 9 am – 5 pm
    - 10 am – 6 pm
    - 11 pm – 7 am
    - 12 am – 8 am
    - 8 am – 8 pm

- The various leaves offered are-
    - Causal leaves
    - Sick leaves
    - Earned leaves
    - Maternity leaves
    - Paternity leaves

4.2 HOUSEKEEPING DEPARTMENT-

- HEAD OF DEPARTMENT – MR. ANKIT BHARDWAJ
- Located in the Lower basement .
- Functions performed –
    - Cleaning of rooms & washrooms
    - Fumigation
    - Changing clothes of patients
    - Scrubbing
    - Dressing
    - Shifting of patients

    - Taking various files & documents to different departments .

- Room services.

- The housekeeping Staffs are trained in CPR.

4.3 **PATIENT CARE SERVICES –**

- HEAD OF DEPARTMENT – MR SURENDER BADHANA

4.3.1 OUTPATIENT DEPATMENT –

- HEAD OF DEPARTMENT- MR. AMAN
- There are 10 OPDs –
  - OPD in the lower basement
  - Gastroentrology OPD in the upper basement
  - Medicine, Orthopedics, cardiology, pulmonology , paediatrics OPDs on the ground floor .
  - Neurology and urology OPDs on 1 st floor
  - Anesthesia OPD on the 2nd floor
- Manpower –
- The functions of this department includes-
  - Registration of the outpatient.
  - Providing the appointments .
  - Guiding the patients.
  - Billing of the outpatients.
  - Billing of the diagnostics test required for the outpatients.
- Average daily footfalls of OPD – 150
- The timings are – 9 AM TO 5 PM
- The OPD remains closed on Sundays.

4.3.2 - INPATIENTS DEPARTMENT –

- HEAD OF DEPARTMENT – MR. ABHINAW OJHA
- Located on the ground floor close to the emergency department .
- The functions of IPD includes-
  - Admission of patients
  - Allotment of wards.
  - Dealing with patients grievances.
  - Segregating the patients into cash, credit, insurances.
  - Billing of inpatients
  - Making total cost estimates for the inpatients .
  - Financial counselling
  - Informing the inpatients and their attendants of all their rights and what all fixed cost will be charged when the patients gets admitted in hospital.
- The department works 24*7 with
- Average daily Occupancy– 50
- The HIS used for registration is ATHMA.

4.4. **DEPARTMENT OF RADIOLOGY-**

- HEAD OF DEPARTMENT- Dr. Vikas Rastogi.
- Located on the ground floor next to IPD and emergency department .
- The various radiological test conducted are-
    - MRI
    - CT Scan
    - X- RAY
    - MAMMOGRAPHY
    - ULTRASOUND

- Both the OPD and IPD and emergency radiologic investigations are conducted in this department.
- The emergency patients are given preference.
- The daily work load of the radiology department is as follow- 1800

4.5- **NURSING DEPARTMENT –**

- HEAD OF DEPARTMENT –MRS. JYOTI GOSAIN
- There are 4 nursing station each being supervised by a nursing incharge
- The nurses follow the 3 shifts system.
    - 8 am – 2 pm , 2 pm – 8 pm , 8 am – 8 pm.
- Functions include-
    - Providing medication
    - Looking after patient's needs.
    - Adhering to the doctors instructions
    - Maintaining the files of the Inpatients.

4.6. **MARKETING DEPARTMENT -**

- HEAD OF DEPARTMENT – MR. KEYUR PATEL
- Located in the upper basement of the hospital.
- The main function of this department is to conduct health awareness camps once or twice which include both mega and specialty camps.

- NH believes in creating good relations with patients and believes in marketing through word of mouth by satisfied patients.

4.7- LABORATORY –

- HEAD OF DEPARTMENT- DR. GAURAV DHAKA
- Located on the 5th floor of the main hospital building.

- The main function is to perform the diagnostic test required by the patients as well as all the screening tests in the blood bank.

4.8 CENTRAL STERILE SUPPLY DEPARTMENT –

- HEAD OF DEPARTMENT – MR . DEEPAK SINGH
- Located in the upper basement of the main building.
- Mainly concerned with the sterilization of instruments and packing of linen, Neuro and instruments.
- Consists of the following areas-
    - Receiving area
    - Cleaning area
    - Drying area
    - Packaging area
    - Sterilization area
    - Storage area
    - Delivery area
- Two types of sterilization take place at NH , Gurugram.
    - STREAM STERILIZATION
    - ETHYLENE OXIDE STERILIZATION.

4.9 .QUALITY DEPARTMENT –

- HEAD OF DEPARTMENT – MRS SUSHMA
- This department deals with the consistent delivery of the services to the expected standards.
- Functions –
    - To ensure the effectiveness of treatment
    - Increase patient satisfaction
    - Patient focused care
    - Ensure the provision of sterilized instruments .
    - Ensure adherence to surgical safety check list.

4.10 .BIOMEDICAL DEPARTMENT –

- HEAD OF DEPARTMENT – MR LALIT SAINI
- Located on the third floor of the main building .
- It is supporting department for all the equipment running in the hospital.
- It looks after the servicing & maintenance of the instruments as well as the equipment.

4.11. BLOOD BANK –

- HEAD OF DEPARTMENT – DR SONIA BINDAL
- Located on the 5th floor of the main building.
- Function is to collect , process , and store blood and its component in specialized refrigerator

- Various record books including the donor records, discard records, deferrals donor books is maintained for 5 years.

4.12. **MAINTENANCE –**

- HEAD OF DEPARTMENT- MR AMULYA PANDA
- Located in the lower basement of the main building.
- Functions- to look after the maintenance of electricity , building , plumbing ,oxygen , water , generators and miscellaneous.
- Mock drill related to fire emergency are conducted by the maintenance department.

4.13. SUPPLY CHAIN MANAGEMENT –

- HEAD OF DEPARTMENT – MR SHIV DUTT
- Located in the upper basement of the man building .
- Functions – purchase of medicine
- Requirement from both IP and OP pharmacy are received and purchase order is placed.

4.14. **FOOD & BEVERAGES DEPARTMENT-**

- HEAD OF DEPARTMENT – MS PARMEET
- Located on the 3rd floor of the main building.
- There is two sitting area – one is for all staff and attendants of patients or visitors and second is only for doctors.
- One small cafeteria is present on the ground floor near radiation waiting hall named Nutribay.
- The F&B department is contractual based .
- The cafeteria present on ground floor operate till 8 pm whereas the canteen on 3rd floor operates 24*7.
- All the food for the patients is prepared on the dietician's recommendation.
- Random feedbacks from patients and attendants are taken about quality of food .

4.15. **MEDICAL RECORD DEPARTMENT -**

- HEAD OF DEPARTMENT – MR MAHINDER
- Located on the 3rd floor .
- Manpower- 2
- Mainly concerned with documentation.
- Every death has to be communicated to the municipality for registration.
- A unique ICD code number for various diseases is present which is mentioned in the records.
- Time periods for preserving the records-

- Discharge – 5 yrs.
- Deaths- 10 yrs.
- Medico legal cases- 10 yrs.

- Obtaining an informed consent for accident and injury cases is a must.
- Consent obtained for following-
  - Surgery
  - Anesthesia
  - High risk case
  - Blood transfusion
  - Intensive procedures
  - Hemodialysis
- Separate register is maintained for communicable diseases and the information of the following cases is sent to the municipality-
  - Malaria
  - Dengue
  - Chikungunya
  - Cholera
  - H1N1

5. LITERATURE REVIEW

Table 5 .1- Review of literature table -

NO.	AUTHOR	TITLE	SOURCE	METHODOLOGY	FINDING	REFRENCE
1	Ajami, S., & Ketabi, S. (2007).	An Analysis of the Average Waiting Time during the Patient Discharge Process at Kashani Hospital in Esfahan, Iran: A Case Study.	Health Information Management Journal	Observational study	Average TAT for all the wards came to be 5:33 hours .As per the hospital personal opinion , the main reasons identified for delay were the delay for discharge summary completion , lack of proper guidelines for the staff involved in the discharge process and absence of hospital information networking system	Ajami, S., & Ketabi, S. (2007). An Analysis of the Average Waiting Time during the Patient Discharge Process at Kashani Hospital in Esfahan, Iran: A Case Study. *Health Information Management Journal*, *36*(2), 37-42. doi: 10.1177/183335830703600207
2	Kumari J.V (2012).	A study on Time Management of Discharge and Billing Process in Tertiary Care Teaching Hospital	Elixir International Journal	Observational study	The average time taken for the discharge of patients was 2 hours & 22 minutes.It was observed that the Intra processing (Outside billing) time for discharge process was more than the Inter processing time (within billing department).	Kumari J.V (2012). "A study on Time Management of Discharge and Billing Process in Tertiary Care Teaching Hospital": Elixir International Journal. 52A, pp. 11533- 11535
3	Swapnil B Tak, S. Kulkarni (2013)	A comparative time motion study of all types of patient discharges in a hospital	Global Journal of Medicine and Public Health. Vol. 2	Observational study	There was delay for all type of discharges i.e. insurance patients , cash patients , DAMA etc. in the hospital . The total time taken for the discharge was compared against NABH standards . The total time taken for insurance , self – payment and DAMA patients was 278 , 337 and 302 minutes respectively . As per the satisfaction survey	Tak.S et.al. (2013). "A comparative time motion study of all types of patient discharges in a hospital": Global Journal of Medicine and Public Health. Vol. 2

					conducted by the author , 69.80% of patients felt that discharge process was lengthy and 61.53% patients believed that process can be speeded up.	
4	Soraia Aparecida da Silva, Reginaldo Aparecido Valácio, Flávia Carvalho Botelho, and Carlos Faria Santos Amaral (2014)	Reasons for discharge delays in teaching hospitals	Rev Saude Publica.	Observational study	In the two hospitals analysed, delays in discharge were mainly due to process related factors (conducting complementary tests or releasing test results) which could be improved through care team or management interventions, with no need for significant financial investment. The desired results would be increased care capacity, reduced costs and decreased exposure of patients to risks related to unnecessary hospitalization.	Silva et.al (2014). "Reasons for discharge delays in teaching hospitals": PMC, Vol. 48(2) pg. 214
5	Shukla, K., Mehta, S., Nair, J., & Rao, S. (2015)	Role of discharge planning and other determinants in total discharge time at a large tertiary care hospital	CHRISM ED Journal Of Health And Researc h	Cross sectional study	The study indicates that with higher number of planned discharges, total discharge time can be reduced. This also helps in reducing the clearance time by different departments. Hence, an effort should be made to plan as many discharges as possible to enhance the discharge flow process. Checking each inpatient bill at night and encouraging duty doctors to promote discharge summary indentation for insurance patients before morning shift will also contribute to improvements. The clearance charts and hospital planning	Shukla, K., Mehta, S., Nair, J., & Rao, S. (2015). Role of discharge planning and other determinants in total discharge time at a large tertiary care hospital. *CHRISM ED Journal Of Health And Research*, *2*(1), 46. doi: 10.4103/2348-3334.149345

					checklist must be regularly monitored to keep a track of all delays and control these immediately.	
6	Shukla, K., & Upadhyay, S. (2018)	Predictive Modelling for Turn Around Time (TAT) of Discharge Process for Insured Patients in a Corporate Hospital of Pune City	Journal Of Health Management	Cross sectional study	The mean discharge TAT for insured patients (*n* = 443) was 390 minutes. Intervening TATs for submitting discharge summary to TPA department and the final bill approval from insurance company had highest predicting effect on overall TAT through statistical analysis.	Shukla, K., & Upadhyay, S. (2018). Predictive Modelling for Turn Around Time (TAT) of Discharge Process for Insured Patients in a Corporate Hospital of Pune City. *Journal Of Health Management*, *20*(1), 56-63. doi: 10.1177/0972063417747701
7	Mundodan, J., Sarala, K., & Narendranath, V. (2019).	A Study to Assess the Factors Contributing to Delay in Discharge Process in a Teaching Hospital	International Journal Of Research Foundation Of Hospital And Healthcare Administration	Time motion study	The mean time for discharge process was 5 hours 41 minutes. The mean time between advice of discharge and physically leaving the ward varied from 6.62 hours in urology to 3.01 hours in ear, nose and throat (ENT). Only 13 patients (18.8%) were discharged within the National Accreditation Board for Hospitals and Healthcare Providers (NABH) prescribed time limit of 180 minutes. The maximum delay occurred during time taken for discharge summary completion.	Mundodan, J., Sarala, K., & Narendranath, V. (2019). A Study to Assess the Factors Contributing to Delay in Discharge Process in a Teaching Hospital. *International Journal Of Research Foundation Of Hospital And Healthcare Administration*, *7*(2), 63-66. doi: 10.5005/jp-journals-10035-1113

6.INTRODUCTION

Discharge is “the process of activities that involves the patient and the team of individuals from various discipline working together to facilitate the transfer of patients from one environment to another”. The patients discharge procedure as “ the final step of treatment procedure during a patient’s length of stay.” And timely discharge as “ when the patients are discharged home or shifted to an appropriate level of care as soon as they are clinically stable and ready for discharge.” There are clinical , legal, and administrative aspects involved in addition to record keeping while discharging a patients from the hospital . These includes settlement of hospital bills, attainment of drugs , arranging transportation and so on.

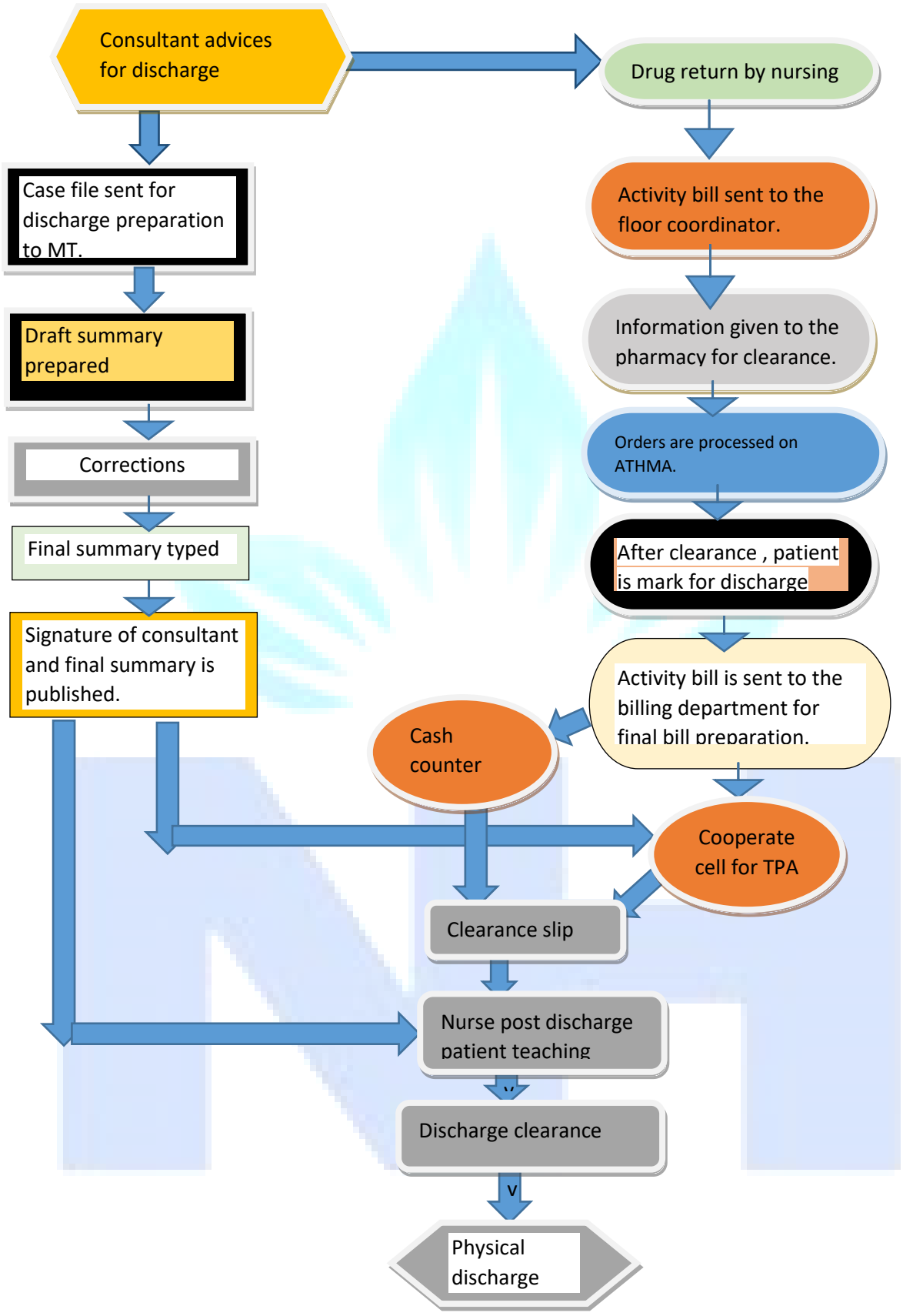
Discharge can be of 5 types –

- NORMAL DISCHARGE
- LAMA
- DAMA
- DOR
- DEATH

The quality of healthcare has changed the demands and functioning of health industry. In present competitive environment of health industry leaves no scope of error, we need to focus on improvement in technical skills, human skill and to develop cost effective methodologies. Among all components , defining the patient satisfaction discharge process plays a important role. Discharge process is the final phase in hospital with satisfactory overall experience by the patient during hospital stay , a slow discharge process can leave dissatisfaction. The discharge process is critical restriction for efficient flow , slow and uncertain discharge translate into a reduction in bed capacity and admission process delays.

At Narayana hospital, investigation was conducted to determine the turn around time of discharge process along with incidence and causes of delayed discharge. As mentioned above an effective discharge planning is a team approach right from informing the patients appropriate post hospital treatment to clearance from all departments , bill settlements , thus total time consumed in the discharge procedure is aggregate of clearance time consumed by every department along with other factors related to patients and the process. Hence maintaining an admissible level of discharge time (cash patients its approx. 2 hrs. and for TPA is 3-4 hrs. maximum.) provides cut throat edge to the organization.

6.1 . DISCHARGE PROCESS FLOWCHART –



7. RESEARCH-

7.1.PROBLEM STATEMENT

Hospital discharge process is very long process . Discharge time is one of the quality indicators of hospital.

The patients and their kin are keen to go back home ,whereas , hospital needs to complete the discharge proves to ensure successful discharge and decrease re-admission . Every healthcare facility seek to enhance its quality through various ways , one of which is decreasing the discharge process time. However , discharge process time can not be reduced without analyzing the components that consume time during discharge. So to analyze the Discharge TAT , this study was conducted at NH, Gurugram.

7.2.OBJECTIVES-

- To calculate the average discharge turn around time of TPA, PSU and Cash patients.
- To identify the gaps in the discharge process.

7.3.MATERIALS & METHODS-

7.3.1. Study area- Narayana super – specialty hospital , Gurugram

7.3.2.Study Design – A prospective , observational time motion study was conducted in the inpatient department of Narayana hospital .

7.3.3.Sampling Unit – patients who got discharged from the wards of NH in month of May .

7.3.4.Sampling Size- A sample size of 209 patients taken by manually on excel followed the discharge process along with a open and close ended questions to the patients & nurses .

- INCLUSION CRITERIA – This study includes cash , TPA , PSU patients who had planned and unplanned normal discharges.
- EXCLUSION CRITERIA – In this study LAMA , DEATH, DOR, DAMA discharge cases were excluded.

7.3.5.Sampling Technique- The technique used to collect data was non probability sampling , purposive sampling.

7.3.6. Design Tool-

- Discharge from – number of patients planned or unplanned for discharge from the ward.
- Initiation time – the time when doctor prescribe to discharge the patients from the hospital.
- Activity received time – the time at which the nursing send the activity of patients to the floor coordinator.
- Service Clearance time – the processing of all the orders like investigation , consultations of the patients on the NH HIS called ATHMA.
- Pharmacy clearance initiation time – the time at which the pharmacy is informed for giving clearance .
- Pharmacy Clearance end time – the time at which the pharmacy gave the clearance.
- MT summary initiation time – the time at which the MT receive the case file of patient for making discharge summary.

- MT summary ready time – the time MT make the final discharge summary of patients.

- Mark for discharge time – The time at which the patient is marked for discharge on ATHMA.
- Activity send Time – the time at which the billing department receive the activity of the patients marked for discharge from floor coordinator.
- Final bill preparation time – the time at which the final bill of the patient is ready.
- Bill settled time – The time at which the bill is settled.
- Physical Discharge time – The time at which the patients leaves the hospital physically and vacate the bed.
- Reasons for delays.

MRN	Patient Name	Bed Number	Consultant	Discharge Type	SPONSOR	Discharge Announcement	Discharge Summary	Pharmacy Clearance	Mark for Discharge Time	Billing	Physical Discharge	Total TAT	Remarks

Table 7.3.6.1- Table represents the data collection tool .

7.3.7.Data collection –

After designing the tools for data collection, the data was collected and recorded by observing and tracking all the patients planned and unplanned discharge for a day

.. Also by daily communicating with the floor coordinator to determine the reasons for delay in discharge and classify them as per discussion.

8. DATA ANALYSIS AND DATA INTERPRETATION

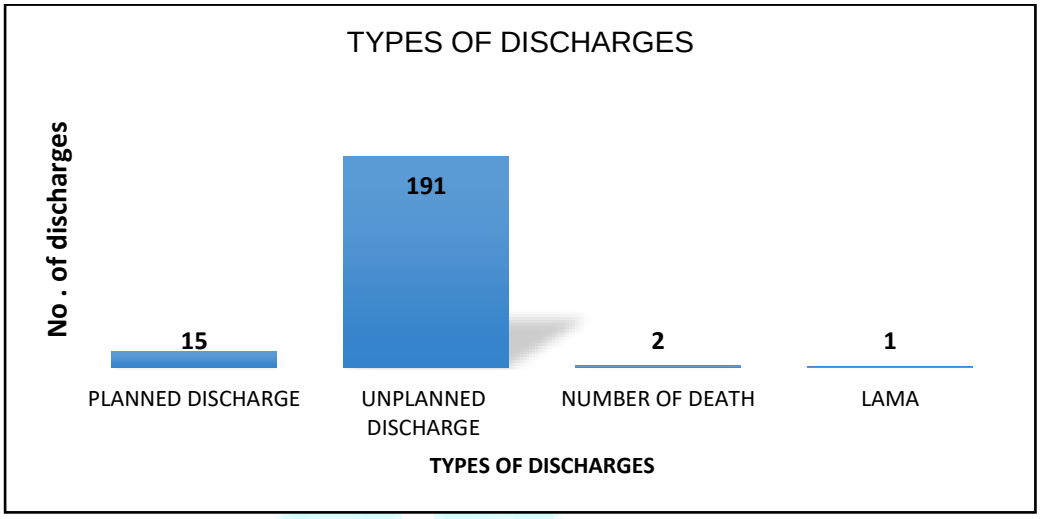


Fig 8.1. TYPES OF DISCHARGES

Table 8.1.1:- TABLE REPRESENT THE RESULTS OF TYPES OF DISCHARGES

TOTAL NUMBER OF DISCHARGES (N)	209
NUMBER OF PLANNED DISCHARGES	15
NUMBER OF UNPLANNED DISCHARGES	191
NUMBER OF DEATH	2
LAMA	1

INTERPRETATION-

Fig 8.1. shows that total data of 209 patients' was collected for time motion study out of which only 15 discharges were planned whereas 191 were unplanned and rest 2 were deaths and 1 LAMA.

Most of discharges were unplanned because during covid , discharges of covid patients can not be announced a day prior as patients had to be monitored and if they are stable than they were discharged. That's why most of the cases discharges were unplanned.

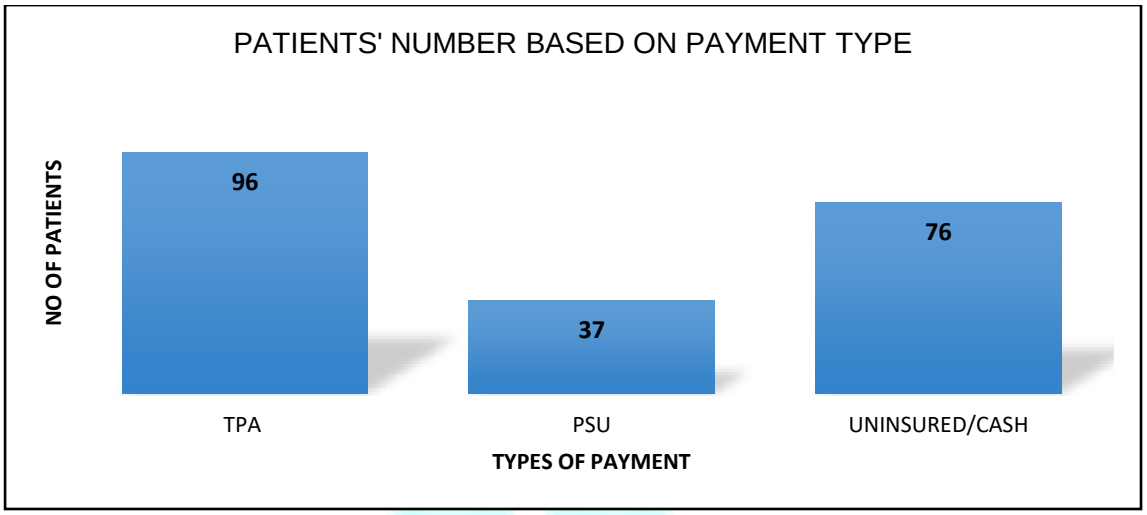


Fig 8.2. PATIENTS' NUMBER BASED ON PAYMENT TYPE

Table 8.2.1:- TABLE REPRESENT THE RESULT OF PATIENTS' NUMBER BASED ON PAYMENT TYPE

TOTAL INSURED	133
TPA	96
PSU	37
UNINSURED/CASH	76
TOTAL DISCHARGES	209

INTERPRETATION-

Fig 8.2. Out of 209 discharges , only 76 patients were uninsured whereas rest 133 patients were insured . If we differentiate among the 133 patients , 96 were TPA holder and rest 37 were PSU holder.

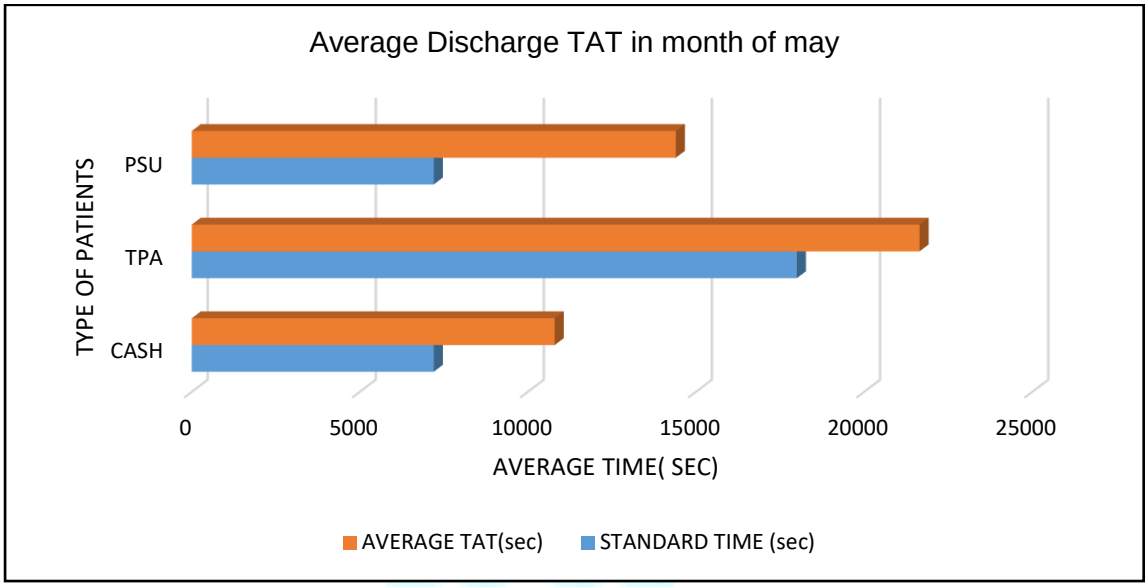


Fig 8.3. AVERAGE DISCHARGE TAT IN MONTH OF MAY

Table 8.3.1- TABLE REPRESENT THE RESULTS OF AVERAGE TIME TAKEN BY DIFFERENT PATIENTS TYPE.

PATIENT TYPE	STANDARD TIME (sec)	AVERAGE TAT(sec)
CASH	7200	10800
TPA	18000	21647
PSU	7200	14400

INTERPRETATION-

Fig 8.3. shows that there is delay in the discharge process in Narayana hospital . The standard time of cash patient's discharge should be 7200 sec but in NH its took 10800 sec whereas in case of TPA and PSU patients' discharge took more time than the standard time i.e. 21647 and 14400 seconds.

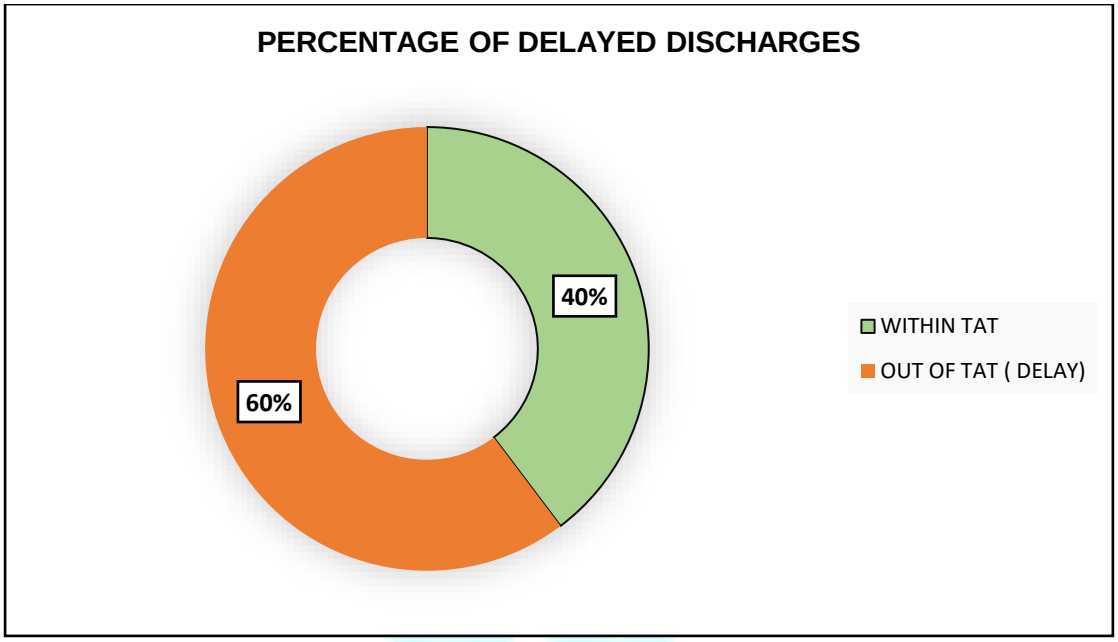


FIG – 8.4. PERCENTAGE OF DISCHARGE DELAYED

Table 8.4.1- TABLE REPRESENT THE RESULT OF NUMBER OF DISCHARGES WHICH ARE ACCORDING TO STANDARD TIME AND WHICH ARE DELAYED

TOTAL DISCHARGES	WITHIN TAT	OUT OF TAT (DELAY)
209	83	126

INTERPRETATION-

In fig 8.4. , we can observe that 60% of total discharges were delayed and only 40% were on time . Hence we can say that in NH , Gurugram most of the discharges were delayed which lead to patients' unsatisfaction .

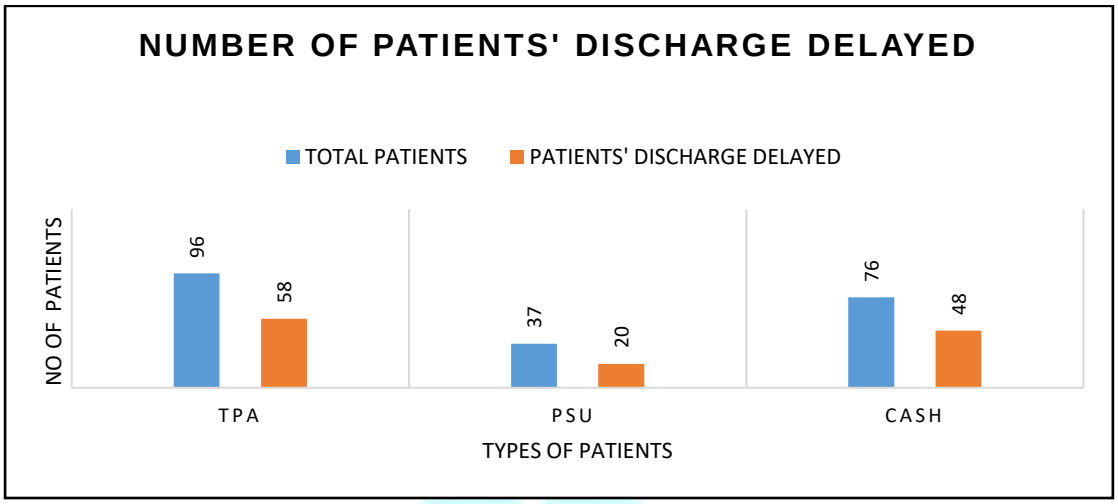


Fig 8.5. Number of Patients' discharge delayed

Table 8.5.1:- TABLE REPESENTS THE RESULT OF NUMBER OF PATIENTS WHOSE DISCHARGES GOT DELAYED.

PATIENTS TYPE	TOTAL PATIENTS	PATIENTS DISCHARGE DELAYED
TPA	96	58
PSU	37	20
CASH	76	48

INTERPRETATION-

Fig 8.5. shows that out of 96 TPA patients' discharge ,58 patients' discharges were delayed and out of 37 PSU patients , 20 got delayed and 48 cash patients' discharge were delayed out of 76 . So we can observe that the no of delay were more in TPA and cash patients.

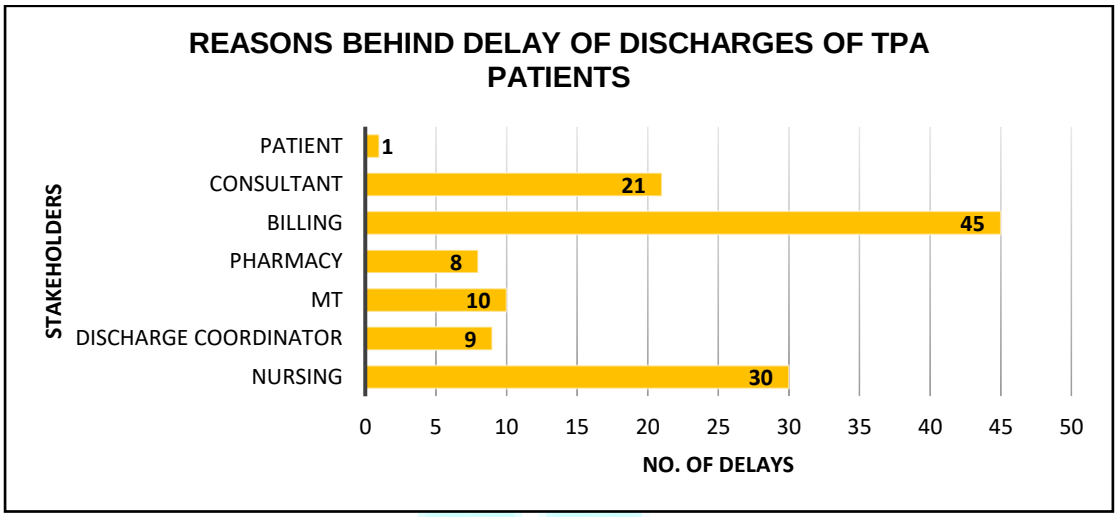


Fig 8.6 REASONS BEHIND DELAY OF TPA PATIENTS

Table 8.6.1- TABLE REPRESENT THE RESULTS OF REASONS BECAUSE OF WHICH TPA PATIENTS' DISCHARGES GOT DELAYED-

TPA DELAY STAKEHOLDERS							
STAKEHOLDERS	NURSING	DISCHARGE COORDINATOR	MT	PHARMACY	BILLING	CONSULTANT	PATIENT
DELAY	30	9	10	8	45	21	1

INTERPRETATION-

Fig 8.6 show that due to billing and nursing most of the TPA patients' discharges were delayed . In billing most of delays were because of delay in TPA approval . The next stakeholders who were reasons for delay were nursing who are responsible for drug return of patients or sending activity to discharge coordinator and other were because of consultants.

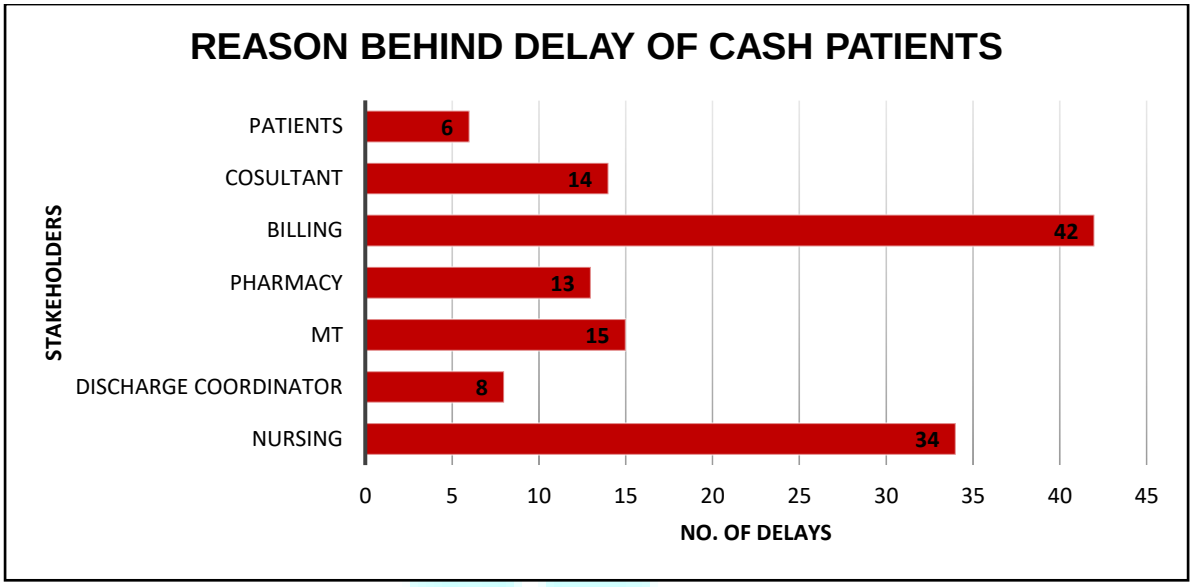


Fig 8.7. REASONS BEHIND DELAY OF CASH PATIENTS' DISCHARGE

Table 8.7.1- TABLE REPRESENT THE RESULT OF REASONS BEHIND DELAY OF CASH PATIENTS' DISCHARGE-

CASH DELAY STAKEHOLDERS							
STAKEHOLDERS	NURSING	DISCHARGE COORDINATOR	MT	PHARMACY	BILLING	CONSULTANT	PATIENT
DELAY	34	8	15	13	42	14	6

INTEPRETATION-

Fig 8.7 shows that various stakeholders were identified which contribute to the delay of discharge process of cash patients. And after analyzing the data we found that for cash patients too billing is the biggest reason for delay , from hospital side like late preparation of final bill . Same as TPA , nursing is the second biggest stakeholder . Here the delay from consultant side is also one of the main reason either because they take rounds late due to which discharge announcement is delayed or they aren't available for signing the final summary.

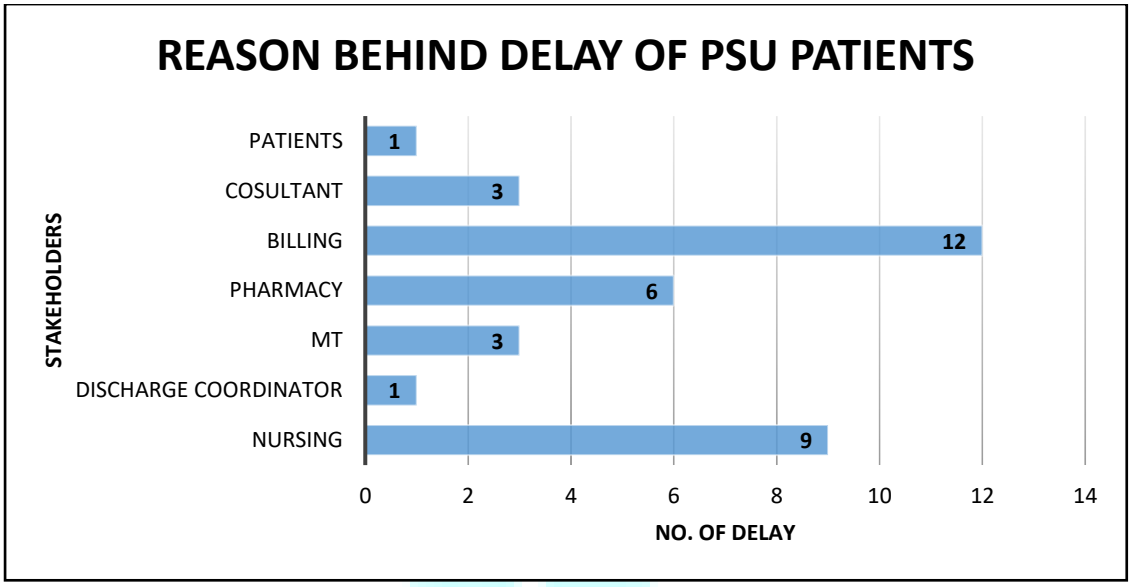


Fig 8.8 PSU DELAY STAKEHOLDER

Table 8.8.1- TABLE REPRESENT THE RESULT OF REASON BEHIND DISCHARGES GOT DELAYED OF PSU PATIENTS-

PSU DELAY STAKEHOLDERS							
STAKEHOLDERS	NURSING	DISCHARGE COORDINATOR	MT	PHARMACY	BILLING	CONSULTANT	PATIENT
DELAY	9	1	3	6	12	3	1

INTERPRETATION

Fig 8.8 shows the different stakeholders which lead to delay of PSU patients' discharges. Most of the discharges were delayed from billing and nursing side respectively which is same as TPA and Cash patients'.

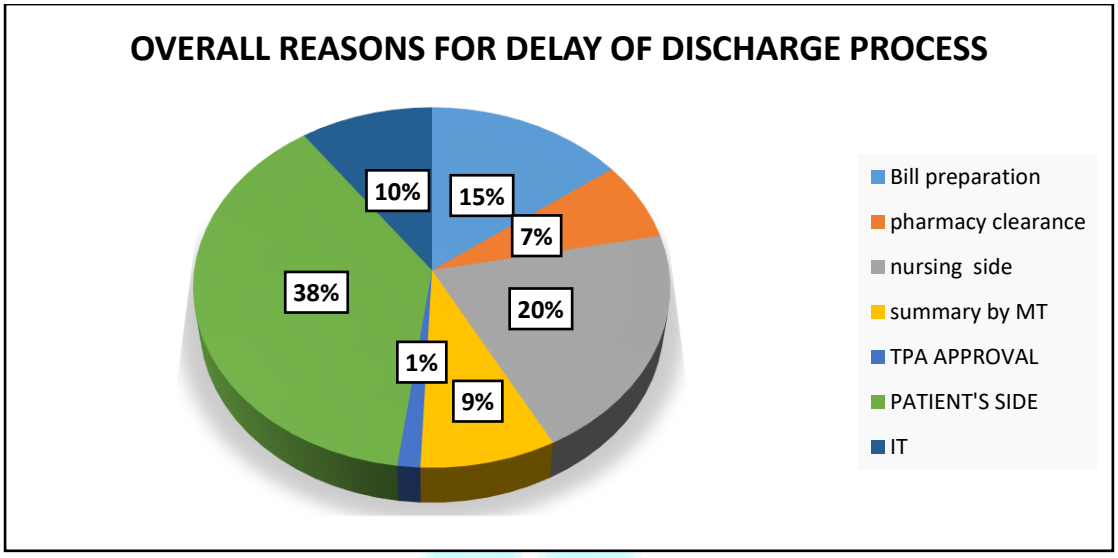


Fig 8.9 OVERALL REASONS FOR DELAY OF DISCHARGE PROCESS

Fig 8.9.1 – TABLE REPRESENT THE OVERALL REASONS FOR DISCHARGE DELAY -

STAKEHOLDERS	NUMBER OF DISCHARGES DELAYED
Bill preparation delay	21
pharmacy clearance delay	10
nursing side delay	29
Final summary delay by MT	12
TPA approval delay	2
Patients' side delay	54
IT side delay	14

INTERPRETATION

FIG 8.9 shows –

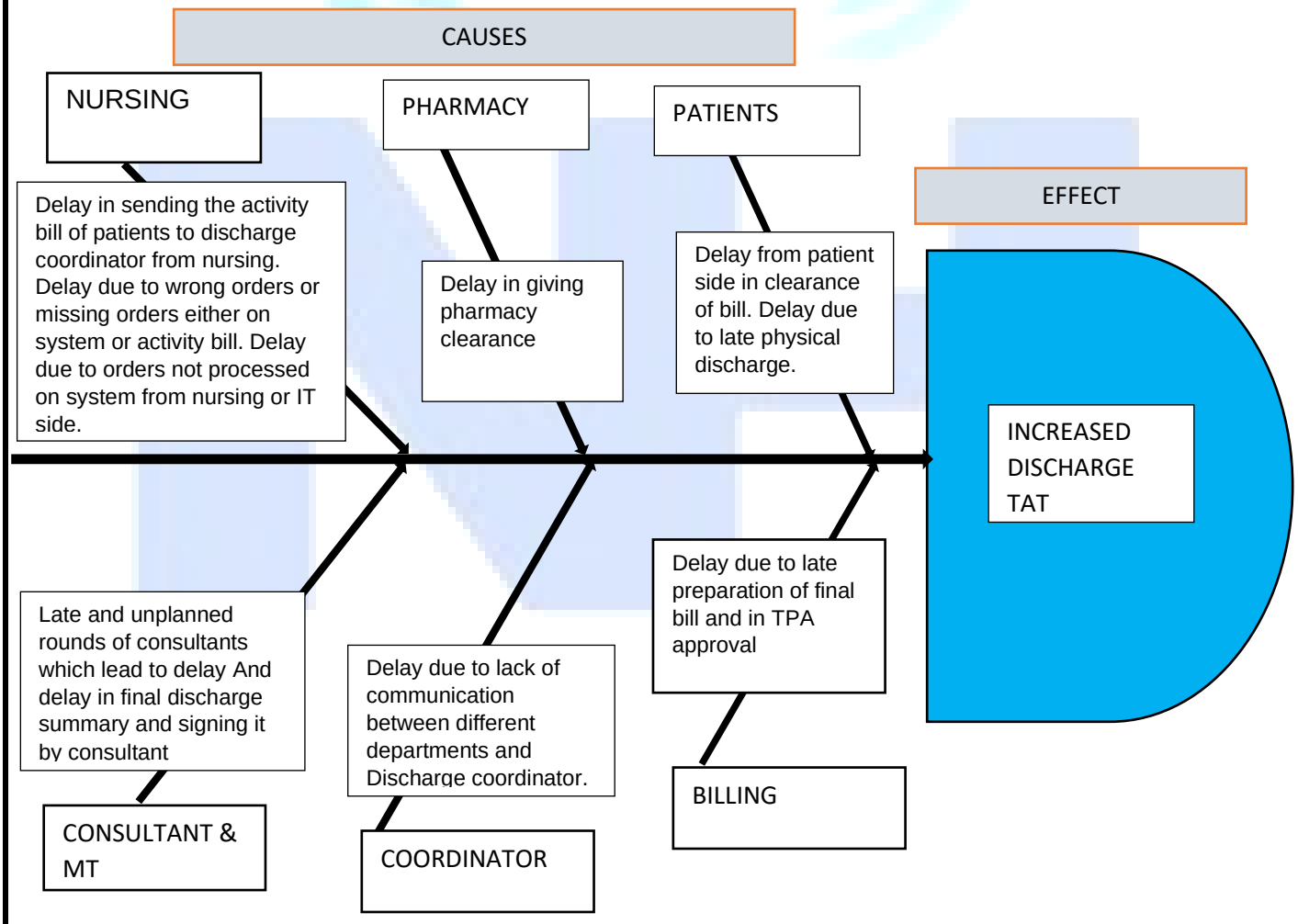
- Maximum delay occur from patients side. Patients usually take more time to settle bill and in physical discharge due to which there is increase in the TA .
- Next factor which lead to delay is from nursing side . Nursing usually sends the activity late to the discharge coordinator which lead to delay in the process or there is delay in drug return .
- 3rd factor which lead to delay of discharges is from billing department , sometimes they take time to prepare the final bill which increase the TAT.
- 4TH Factor which lead to increased TAT is from IT as they don't process the orders which leads to delay and more burden on the discharge coordinator as he/she had to process the orders.
- Others factor which lead to delay of discharges are delay in summary preparation by MT and unavailability of consultants to sign the summary , delay in pharmacy clearance & delay in TPA approval.

9 .ROOT CAUSE ANALYSIS :

According to observations , the following are reasons leading to the delay in discharge process :-

- Late and unplanned rounds of consultants which lead to delay.
- Delay in sending the activity bill of patients to discharge coordinator from nursing .
- Delay due to wrong orders or missing orders either on system or activity bill.
- Delay due to orders not processed on system from nursing or IT side.
- Delay due to unavailability of GDA to send the activity to the billing.
- Delay due to lack of communication between different departments.
- Delay in pharmacy clearance due to lack of employee or manual checking in pharmacy.
- Delay due to late preparation of final bill .
- Delay from patient side in clearance of bill.
- Delay due to late physical discharge.
- Delay in TPA approval & Enquires
- Physiotherapy/ dietician/war fin teaching unscheduled time.

Fig 9.1 – ROOT CAUSE ANALYSIS



10.RECOMMENDATIONS-

- More planned discharge and it should be actively followed .
- To keep Night billing staff so that daily activity update in billing on same date can be done and plan discharge bill will be ready a day prior and next day can be finalized and patient will be ready for discharge.
- Pharmacy usually check the record manually for giving clearance because of which it takes a lot of time. If this whole process can be digitalize and records can be maintained on system properly so it will be more accurate and will take less time.
- Maximum orders on ATHMA should be auto processed like Lab investigations, diagnostic , administrative.
- After final bill is ready , inform the patients' attendants and follow up regarding the bill settlement.
- After bill is settled , the teaching or explaining done by nursing regarding post discharge should be not be late so that physical discharge can be done on time.
- Maintaining of discharge tracker daily so that we can identify the reasons for delay and work on it to reduce TAT.
- For effective discharge process training should be conducted for different departments so that there is no misunderstanding regarding their roles .
- A day prior preparation of draft discharge summary should be practiced.
- Sensitizing the attendants availability at all time during discharge process in hospital.
- Keep 2-3 GDAs specifically for discharge so that they are available at the time of need which will reduce the time taken in receiving and sending the activity bill or files.
- Discharge coordinator should coordinate with the patients and help them if they have any queries so that patient also know where they are and how much time will it take otherwise they will get confused and anxious and keep running from one department to other which will lead to dissatisfaction

11 .CONCLUSIONS –

Through the time motion study, it was concluded that the overall discharge TAT for cash patients was found to be 10800 seconds (4 hrs 12 mins) whereas for TPA patients it was 21647 seconds (6 hrs 48 mins) and for PSU patients it was 14400 seconds (3 hrs 12 min) respectively .

It was observed that various reasons like delay in sending activities to discharge coordinator from nursing side , delay in giving pharmacy clearance , delay in final bill preparation or final discharge summary contribute to the delay in the discharge process of the patients .

12 - A STUDY ON PROCESS MAPPING OF ADMISSION AND ADMISSION TAT

12.1. INTRODUCTION

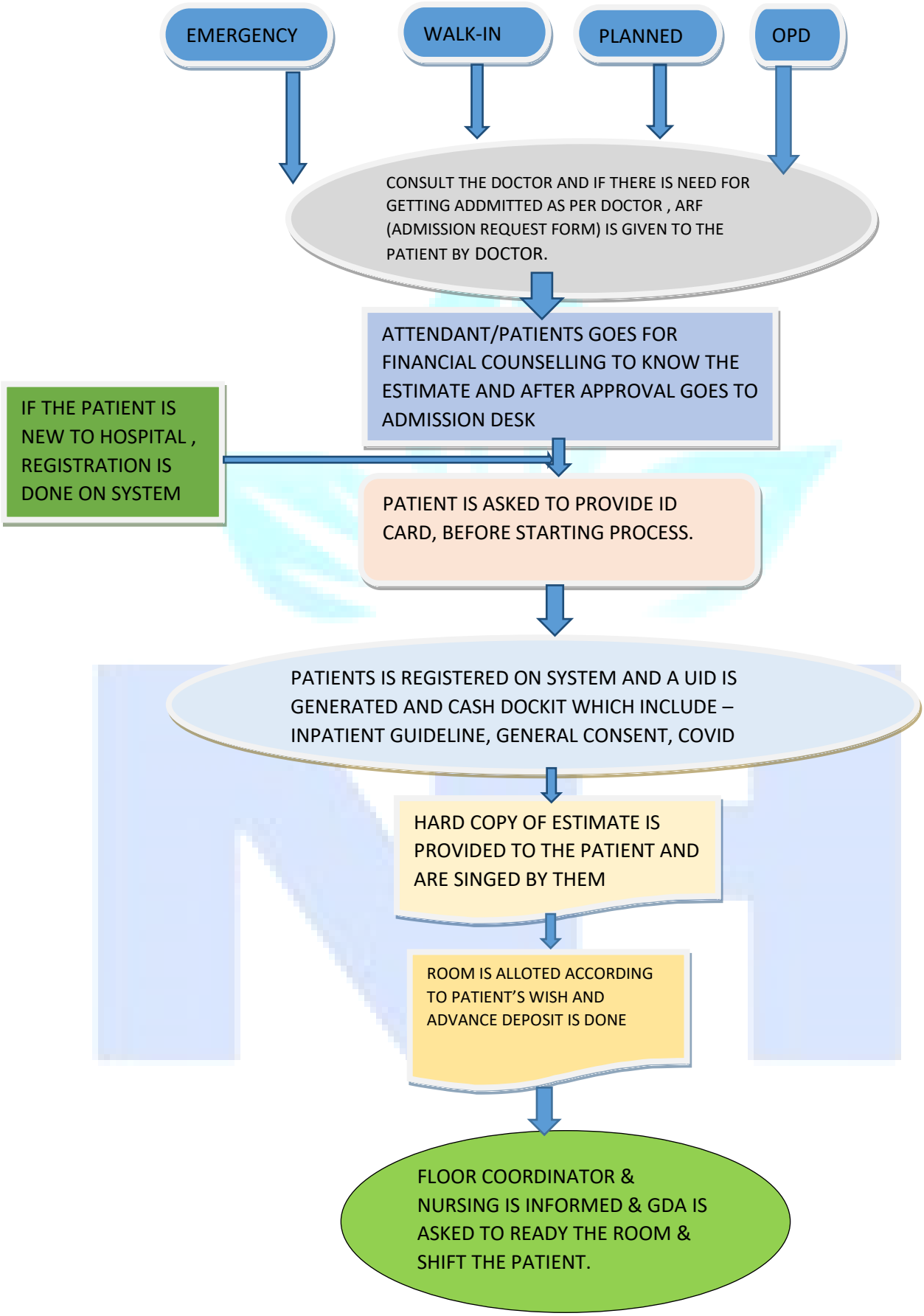
Hospital admission process includes preparation of admitting patients , perform admission process , emergency admission and billing , ward admission , transfer of patients . Admission is defined as allowing a patient to board in hospital for observation ,diagnostic, treatment and care. Admission is the entrance of a patient into a hospital for therapeutic or diagnostic purposes.

There are 2 types of admission –

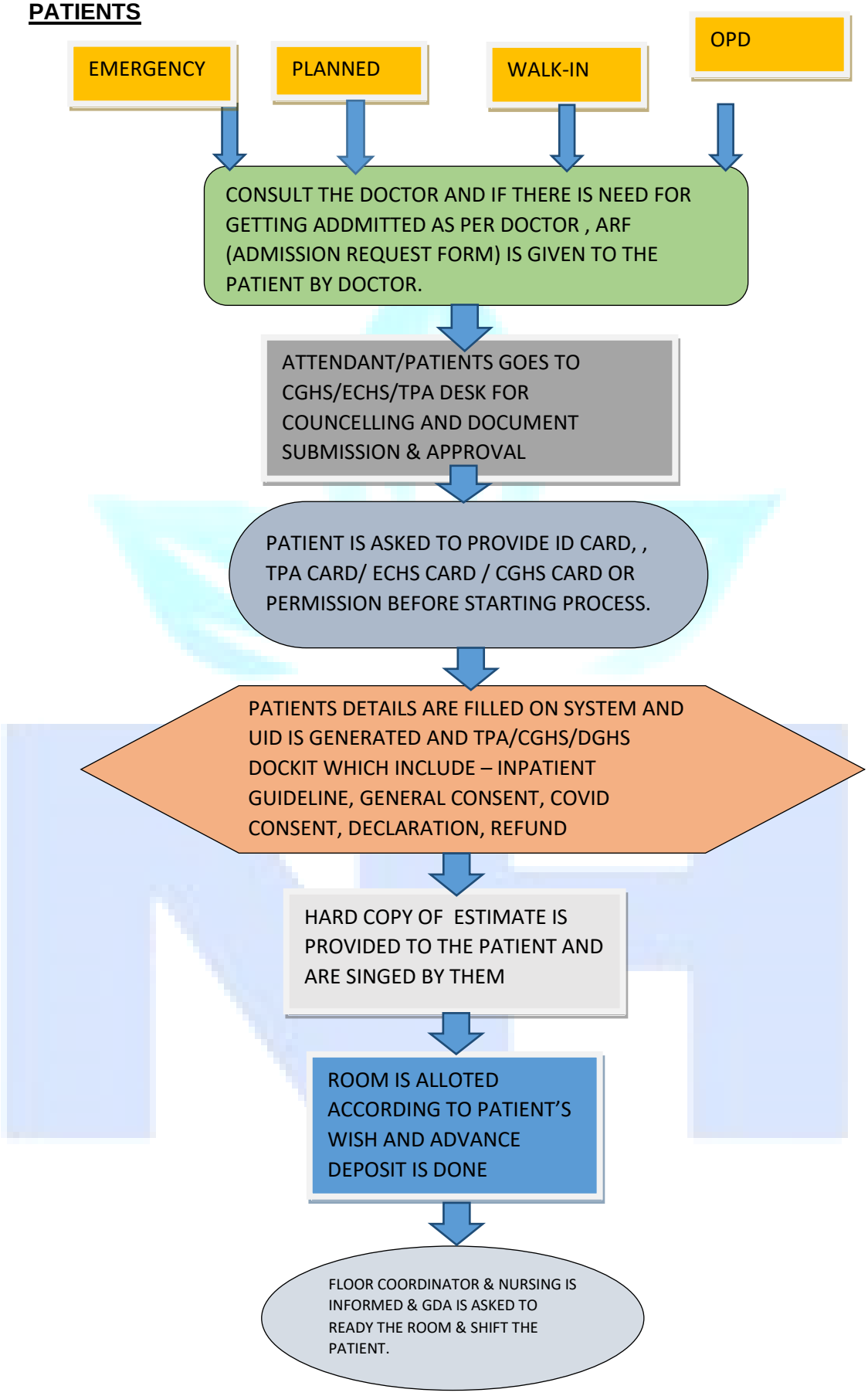
- Emergency admission – when patients are admitted in acute conditions requiring immediate treatment.
- Ward admission – when patients are admitted for investigation , diagnostics and medical or surgical treatment

12.1.2- PROCESS MAPPING

12.1.2.1- FLOW CHART OF ADMISSION PROCESS OF CASH PATIENTS-



12.1.2.2- FLOWCHART OF ADMISSION PROCESS OF TPA PATIENT / CGHS PATIENTS



12.2. DOCUMENTATIONS –

12.2.1 FOR CASH PATIENTS-

12.2.1.1- ARF

The admission request form is a form on which the patient details like name, age , sex , consultant name , department is written and reason for which patient need to admitted is written. Without ARF, admission wont be done.

12.2.1.2- ID PROOF

Any Identity card like Aadhar , passport, ration , voter Id .

12.2.1.3- INPATIENT GUIDELINES

In this form , the rent of each room is mentioned and it's the only document which is different for cash/CGHS/TPA because all have different room rents and also all the important information like the extra RMO, Dietician, Infection control charges are mentioned and also about refund policy , food charges everything which a inpatient should need to know before getting admitted in mentioned in this form.

12.2.1.4- COVID CONSENT

In this consent , patients/attendant is informed that the at the time pandemic they are coming to hospital at their own risk & if they get infected with covid , hospital wont be responsible.

12.2.1.5-REFUND DECLARATION

In this form the details of person to whom refund would be initiated if any is filled . According to hospital policy , refund less than 10,000 is given in cash but more than this is transferred online.

12.2.1.6-GENERAL CONSENT

In this , all the important points related to patients rights & responsibility , financial responsibility , confidentiality .

12.2.2- FOR TPA & PSU PATIENTS-

All documents same as above and also the following mentioned below-

12.2.2.1.TPA DECLARATION

In this , various points were explained like if TPA sends denial then hospital will charging by current tariff, if bill amount exceeds TPA amount the difference amount will be deposited and hospital is not responsible for getting approval and many more points are mentioned .

12.2.2.2.PAYABLE ITEM LIST

In this list of items are mentioned which the insurance company wont pay so they are to be paid by the patient's pocket.

12.2.2.3- TPA/PSU CARD

12.3 . OBJECTIVES-

1.To analyze the average TAT of admission process .

2. To identify the gaps in the admission process.

12.4. METHODOLOGY-

12.4.1

STUDY SETTING- the study was conducted in Narayana health , Gurugram.

12.4.2

Study Approach – The study approach used is both quantitative and qualitative.

12.4.3

Study type- The study is a observational cross sectional study.

12.4.4

Sample Size – 454 patients who got admitted in month of June 2021 in NH, Gurugram.

12.4.5

Sample duration – 15 days

12.4.6

Study population- the patients who came to NH, Gurugram for getting admission .

12.5. DATA ANALYSIS AND INTERPRETATION

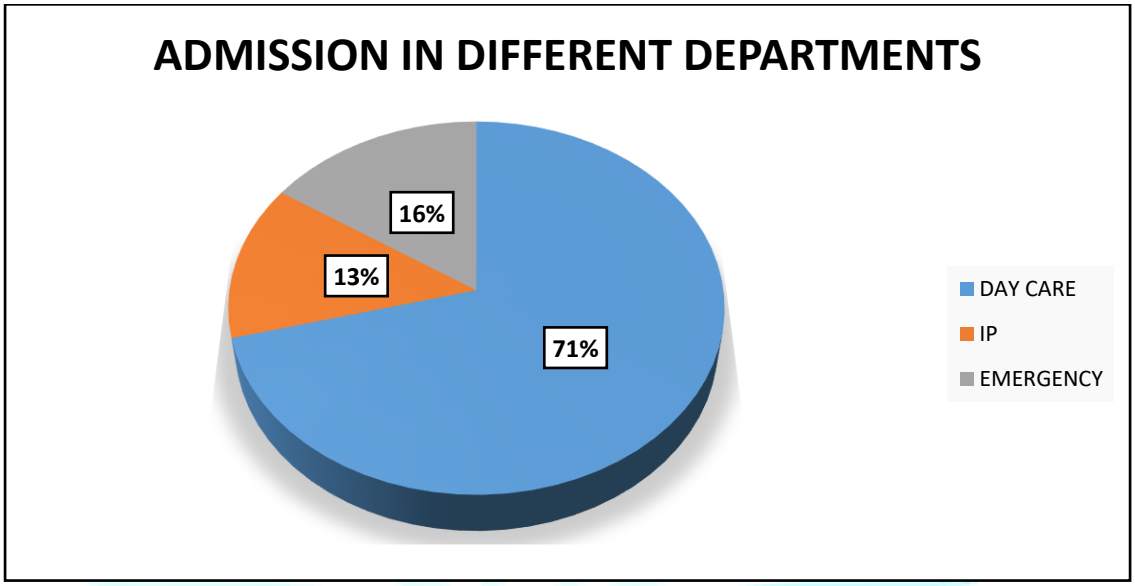


FIG 12.5.1 PERCENTAGE OF ADMISSION IN DIFFERENT DEPARTMENTS IN MONTH OF JUNE

Table 12.5.1.1- TABLE REPRESENT THE NUMBER OF ADMISSION TOOK PLACE IN DIFFERENT DEPARTMENT OF NH IN MONTH OF JUNE

DEPARTMENT	NO OF ADMISSION
DAY CARE	322
EMERGENCY	73
IP	59

INTERPRETATION

FIG 12.5.1 shows that 71% out of 454 patients were admitted to Daycare while only 13% were admitted to wards.

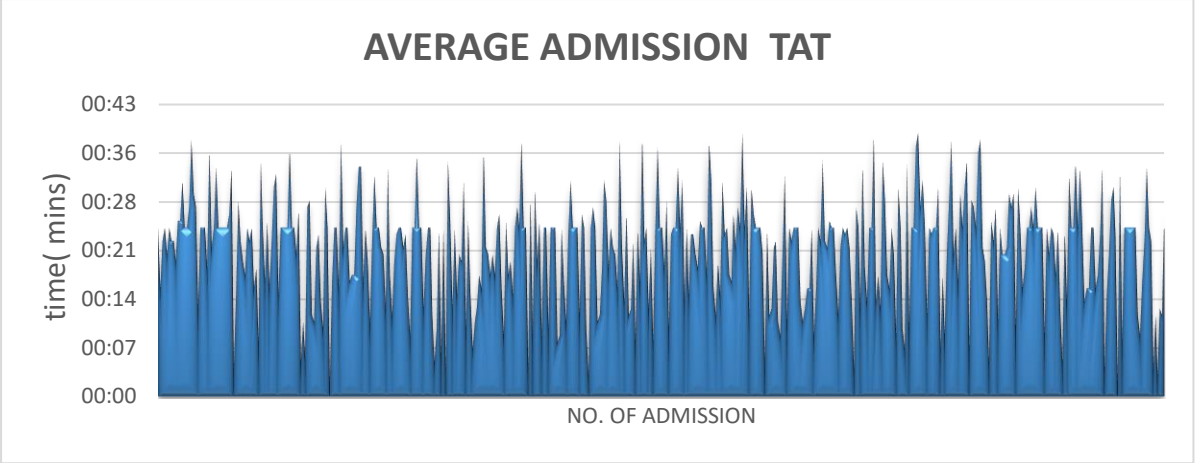


FIG 12.5.2 AVERAGE ADMISSION TAT

INTEPRETATION

Fig 12.5.2 show the admission TAT of 454 patients . The average admission TAT was 21 mins . NH, Gurugram wants the Admission TAT to be 15 min so that the waiting time is decreased and they can provide better service to patients which will lead to patient satisfaction.

12.6. REASONS FOR DELAY IN ADMISSION-

- Unavailability of the staff at the counter.
- More time is taken in financial counselling.
- Due to delay in Discharge availability of bed is decreased which led to increase in admission TAT.
- Unavailability of Cashier which put more burden on the staff and takes more time in counting cash manually and led to delay in admission.
- Documentation and signing takes times which led to delay.
- Unavailability of GDA staff lead to delay in shifting of the patients to room .
- Due to lack of communication with floor coordinator.
- Some time because of patients own reasons like they don't have ID proof or TPA card or covid negative report or waiting for someone else for documents.

12.7 .RECOMMENDATIONS-

- Digitalization of documentation to reduce the time taken in admission.
- To reduce discharge TAT so that beds are unavailable for new patients and they don't have to wait .
- More staff at the counter so that admission process is completed fast.
- Green channel patients- Patients who have planned admission and their documentation and financial counselling is done a day prior so they are directly shifted to the room they have blocked earlier and bill is updated by night billing staff so they don't have to wait for it . In this way TAT can reduce if they will increase the number of green patient.
- Start a separate cashier counter so easiness of other admission staff .
- Reduce the financial counselling time by directly contacting to doctor or Doctor's coordinator to avoid confusion .

12.8.CONCLUSIONS- The following points were concluded from the study-

- The target TAT for admission process in NH , Gurugram is 15 mins but it was found that the average TAT was 21 minutes.
- After this study it was found that the various factors like unavailability of staff at the counter , more time taken in financial counselling and documentation , delay in discharge process and unavailability of bed were some of the reasons for the increased admission TAT.

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