

**Summer Training at
ASTER PRIME HOSPITAL, HYDERABD**

10th MAY 2021 – 2nd JULY 2021

- **A Study on Satisfaction Survey of Dialysis patients regarding service delivery process in the Dialysis department of Aster Prime Hospital.**
- **A Study on TURN Around Time of diagnostic imaging procedure**

A Report

By

Rima Datta

Under the guidance of

Dr. Sheenu Jain

MBA Hospital and Healthcare Management

2020-22

Date: 05th Jul, 2021.

TO WHOM SOEVER IT MAY CONCERN

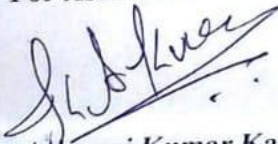
INTERNSHIP CERTIFICATE

This is to certify that **Ms. Rima Datta** student of MBA (Hospital & Healthcare Management) of the IIHMR University, Jaipur, has successfully completed her 8 weeks summer Internship under the guidance of Mr Nidhin Antony Head of Operations Management at Aster Prime Hospital, Hyderabad.

During the period of training from 10th May 2021 to 02nd July 2021 her conduct was found to be sincere, dedicated and committed.

We wish her all the best in her future endeavors.

For Aster Prime Hospital



Ashwani Kumar Kaza
Head- HR



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ACKNOWLEDGEMENT

A successful project is the product of collaboration and teamwork that involves not only the developers who present the ideas, reasoning, and efforts, but also those who lead them. The effective completion of summer training and the successful completion of this project needed a lot of help from a variety of people, and I consider myself fortunate to have so many people to help me.

Firstly, I would want to express my sincere thanks to Aster Prime Hospital in Hyderabad for providing me with the opportunity to complete my summer internship and project there.

I would like to express my gratitude to our mentors, Mr. Nidhin Antony (Head of Operations) and Dr. Priyanka Shetty (Deputy Manager of Operations) at Aster Prime Hospital in Hyderabad, for leading us through each stage and providing us with chances for prudent learning by assigning us tasks and remaining open to constructive conversations.

I would want to convey my special thanks to Dr. Sheenu Jain (Associate Professor) our mentor at the IIHMR University, for always being our continuous guides and for always being there whenever we needed their help.

I'm also thankful to Dr. Ashok Kaushik (Academic Dean), Mr. Hembhargav (Placement In-charge) for their unwavering support and encouragement during the project's completion.

Last but not the least, I would like to thank my parents, without whom I would not be here and who were always willing to assist me whenever I needed it.

Thanks

Rima datta

MBA (HM) 1st Year

IIHMR University, Jaipur

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Acronyms/ Abbreviations

OPD – Outpatient department.

IPD – In-patient department.

TAT – Turnaround time.

OT – Operation theatre

CTICU – Cardiac thoracic intensive care unit

CICU – Cardiac intensive care unit

MICU – Medical intensive care unit

HDU –High dependency unit

CT – Computed tomography

MRI – Magnetic resonance imaging

USG – Ultrasonography

Main Text:

The main text of the report will have two parts.

- (i) Observational Learning.
- (ii) Project Report.

Observational Training**Section-1: Introduction-**

According to the Frost & Sullivan Report, Aster DM Healthcare Limited is one of the major private healthcare service companies operating in various GCC states based on the number of hospitals and clinics, and a growing healthcare operator in India. Through its 20 hospitals, 112 clinics, and 213 pharmacies, the firm has a substantial presence in primary secondary tertiary and quaternary healthcare. The company operates throughout the Gulf Cooperation Council (GCC), which includes the United Arab Emirates, Oman, and Saudi Arabia, Qatar, KSA, Kuwait, and Bahrain, Jordan India and the Philippines.

The hospital network of the firm includes 9 hospitals in GCC states and 11 multi-specialty hospitals and clinics in India. It operates hospitals in Kochi, Kolhapur, Kozhikode, Kottakkal, Bengaluru, Vijayawada, Guntur, Ongole, Wayanad, and Hyderabad under the 'Aster,' 'MIMS,' 'Ramesh,' or 'Prime' brands. The firm has one of the largest and most extensive clinic networks in the Middle East. There are 112 clinics in the Aster DM network, including 103 clinics in GCC states and 9 clinics in India.



Aster Prime Hospitals provide quaternary medical treatment with world-class technology and facilities that meet global standards, ensuring that all patients get world-class care. As a leading healthcare provider, the hospital offers patients the most up-to-date technological innovations for the diagnosis and treatment of the most serious clinical conditions, as well as highly skilled medical and nursing expertise and round-the-clock personalised care to help patients recover faster. Aster Prime Hospital is a private, full-service, 204-bed multi-specialty hospital in Hyderabad's key Ameerpet neighbourhood. As one of the states of Telangana's first corporate healthcare facilities, Aster Prime Hospitals has always been in the forefront of providing international-standard healthcare services to its community right here in Hyderabad.

Mission and Vision- A compassionate mission with a worldwide goal to provide the world with accessible and affordable high-quality healthcare. Hospitals provide quaternary medical treatment with best-in-class technology and facilities that meet global standards, ensuring that all patients receive world-class care.

Values- We follow through on this promise, which encompasses all we do and why we exist. This is our guiding philosophy in our interactions with patients, physicians, workers, and society at large. At Aster DM Healthcare, we follow a set of fundamental principles that govern our organisational behaviour and decision-making, as well as the ethos that each Asterian embodies.

Objectives-

- To gain knowledge of the hospital's many services and to watch how work is done in various areas.
- To have a better understanding of the many departments of a hospital.
- To identify problems in various departments and provide suitable recommendations for change.

Section-2: Mode of data collection-

Discussions with administrative employees, HODs on managerial concerns, talking with other workers, and going through documents were all part of the data collecting process.

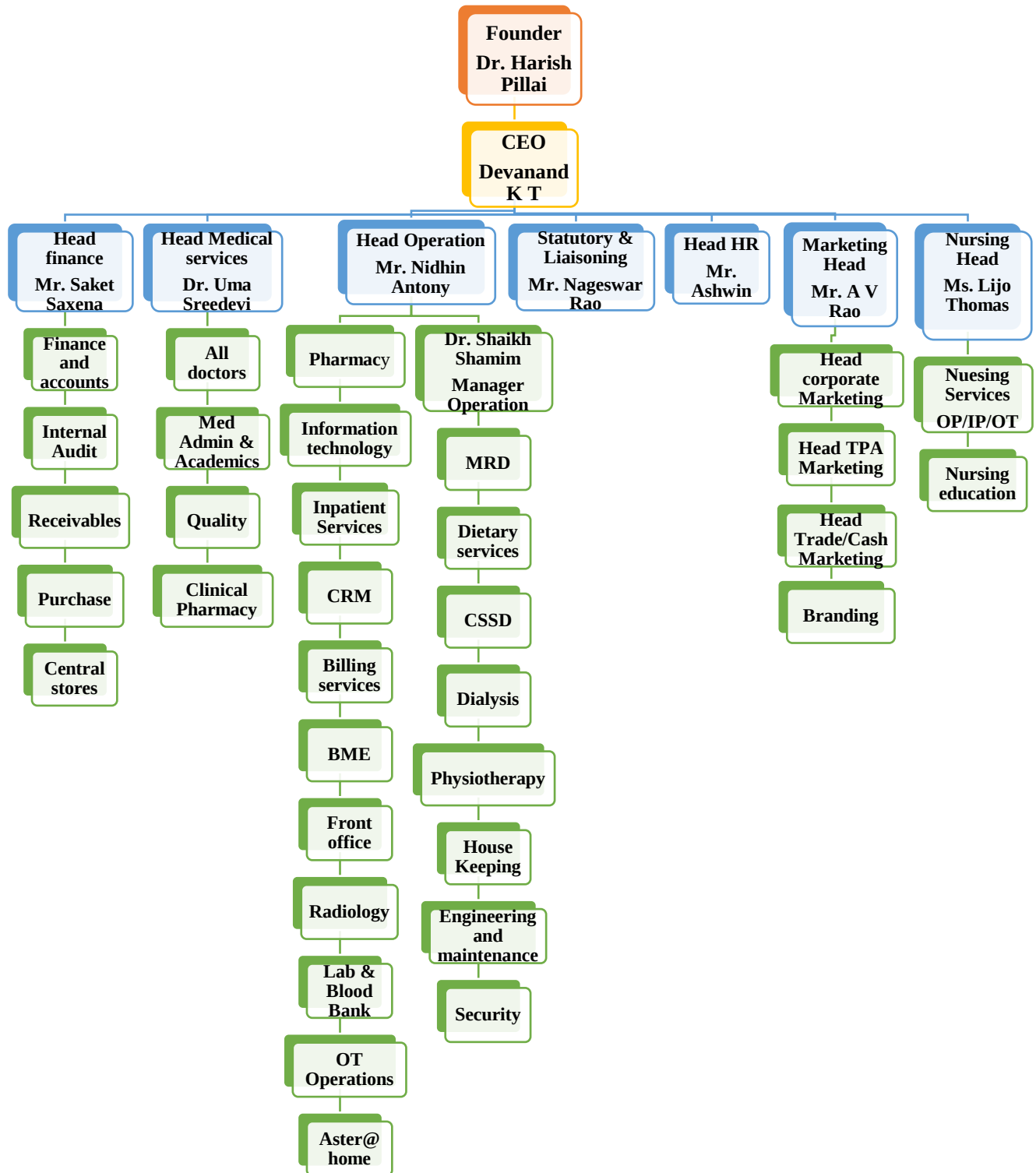
➤ Primary

- Interacting with the hospital's HODs, executives, physicians, nursing staff, and other important personnel.
- Through direct observation.

- Conducted a patient satisfaction survey to gather vital information about patients' opinions and experiences with quality services, which will, of course, aid service providers in improving processes and service delivery.
- Secondary
- Through hospital webpages.
- Through registration records.
- Magazines, booklets, brochures, CDs, and written materials regarding the hospital are available.

Section-3: General findings on learning-

Organizational chart-



Front Office-

- Patient's/their attendant's point of contact when they arrive at the facility.
- Does registration, billing, and scheduling of preventive health check-ups.
- Give reports of all diagnostic procedure to all patients.
- Insurance management.
- Gives directions to them about the locations of various diagnostic procedure rooms.

Location- First floor.

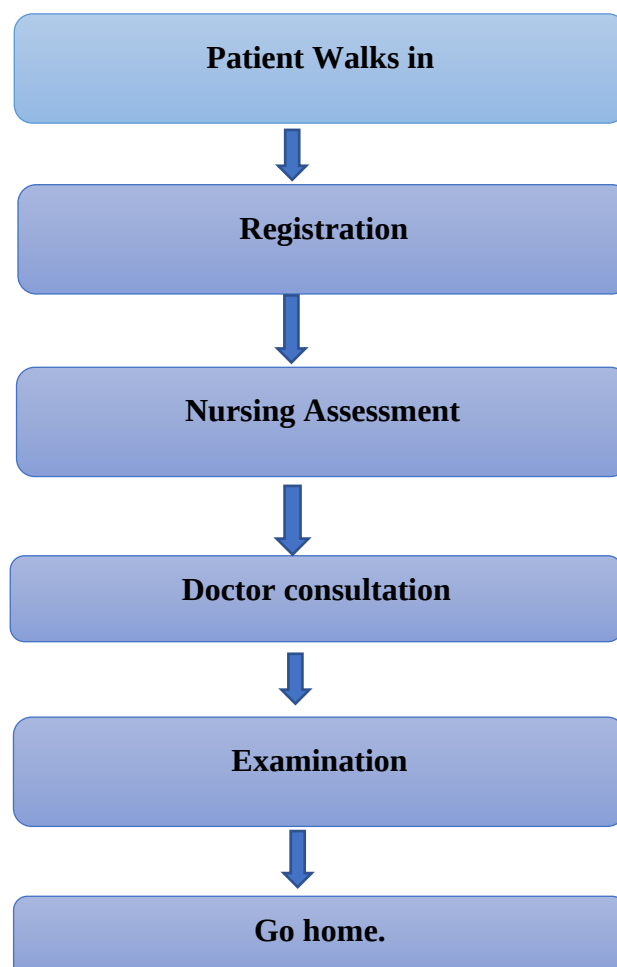
Challenges-

- Shortage of staffs.
- Huge rush during peak hours, 09:00 am to 12:00 pm and very difficult to manage crowd.

Out-patient Department-

- There is a procedure room and a front desk in every OPD. Appointments are coordinated and tracked using the hospital's information management system.

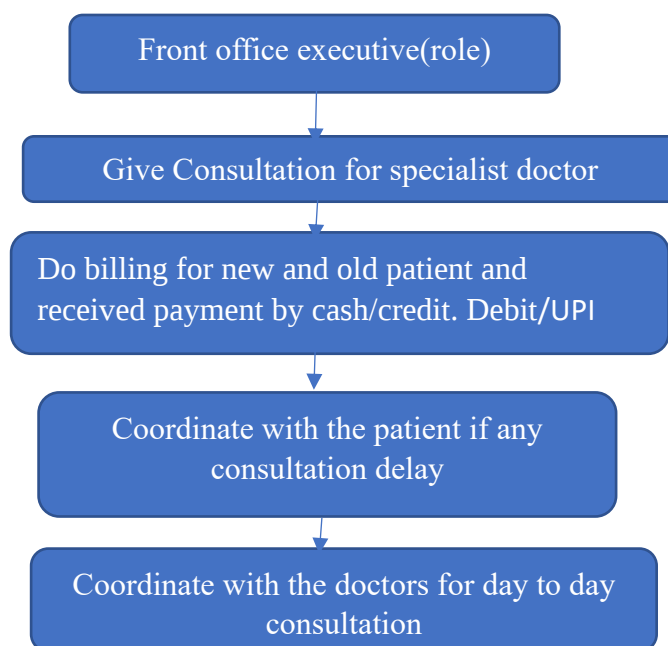
➤ Process Flow-



- The OPD of this hospital is separated into two sections. Half of the OPD is on the first floor, while the other half is on the second. In the OPD, there are 12 consult chambers. The OPD is open from 10 a.m. to 5 p.m. The seating capacity is around 120 people. There are a total of 5 front desks.
- Each OPD waiting area has the capacity to handle 30 to 50 patients waiting.
- In case of new patient, registration is done which is valid pan-max and for lifetime of the patient and a UMR no. is created which becomes a unique identification for all his health-related information.

Specialization available for consultation- Anaesthesiology, Biochemistry, Cardiology, Dermatology, DNB Cardio, Endocrinology, ENT, Gastroenterology, General physician, Gynaecology, Psychologist, Microbiology, Nephrology, Neuro-physician, Oncology, Orthopaedical, Pathology, Paediatrician, Plastic surgeon, Pulmonology, Radiology, rheumatology, Urology.

Flowchart illustration of 1-week (Out of 8 weeks) training



In-patient department-

The hospital has a total of 204 beds. These beds are separated, From the first to the sixth level.

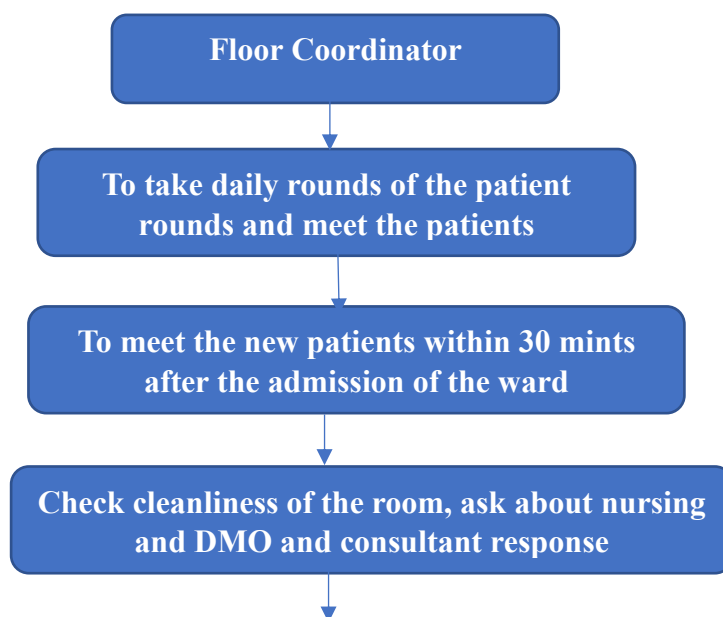
- ✓ Single and sharing bedded rooms- 22 beds- 6th floor.
- ✓ CICU- 8 beds- 5th floor.
- ✓ CTICU- 6 beds- 5th floor.
- ✓ MICU- 10 beds- 4th floor.
- ✓ HDU- 11 beds- 4th floor.
- ✓ 3rd general ward- 8 beds- 3rd floor

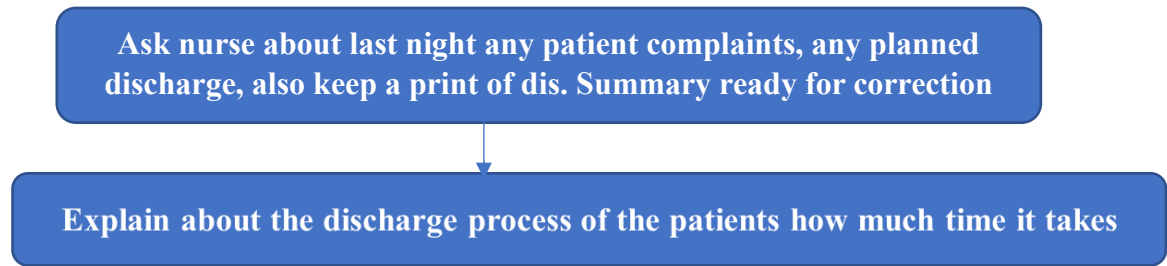
- ✓ 2nd general ward- 10 beds- 2nd floor.
- ✓ Cancer clinic- 8 beds- 2nd floor.
- ✓ Single delux room- 8 beds- 4th floor.
- ✓ Suit room- 8beds- 3rd floor.

The following are the duties of a floor coordinator, as monitored closely:

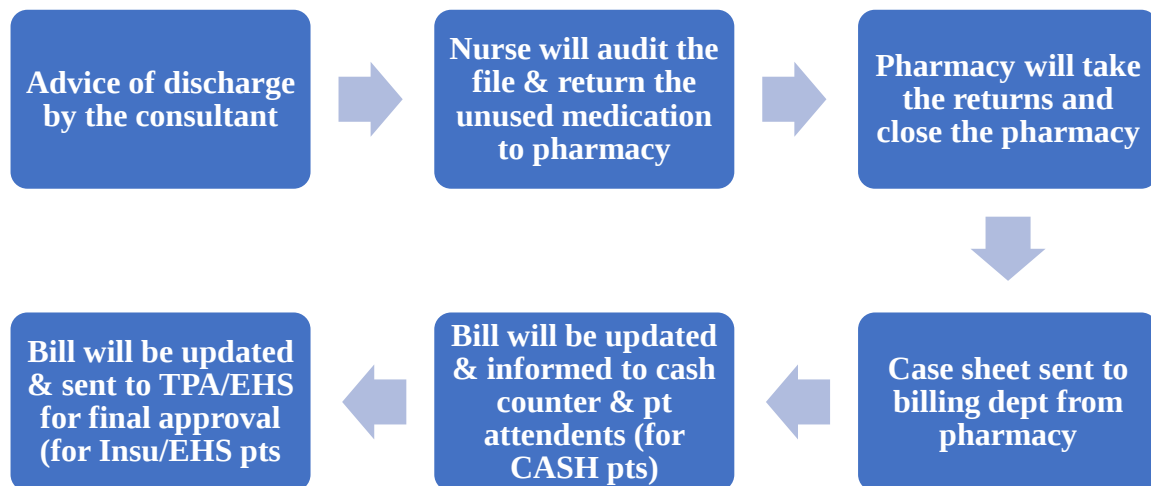
- To obtain a patient list from the hospital information system, which includes patient UMR, name, admission date, address, consultant, and sponsor information.
- To make daily rounds of each allocated ward. If it is 9 a.m. to 5 p.m., the patient's admittance order must be signed within 4 hours.
- Keeping track of discharges and following up on them.
- To address a billing issue with the patient's discharge.
- The objective of this survey is to collect patient feedback on hospital services in order to address a billing issue related to the patient's discharge.
- To guarantee that the patient's paperwork is properly completed. To ensure that the patient's paperwork is properly completed.
- To create a discharge tracker to keep track of how long it takes to complete the discharge requirements and take remedial action if necessary.
- To work with other departments to provide the highest level of patient satisfaction

Flowchart illustration of 1-week (Out of 8 weeks) training





Discharge process: -



Emergency Department-

Emergency medicine is a subspecialty of medicine that deals with the diagnosis and treatment of diseases and injuries that require rapid medical intervention. The emergency department's function at a multi-specialty hospital is to serve patients with prompt healthcare. Patients come to the emergency department for immediate care such as accidents, trauma, referrals, investigations, and so on, even though the emergency department also reacts to specific disasters within the hospital. The EMR department of Aster Prime Hospital sits on the GROUND FLOOR, facing the main road, and has its own door that only ambulances and emergency vehicles use. The road within the hospital has enough signboards directing people in the right direction. A dependent registration counter and waiting lounge are available at the emergency department. EMR has its own drugstore and pharmacy. The causality has 11 beds separated

into triage and observation sections for quick care and assessment of critically ill patients. The emergency department is staffed by emergency-trained physicians and nurses, who are backed up by on-call experts who operate around the clock.

Functions: -

- To offer emergency a medical procedure Seven days a week, 24 hours a day.
- Injured and critically sick individuals must be treated and stabilized.
- To connect and integrate with other departments, units, and organizations.
- Patients' and their families' physical and psychological needs must be met.

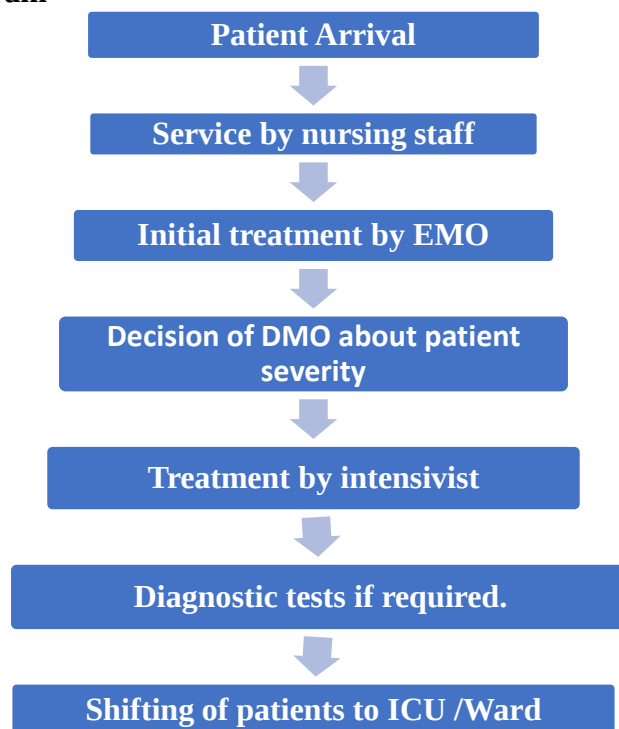
The hospital has the triage policy which follows the guidelines of patients to determine the priority of need and transportation.

Priority-1(Red)- Immediately life threatening-4 beds.

Priority-2(Yellow)- Immediately beds for life-threatening or urgent time-critical treatment or extreme pain-4 beds.

Priority-3(Green)- A potentially life-threatening scenario or a situational necessity that necessitates a thirty-minute evaluation - 3 beds.

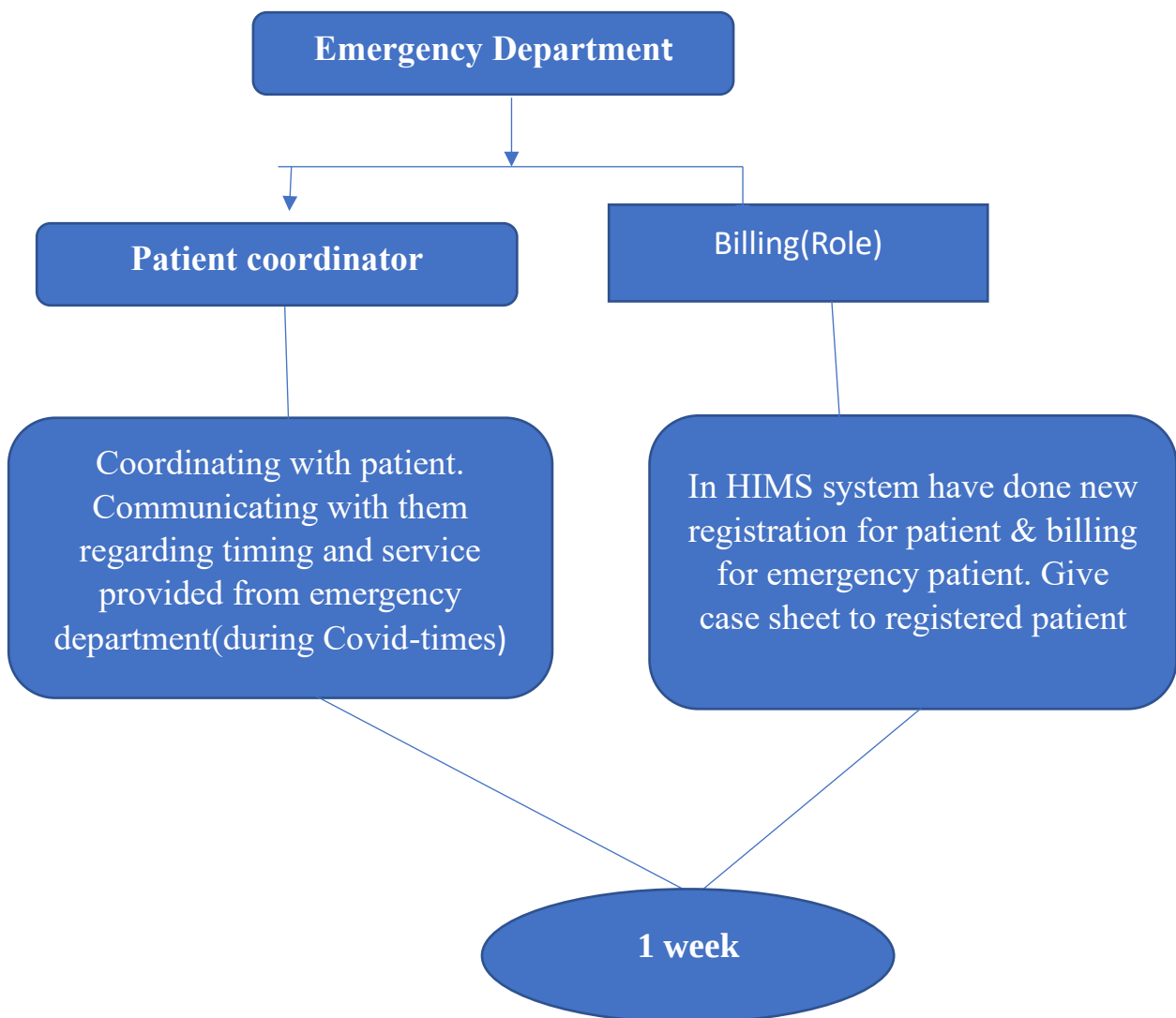
Patient flow diagram-



Investigations in the emergency room are billed at the ER registration counter.

- Referral to specialists in other fields. As needed, perform diagnostic and therapeutic treatments.
- If the patient requires admission, the admitting specialty register/consultant fills out and signs the admission request form, and the patient attendant/ER registration completes the admission procedure formalities.
- The EMO explains the hospital permission form, which is then signed by the patient attendant.
- The patient's attendant is responsible for payment (ER registration).
- Patient shifting-Bed availability is verified in the appropriate location, i.e., Ward/ICU/OT, by the nurse/ER registration, based on the state of the patient.
- The nurse informs the concerned ward/ICU/OT of the patient's shift.
- If the patient's therapy is finished and he or she is in good health, EMO will discharge the patient from the emergency room.

Flowchart illustration of 1-week (Out of 8 weeks) training



Section-4: -

Suggestion for improvement-

- ✓ Increasing nursing, cleaning, and general duty assistant personnel, as well as modifying their staffing patterns to match patient numbers.
- ✓ Minimizing the time patients spend in intensive care units (ICUs), particularly MICU patients, who experience the most delays owing to a lack of beds or personnel.
- ✓ In OPD one big screen TV should be available each floor for displaying which doctor is available every day and their consultation time. It will be easy to understand for patients no need to ask staffs.
- ✓ More manpower needs in OPD.
- ✓ The nursing staff should notify the patient of their discharge as soon as the doctor says so.
- ✓ Patients are counselled before to their scheduled discharge date on home healthcare, discharge procedures, payment, and clearance.
- ✓ Dieticians should provide timely counselling, with priority given to patients who are about to be released.
- ✓ To prevent delays in the discharge summary, just one typewriter should be employed.

PROJECT-1 TOPIC

**Satisfaction Survey of Dialysis patients regarding service delivery process in the
Dialysis department of Aster Prime Hospital**

Section-1: -INTRODUCTION TO THE TOPIC:

DIALYSIS-

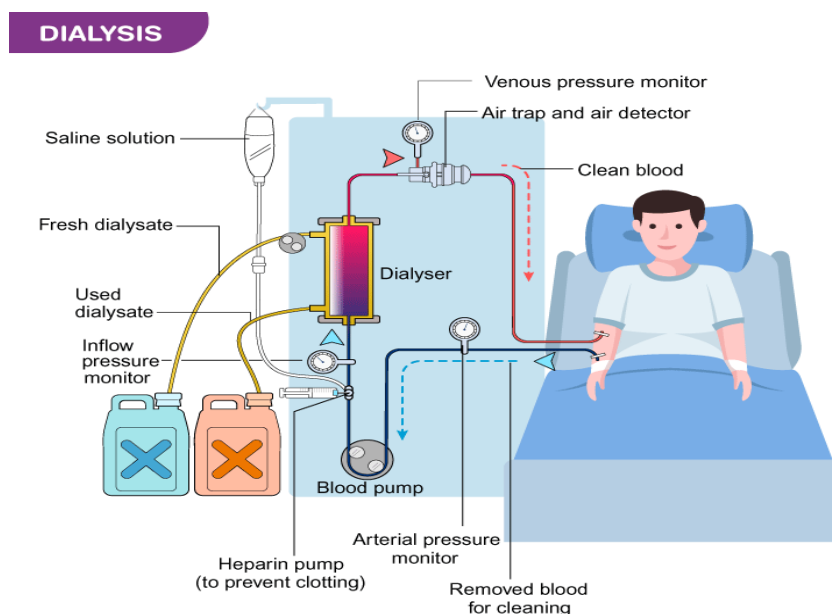
Every day, a kidney can filter 100-150 quarts of blood. When the kidneys aren't working correctly, waste builds up in the bloodstream. This can lead to a coma or possibly death. Dialysis is used to help the patient recover.

Dialysis helps to keep the body in balance by doing the following:

- It keeps your blood pressure in check.
- It flushes the body of extra water and metabolic waste.
- Prevents dangerous amounts of substances like potassium, bicarbonate, and sodium from accumulating.

Dialysis is used to treat patients who have a serious kidney problem, such as severe kidney damage or prior renal failure. It is needed when the kidneys have lost 90% of their function and the glomerular filtration rate is less than 15. Because most kidney failures are permanent, this therapy may be continued for months or years.

Dialysis is based on the ultrafiltration of fluid across a semipermeable membrane, as well as the idea of solute dissipation. Diffusion is a property of materials in water that causes them to move in the opposite direction of a concentration gradient. Dialysate or separate dialysis fluids flow on one flank of the semi-permeable membrane, while blood flows on the other. A selectively permeable layer is a thin material membrane that has pores or holes of various sizes.



Minor solutes and fluids pass through the layer, while larger substances are blocked by the membrane (for instance, large proteins, red blood cells). When blood flows into the kidneys, the larger chemicals are separated from the minor ones in the glomerulus, simulating the filtering process that occurs in the kidneys. Dialysis, on the other hand, should not be viewed as a permanent solution; rather, it should be viewed as a temporary substitute for the kidney's function until the kidney can heal itself.

Chronic renal damage, on the other hand, seldom heals on its own, necessitating a kidney transplant. Patients who have a kidney transplant have a higher life expectancy than those who receive dialysis.

Dialysis has its benefits-

- Dialysis may be done in the comfort of your own home.
- Peritoneal dialysis is a simple and pleasant type of dialysis.
- Peritoneal dialysis equipment is less bulky and easier to transport with the patient.
- Haemodialysis, unlike peritoneal dialysis, is not done every day.

Dialysis comes in a variety of forms. All of these kinds aid in the purification of the blood in some way. The types of dialysis differ depending on the technique utilised. There two major types of dialysis.

Haemodialysis-

Haemodialysis is the most prevalent dialysis technique. Using this procedure, the doctor will surgically construct a vascular entry into the body. This will allow more blood to pass through the dialyzer and back into the body after it has been purified. The vascular access is a blood vessel's entry.

Thousands of microscopic synthetic fibres function as a semi-permeable membrane inside the dialyzer. The blood that passes across this membrane of fibres is purified using a dialysis solution, also known as dialysate. To get the water out of the blood and into the dialysate, a negative pressure is utilised. The Haemodialysis procedure usually takes 4 hours. A person typically requires three haemodialysis treatments each week. Haemodialysis, on the other hand, can be done more frequently and for shorter or longer periods of time depending on the condition, demand, or disease.

doctor will undergo surgery to provide an entrance point (vascular access) into your blood arteries so that blood may pass to the artificial kidney. There are three sorts of entrance points for this:

Arteriovenous (AV) fistula- This sort of entry point that joins an artery and a vein. It is the most popular choice.

Av graft- This type is looped tube.

Vascular access catheter- A catheter may be placed into a big vein in your neck.

Peritoneal Dialysis- This is a surgical procedure of dialysis. The doctor inserts a catheter into the patient's stomach, which emerges from below the belly button. A dialysate fluid is inserted into the abdomen through the catheter. Through the tiny blood arteries in the belly, this fluid pulls waste items and excess water from the blood. Once the procedure is completed, the waste materials and excess water from the blood, as well as the dialysate fluid, are deposited into a bag via the catheter.

It is important to note that there are two forms of peritoneal dialysis - haemodialysis and peritoneal dialysis.

- Continuous ambulatory peritoneal dialysis (CAPD)
- Continuous cycling peritoneal dialysis (CCPD)

CAPD is advantageous for people who wish to get dialysis treatment while being mobile or performing other duties. It is repeated several times a day. This technique does not need the use of a machine to perform dialysis. CCPD is beneficial for individuals who do not want to be interrupted during the day. It's done in the middle of the night, while the patient is sleeping.

Staffing Pattern-

Nephrologist – 1

Technician – 9

Nursing Staff – 6

Dialysis Unit In-Charge – 2

Medical officer – 2

Housekeeping staff – 2

Trainees – 4

Shift timings –

08:00 to 12:00 PM
12:00 PM to 04:00 PM
04:00 PM to 08:00 PM

Procedure Time – Generally, one cycle of haemodialysis takes 4 hours to complete a procedure.

Infrastructure- The facility has 14 dialysis machines, including 5 for patients who are seropositive. Patients who are seropositive and those who are seronegative have their own facilities.

Charges –

Sponsors	Package	Per dialysis charge	
		Single use dialyzer	Reuse dialyzer
Cash	25000/-	3600	2000
Govt scheme (Arogya Shree)	13500/-	1000	1000
EHS	25000/-	1450	1450

LITERATURE REVIEW-

Chronic illnesses have emerged as a serious public health issue and the main cause of morbidity and death in the United States. It is impossible to correctly quantify the burden of chronic renal disease in India. The evaluation of patient satisfaction is becoming increasingly essential in the delivery of health care. There is reason to believe that higher patient satisfaction is linked to improved medical outcomes, such as fewer hospitalizations and lower death. The current study's goal is to determine how satisfied haemodialysis patients are with their dialysis treatment. Saveetha College of Nursing in Chennai did a descriptive research to measure the degree of satisfaction among 100 haemodialysis patients. The satisfaction level and quality of life of haemodialysis patients were assessed using a standardised questionnaire. According to the findings of this study, 16 percent were entirely unhappy with their dialysis treatment, 37 percent were unsatisfied, 18 percent were neither content nor dissatisfied, 12 percent were satisfied, and 17 percent were completely satisfied.

Patient satisfaction is just as essential as other clinical health indicators, and it's a key indicator of how well healthcare is delivered. In order to obtain and keep market share in today's competitive climate, healthcare organisations must focus on patient happiness. The information obtained through patient satisfaction surveys reflects the treatment provided by staff and clinicians and can be used to make

decisions. Patient satisfaction surveys may be learning aids, providing a scale for problem areas and a point of reference for management decisions. They may also be used to keep doctors responsible by requiring them to prove that they have appropriate levels of patient satisfaction.

The goal of this study is to conduct an in-depth investigation into several other research studies that more importantly discuss the relationship between dependent and influential attributes and overall patient satisfaction, as well as the impact on quality improvement within the organisation.

Before we can measure understanding satisfaction, we must first grasp what it is. How we define patient fulfilment will allow us to design an evaluation method that provides accurate estimates of the elements that contribute to a patient's level of satisfaction. (Smekal et al., 2019)

Susie Linder-Pelz (1982) gives the following definition in her study of patient satisfaction writing: "...favourable ratings of unmistakable components of the medical services," according to the definition of satisfaction. (The aspect being evaluated may be a single centre visit, treatment throughout an illness scene, a specific human service setting or plan, or the general medical services framework.) where a variety of compositions might be rather satisfying to the patient.

A patient's experience at a medical clinic is based on their interactions with a wide range of people and environments. The main experience is with the parking garage, followed by physically getting to the office, the confirmation procedure, experiences with the doctors, attendants, lab staff, and other specialist organisations and their individual physical areas, including the patient room and the consideration they receive while in their room, the release procedure, and finally the charging instalment process." (Government of India, Directorate General of Health Services, 2010).

Consistent satisfaction has been regarded as a foundational component of wellness result quality across the board, making it a vital measure for clinics (Heidegger et al., 2006). With the growing interest in tolerant fulfilment, a variety of surveys and instruments have been developed to estimate and assess it (Gill and White, 2009)

ABSTRACT-

Most safety breaches in a complicated high-risk environment are caused by unintentional human mistakes. Dialysis care takes place in a highly complicated environment. Dialysis patients' physiologies are unique and evolving, and the dialysis routine involves many open-minded exchanges between physicians and a range of technologically advanced equipment. Mistakes in communication, both inside the dialysis facility and during the care transition, as well as policy and procedure violations, are all major causes of safety risk. Air emboli and needle dislodgments, for example, are uncommon but extremely dangerous. Unfavourable events include medication errors, patient falls, catheter and access-related

infections, access infiltration, and prolonged bleeding. A solid safety system should consider how several, consecutive errors might lead to harm. Care systems can be enhanced by combining the results of root cause analysis with "good catches." To proactively identify and minimize high-risk zones, failure mode impacts and analysis may be used, and cognitive psychology, simulation training, and human factor engineering techniques can be used to improve facility safety.

OBJECTIVES-

- The purpose of this research is to look into the dialysis patients' service delivery procedure.
- To assess patient satisfaction with the services offered to dialysis patients from the time they enter the hospital until they leave.
- To identify process bottlenecks and make recommendations for improvement.

Section-2- RESEARCH METHODOLOGY

Study Area- Dialysis department at the Aster Prime hospital.

Study design- Descriptive-Cross Sectional study.

Research tool- Semi structured questionnaire.

Study population- All patients undergoing dialysis on a day care basis(n=107).

Study duration- 1 month

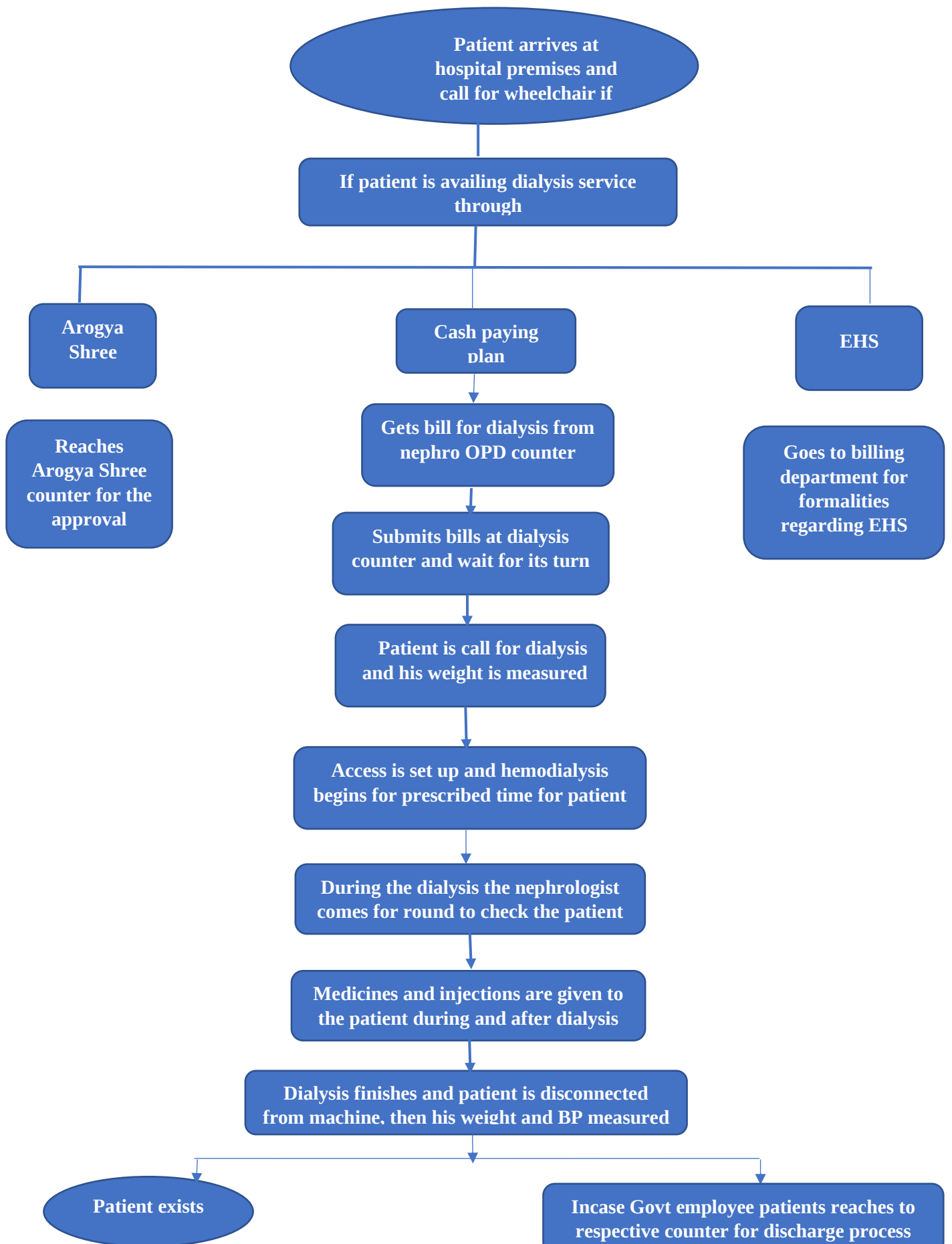
Sampling method- Convenient sampling

Data collection- Personal interview.

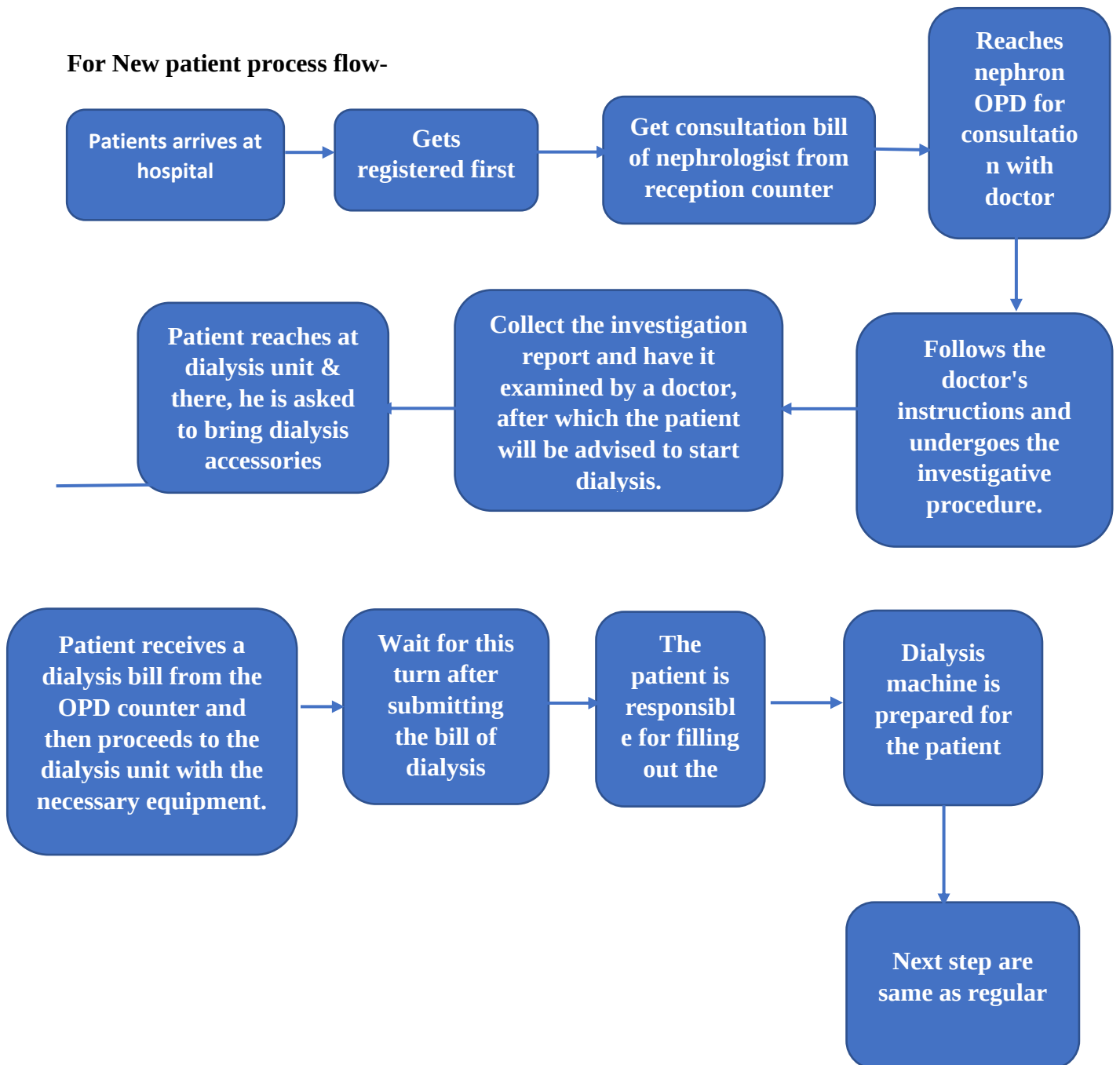
MODE OF DATA COLLECTION-

The information was gathered using a standardized questionnaire and a personal interview with the patients.

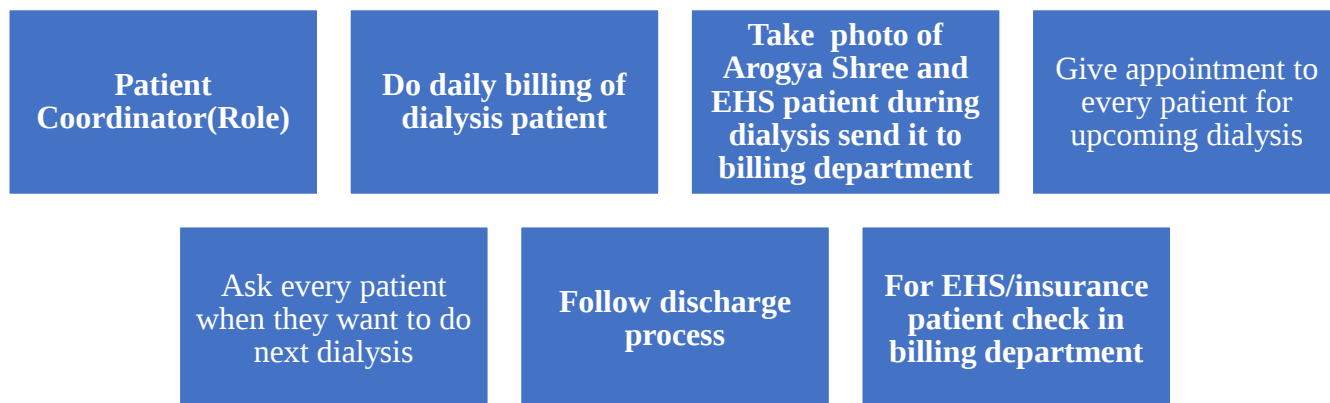
For OPD patient (Regular)-



For New patient process flow-

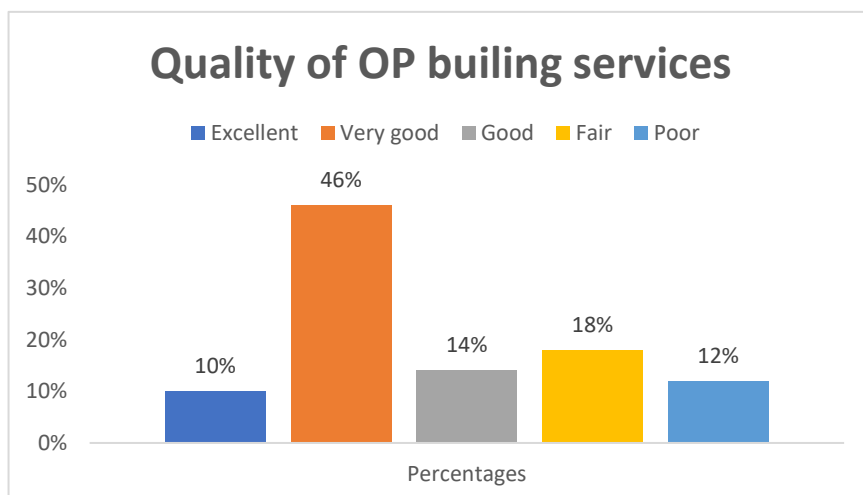


Flowchart illustration of 3-weeks (Out of 8 weeks) training



Section-3: - FINDING AND ANALYSIS

- OPD billing services-

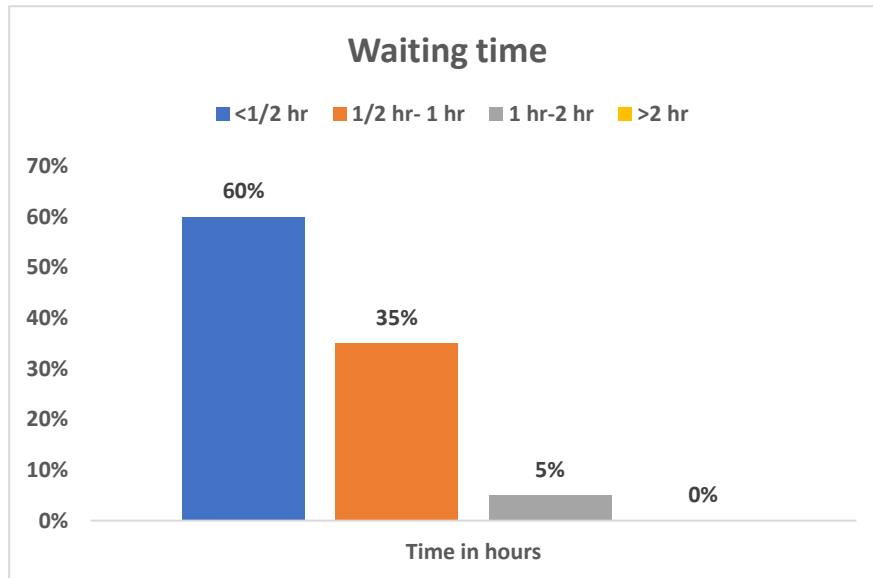


Excellent	5
Very good	4
Good	3
Fair	2
Poor	1

INTERPRETATION-

According to the graph, around 46% of patients were happy with OPD billing services, while just 12% were dissatisfied.

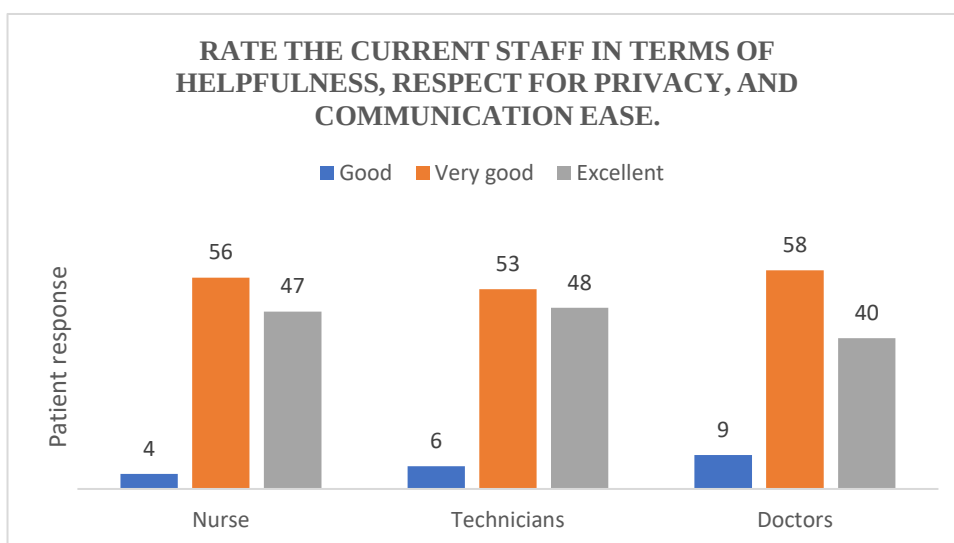
- **Waiting time: -**



INTERPRETATION-

The graph above reveals that 60 percent of patients waited between one and half an hour and one hour from the time they were billed until dialysis began, while just a few individuals waited between one hour and two hours.

- **Staff behaviour: -**

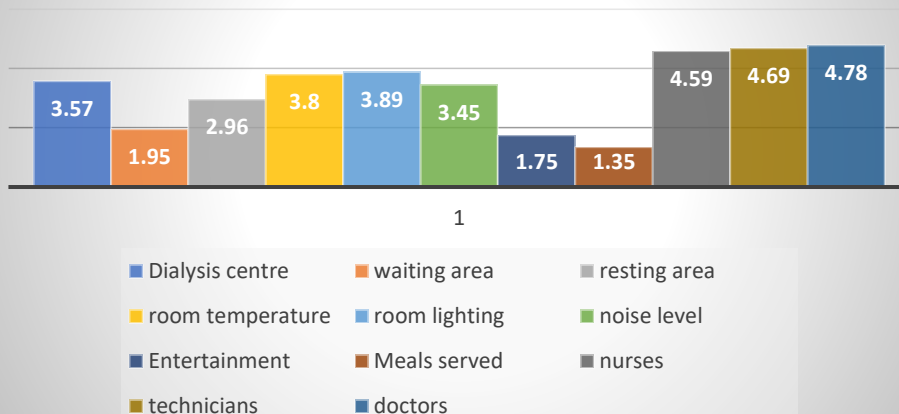


Excellent	5
Very good	4
Good	3
Fair	2
Poor	1

INTERPRETATION-

This demonstrates that most dialysis patients were quite pleased with the treatment they received.

AVERAGE OVERALL SATISFACTION RATING FOR DIALYSIS UNIT SERVICES



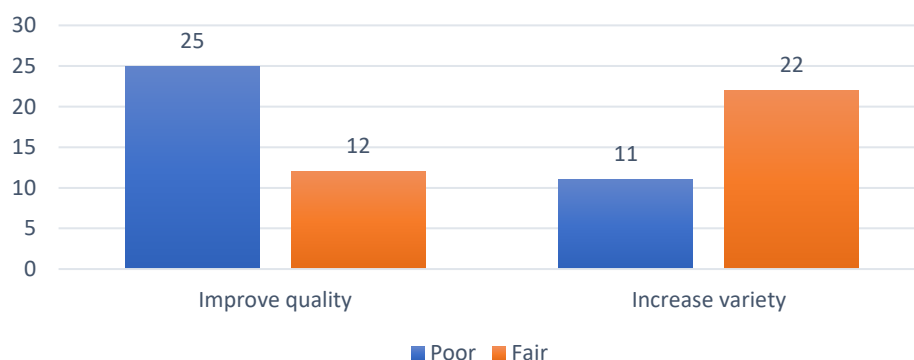
Excellent	5
Very good	4
Good	3
Fair	2
Poor	1

INTERPRETATION-

The concerned areas in this graph are the waiting area, resting area, and food services.

- **Food services: -**

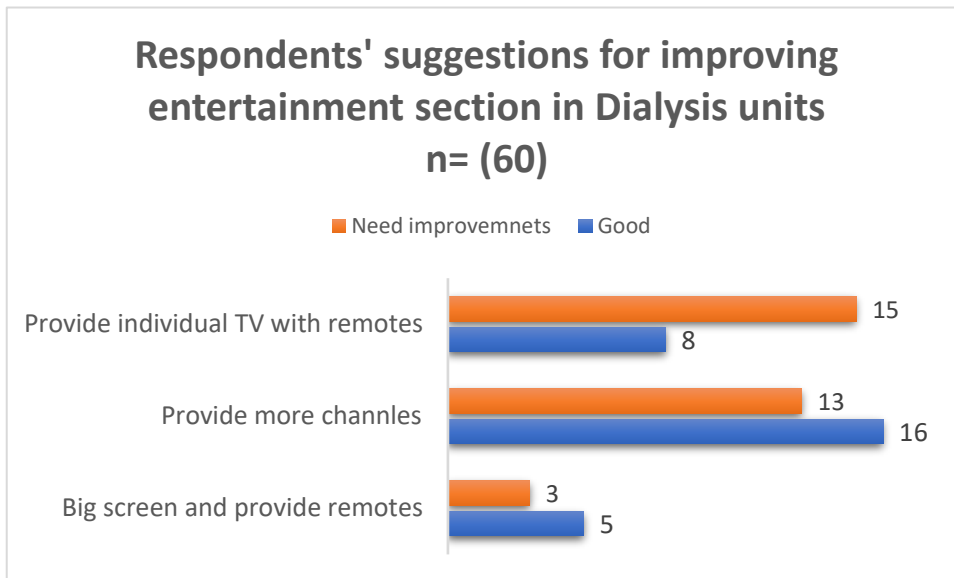
SUGGESTIONS FOR IMPROVING THE MEALS PROVIDED BY THE RESPONDENTS(n=70)



Excellent	5
Very good	4
Good	3
Fair	2
Poor	1

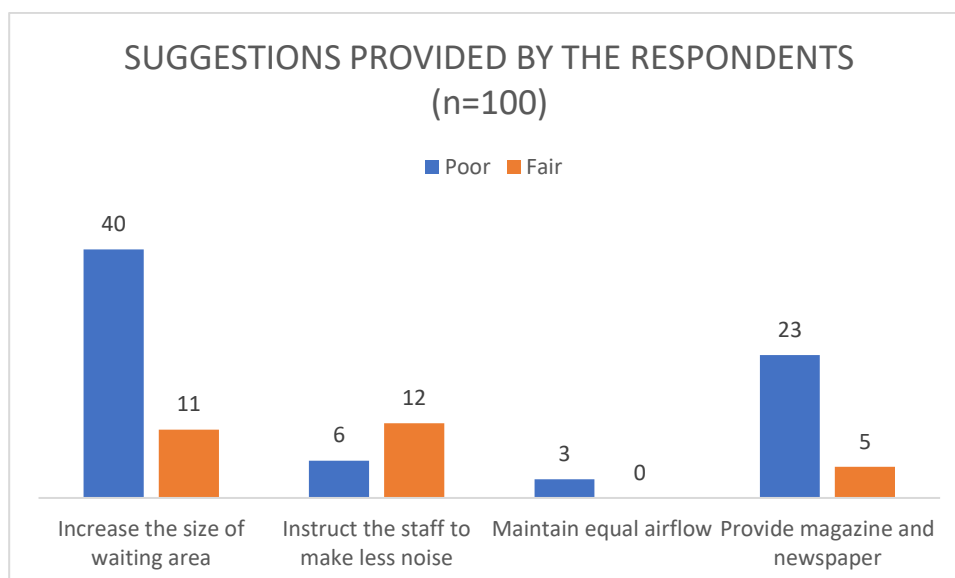
INTERPRETATION-

More than half of the patients are dissatisfied with the meal service, according to the data. Patient wants food quality to be enhanced and greater variety of meals to be supplied on a regular basis, as seen in the graph.



INTERPRETATION-

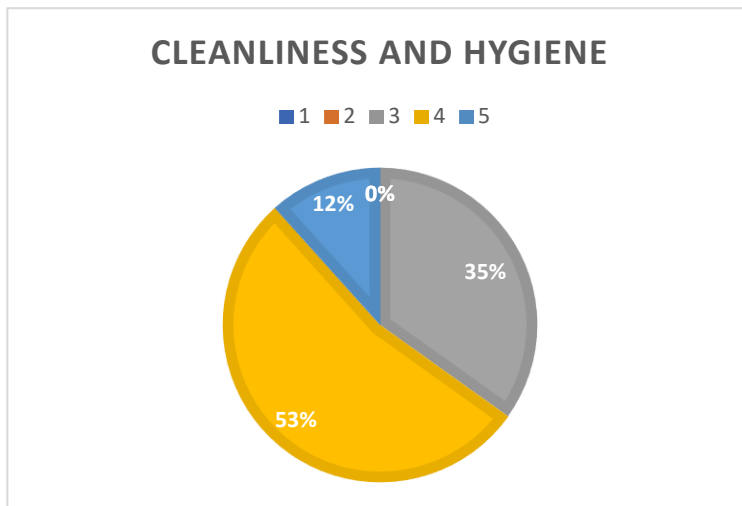
Many patients believe that the dialysis unit's entertainment section should be enhanced.



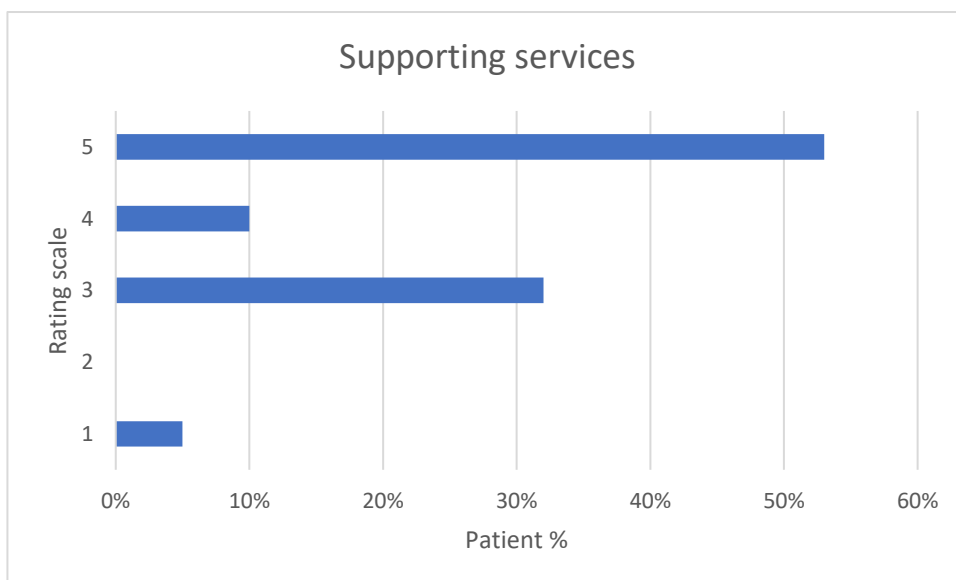
INTERPRETATION-

Respondents provided suggestion regarding increase the waiting area and also to provide magazines and newspaper.

- **Cleanliness and Hygiene-**



- **Supporting Services**



INTERPRETATION-

According to the graph above, most patients were happy with the cleanliness of the dialysis unit and the support services they received.

RESULT AND OBSERVATION-

- ✓ Due to billing delays, about 1/3 of the patients were dissatisfied with the OPD billing services (specifically in morning shift).
- ✓ Due to rising wait times, around 35% of patients had to wait longer than one and half an hours.
- ✓ Due to the late arrival of morning shift patients, the scheduling of non-shift patients is delayed.
- ✓ During morning shifts, dialysis staff allows patients to get dialysis without having to pay a fee (as their dialysis gets started but their bills comes after that).
- ✓ Between the dietician and the patient, there is a communication gap.
- ✓ More than half of the patients were dissatisfied with the food and beverage services due to poor food quality and long wait times for meals.
- ✓ Patient must wait for dialysis due to the failure of some equipment.

CONCLUSIONS-

Assessing patient satisfaction is a straightforward and cost-effective method of evaluating hospital services, and it aids the business in maintaining and enhancing its service quality for the goal of customer satisfaction and retention. With the results of the study, we can infer that the hospital's extra services, such as entertainment, waiting areas, and food, were the source of the majority of the difficulties. To summaries, more effort may be made to improve the patient experience.

Section-4: - RECOMMENDATION-

- ✓ At the dialysis OPD counter, a system (PC) is required.
- ✓ Patients on the early shifts should have their own billing services.
- ✓ To entertain patients and attendants, more facilities should be given in the waiting room.
- ✓ Another suggestion may be to provide magazines and newspapers, as many of the responders are educated and so more likely to accept them.
- ✓ The dietician on duty can give patients one-on-one counselling to help them understand the benefits of the food offered here against the dangers of store-bought food.
- ✓ To combat patients' perceptions of a lack of diversity, the menu for the following session can be posted ahead of time so that the patient can check out the variety offered and, over time, learn that hospital-provided food is superior to store-bought food.
- ✓ In a dialysis unit, one doctor should be always on call.
- ✓ Inside the dialysis unit and waiting room, a visual display should be available.

- ✓ Machines should be inspected and maintained on a regular basis.
- ✓ Because the TAT is less than 20 minutes, the patients are taken to the dialysis session right away, but patients' relatives must adhere to a strict rule of sitting in the adjacent wing's waiting area while the patient is being dialyzed and only being allowed to assist the patient during the lunch/food session.
- ✓ Provide remote controls for each patient's television.
- ✓ The lack of diversity in the menu given is the primary issue of the meal service. To combat this, the dietician on duty can give one-on-one counselling to patients, educating them on the benefits of the food supplied here as well as the dangers of store-bought food.

Action Plan-

- Due to billing delays- To begin, an additional billing counter with a dedicated PC must be established. To put this plan into action, we must first form a team to work on it. The members of the team will first study the problematic situation of the OPD billing counter and then create a PowerPoint presentation to present to the higher authorities for implementation. Once the presentation has been presented to the higher authorities for implementation.
- Then, at a subsequent meeting with higher authorities, we will discuss how we can implement this idea in our hospital by appointing more staff to the newly opened OPD billing centre with specialized computers for smooth and faster billing, resulting in less crowding and chaos in the morning, and thus our plan can be implemented in our hospital in this manner.
- For waiting area- Now, in order to overcome this problem, we must follow a few actions. First, we must form a team to oversee this problematic issue and prepare a power point presentation to submit it to the hospital's higher authorities. If they agree and appreciate our plan, we will discuss the method for putting it into action at a later meeting.
- To put this plan into action, we will need to hire some temporary workers for a few days to redesign the waiting and patient rooms to make them more appealing.
- For entertainment reasons, the room should be outfitted with LCD/LED displays. The hospital should then add speakers with calm music, which will provide a rich and relaxing experience for both the patient and the visitor, as well as internet, charging outlets, and wellness facilities. Visitors and patients are better amused when books, periodicals, and newspapers are available.
- We can make this space more entertaining in this way, and we all know that happiness is half the cure for any ailments, so this will make both the patient and their family members who are waiting outside in the waiting area happy.

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PROJECT-2-TOPIC

Study on TURN Around Time of diagnostic imaging procedure

Section-1: -Introduction to the topic-

Radiology is being asked to be the medical six-million-dollar man in today's healthcare climate; this speciality is supposed to be better, stronger, and quicker than ever before. The fastest radiology report turnaround time is critical to achieving this goal. The pursuit of the quickest turnaround time is nothing new. For over a decade, it has been the holy grail in radiology in many respects. The suppliers, on the other hand, are grappling with the question of how fast is too fast. The turnaround time varies. Some exams take 15 minutes to complete, while others may take up to an hour. The goal of this research is to look at the many stages that go into improving TAT and provide solutions that can be implemented without compromising diagnostic accuracy or provider efficiency.

We looked at four different diagnostic methods in this study-

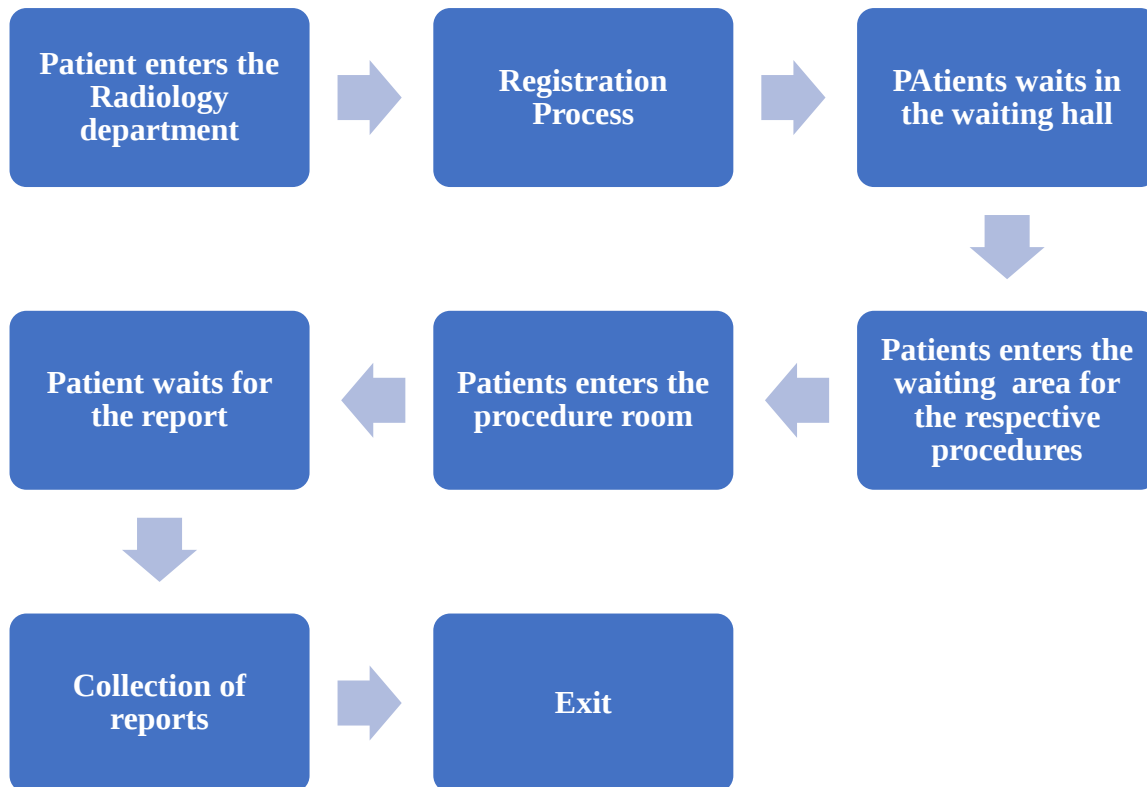
- X-Ray.
- Ultrasound.
- CT scan.
- MRI.

PROCESS:

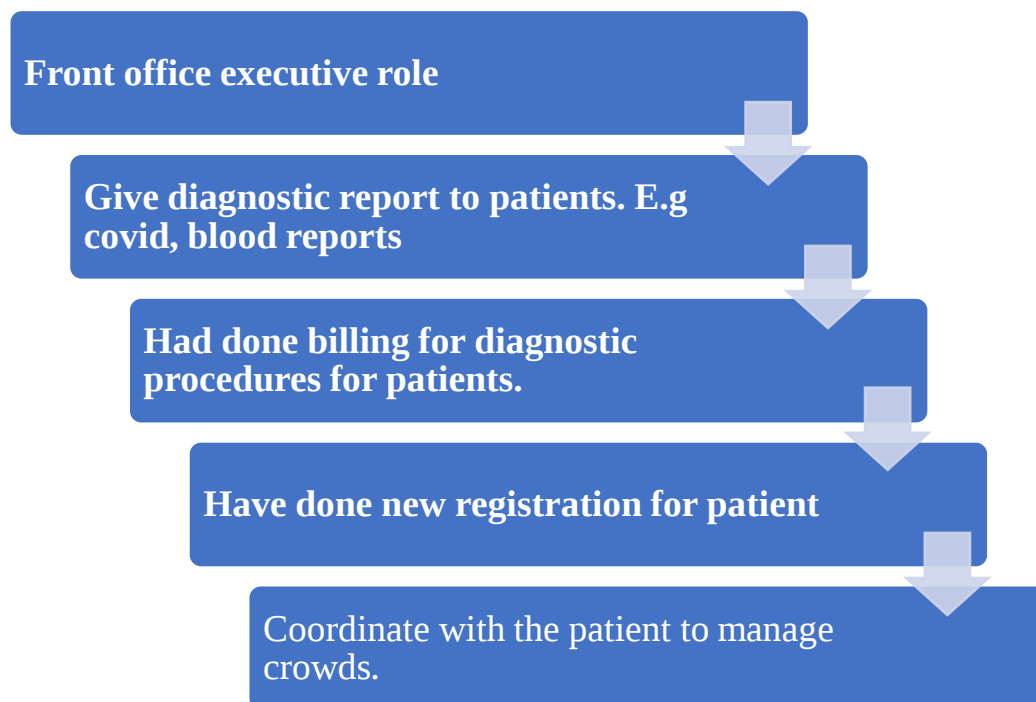
The hospital's standard TAT was compared to the average time spent in these operations, as well as a root cause analysis of the causes that caused the delay. It's the amount of time it takes for a diagnostic process to go from registration to report generation. For different procedures, the typical TAT at Aster Prime Hospital in Hyderabad is-

PROCEDURES	TURNAROUND TIME
X-RAY	3 HOURS
ULTRASOUND	1 HOUR
CT	3 HOURS
MRI	4 HOURS

PROCESS FLOW IN THE DEPARTMENT:



Flowchart illustration of 2-weeks (Out of 8 weeks) training



RESEARCH OBJECTIVES-

- To do a root cause analysis of the causes of an increased TAT, in the radiology department of Aster Prime Hospital,
- To provide a viable solution for reducing TAT in the radiology department of Aster Prime Hospital.

Literature Review-

In their study "the turnaround time to a generic timeline: A systematic review of TAT definitions in clinical domains," Odhiambo et al. (2015) found that the following 15 terms contribute to turnaround time: admission, order, biopsy/ examination, receipt of specimen, procedure completion interpretation, dictation, transcription, verification, report available, delivery, physiatrist, physiatrist, physiatrist, physiatrist, physician.

In their study, Humphires et al. stated that the various methods for improving the TAT were shifting the CT technologist hours to cover the busier part of the day, use of wireless communication devices by the staff, and supervisors assigning daily scorecards to their technicians and based on their results, the CT protocol was changed to employ less indirect contrast more appropriately.

Section-2-RESEARCH METHODOLOGY

Research Area- The study had been carried out in the radiology department of Aster Prime hospital.

Research design- Descriptive cross-sectional study

Study period-2 weeks

Sample design- Convenient sample technique.

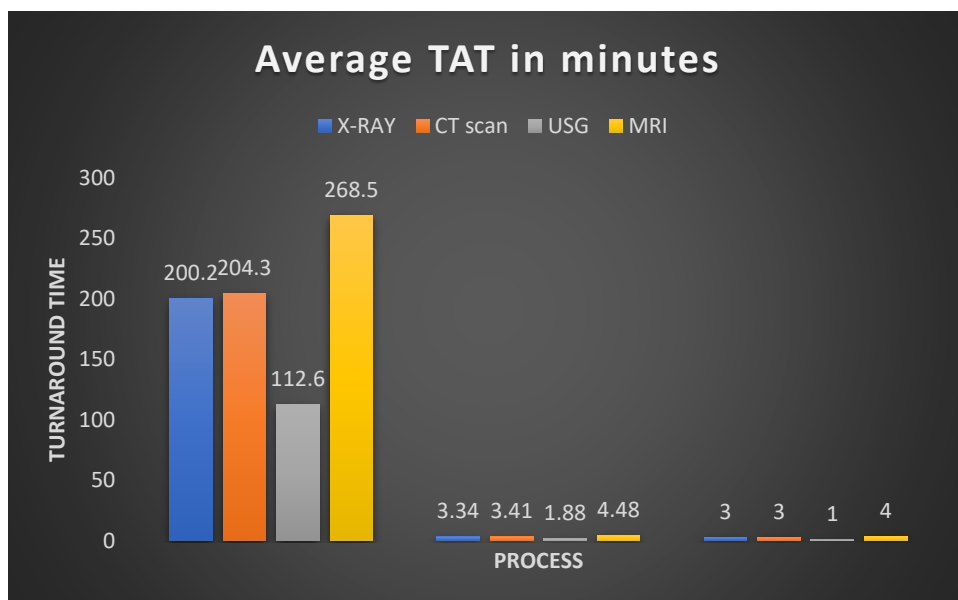
Sample size- MRI-44, X-ray-148, CT scan-105, USG-32.

Section-2: -Mode of data collection

Primary data through observation.

Section-3: -FINDINGS AND ANALYSIS

- The graph below depicts the average TAT for each of the four diagnostic procedures performed at Aster Prime Hospital.



The graph depicts the average TAT in minutes.

- The table below displays the average TAT for various operations as well as the hospital's standard TAT.

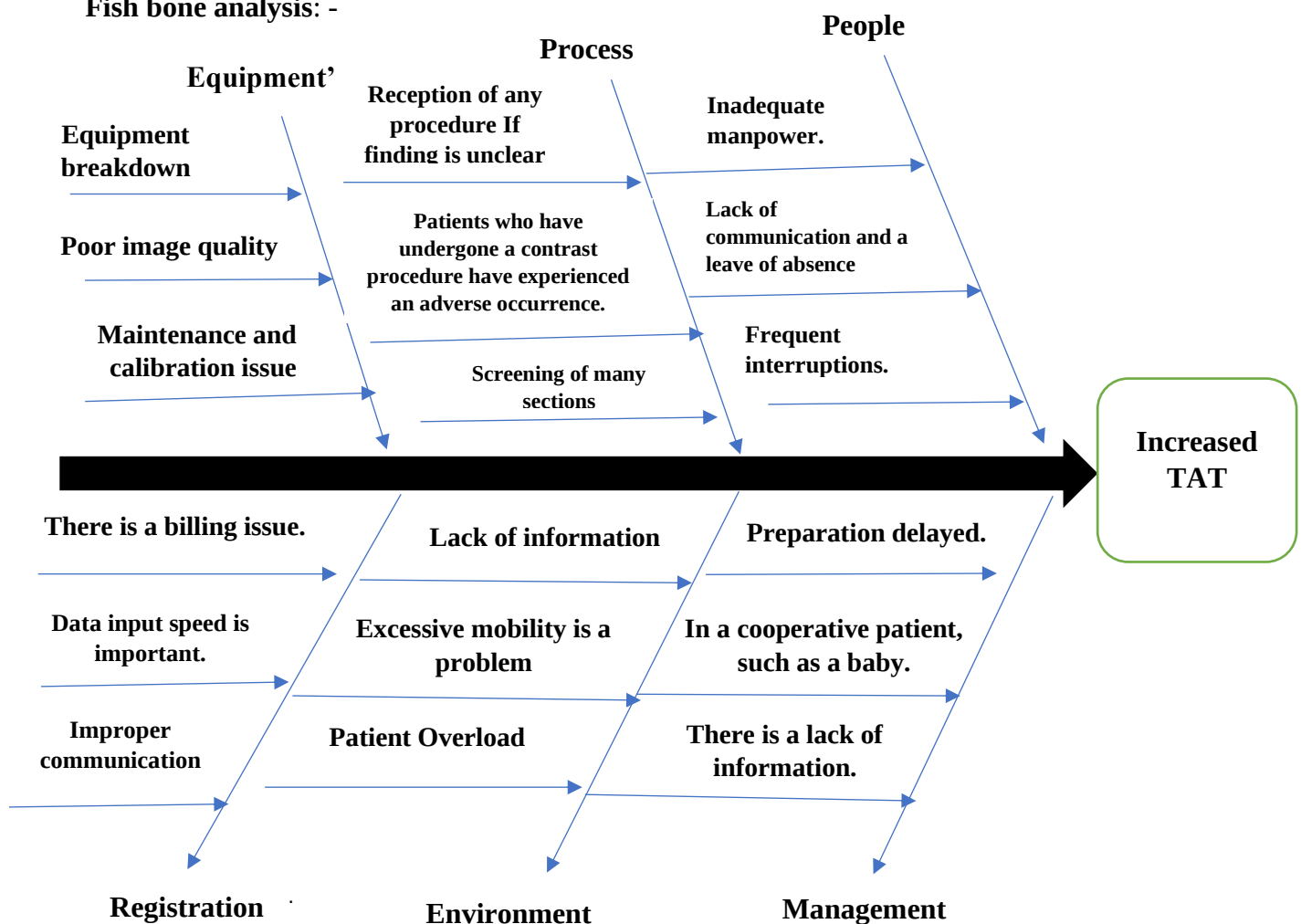
PROCEDURES	AVERAGE IN MINUTES	IN HOURS	STANDARD TAT
X-RAY	200.2	3.34	3
CT	204.3	3.41	3
USG	112.6	1.88	1
MRI	268.5	4.48	4

ROOT CAUSE ANALYSIS: -

- ✓ When just one registration staff member is present, there is a delay at the registration counter.
- ✓ Due to a lack of staff at the front office, there is an increase in waiting time when there is a rush in the department, resulting in a longer turnaround time.

- ✓ Only one X-ray and one MRI equipment are available, causing significant delays in the operations. The staff must manually call out the patient's name, causing chaos because the patient may not hear and miss his turn.
- ✓ To draw attention, the employees must also loudly announce many times.
- ✓ To assure patient counselling, x-ray staff should be trained.
- ✓ Emergency patients cause lengthier wait times between scheduled appointments. A trailing machine or piece of equipment causes a delay. There was no previous advice given to patients about bladder filling in the event of a USG procedure, which resulted in patients drinking less water and wasting time in the operation room.
- ✓ There was no previous notice given about the removal of metallic items for CT scan and MRI treatments, resulting in a delay within the operation room.
- ✓ There are not enough radiologists, especially when some of them are on vacation.
- ✓ Radiologists need time to diagnose and write a proper report in some crucial instances.

Fish bone analysis: -



Because the radiology department generates the majority of money, patient happiness in the area is more essential than appears on the surface. In today's society, when time is more valuable than money, failing to respect the patients' time is tantamount to gambling with the hospital's profits. As a result, it is strongly recommended that the hospital's standard TAT be reduced, therefore boosting patient happiness, and assisting in the improvement of the hospital's income.

Section-4: - RECOMMENDATION-

- ✓ To minimise turmoil and overpopulation, it is strongly recommended that reports be sent to patients via the internet.
- ✓ Every USG patient should be educated ahead of time about the necessity of bladder filling and the time it takes.
- ✓ Information in pictures Bulletins with comprehensive information regarding bladder filling, radioactive risks, and objects banned in the procedure room should be posted in the waiting area.
- ✓ To control the crowds in the diagnostic waiting room, one person should be assigned.
- ✓ To minimize hospital-induced radioactive hazards to fetes, every married woman should be inquired about her pregnant status.
- ✓ The billing problem should be dealt with in a more professional manner.
- ✓ The presence of a Severe patient should first be disclosed to the personnel through training. At regular intervals, equipment should be inspected by a technician.
- ✓ If more than one radiologist is on leave, the department should recruit another radiologist to keep the patient load at a manageable level.
- ✓ A training programmed is recommended based on the lean six sigma approach in order to decrease TAT by eliminating non-value-added stages and activities in the process, speeding up and lowering through automation, and optimizing workflow.
- ✓ During these pandemic situation hospitals are full with patients with many diseases so to lower down the crowd in hospitals the test report must be sent to patients via the internet through any app or website

Action Plan-

Now to get a report after so many hours is a big issue in hospitals because it is important to maintain social distance during this epidemic, and a simple approach to keep it to a minimum is to create an online app or website where all test reports and papers can be shared with patients over the internet.

Now, in order to address these problems, we must follow a few actions.

- Now, to implement this, we must first form a team with a specialized and experienced software developer, and with the help of the software developer and our team, we will create a PowerPoint presentation to present it to the hospital's higher authorities. If they agree and like our idea, we will meet again to discuss how to successfully run the app, and to implement this, we must first form a team with a specialized and experienced software developer.

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4. [Improving Emergency Department radiology transportation time: a successful implementation of lean methodology \(biomedcentral.com\)](#)

ANNEXURE: -1

DIALYSIS PATIENT SATISFACTION QUESTIONNAIRE			
SI no	Questions	Response	
	Rating scale: 1-poor; 2-fair; 3-Good; 4-Very good; 5-Ecellent		
1)	How old are you	1)18-24	
		2) 25-34	
		3) 35-44	
		4) 45-54	
		5) 55-64	
		6) 65-74	
		7) above 75	
2)	Gender	1) Male	
		2)	
3)	Were you prepared for your dialysis at the Start of your treatment	1)Yes	
		2)No	
4)	Did you go to any other dialysis centre before starting your treatment here	1)Yes	
		2)No	
5)	What were the service provided there	1)Yes	
		2)No	

6)	What service would you like to have here		
7)	How would you rate your current dialysis centre? (Aster Prime hospital)		
8)	Is the look of the dialysis room pleasing to you	1)Yes	
		2)No	
9)	How would you rate the following (Rating out of 5)		
9.1	Waiting area		
9.2	Patient area		
9.3	Room lightning		
9.4	Noise level		
9.5	Suggestion on improvement		
9.6	How do you pass your time		
9.7	How will you rate the means of entertainment (Television)		
9.8	Suggestion for improvement		
9.9	Do you eat during dialysis		
10	How will you rate the meal served to you during the session		
11	Suggestion for improvement		
12	Patient satisfaction towards staff		
	Rating scale: 1-poor; 2-fair; 3-Good; 4-Very good; 5-Ecellent		
		Nurse	Technician
		Doctor	
12.1	Did the staff at the dialysis treat you with respect		

12.2	Were the staff helpful as you thought they would be			
12.3	Did the staff invest time to listen to your queries			
12.4	Were all your queries answered adequately			
12.5	Did the staff explain things in a way you could understand?			
12.6	Was your privacy taken care of at all times necessary?			
12.7	Was the staff responsive to the alarm by the dialysis?			
12.8	How will you rate the staff overall for the session?			
12.9	Suggestion for improvement			
Patient compliance				
Rating scale: 1-poor; 2-fair; 3-Good; 4-Very good; 5-Excellent				
13	Do you follow up with			
13.1	Consultant			
13.2	Dietician for update on diet plan			
13.3	Food services			

ANNEXURE: -2

Age/sex	Test of under entry (t1)	In time (t2)	Waiting time (t2-t1)	Procedure time	Report collection time	Actual TAT	Standard TAT