Summer Training at
Artemis Hospital, Gurgaon
(April - June, 2013)

1. STUDY OF OPERATION THEATRE PROCESS FLOW AND TURN AROUND TIME.
2. CLINICAL AUDIT OF THE MEDICAL RECORDS

By
Mani Pathak

Under the guidance of
Dr. Arindam Das

Post Graduate Diploma in Hospital and Health Management
2012-2014

Institute of Health Management Research,
Jaipur
2013

INSTITUTE OF HEALTH MANAGEMENT RESEARCH
1, Prabhu Dayal Marg
Sanganer Airport, JAIPUR - 302 011, INDIA
Tel. : 3924700, 2791431-32
Fax : 91-141-3924738
E-mail : iihmr@iihmr.org
URL : http://www.iihmr.org
Gram : HEALTHINST

CERTIFICATE

This is to certify that Dr. Mani Pathak student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from Institute of Health Management Research, Jaipur, Batch 17th has undergone summer training in Artemis Hospital ,Gurgaon from 8th April to 5th June 2013 and has done study on:

- Study of Operation Theatre Process Flow and Turn Around Time
- Clinical Audit of the Medical Records.

The candidate has successfully carried out the study assigned to her and during her summer training her approach to the study has been sincere, scientific and analytical.

I wish her success in all her future endeavors.

Arindam Das.

Dr.Arindam Das
Associate Professor
Faculty and Mentor
IIHMR, Jaipur

Dr. Ashok Kaushik
Dean, Academic and Student Affairs
IIHMR, Jaipur

Dated: 5th June 2013

TO WHOM IT MAY CONCERN

This is to certify that Dr. Mani Pathak from Institute of Health Management Research, Jaipur has successfully completed her Internship in Operation Theatre Unit and Quality Department at Artemis Health Institute, Gurgaon from 8th April 2013 till 5th June 2013.

During her training, she was found to be sincere and hardworking.

We wish her success in future.

For Artemis Health Institute,

Ramanjit

Artemis Medicare Services Ltd.

Ramanjit Kaur Virk
Group Team Leader - Training & HR

ACKNOWLEDGEMENT

The Project training at **Artemis health institute,** Gurgaon, provided me both learning experience as well as a glimpse into the daily management functions of a renowned hospital. I was fortunate enough to interact with the people, who in their own capacities have encouraged and guided me in each and every step.

First of all, I would like to thank **Dr. Devlina Chakravarty, COO** for providing me an opportunity to do internship at **Artemis health institute.**

I am obliged to **Col. Rajnish Handa,** Head HR, **Mrs. Ramanjit Kaur Virk,** GroupTeam leader of training and development, for giving me this wonderful opportunity to learn and experience the corporate work culture by trusting my capabilities.

I want to extend my sincere thanks and gratitude to my mentor **Mrs Santosh ,**Divisonal Head of Nursing department for her constant support and invaluable time-to-time guidance and kind help in completion of my project.

I also want to extend my thanks to **Dr. S.D. Gupta,** Director-IIHMR for incorporating right attitude towards learning and **Dr.Ashok Kaushik,** Dean-Academic and Students Affairs, IIHMR, for helping and supporting wherever and whenever I wanted.

Finally I acknowledge my indebtedness to the other team members (Mr Vishwendra), doctors, nursing staff at Artemis Health Institute, Gurgaon, who supported me in successfully completing this project.

Dr. Mani Pathak

Gurgaon
5th June 2013

CONTENTS

Abbreviations-

1. OT - Operation Theatre
2. ICU - Intensive Care Unit
3. HIS- Hospital Information System
4. Pre-op -Pre-operative
5. Cath Lab- Cardiac Catheterization Laboratory
6. NABH –National Accreditation Board for Hospital and Healthcare
7. NABL –National Accreditation Board for Testing and Calibration Laboratories
8. MRD – Medical Records Department
9. TAT – Turn Around Time
10. TKR – Total Knee Replacement
11. Lap Chole – Lap cholecystectomy
12. LSCS – Lower cesarean section
13. FESS- Functional Endoscopic Sinus Surgery
14. PFE – Patient Family Education form
15. ENT – Ear nose throat

In order to undertake this crucial project it was important for me to understand set protocols and find the gaps, if any, while implementing these protocols. It was of utmost importance for me to understand the processes, however small, to come to any conclusion.

Aims.

- To understand working of whole of the hospital and to seek opportunities that will provide wholesome experience.
- To study process flows of OT as well as other departments.
- To Study Hospital operations/medical services department in detail.

The primary objective of my Summer Internship program is to have experience and knowledge on the management and operational aspect of the hospital.

To accomplish these objectives I have participated in a variety of day to day activities in the hospital. I worked significantly with the co-workers and was involved in managerial activities broadly classifying the various aspects of patient's safety.

Operation Theatre plays a significant role in surgical care. Operation Theatre plays a significant role in surgical care .The maintenance of operation theatre is of paramount importance considering its need for sterilization .The multi-specialty hospitals has even earmarked OT for different specialities to reduce expenses.

Hospital Profile

Artemis Health Sciences is promoted by Apollo tyres group and is highly regarded for its professional management. The name Artemis depicts the ancient Greek Goddess and the sister of Apollo (Greek God of medicine). The logo of Artemis is the "art of health care" that signifies that "you are always in good hands" and encapsulates the philosophy of care and patient focus. Artemis health institute aims to define and deliver cutting edge healthcare in India by uniquely integrating healthcare delivery with research and development, medical education and manufactures of medical devices and equipment.

Artemis health institute is 300 bedded, super specialties, and tertiary care hospital located in Gurgaon, India. Designed to be one of India's most advanced hospitals, Artemis has some of the world's finest technology and equipment. The medical practices and procedures followed at the hospital are research oriented and benchmarked against the best in the world. The hospital delivers world class services in a warm, open, patient-centric environment. A sprawling campus of 8 acres has the potential of adding 300 more beds taking the total bed strength of 600.

The hospital handles close to 200,000 patients a year, out of which 12,000 are international patients. International patients come to Artemis health institute from UK, USA, Europe, Middle East, Australia, Yemen, and Africa and amongst other countries.

Highlights.

- First hospital in Gurgaon region to be Joint Commission International (JCI) accredited.
- Accredited by national accredited board for hospitals and health care providers (NABH).
- Accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL)
- Artemis health institute Gurgaon was awarded as the most promising start up health care company of the year 2007, at "the health care excellence awards 2008" organized by the express group and express group health care.
- One of the first paperless hospitals in India, to have fully electronic hospital informative system.

The hospital won the Asia Pacific award for Hand Hygiene in 2010 and 2011 and it strictly follows 5 steps of Hand Hygiene to prevent hospital acquired infections. The hospital has set defined protocols to prevent nosocomial infections like VAPS, SSI, UTI, Needle Stick injuries

VISION, MISSION AND CORE VALUES

VISION

To create an integrated world class healthcare system, forecasting, protecting, sustaining and restoring health through best in class medical practices and cutting edge technology developed through in depth research carried out by the world's leading scientific mind.

MISSION

- Deliver world class patient care services.
- Excel in the delivery of specialized medical care supported by comprehensive research and education.
- Be the preferred choice for the world's leading medical professionals and scientific minds.
- Develop, apply, evaluate and share new technology.
- Be an active partner in local community initiatives and contribute to its wellbeing and development.

CORE VALUES

- **C**are for the customers
- **R**espect for Associate
- **E**xcellence through teamwork

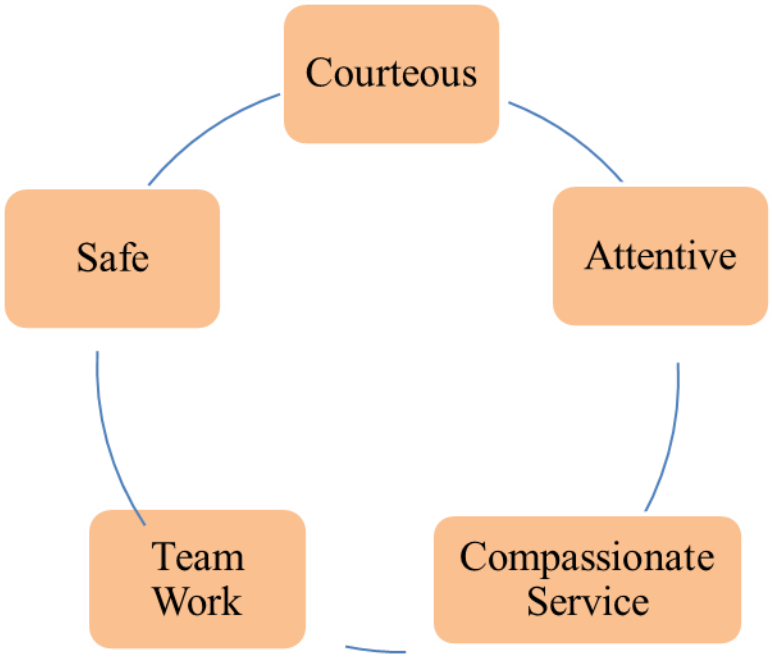
- **A**lways Learning
- **T**rust Mutually
- **E**thical Practices

Artemis Health Sciences

Health care Delivery - Artemis Health Sciences is focused on delivering world class healthcare with its state of the art facilities, spread across India. The first **Artemis Health Institute**, located in Gurgaon in the National Capital Region, is operational since July 2007.The facility is designed and constructed across a total area of 525,000 square feet (when completely built). The area is divided into three towers- Tower I, Tower II and Tower III (Future expansion).The construction is in strict accordance with International guidelines.

The facility focuses on offering patients technology-backed world-class healthcare delivered by leading medical professionals certified by international medical bodies. Additionally, Artemis follows patient-centric processes conforming to International Patient Protocols, there by establishing new standards of service and care.

Artemis Service Standards.



SWOT of the Hospital

❖ **Strengths**

- Exclusive centre for Cardiology and Oncology
- Core Specialties are cardio, neurology, oncology, nephrology, fertility centre & bariatric surgery
- Ambience and homely environment.
- Cutting Edge Technology.
- Internationally renowned faculty
- International Quality Protocols
- Patient Centric Approach
- Healthy and friendly environment
- Liver Transplant Centre & Cosmetic Clinic
- Separate PCS team for Registration , Billing & Handling Queries

❖ **Weakness**

- Location of the hospital where public transport is less
- Low awareness in public

❖ **Opportunities**

- Awareness among the public
- Scope of international patients
- Branding at airports

❖ **Threats**

- Competition from upcoming hospitals

Floor Directory

Ground Floor

- Atrium(Reception)
- PCS-OPD
- Phlebotomy(Sample Collection)
- Physiotherapy
- OPD-Pharmacy
- International Patient Lounge
- Health & Wellness Department
- Dental centre
- Reproductive medicine centre
- Diagnostics(Imaging)
- Auditorium
- Blood Bank
- Emergency(12 beds)
- PCS-IPD
- TPA & Financial Counseling
- Visitors Cafeteria

First Floor

- Operation Theatre Complex(9 OT's with one hybrid OT)
- Recovery Area
- Cath Labs
- Day Care
- Surgical ICU(34 beds)
- NICU(11 beds)
- LDR(6 beds)

Second Floor

- PICU & MICU(34 beds)
- Administrative Block
- Chairman's Office
- Library
- IT Department
- Biomedical Services

Third Floor

- Twin Sharing Rooms
- Economy Rooms(Four Sharing)

Fourth Floor

- Twin Sharing Rooms
- Sleep Lab

Fifth Floor

- Executive Single Room
- Deluxe Single Room
- Liver Transplant Centre

Sixth Floor

- Nursing Administration Office
- Executive Suite
- Presidential Suite

Basement

- Dialysis unit(9 beds)
- Chemotherapy & Nuclear Medicine
- Clinical Research Office
- Endoscopy
- OPD(Dermatology & Ophthalmology)
- NAT Lab
- Infection Control Office
- MRD
- IPD Pharmacy
- Staff Cafeteria
- Laboratory Services
- Mortuary
- Clinical Engineering
- CSSD
- CGHS Wards
- Food & Beverages Department
- Nutrition & Dietetics
- Housekeeping Office
- Store receiving unit
- Stationary store
- Power Plant
- Civil engineering department
- Food and beverages department
- Kitchen

Services at Artemis Health Institute

Artemis Super Specialties:

- ENT
- Dental
- Urology
- Neurology
- Radiology
- Paediatrics
- Cardiology
- Nephrology
- Orthopaedics
- Critical Care
- Lab Services
- Physiotherapy
- Spine Surgery
- Cardio Thoracic
- Artemis Artificial Limb Centre
- Holistic Medicine
- Internal Medicine
- Nuclear Medicine
- Bariatric Surgery
- Gastroenterology
- Surgical Oncology
- Medical Oncology
- Pulmonary Medicine
- Alternative Medicine
- Laparoscopic Surgery
- Reproductive Medicine
- Gynaecology
- Anaesthesiology
- Endocrinology
- Ophthalmology
- Neuro Surgery
- General Surgery
- Vascular Surgery
- Clinical Psychology
- Radiation Oncology
- Emergency Medicine
- Human Organ
- Transplant
- Blood Transfusion
- Services
- Obstetrics &
- Gynaecology
- Plastic &
- Reconstructive
- Surgery

Artemis Centers of Excellence:

- Artemis Transplant Centre (Liver, Renal and Corneal)
- Artemis Cancer Centre
- Artemis Heart Centre
- Artemis Neurosciences Centre
- Artemis Joint Replacement & Orthopedics Centre
- Artemis Minimally Invasive & Bariatric Surgery Centre
- Artemis Renal Centre
- Artemis Birthing Centre
- Artemis Fertility Centre
- Artemis Critical Care & Pulmonology Centre
- Artemis Gastro sciences Centre
- Artemis reproductive medicine centre
- Artemis special child care centre
- Artemis Home care unit.
- Artemis artificial limb centre

Diagnostic

- ❖ Imaging Services

- 64 Slice CT Scanner
- 3.0 Tesla MRI Scanner
- PET- CT
- Bone Densitometry (DEXA)
- Digital Mammography
- 4D Ultrasound
- 4D Colour Doppler
- Dual Head Gamma Camera
- Fluoroscopy
- Laboratory Services
- Neuro Lab NCV
- EEG, EMG
- Non-Invasive Cardiology stress Echocardiography TMT & Holter Monitoring

Special Program and clinics

- Artemis diabetic program
- Obesity care program
- Artemis Health and Wellness Program
- Health @ Work Program
- Artemis Breast Clinic
- Pain Clinic
- Artemis Maternity Program
- Artemis Heart Club
- Safe Spine Surgery Program
- Stroke Management Centre
- Memory Clinic
- Artemis Joint Onco Clinic
- Artemis Artificial Limb Clinic
- Hepatology Clinic

Infection control Department

Overview: - Infection control department takes care of the microbial level of the hospital land especially of the critical areas .The teams conducts weekly audits of different areas.

Location: - Lower Ground Floor

Manpower: - Department Head 1 (MD Microbiology)
Nurses 2

Special feature: - The hospital won the Asia Pacific Award for Hand Hygiene in 2010-2011 and it strictly follows 5 steps of Hand Hygiene to prevent hospital acquired infections like VAPS, SSI and Needle Stick injuries.

Findings: - Maximum infections were found to be needle stick injuries among the GDAs (General Duty Assistants) during bio waste disposal and UTI among the patients. But the rate of hospital acquired infections among patients is very less.

Audits:-

Week 1 Air Culture of the OT (random)
Week 2 Hand Swab of the ICU staff (random)
Week 3 Hand Swab of the OT staff (random)
Week 4 Hand Swab of the Food and beverages staff (random)
Random collection of environmental samples of different critical areas

Infection control methods: - Fogging or fumigation of OT done once a week on Saturdays and frequency is increased if number of infected cases is more.

Training: - Every Thursday training of nurses as per the training calendar in Bio waste management, Hand Hygiene etc taken by the infection control department .Apart from this, the new staffs has a detailed infection control training given as part of their orientation program. The head of infection control plans training schedule/CMEs for the clinicians periodically.

Dialysis

Location: - Lower Ground Floor

Layout: - 9 cubicles with one bed and a TV each (3 additional units in the ICU) .All the cubicles are segregated for patient privacy
Other rooms: Clean utility, dirty utility, Workroom, Doctors room, RO plant room

Manpower:-Doctors 4(1 HOD nephrology + 2 associate consultants+1 resident)

- Technicians 4
- Nurses 4
- (2 technicians & 2 nurses in every shift & there are two shifts of 6 hrs each & at night they have on call service in case of emergency)

Timings: - 8:00 am to 9:00 pm

Communication: - Through HIS and Phone

Equipments Present: - 9 dialysis unit of Frezenius, crash cart and other basic things.

Procedures done: - Peritoneal and Renal dialysis.

Process

- Registration of the patient is done on first contact and GNID number is given
- Scheduling of the dialysis procedure is done and patient is given appointment from one of the shifts(8to 12,12:30 to 4:30,5 to 9)
- Consent form is taken and details are entered in HIS
- Blood tests done before the dialysis to check HIV, HbsAg and CBC
- Tubes of infected patients are not reused but for other non-infected cases they can be reused after cleaning with renalin .This saves 700rs of the patient and can be reused 3 times
- Biomedical waste Management is followed and infection control policies arefollowed

Patient flow: - 1000 patients per month (24 to 28 patients per day) .Dialysis are done in 3shifts of 4hrs each**.**

Special Features

- UPS power back up is present
- RO plant: Dialysis unit has its own taking in about 10,000 liters of water per week each patient requiring around 120 liters.

Complications: - Improper maintenance of AV fistula leading to blockage as well site infections, electrolyte disturbance with regular checking of potassium and other level, air bubble and cardiac arrest.

Prices: - Each dialysis session per patient would cost about Rs. 2700/-, this would not involve the price of the erythropoietin inj that may be required for patients which would cost another 1700/-

CSSD

❖ **Location**:- Lower ground floor

❖ **Manpower**:-9 (3 per shift including one supervisor and 2 technicians)
The technicians have a diploma in CSSD

❖ **Layout**: - Small Hallway which leads to the door of dirty zone .It is the point of receiving of soiled instruments from the OPD and IPD personnel.

❖ **Zones**:-

- Dirty Zone
- Clean Zone
- Sterilized zone

❖ **Timings: -** For receiving : 8:30am to 9:30am & 2:00pm to 3:00 pm (from OPD and IPD)
24 hrs (from OT, ER, ICU, CathLab)

❖ **Connectivity**: - It is connected to the OT through the lifts(dumbwaiters)

❖ Protocol followed

- **Prewashed**: All instruments are prewashed at their respective depts. before theyare sent to CSSD.

ZONES:

❖ **Dirty Zone:** - Instruments are received, checked, sorted according to checklist

Equipments present

Name of the equipment	Function	Duration
Automatic washer	It cleans the instruments in 5 stages at 82 degrees i.e. prewash, washing , enzymatic, rinsing and drying .It has capacity of 250 litres (6-7 trays) .The enzyme used is Rapid Multi enzyme low foam and 80ml is used per cycle.	1 hr runs 8-9 cycles per day
Large ultrasonic washer with air gun	Used for large and delicate instruments respectively. After cleaning of instruments with rapid cleanser in the ultrasonic bath they are rinsed in running water.	15-20 minutes
Small ultrasonic washer		
Dumbwaiter	To bring down the soiled instruments from the OT	

- The instruments of HIV patients come in a red bag which are washed with hypochlorite before putting in ultrasonic bath
- There is a trolley wash area for cleaning the trolleys also.
- There is no pressure difference between the dirty and the clean zone.

❖ Clean Zone

After washing, the instruments are carried to the clean zone. The packing of instruments is done in this zone in linen.

Equipments Present

Name of the equipment	Functioning	Duration
Autoclave (750 lit)	Used for instruments in bulk (121 to 134 degree Celsius and 32 psi	30 to 50 min
Autoclave (250 lit)	Used for instruments required in emergency .It can autoclave one tray in a short time.	15 to 20 min
Boiler	Supply to both the autoclaves	

ETO (Ethylene Oxide) zone:

Equipments present

Name of the equipment	Functioning	Duration
ETO unit	Used for instruments which are sensitive to high temperatures like cautery, plastic objects etc.. These are sterilised at 50 degree Celsius using ethylene oxide gas in a 100ml cartridge. The process releases CO gas which is exhausted from a 6 ft pipe on the 6^{th} floor. The instruments are packed in medical grade paper before sterilisation. It is also attached to air filter to remove moisture.	Cycle of 16hrs (valid after 48 hrs after check by infection control dept.
Packing unit (automatic and manual)	For sealing of instruments packed in medical grade paper.	1 to 2 minutes

Sterilized zone

All the sterilized instruments are kept in this zone and from here they are sent to OT and ICU through dumbwaiter. Some instruments are kept in loan format as backup for emergency. It is a positive pressure room and has a temp of 22 -27 degree Celsius. The temperature and pressure are maintained by the biomedical engineering department.

In this room Validation of sterilisation is

- Normal packing : OT : 3days & Wards: 7 days
- Medical Grade Paper: 6 months for all instruments

Cleaning of the Dept: Virex (10 ml in 5lit) for the floors twice day and
Cleanex tablets (500mg for 2 lit) for counter tops.
Fumigation is done once every month

Quality indicators use: Chemical and biological indicator tests, Strip test, Autoclave tape,Bowe Dick indicator. The infection control department team comes for monthly audits to collect swabs and make culture reports.

Chemotherapy

- **Location**: Lower ground floor. It faces the outside greenery with full length glass windowsmaking for a calming ambience.

- **Layout**: It has 7 segregated cubicles with a clear view of each bed from the nursing station.

- **Manpower**: 8(including one doctor and 7 nursing staff. 5 of the nursing staff stay in daycare unit and two stay in the IPD.)
- The staffs are very good in hospitality and make the patients comfortable. Counsellors also come for the patients when required.

- **Patient flow** : 6 to 17 per day

- **Timings** .It runs from 8:00 am to 8:00 pm while the new admissions close by 4:00 pm.There are 3 shifts of 6hrs each.

- **Process**: Patients have to get pre cycle tests of LFT, KFT and CBC. If tests are fine they undergo the cycle and are given the next appointment. Patients also come for the flushing of chemo port and PICC line every 21 days with heparin. Chemo port is usually inserted by the CTVS team after an appointment. The precaution to be taken with them is to avoid blockage as well any infection at the site. Careful surveillance of the line is usually done bythe nursing staff

- Chemotherapy and dialysis unit have a common crash cart and fire extinguishing system.

Prices: Per cycle is on an average 5000

Food & Beverages

Outsourced from Sodexo

Location: Lower Ground Floor

Accessibility: Lifts and Staircase

Layout: One entrance which leads to the cooking area (Unilateral Flow)

Cooking area is divided into four sections

- Liquid Section
- Bulk cooking section for the staff
- Patient food section
- Chopping section (colour coded boards for chopping veg and non veg)
- Packing counter

Storage section

- Cold Storage room
- Separate Fridges for the veg and nonveg food
- Chest Freezers

Washing Area

- For Large and Small Utensils

- Ceiling made up of stainless steel with hoods present in them for air circulation and fire alarms and sprinklers.

Menu: 8 cyclic menus

Services offered	Type	Timings
1st	Early morning tea	6 am
2nd	Breakfast	8am
3rd	Mid morning soup	10:30 -11:00 am
4th	Lunch	1 pm
5th	Evening tea	3:30 pm
6th	Evening soup	5:30 -6:00 pm
7th	Dinner	8:00 pm
8th	Bed time milk	9:30 pm

Clearance done after 30 minutes of service

Manpower: 82 outsourced from sodexo, 4 administrative staff from Artemis hospital and 4 dieticians on shift basis.

Policies and Procedures

- PFA accordance displayed
- Quality control measure taken
- Approval from Food Adulteration Department
- HACCP guidelines followed
- Colour coded chopping boards :
  Red- meat
  White- bread
  Green- vegetables
  Blue- Fish
- Colour coded dusters : white for service area , green for all hot and cold objects, blue for walls and tiles
- Colour coded buckets : Red for sodium hypochlorite and orange for clean water
- Hygiene audits held and hygiene cards of all employees checked regularly.

Process of inventory

Chef prepares the list (2 days in advance)

⬇

Hands it over to the store in charge

⬇

Order given to vendors for the supplies

⬇

Items received and segregated by chef & store in charge

⬇

The batch no.,date of receiving and MRP is displayed on items and items are stored

Process of food delivery to the patient

Patient admitted

⬇

Sister informs the dietician

⬇

Dietician visits the patient

Diet planning of the patient (by dietician)

⬇

Diet summary given to the kitchen

⬇

Diet card of patients made

⬇

Cooking done by chef according to the diet summary & food is dispatched

Biomedical Engineering Department

- **Location**: 2nd floor
- **Layout**: Single room
- **Manpower**:1 team leader
  - 3 Engineers
  - 1 Engineer (of Philips Company)

❖ Responsibilities

- Deal with the new requirements of different departments. The concerned department sends request for new equipment which may be Capex (new technology) or Opex (routine new equipment) to the Bio engineering department (BED). BED forwards it to the purchase dept. The purchase dept. calls the meeting of vendor, purchase dept personnel and biomedical engineering dept. person. The vendors give a demo to the users (doctors, nurses etc.) and feedback is taken from them. According to the feedback and the quotations of the vendor the equipment is bought.

- **Maintenance**

  - AMC Annual Maintenance Contract including only the labour cost and is 1 % of the total cost of the product

  - CMC Company Maintenance Contract including the labour cost and the cost of the spare parts.

  - PMS Preventive Maintenance Services are done quarterly depending on the type of the equipment.

- **Training**

  - Training of the staff every Tuesday regarding the use of the equipment.

- **Quality indicators** : PMS, Downtime ,Response time to a call ,AMC

Blood Bank

Location: Ground floor adjacent to the emergency (open 24*7)

Layout:

- **Donor Registration and screening area**

  - In this area the donor is registered and his height, weight and Hb is tested .It includes three rooms for the consultants,1 for Hb testing and a separate registration counter

- **Blood collection area**

  - Whole blood donation area
  - Aphaeresis room

- Refreshment room
- Waiting area
- TTI (transfusion transmitted infection) testing room
- Serology room for blood group testing
- Issue counter (also has Pneumatic shoot)
- Sterilization room for discarding blood
- Storage section
- Component separation room
- Record section ...Records of donor maintained for 5 years

Equipments

Room	Equipment room
Blood collection room **Aphaeresis room**	2 couches 2 couches with attached component separating unit of Fennuel Baxter.
TTI	2 Elisa testing machines (for HBcAg,HIV,HCV,HbsAg,Malaria.
Serology room	Incubator Water bath Blood group testing unit
Sterilisation area	Autoclave for sterilising infected blood before discarding
Storage section	2 Quarantine freezers 2 Deep freezers Platelet agitator Cryobath Pharma fridge Cold storage
Component separation room	C3 3000 baxter Amicus machine and 2 separators which can separate 3 components at a time.

- Temperature of 22 degrees is maintained all through out
- Calibration of instruments done every morning.

Manpower: 11 technicians 3 doctors 6 nurses

Process flow

Donor comes to the registration area

↓

Registration, screening and counselling done

↓

Issued a barcode identity after Hb testing

↓

Sent to blood collection area for blood collection

↓

Sent to refreshment area and sent back from there

↓

Blood sent to serology for blood grouping
TTI for HIV and Hbs

↓

Sent to sterilisation room if infected /Sent to storage area if needs to be stored/sent to separation area for component separation.

Quality Indicators: Transfusion reactions, TAT for issuing and blood collection, Component usage, Rate of discarding blood, Expiry of Product.

Standards: You need 20 units per bed per year. So 6000 units per year and 500 units per month and 40 units of every blood group. Discarding rate is 1% for RBC, 20% for Platelets and 80-85% is used. Viability of RBC is 42 days, 1 year for plasma, 5days for platelets.

Labour delivery room section

Location: First Floor

Layout :- 6 LDR rooms with four facing the greenery side
11 bedded NICU (separate for premature and sepsis patient)
Nursery
Nursing station with billing desk and waiting area

Manpower: 4 nurses in LDR 1 in IPD and 1 in OT

Quality indicators: Cases of haematoma, bed sores, infant swapping, infection control.

Equipment in LDR: Hundley beds which can be converted to labour table, CTG machines, Crash cart, Lithotomy table

Patient flow: 70 to 80 patients per month out of which 70% are C -Sections

Cath Lab

Location: First Floor

Layout:

- Hallway having male and female change room, directors room and cath recovery room.
- Cath unit having control room with C arm, Clean and dirty utility room and Cath pharmacy.

Manpower: 2 nurses and 2 technicians and 3 doctors in 2 shifts

Training: 3 seats for PGDC of 2 years approved by IGNOU

Patient flow: 350 patients per month (200angio and 100 of implants)

Time taken for angiography is 15 to 20 min

Prices

- Angiography Rs 15,000
- Angioplasty Rs 1 lakh

Project 1 on Study of OT process flow and Turnaround time

Executive Summary-

Operation room utilization analysis is essential to assess the existing workload as well as to optimize facility functioning and patient scheduling for surgical operations. It also aids in allocating reserve time for emergency operations, asepsis measures and procedures, and provides decision making information for augmentation or downsizing of the facility. The operation time utilization varies in different healthcare settings. **Optimum utilization of the OT time has always been a priority area for hospital administrators.**

This case study is being carried out with the objective of assessment of utilization of **Operation Theatr**e , **Recovery area utilization (Pre-op**) where the patient is brought before the surgery where all his vitals are being checked and he is being explained about the anesthesia he will undergo and **time-out** i.e Patient Verification , Surgical site marking ,all consents are being explained and is taken from the patient/ relative and the witness available for operation and in **Post-op Recovery area** where all his vitals are being monitored till the patient is stable, to be discharged or shifted to the ward .The Study helped in the identification of bottlenecks required for the optimum utilization of operation theatre.

It's a prospective study of sample size of 111 patients .The various parameters taken in consideration were the scheduled time of surgery in OT-List, exact time of surgery, total time spent in pre-op recovery, time for which patient was inside the operating theatre and the total time spent in post-op recovery area. . After collecting, compiling and analyzing the data, the areas of concern were highlighted for the optimum use of implementations to be done by the hospital.

The study revealed that the utilization though satisfactory could be further maximized by increasing the operational timing of OT, functioning two shifts of 08 hours each and performing minor procedures in minor OTs of the OPD. The study identified the main bottlenecks as the non availability of the Operating Room Manual and non- adherence to OT timings.

Introduction-

Operation Theatre found located on the first floor and its process flow was understood to have a broader picture of OT-utilization and the various factors contributing to scheduling errors.

Operation Theatre plays a significant role in surgical care .The maintenance of operation theatre is of paramount importance considering its need for sterilization .The hospital has earmarked OTs for Orthopedic cases and Cath lab for cardiac patients to reduce expenses.

All those working in the Operating Room must be cost efficient and must maximize productivity for long-term success.

Physical Facilities of Operation Theatre-

- Location: First floor
- Adjoining ICU and OT-recovery.
- Connected with CSSD through Lift and the Labs through Pneumatic Shoot.
- Centralized 9 OT Suites (with one Hybrid OT)
- Zoning-

1) Protective zone- comprises of-

- Waiting room for patient and relatives
- Changing rooms for all medical and paramedical staff with toilets
- Reception

2) Clean Zone-

- Recovery Room (pre and post-op recovery)
- Trolley bay
- Pharmacy
- Doctor's room
- Nurse's room
- Pantry

3) Sterile zone-

- Operating room
- Equipment room
- Clean Utility room
- Neonatal Bassinet

- Drugs/Instrument trolley areas
- Refrigerator containing injections

.4) Disposal Zone-

- Dirty utility room(connected through lift with CSSD)
- Disposal Corridor

Equipments:

- **Operating table** in the center of the room can be raised, lowered, and tilted in any direction
- **Operating room lights** are over the table to provide bright light, without shadows, during surgery.
- The **Anesthesia machine** is at the head of the operating table. This machine has tubes that connect to the patient to assist him or her in breathing during surgery, and built-in monitors that help control the mixture of gases in the breathing circuit.
- **Anesthesia cart** is next to the anesthesia machine. It contains the medications, equipment, and other supplies that the anesthesiologist may need.
- An **Electronic monitor (**which records the heart rate and respiratory rate by adhesive patches) is placed on patient's chest.
- The **Pulse oximeter** machine attaches to the patient's finger with an elastic band aid. It measures the amount of oxygen contained in the blood.
- **Automated blood pressure** measuring machine that automatically inflates the blood pressure cuff on patient's arm.
- An **Electrocautery machine** uses high frequency electrical signals to cauterize or seal off blood vessels and may also be used to cut through tissue with a minimal amount of bleeding. If surgery requires, a Heart-lung machine, or other specialized equipment, may be brought into the room.
- **C-Arm machine** - Advances in technology i.e Hybrid Operating Rooms" which integrate diagnostic imaging systems such as MRI and Cardiac Catheterization into the operating room to assist surgeons in specialized **Neurological and Cardiac procedures.**
- Sterile instruments to be used during surgery are arranged on a **stainless steel table**.

Staffing-

- Surgeon – consulting surgeon and assistant surgeon
- Anesthetist
- 2 –Technicians
- 2 – Nurses ; 1- circulatory nurse and 1- scrub nurse

Operation and Communication – by Hospital Information System (HIS) and Phone

Policies and Procedures- the clarity in practices, policies and procedures to be followed in OT is important because of the cost involved and tempers of the near-dear ones, both of them are always at higher levels.

- A**dmission –** Patient comes to the OPD first and if asked by the surgeon gets admitted to the ward .OT-booking is done by the surgeon or the patient may directly can come to OT from emergency.
- **Scheduling** – Scheduling of the operations is being done by the OT-Controller.
- **Pre-anesthetic check-up** is being done whether the patient is stable to be anaesthetized and surgery to be performed or not.
- Movement of the patient from the ward to the pre-op OT Recover area.
- **Consent Form**- for the type of anesthesia to be given and the surgery to be performed and any other procedure such as Blood Transfusion is being required.
- Movement of the within the OT-Complex.
- Proper Hygiene practices are being followed the staff wears Head cap ,face-mask, sterile OT-Attire to prevent any chances of infection.
- **Records**- All records, the entire clinical events history is being maintained in the HIS of the hospital.

Objectives-

The study had following objectives:

- To study the process flow of Operating Theatre Complex
- To find out the turnaround time at each end and identify the bottle neck.
- To measure and compare the important components of few specialties.

Methodology:

- **Data source**: Data has been collected on routine basis from OT and recovery area.
- All the analysis and graphical depictions were done with the help of MS-Excel.
- **Type of study**: Cross-sectional, prospective and analytical study.
- **Study area**: Artemis, Gurgaon
- **Time duration of study**: 25th April- 15th may, 2013.
- **Sample size**: Patients (111) – surgeries taking place in operating theatre complex.

Sampling Method : Convenient sampling. To know about the OT-Utilization and the Recovery area utilization I had done a study on the movement of Patient from ward to Recovery area and then to the Main OT. The data was collected directly that included:

1) T**ime at which patient is brought inside the pre-op recovery area –**the time of movement of patient from the ward to pre-op recovery.
2) **Time at which patient is taken out from pre-op to main OT**
3) **Scheduled(listed) time of surgery**
4) **Exact time of surgery –**as noted by self.
5) **For how long the surgery took place**
6) **When was the patient brought into the post-op recovery area**
7) **Time of movement of patient from post-op recovery to the ward**

Overview:

THE APPROACH-

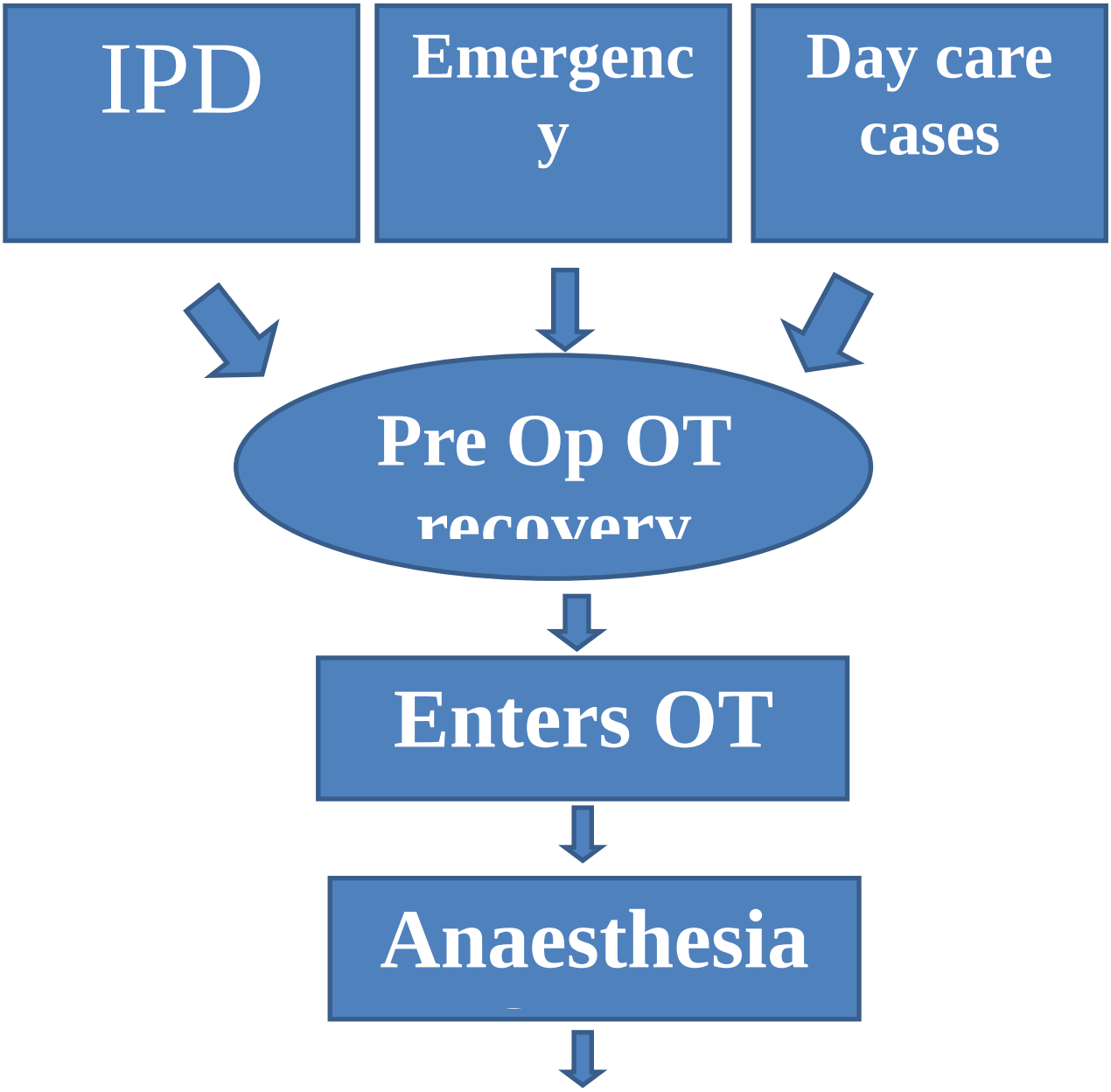
This project conducted was within the time frame of eight weeks (from April to May 2012). The approach involves 4 steps-

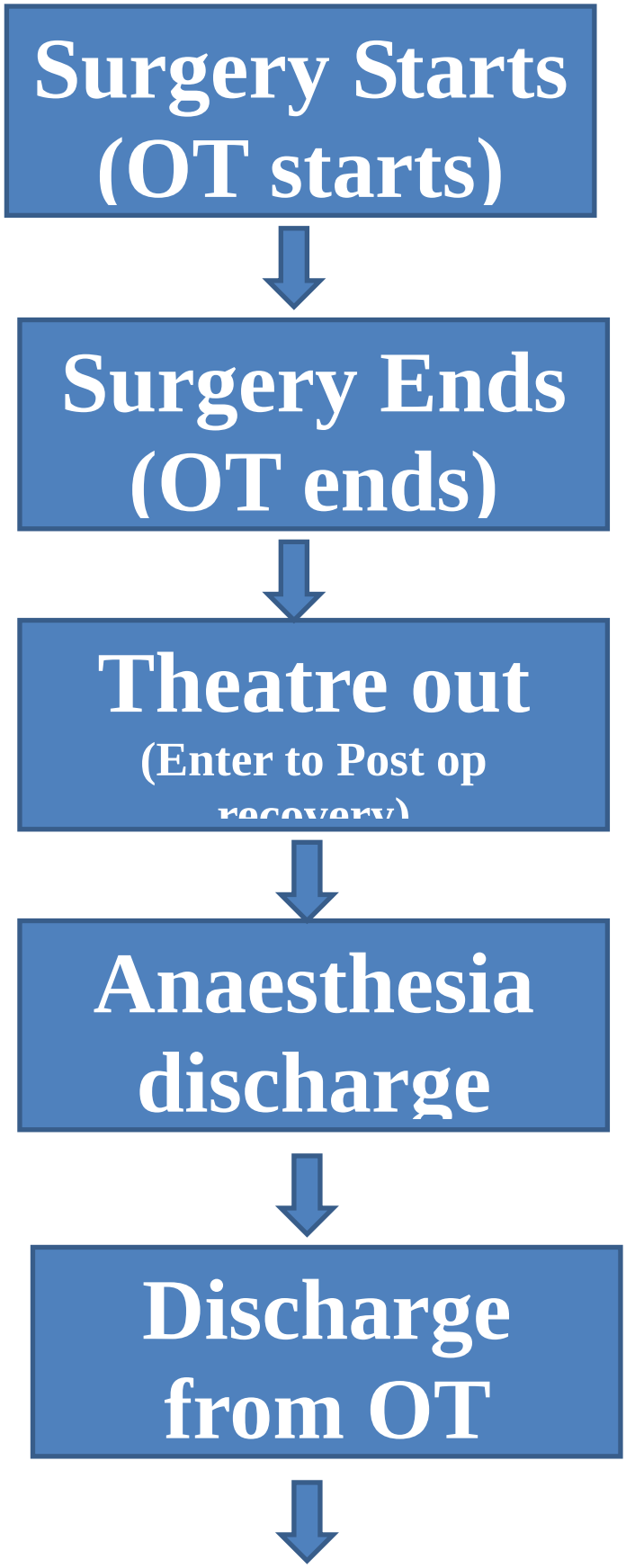
- Project design
- Data collection
- Data analysis
- Data Interpretation

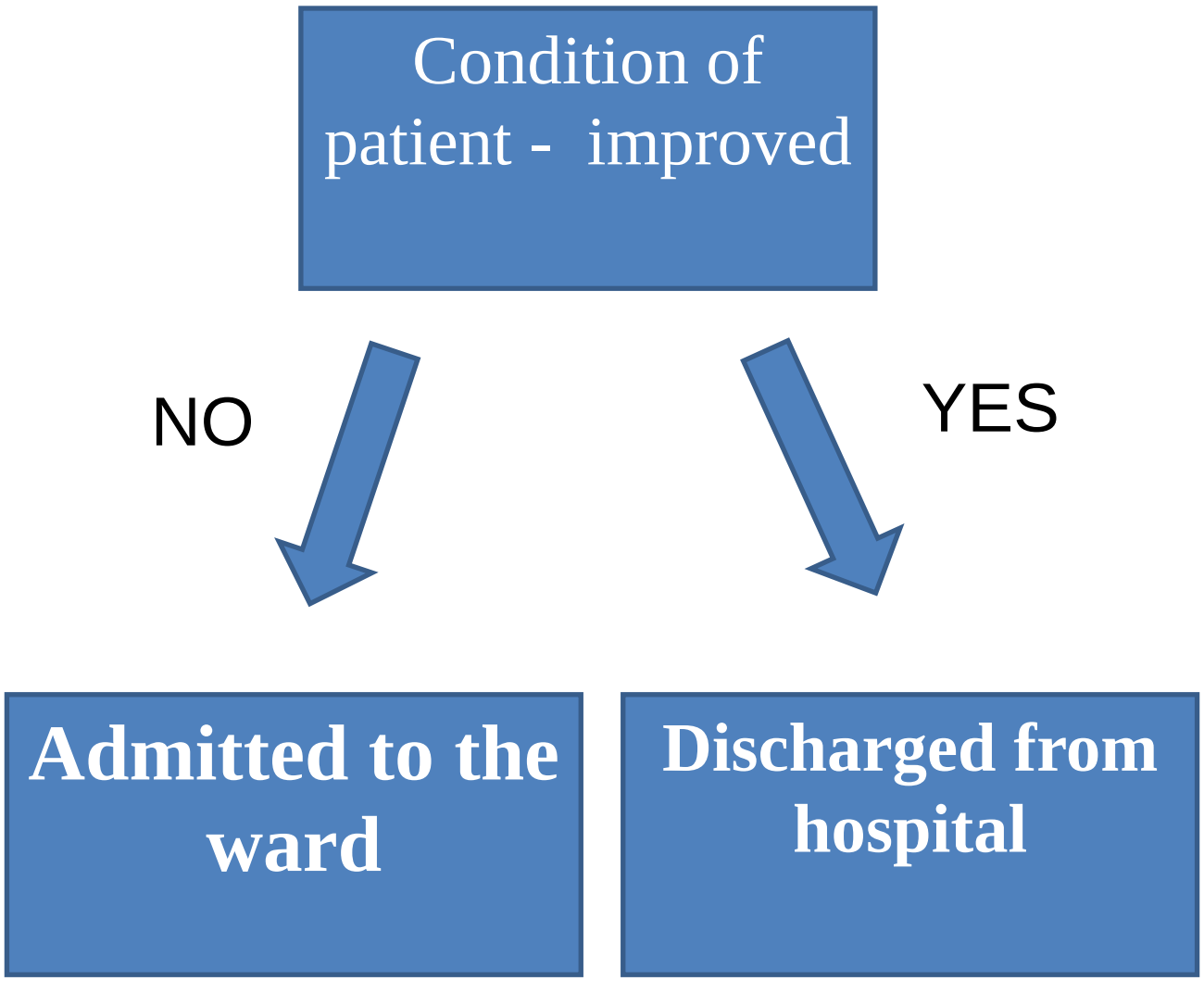
Project design

- Project design first requires gathering, synthesizing and analyzing information with enough objectivity and detail to support a program decision that makes optimum use of resources to achieve desire result. First whole process of OT process flow was understood. Process mapping for the surgeries being performed was developed and track of activities taking place were monitored .For both the OT-Utilization and Recovery area utilization study was carried out for a period of four weeks ie.25th April to 15th may 2013.Total No. of OT's = 9, out of which 7 are functional including one hybrid OT. Scheduled Elective theatre timings are 8:30am till 5:00pm. Extended OT-utilization timings =beyond 5:00pm till 8:00am in the morning. A Pre Anesthesia Room is attached to each O.R. where patient is wheeled in before surgery and I/V lines are set.

PROCESS FLOW




Surgery Starts (OT starts)
Surgery Ends (OT ends)
Theatre out
(Enter to Post op recovery)
Anaesthesia discharge
Discharge from OT


Condition of patient - improved
NO
YES
Admitted to the ward
Discharged from hospital

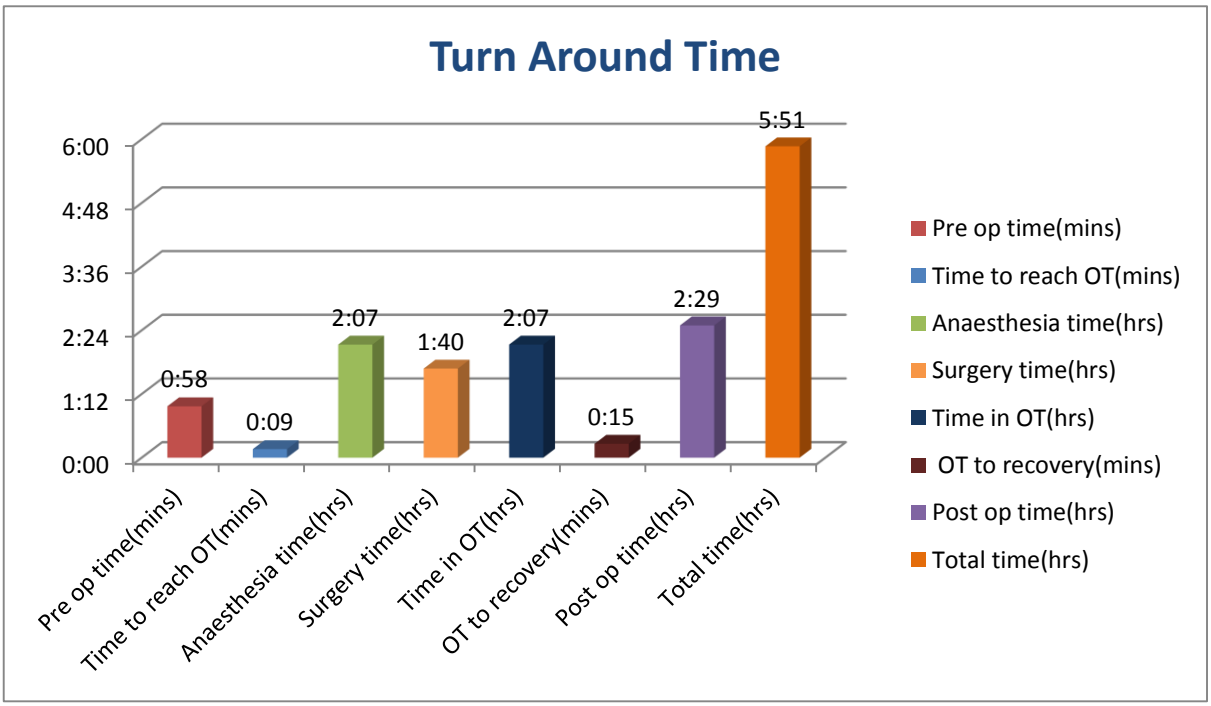


Figure-1

Figure 1 shows the total turnaround time (TAT) starting from the pre op time, time to reach OT, anesthesia time, surgery time, time in OT, OT to recovery, Post op time and total time) Discharge time(Patient is ready to be shifted from post-op recovery area) and the total time taken for it .This graph is showing on an average time taken for the different type of surgeries taking place in the department. Speciality wise Turnaround Time has been explained further in the report.

DELAY IN SURGERIES

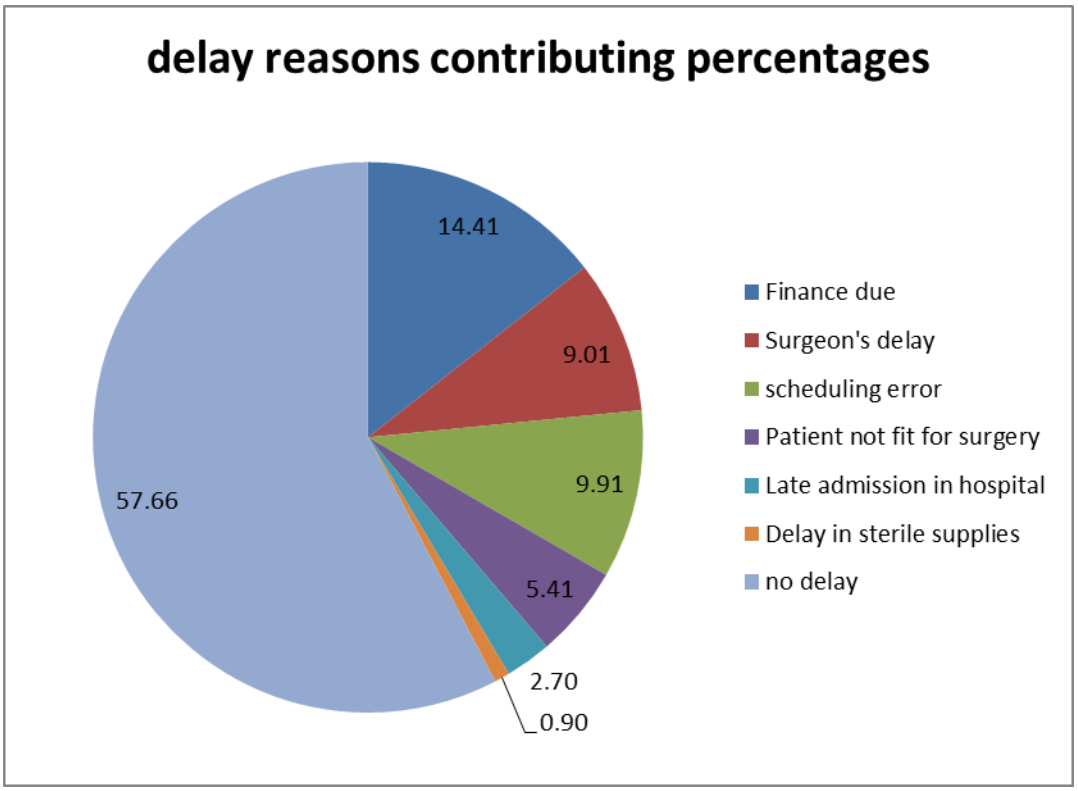


Figure 2

Figure 2 clearly shows that only approximately 58% of the cases are executed on time, 42% cases for multiple reasons as shown above are being delayed**.**

Table-1

Delay reasons	**No. of cases**
Finance due	16
Surgeon's delay	10
scheduling error	11
Patient not fit for surgery	6
Late admission in hospital	3
Delay in sterile supplies	1
no delay	64
Total no of cases	**111**

DURATION OF DELAY

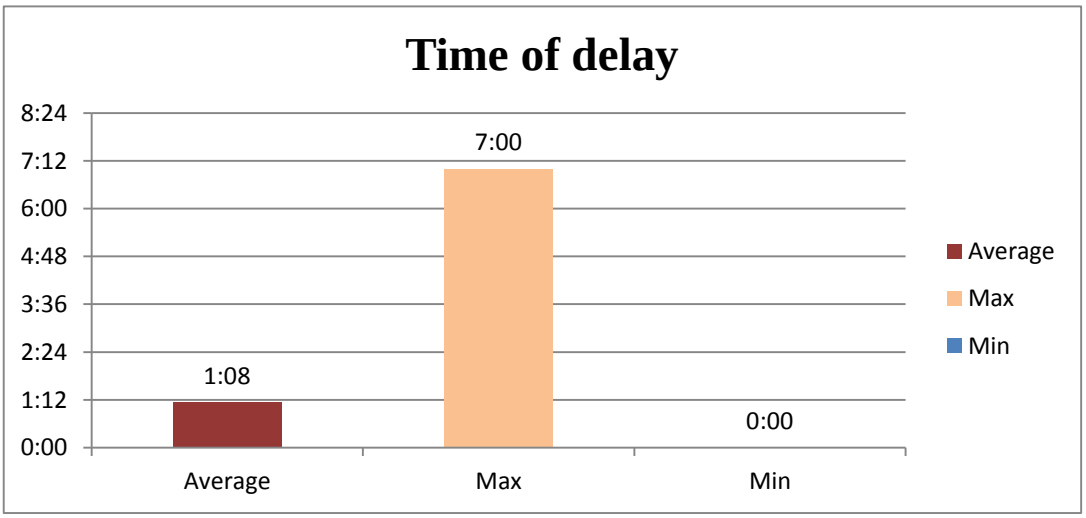


Figure 3

Figure 3 shows the comparison of average, minimum and maximum time of delay in performing of the surgeries because of the different reasons mentioned in the above graph.

Observations:

- Maximum delay was seen in - an orthopaedic case of Open Reduction and Internal Fixation because, because patient's TPA Approval did not come by the time of surgery. Minimum Delay was seen in – many cases when the surgery was performed at the exact scheduled time of the listed case.On an average cases get delayed by approximately 1hr from the scheduled time of surgery.

PRE OP TIME

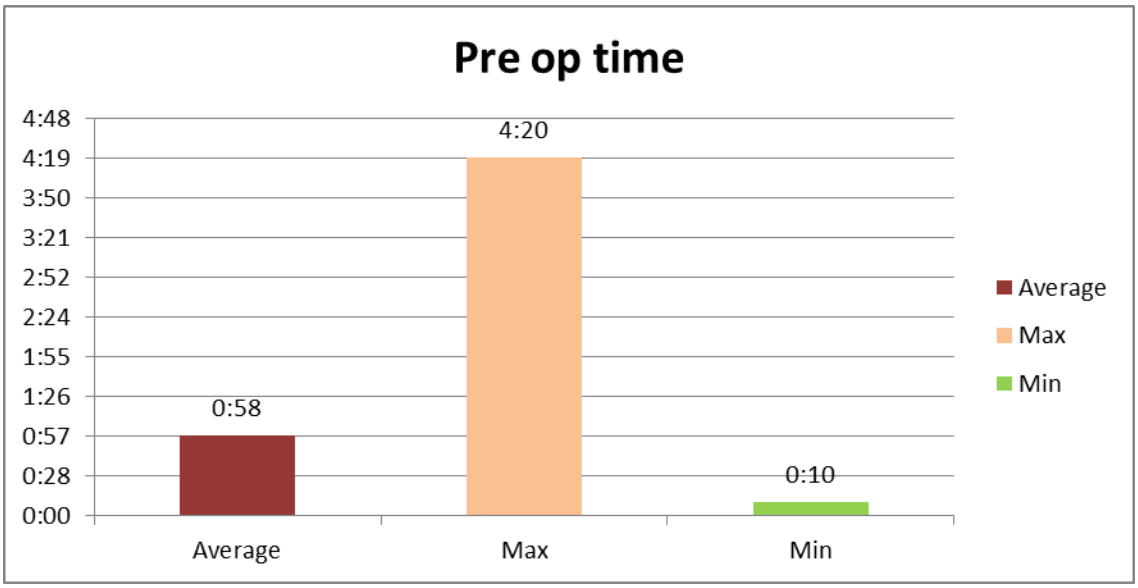


Figure-4

Figure 4 shows the maximum, minimum and the average time for which a patient was kept in the pre-op recovery area prior to the surgery from Floor-in time (time patient arrives from the ward to the pre-op room) till Theatre-in time (the time patient enters the operating room).

Observations:

- Maximum time taken was for an Ortho Case (Tibial Osteotomy and Fixation) – Reason being when patient's vitals were checked he was not found stable for surgery hence stayed in pre-op for 4hrs 20mins.Minimum time taken was for Gyanecology (caesarean Section) which was an emergency case so as soon as the patient was brought in pre-op got immediately transferred to the OT.

On an Average patient stays there for one hour which is sufficient for the pre-surgical check that includes:

- Patient Verification (in terms of identification and surgical site marking)
- Filling of all related consent forms.
- Filling of pre surgical time out form.
- Recording all the basic vital signs and checking the patient's condition before surgery

ANAESTHESIA TIME

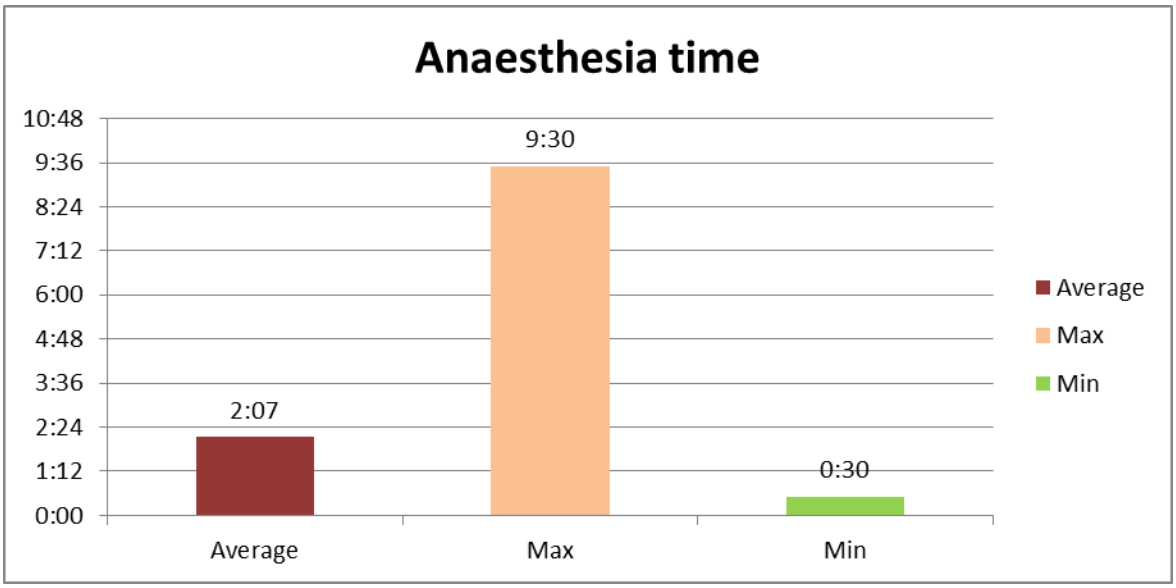


Figure 5

Figure 5 shows Anesthesia time which includes anesthesia start/ induction time till anesthesia end time in OT

Observations:

- Its maximum minimum and average time depends upon the kind of surgery and anesthesia given to patient.The patient is moved out of OT after the anesthesia effect lowers and patient responses to verbal commands, out of sedation.

SURGERY TIME

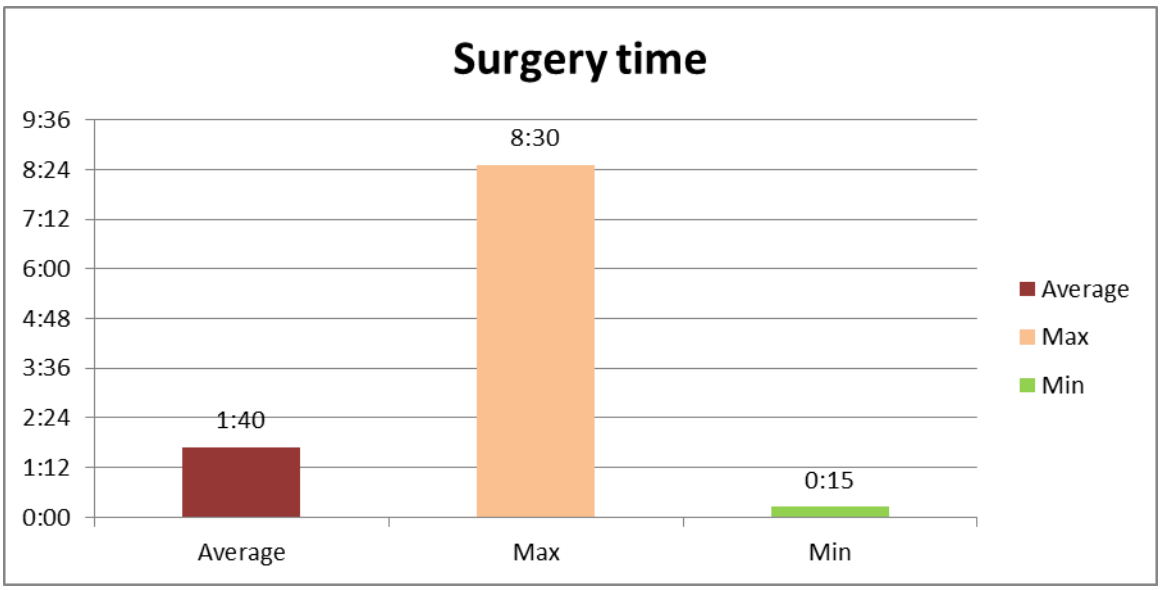


Figure-6

Figure 6 shows the time taken for surgery

Observations:

- Its maximum, minimum and average time depends upon the kind of surgery the patient undergoes.Usually spine surgeries, orthopaedic and plastic cases are expected to take long duration.

POST -OP TIME

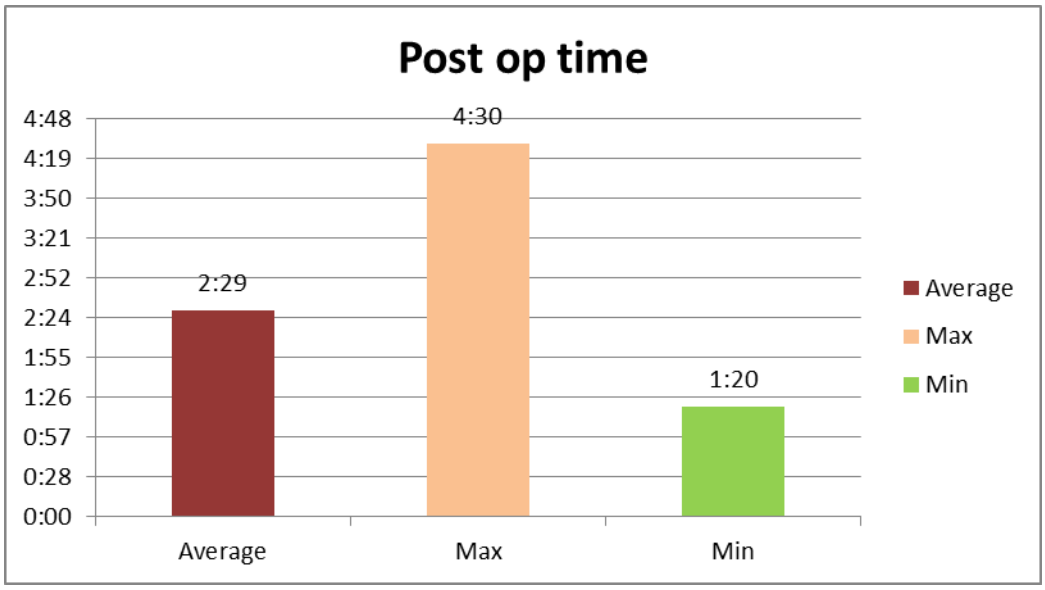


Figure-7

Figure 7 shows the time for which patient stays post op in the recovery room

Observations:

- Patient is being assessed to be ready for discharge out of hospital or ward.
- All their vitals like pulse, temperature, blood pressure, Oxygen saturation are measured regularly at the interval of 15 minutes.
- These vitals are measured till the patient is normal.

TOTAL PROCESS TIME

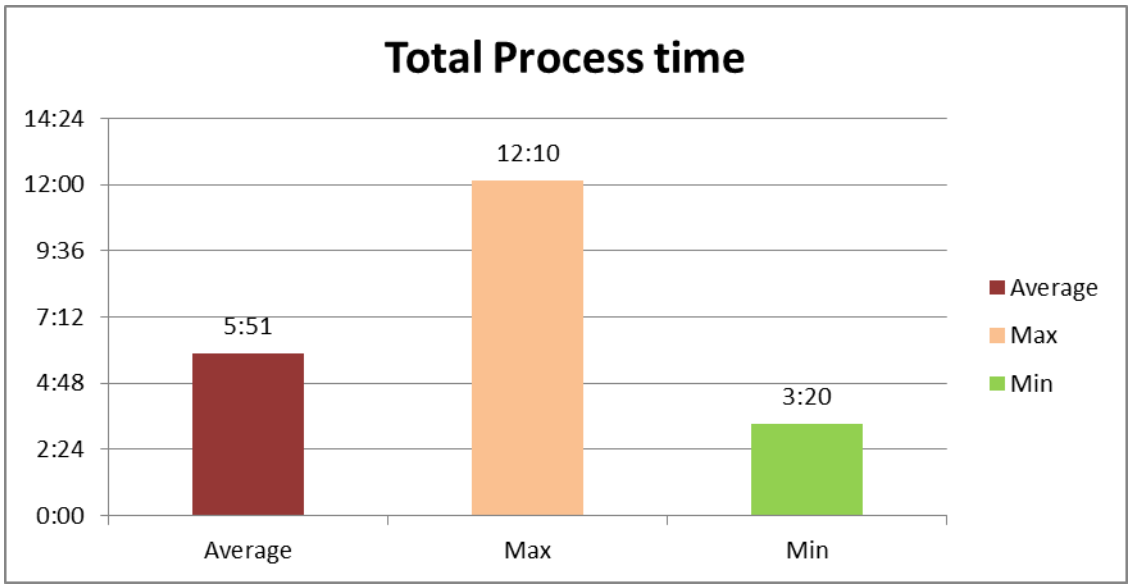


Figure-8

Figure 8 shows the total time for a process in OT

Observations:

- This graph depicts that the maximum time taken in the entire process of OT activities was around 12hrs 10 minutes, this was a plastic Surgery that was being done for the Brachial Plexus Repair.
- Second Surgery that took 8hrs 50mins was an orthopaedic case of Tibial osteotomy but, that took long time for the entire OT process because patient was not stable for surgery and so kept for a long duration in Pre-op recovery.

SPECIALITY WISE ANALYSIS and COMPARISION

ORTHOPAEDICS

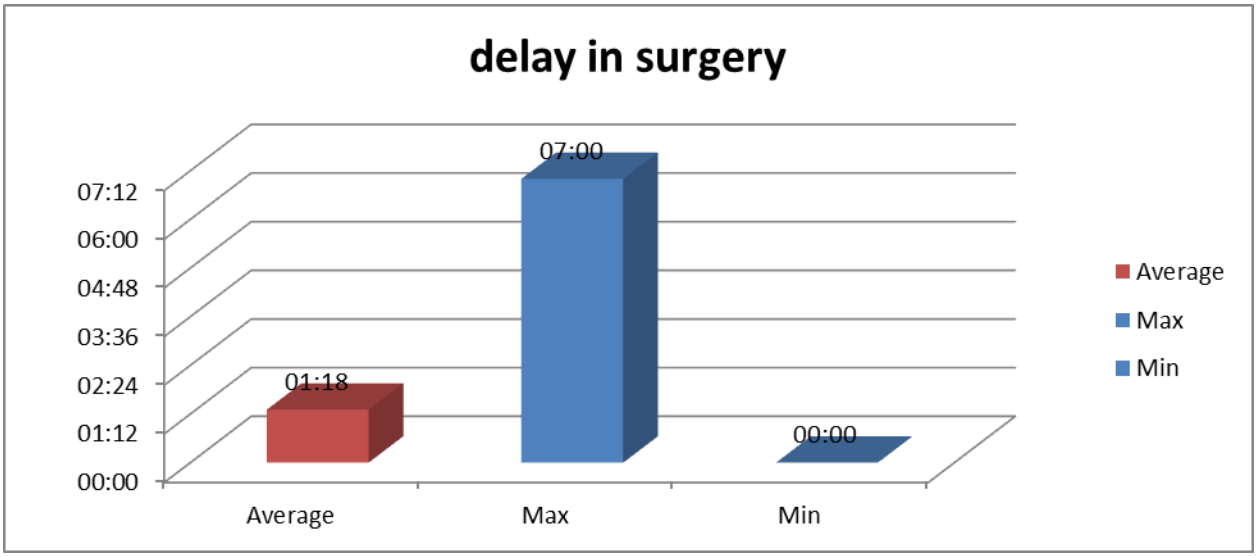


Figure 9

Figure 9 shows the time of delay in surgery that is from the scheduled time

Observations:

- The maximum case delay is because the patient was unstable when bought to the recovery so there was delay in the surgery.The delay at times is caused because the maximum number of cases is of orthopaedics in OT on daily basis.

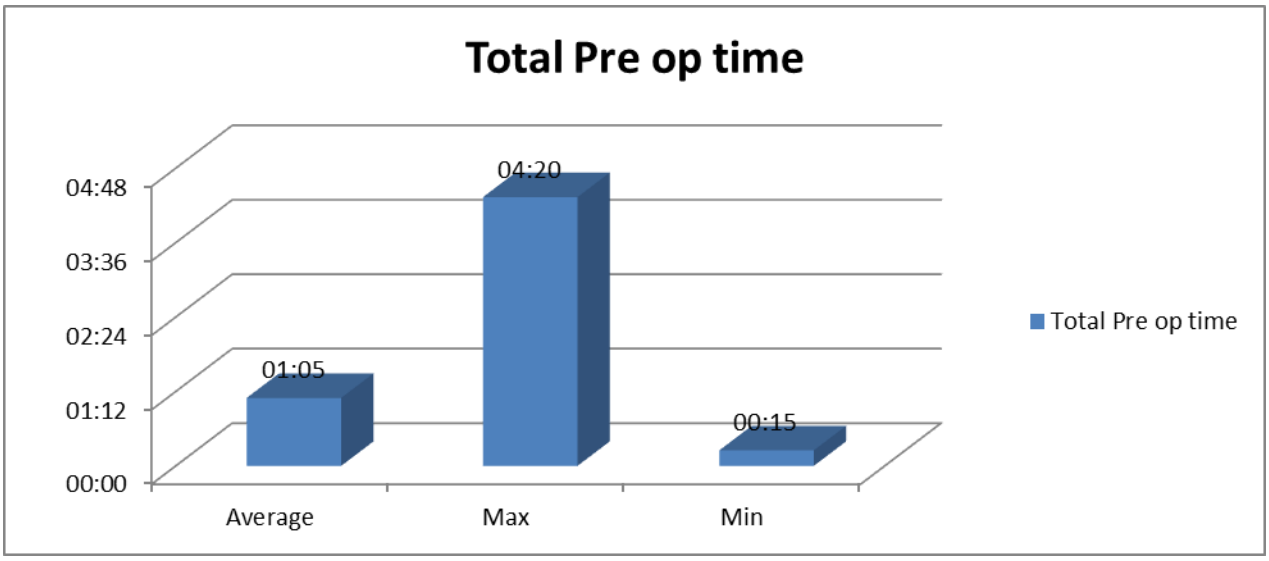


Figure 10

Figure 10 shows the total pre op time taken in recovery area

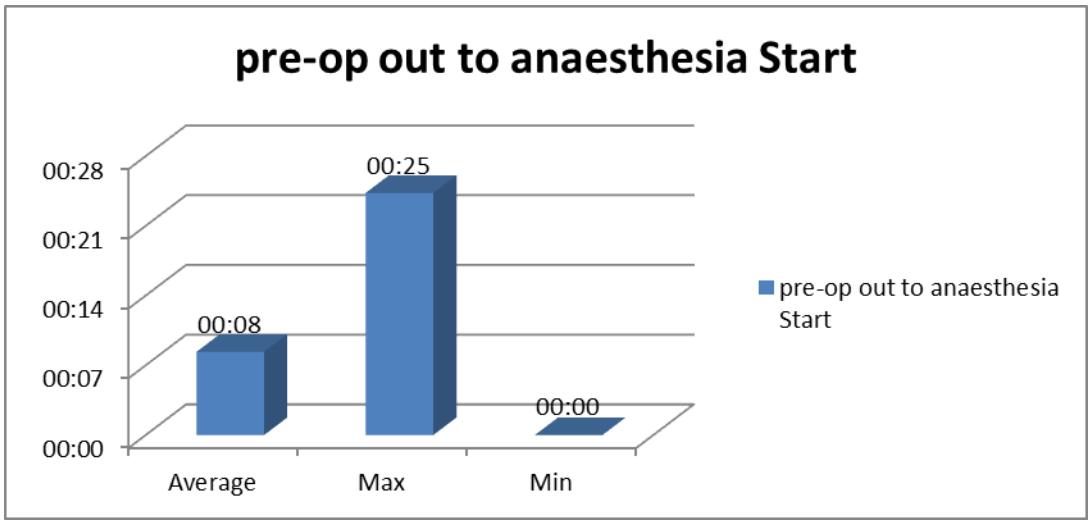


Figure 11

Figure 11 shows the pre op out to anesthesia start time

Observations: The maximum time taken in preparation after entering the OT is 25 minutes which is caused due to the delay of instruments being assembled and the doctors arranging all the desired equipments.

GYNAECOLOGY

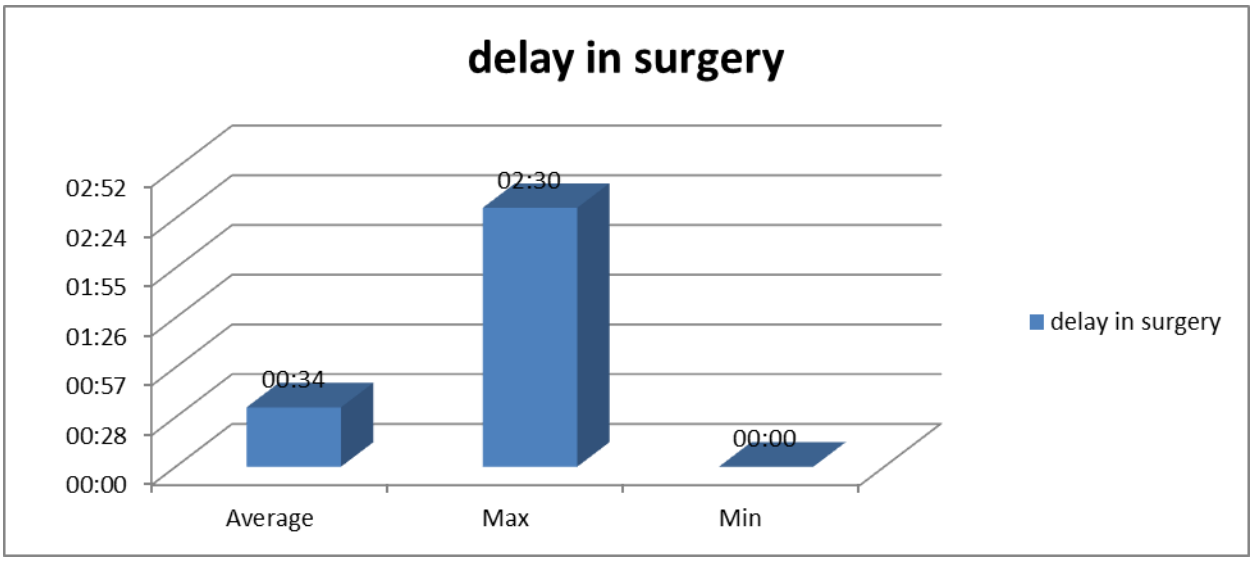


Figure 12

Figure 12 shows the delay in surgery in this specific specialty

Observations:

Maximum delay was for 2hrs30mins that occurred because of the Scheduling Error (previous case took longer time).

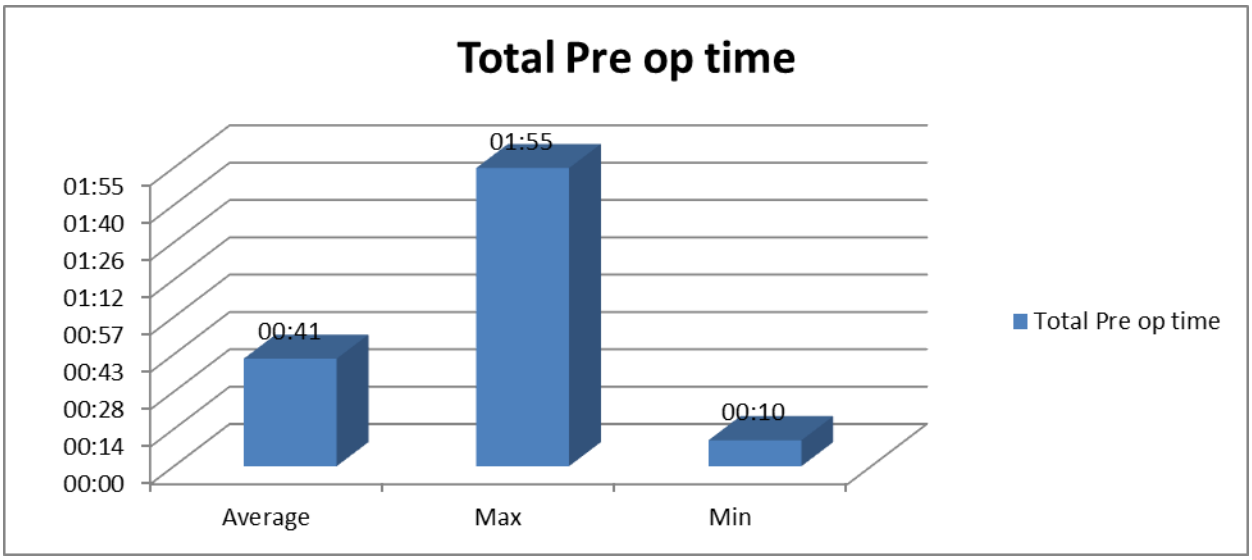


Figure 13

Figure 13 shows the total pre op time taken

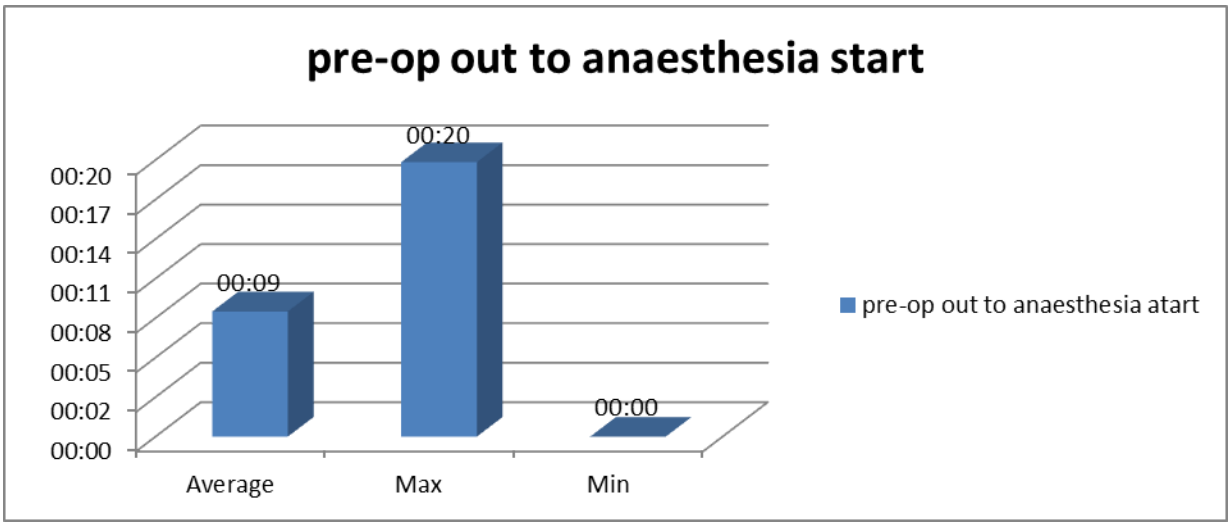


Figure 13

Figure 13 shows the time taken inside OT before anesthesia is administered

GENERAL SURGERY

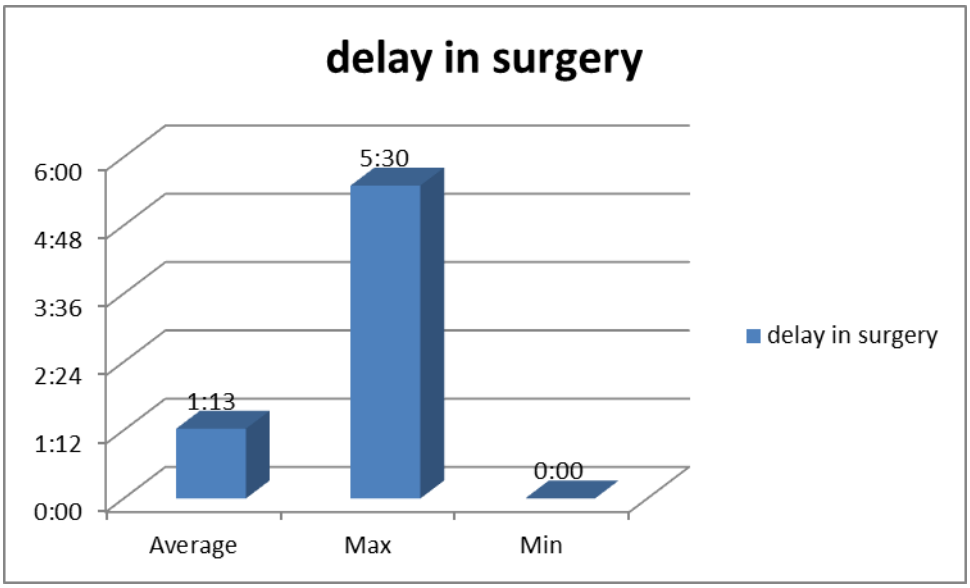


Figure 14

Figure 14 shows the amount of delay in the scheduled surgery

Observations:

Maximum delay took for 5hrs30mins reason being patient was a TPA patient and his approval didn't come by the scheduled time of surgery.

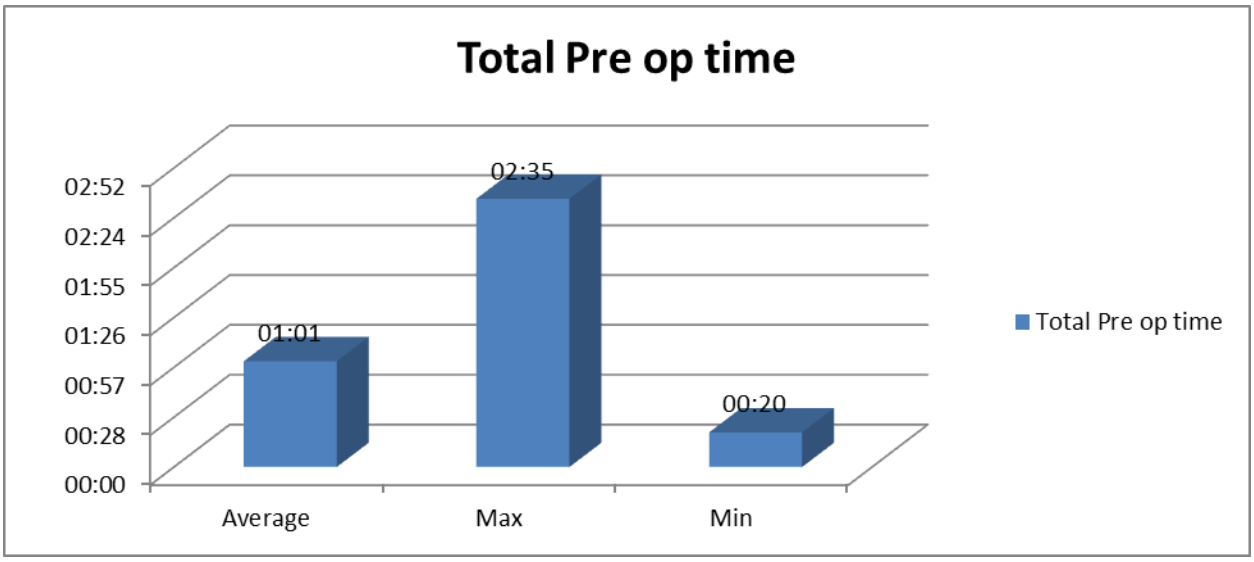


Figure 15

Figure 15 shows the total pre op time taken of the specific surgery

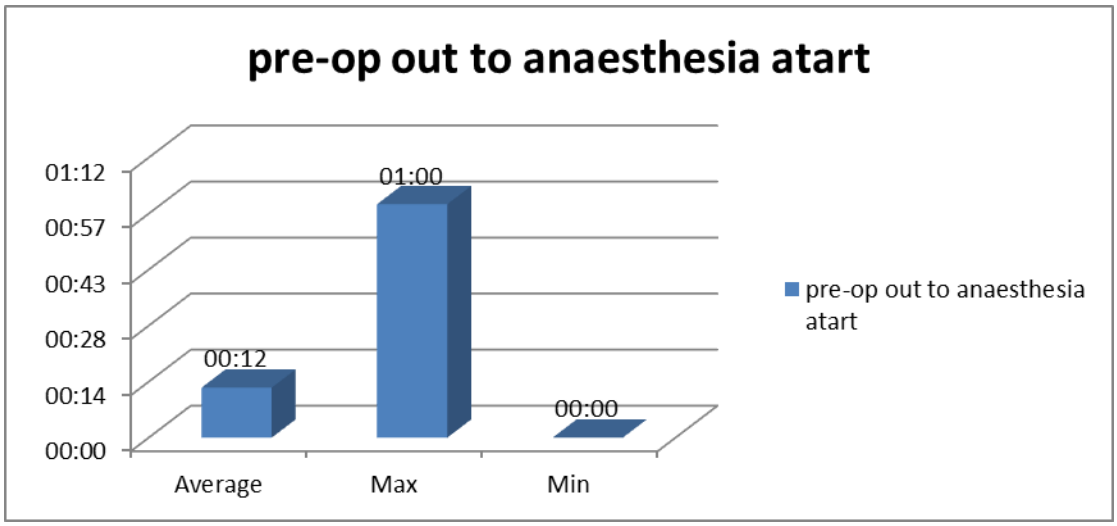


Figure 16

Figure 16 shows the amount of time taken inside OT before anesthesia is administered

UROLOGY

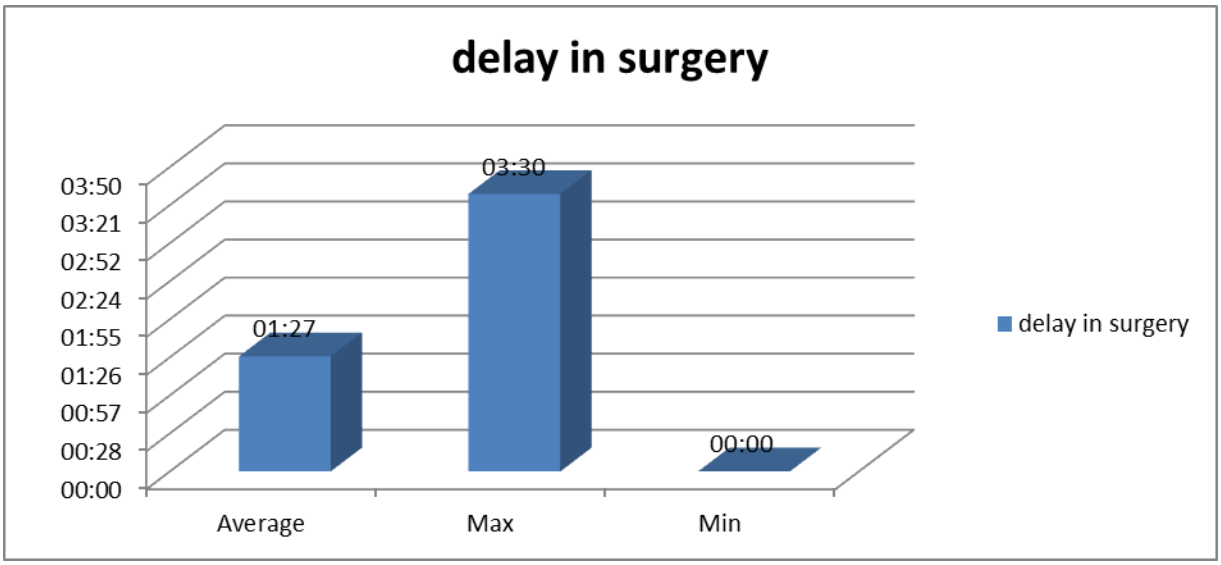


Figure 17

Figure 17 shows the delay in surgery of the specific specialty

Observation:

Delayed because of the financial due of the patient and so the next case was taken inside the OT and Surgery got delayed.

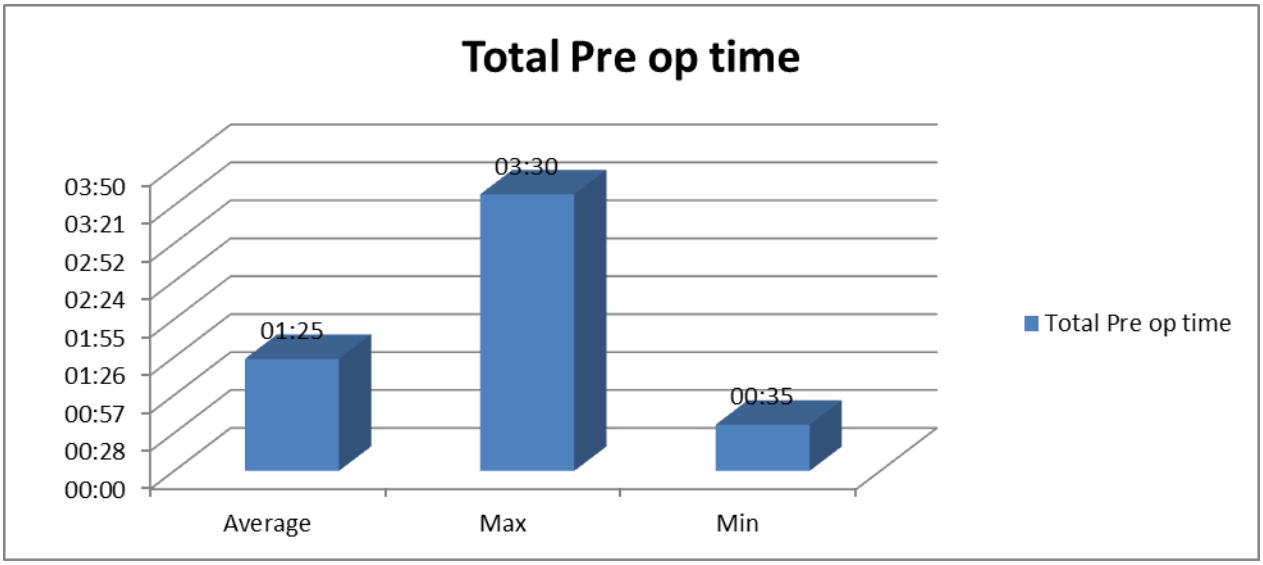


Figure 18

Figure 18 shows the total pre op time when the patient stays in the recovery area

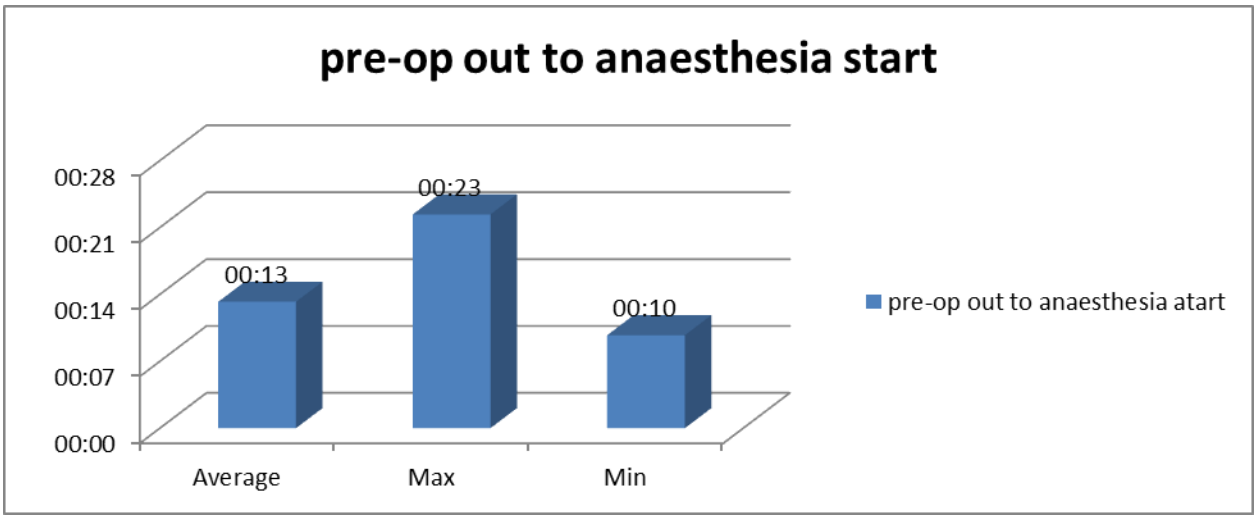


Figure 19 shows the time a patient stays in OT before anesthesia is administered

Ear Nose Throat

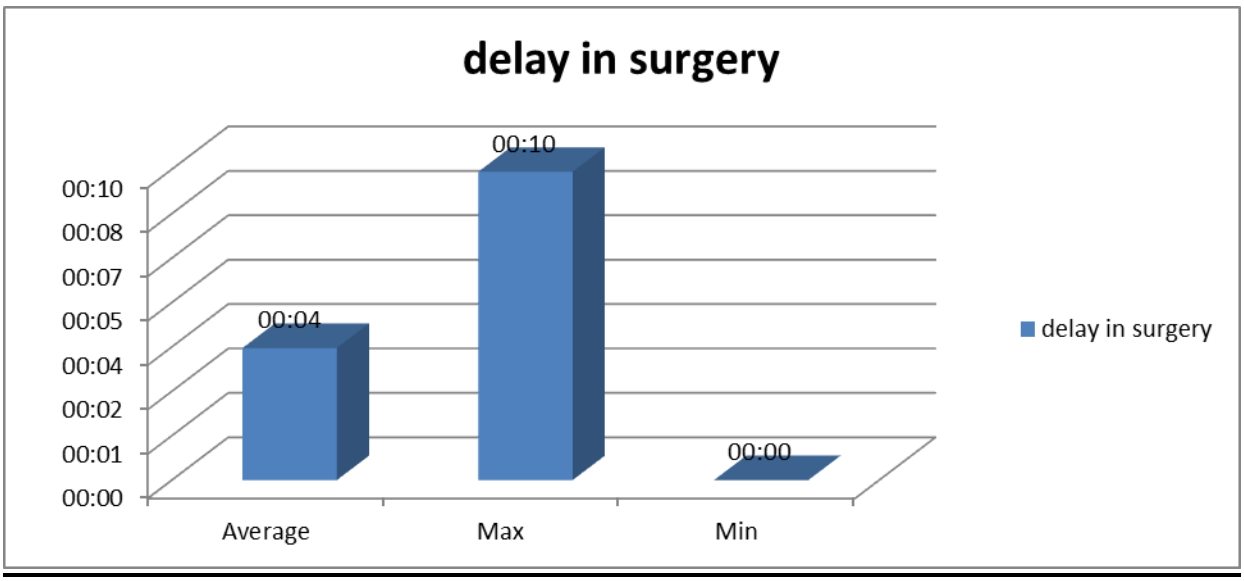


Figure 20

Figure 20 shows the delay in surgery in this specific specialty

Observations: As such the graph is showing that maximum delay is hardly for 10mins which is not much evident and rather it should be considered as a benchmark for other departments where huge amount of delay in surgery is noticed.

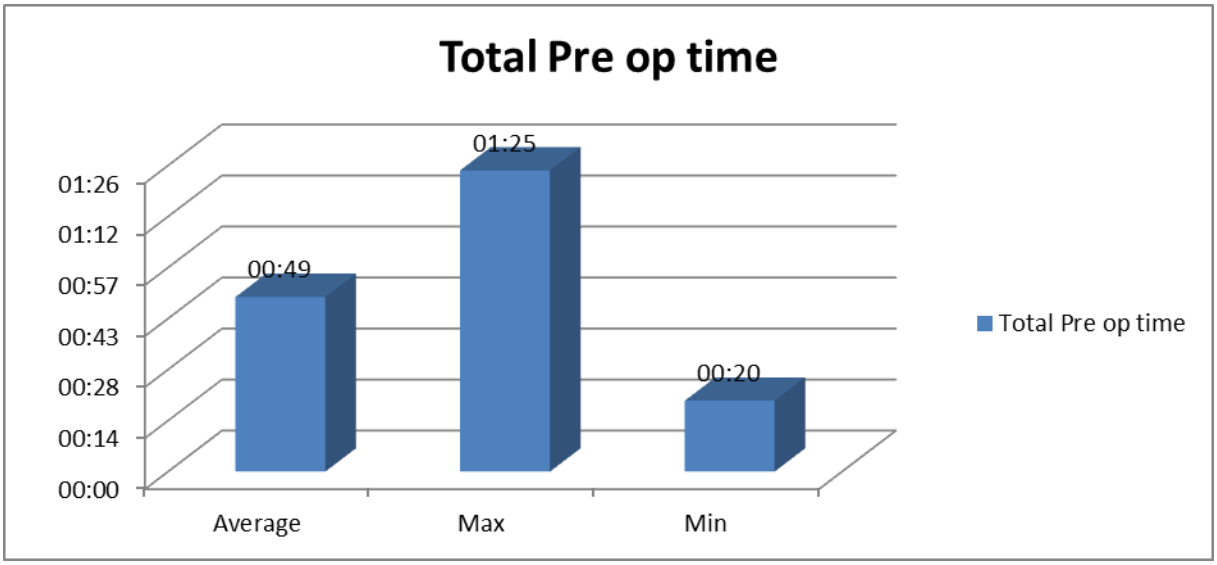


Figure 21

Figure 21 shows the total pre op time taken by patient in this specific specialty

AVERAGE DELAY IN SURGERY COMPARISION (specialty wise)

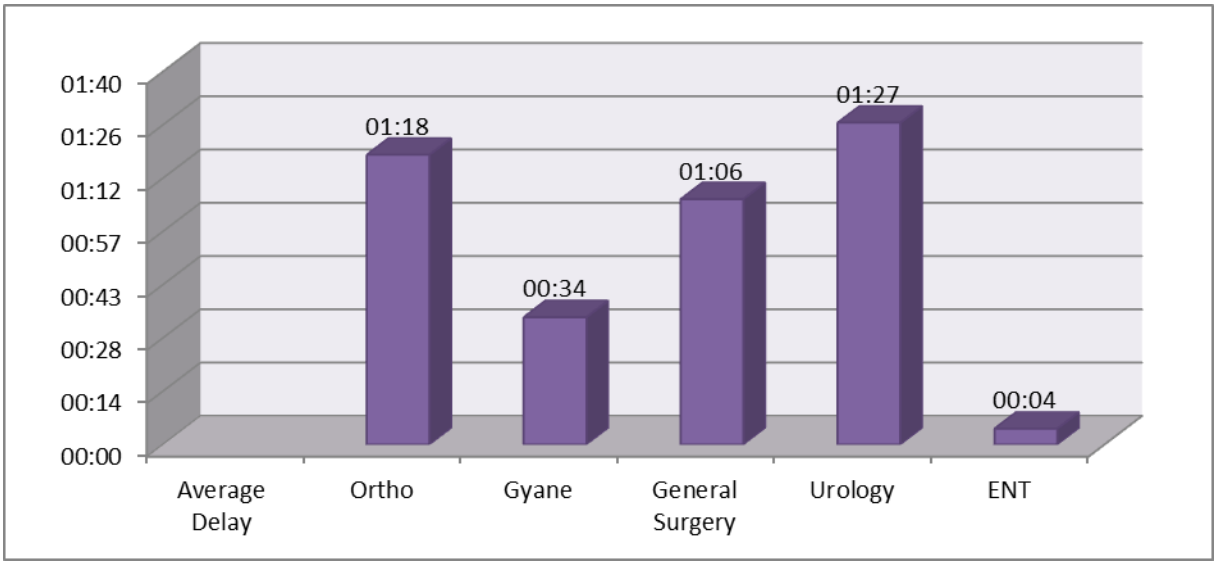


Figure 22 shows the comparison in the average delay in surgery specialty wise

RECOMMENDATIONS:

- First case should reach O.T. in time from the ward, to allow the O.T. to be started on time.

- Perform all the minor procedures in minor O.T.'s attached to the OPD.

- The first case to be done in OT must be **In-house** so that delay because of late admission of the patient in the hospital can be avoided.

- More trolleys are needed to shift the patients in and out of M.O.T. Complex.

- The Anesthesia and other equipments must be made ready by the assisting staff so that the O.T. starts on time.

- Accountability should be fixed for any delay caused , even it is because of surgeon.

CONCLUSION:

As a student of 'Post graduation in health administration' I have tried to study and understand policies and protocols of Operation of the hospital.

The main objective of the study was to analyze different aspects related to OT process and the time taken at each end. From the analysis it was found that there are various areas where there is delay in the scheduling due to multiple reasons.
My project placement in this hospital was very impactful and productive. I express my sincere thanks to all who helped me by giving their valuable information about the procedures.

Project 2 on CLINICAL AUDIT OF MEDICAL RECORDS and COMPARISION of their COMPLIANCE

Executive summary:

Medical records includes a variety of types of "note" entered over time by heath care professionals, recording observations and administration of drugs and therapies, test results, x-rays, reports etc. The maintenance of complete and accurate medical records is a requirement of health care providers and is generally enforced as a licensing or certification prerequisite. This study is to check the compilation of records on paper as well as HIS by the clinician. As clinician play an important role in the treatment of the patients, it's necessary for them to document all the details of their treatment in the records. The study was conducted of a few random cases of a few specialties of four months (January to April 2013). There were a few areas where it was seen that clinician are missing out on mentioning the details that are required. These records very importantly help the patient and clinician to cross check the treatment underwent by the patient during their stay in the hospital.

Introduction:

The study was conducted in the medical records department. A few data was collected from the records and few from the HIS. To audit the records a tool was prepared and the complete documentation process was understood of the concerned specialities. All the important details were taken care of while making the tool. The clinical papers that went in to each patient admission, to their operation details, paper work during their stay and discharge was understood.

Objectives:

- To study the clinical aspects documentation in the medical records.
- To compare the clinical components compliance between five specialities.

Methodology:

- **Data source**: Data has been collected on routine basis from medical records department and HIS.

- All the analysis and graphical depictions were done with the help of MS-Excel.
- **Study area**: Artemis, Gurgaon
- **Time duration of study**: 10th May- 4th June, 2013.
- **Sample size**: Patients (90) – 20 files of each speciality.
  (4-5 files of each month ranging from January to April 2013)
- **Sampling Method**: Convenient sampling.

Data Collection:

The data collection was done from the medical records department selecting the files at random. A few components were seen in the patient files and the rest in the HIS. Random patient files were seen of four months. The components covered were from the HIS and medical records. They are as follows:

Hospital Information System

Initial assessment: Plan of care, Medications, Diet, Activity, Discharge Plan, Estimate of Blood, Care Plan Goals.

Dr's Progress note: complete on day of admission, daily noted, pain assessment, care plans, Transfer notes and referral notes.

Operative notes: pre op diagnosis, indications, complications and estimated blood loss.

Medical records

Consent form: All forms present, patient/relative signature, doctor's signature, witness signature, name of treating doctor and signature of treating doctor.

Anaesthesia assessment: Type of anaesthesia, PAC assessment, Time out documented, Baseline vitals documented.

Post anaesthesia recovery

Physiotherapy assessment

IDTR form assessment

PFE form assessment

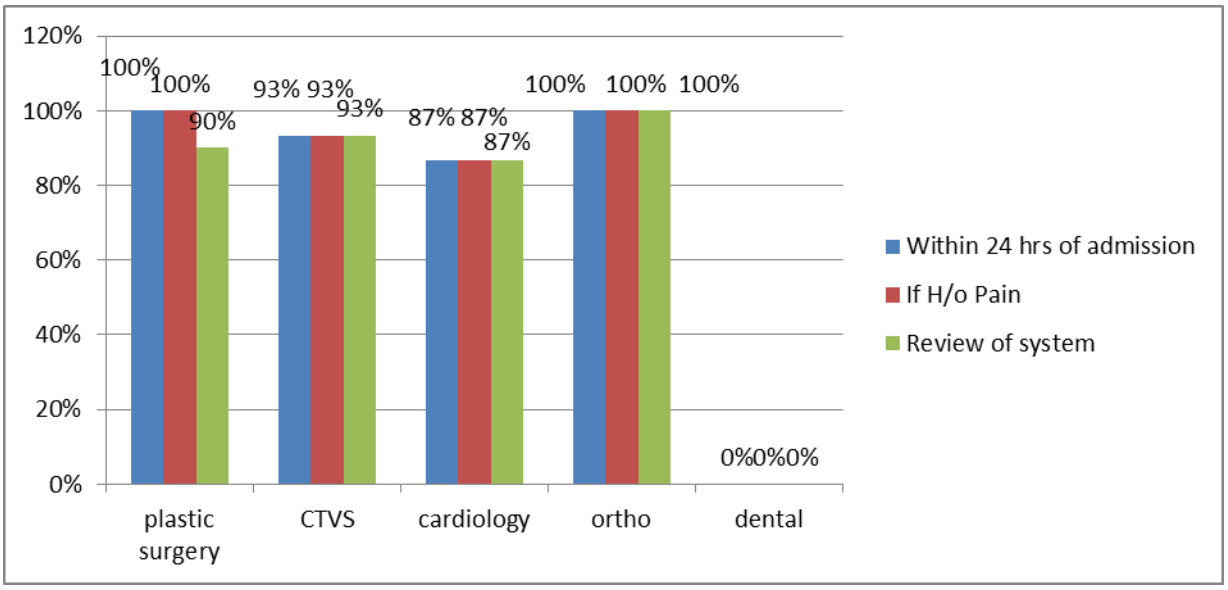
Medical records Sheet: All drugs mentioned, ordered time, order signs and legibility

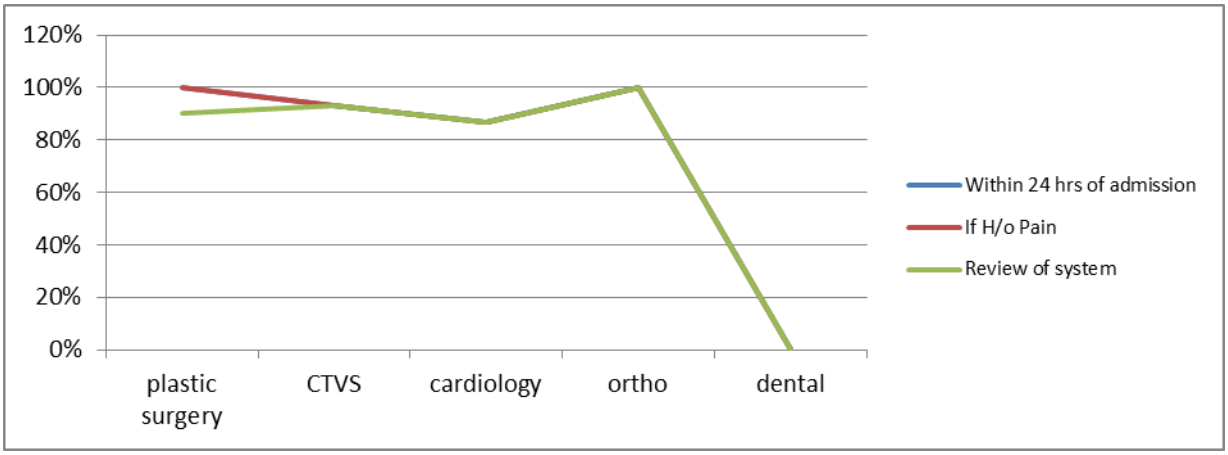
Discharge summary: condition of patient, physical activity advised, diet advised and other non-drug advised.

DATA ANALYSIS and DATA INTERPRETATION

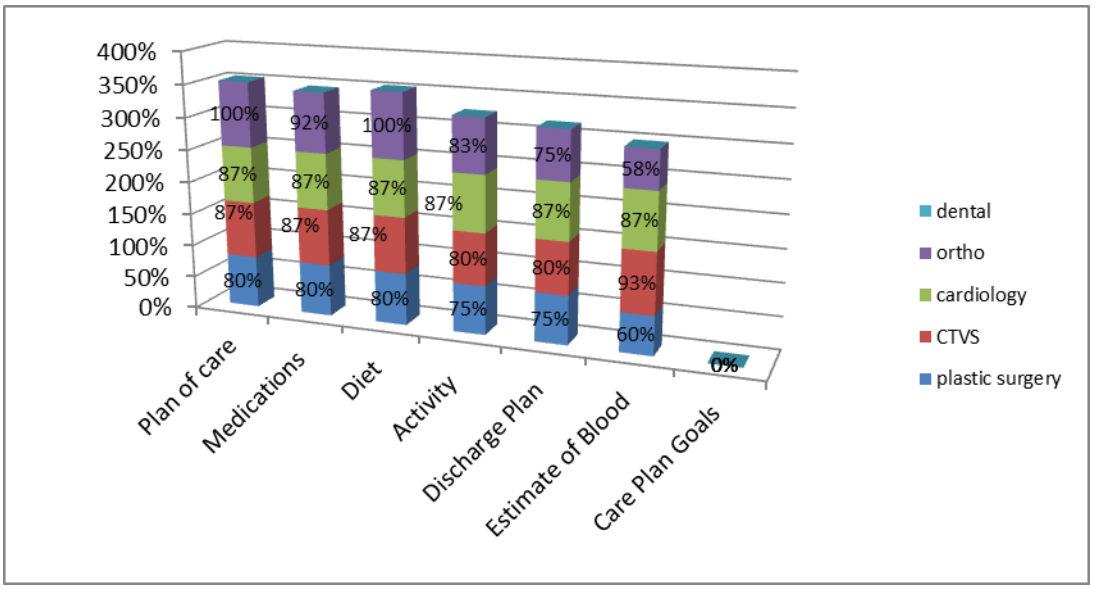
*All the components were checked for a random number of cases in the medical records file and HIS. For the institute confidentiality reasons, the name of the specialities are plastic surgery, CTVS, cardiology, orthopedics and dental. The comparison between the specialities on various parameters is shown below

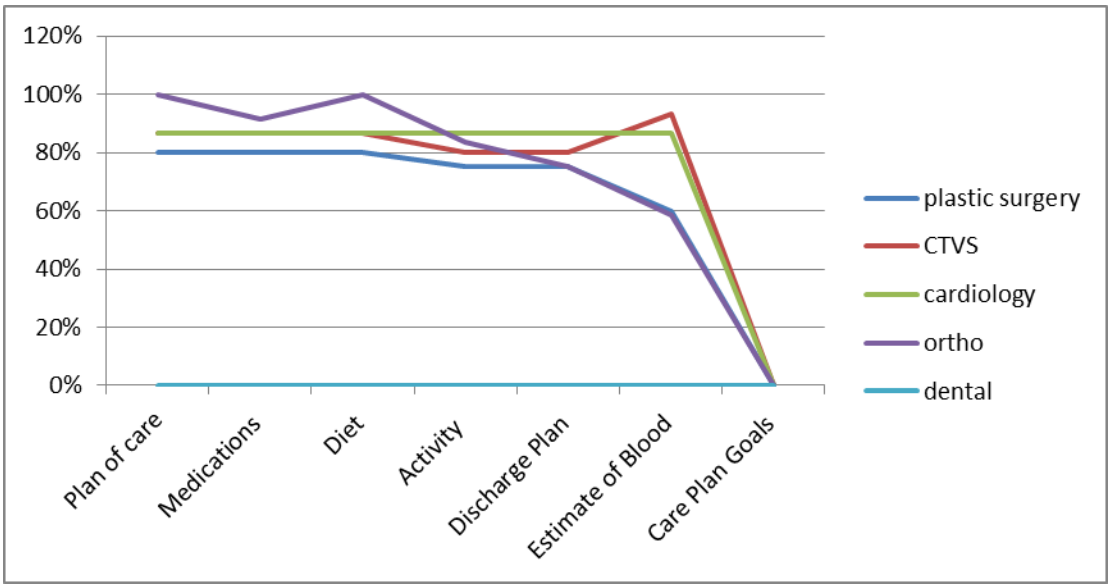
INITIAL ASSESMENT of Patient





***The above figures show the comparison between the specialties during the time of initial assessment of patients.**



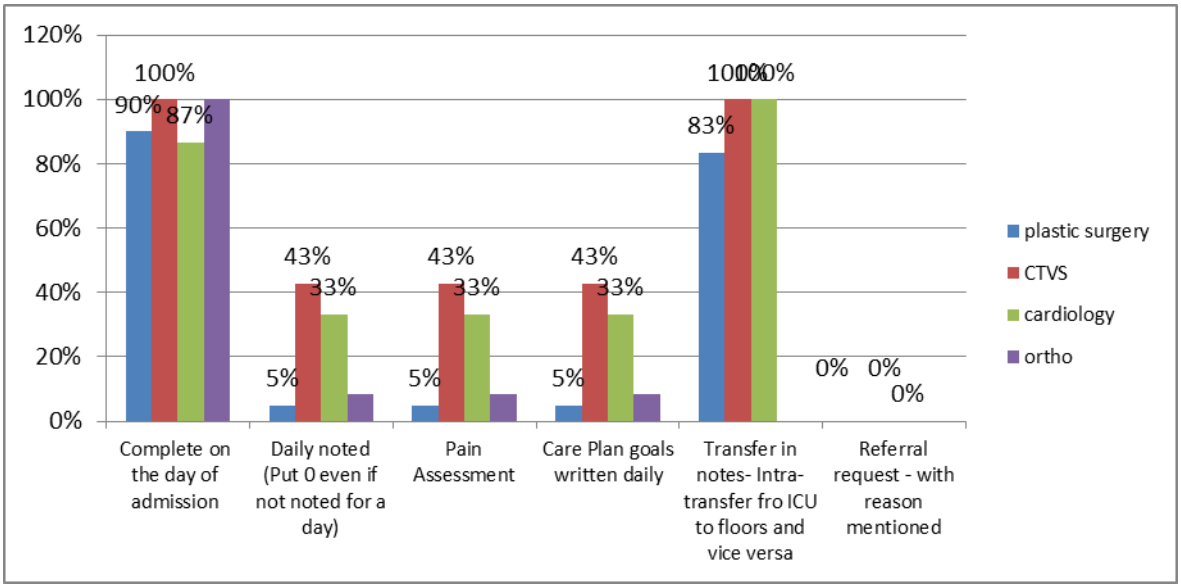


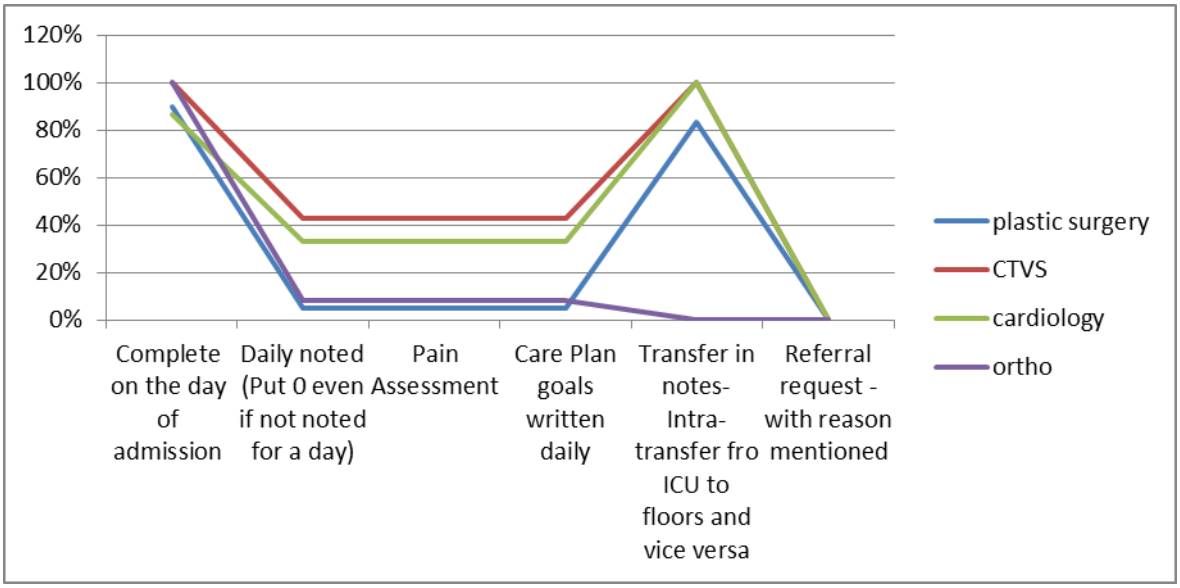
***The above figure shows the compliance of assessment at the time of admission by doctors of different specialties**

Observation:

- From above we can see that all the specialities have 0 compliance rate for care plan goals.
- Orthopaedics has the highest compliance rate in all parameters except "estimate of blood"
- Dental has the lowest compliance rate in all the parameters.

Dr's initial assessment notes



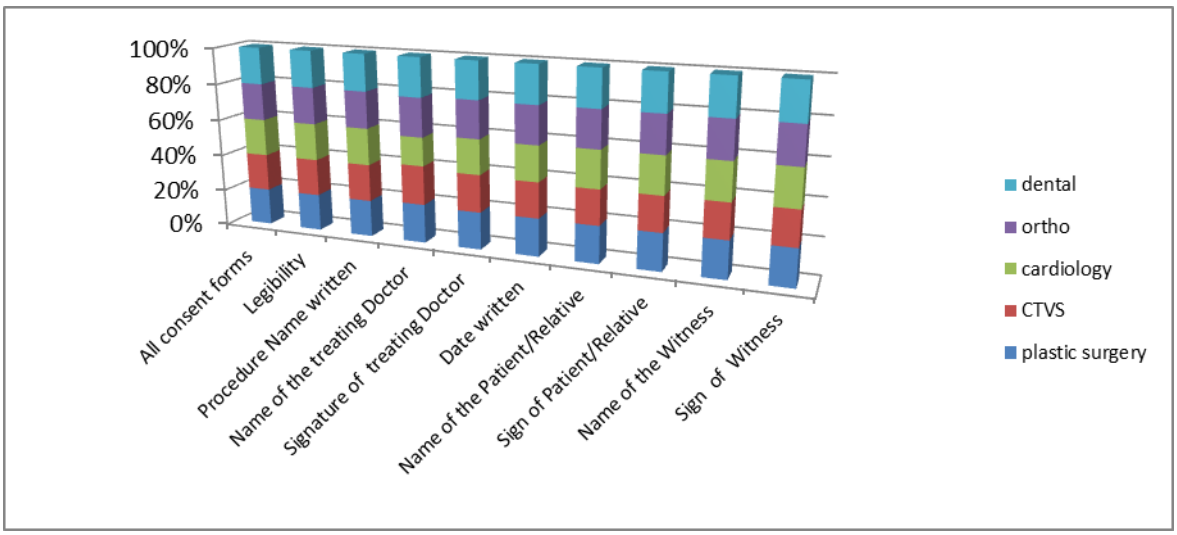


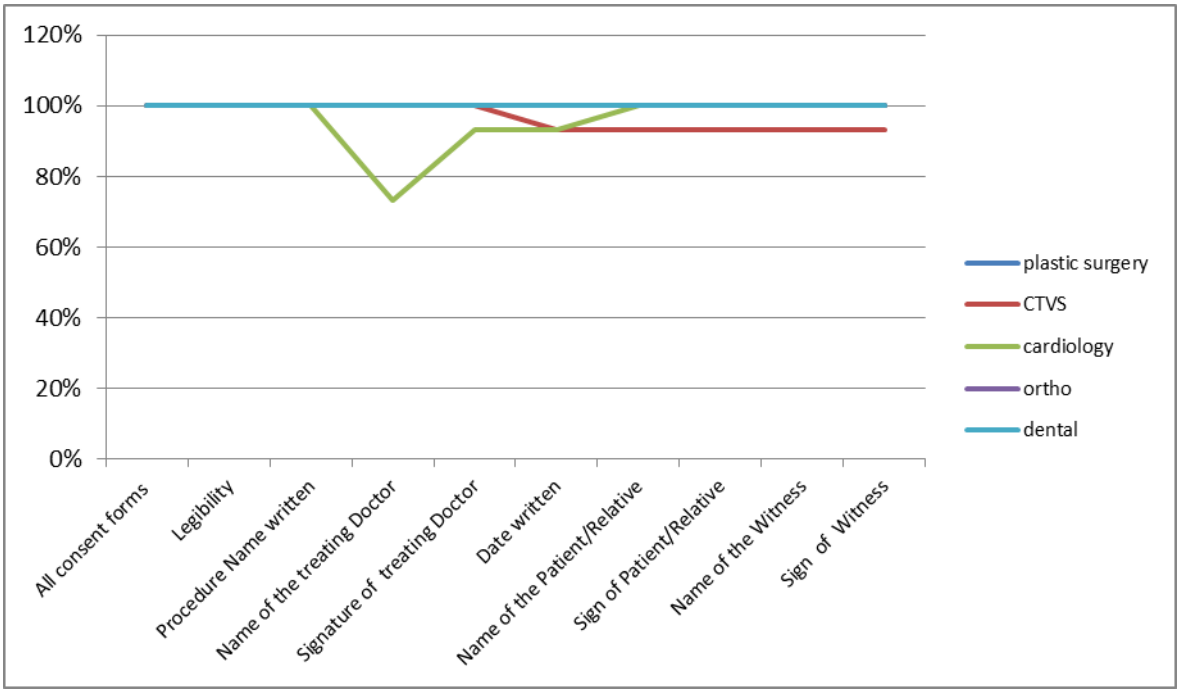
***The above figures show the compliance rate of Dr. Progress notes of various specialities**

Observations:

- CTVS is the speciality that has maximum compliance in this area.
- Dental again has the least compliance rate.
- Orthopaedics is closer to CTVS but its compliance rate drastically drops down in one parameter and that is " transfer of patient"

CONSENT FORMS





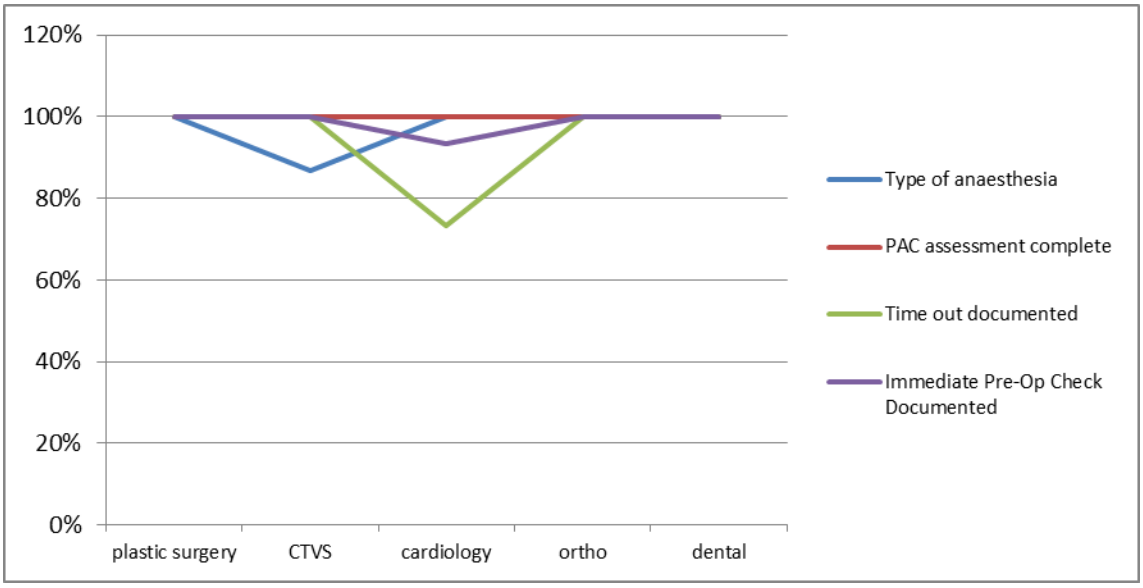
***The above figures shows the compliance rate of consent forms of various specialties**

Observations:

- Cardiology has the least compliance rate in having all the parameters of the form filled among these parameters the most not filled is the name of the treating doctor.

- This is followed by CTVS which also has a low compliance rate in the signature parameter

ANAESTHESIA ASESMENT

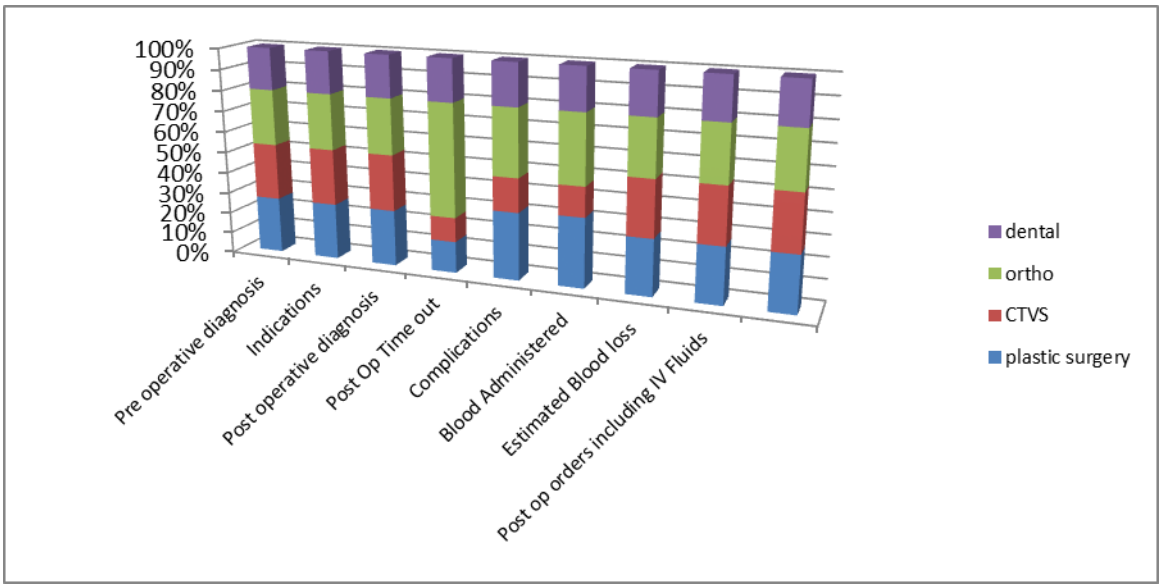


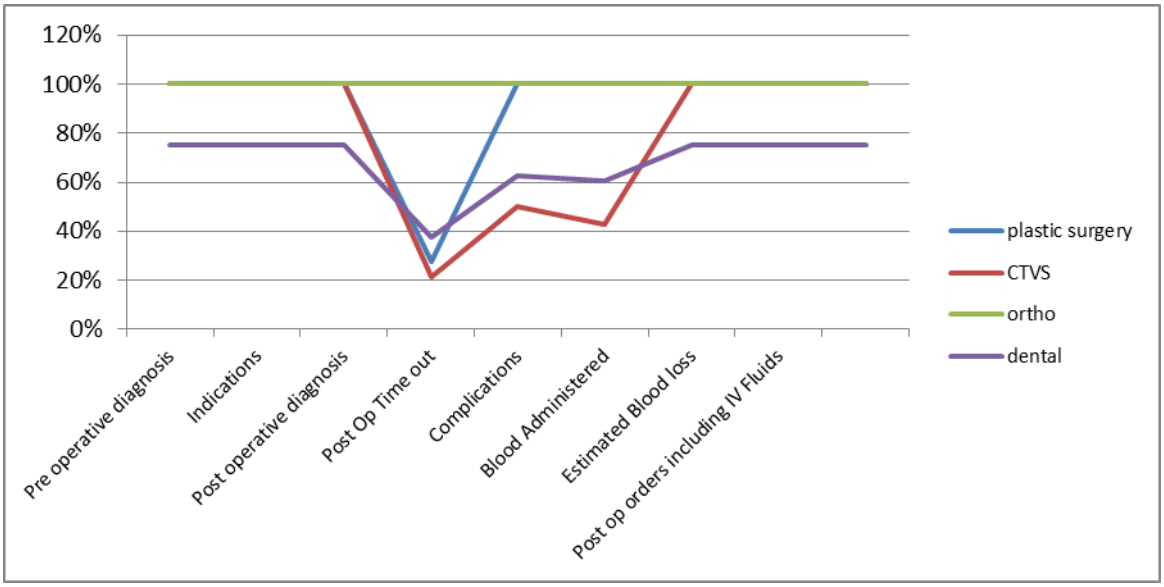
***The above figures shows the compliance rate of anaesthesia assessment of various specialities**

Observations:

- Cardiology has been seen to have the least compliance rate in this area with the most effected parameter being the time out documentation form.
- CTVS lacks in mentioning the type of anesthesia most of the times.

OPERATIVE NOTES





***The above figures shows the compliance rate of operative notes of various specialties**

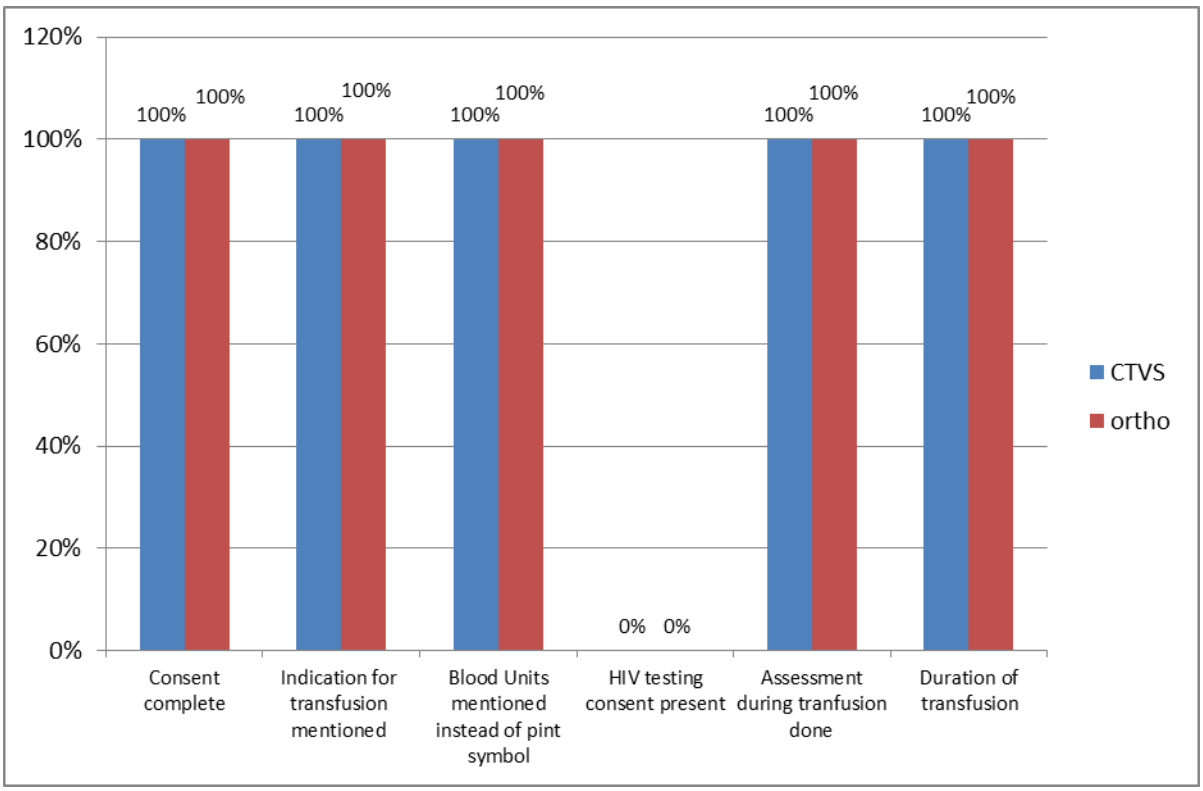
Observations:

- CTVS is the speciality that has the lowest compliance rate in this area. The main parameter effecting in this is the documentation of post op time.

- Plastic surgery also lacks the most in the same parameter as documentation of the post op time.

- Orthopaedics is the most consistent having 100% compliance rate in this aspect.

BLOOD TRANSFUSION component

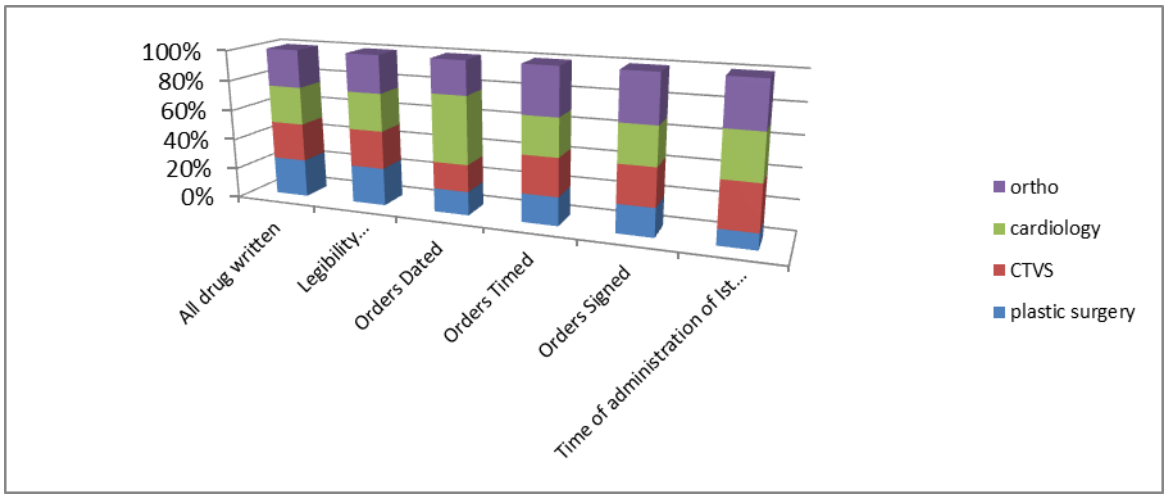


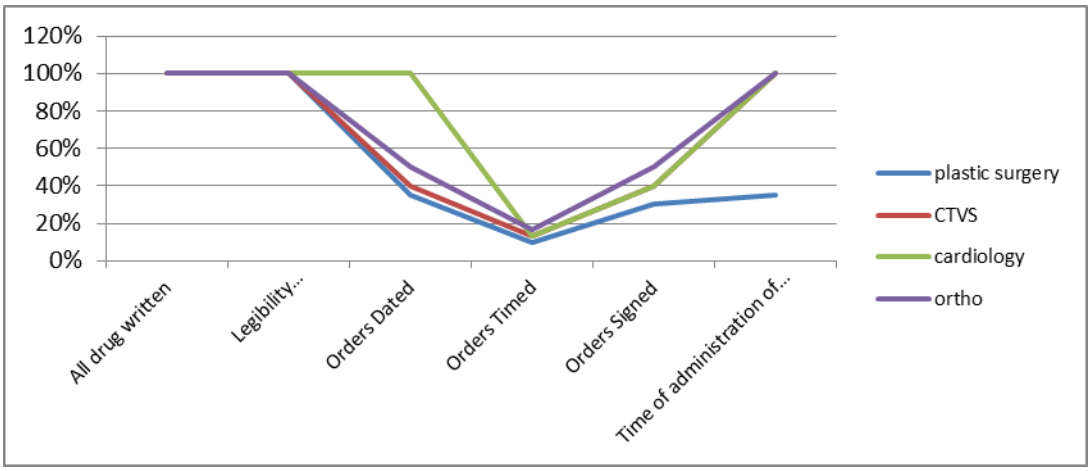
***The above figure shows the compliance rate of blood transfusion components**

Observations:

- All the components are seen to be filled except the "HIV testing consent for", this being one of the important components for blood transfusion this is not being done

MEDICINE ADMINISTRATIVE RECORDS



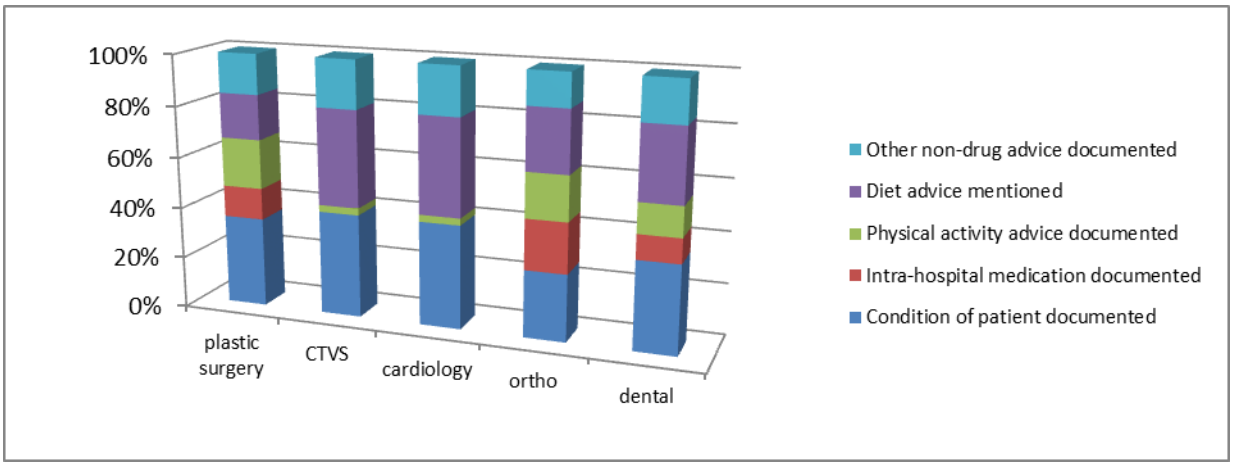


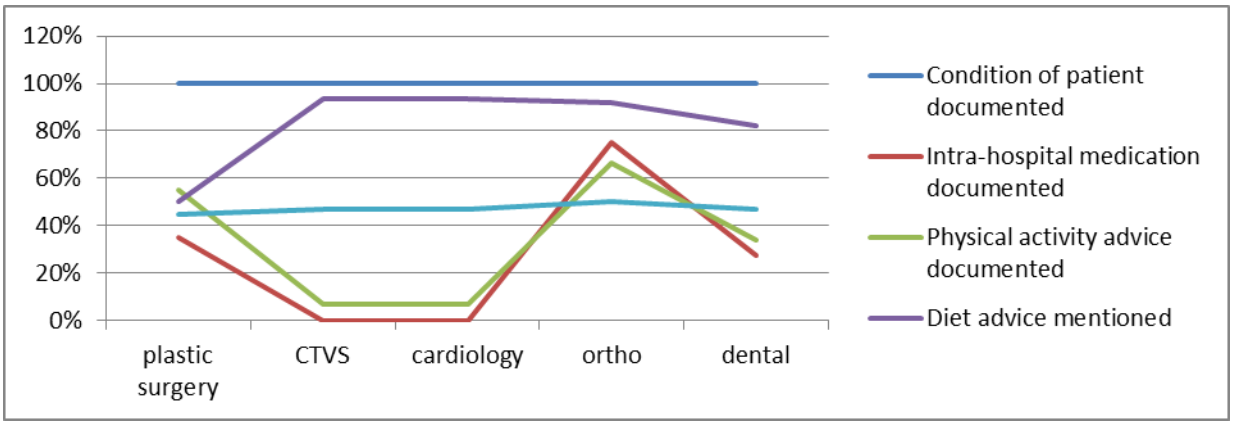
***The above figure shows the compliance rate of medicine administrative records components.**

Observations:

- Plastic surgery has the least compliance in this area.
- All specialities lack compliance rate to a great extent in one parameter and that is “orders timed” of drugs.
- Next compliance parameter that is very important and is neglected is doctor signature against advising the drug

DISCHARGE SUMMARY



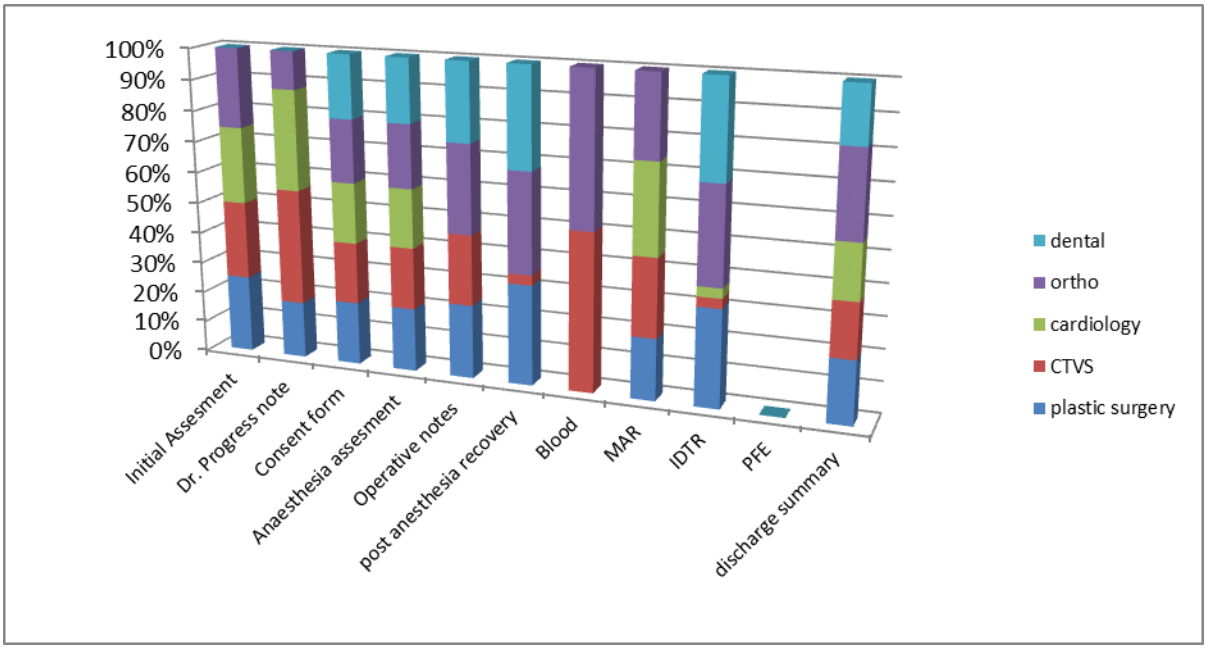


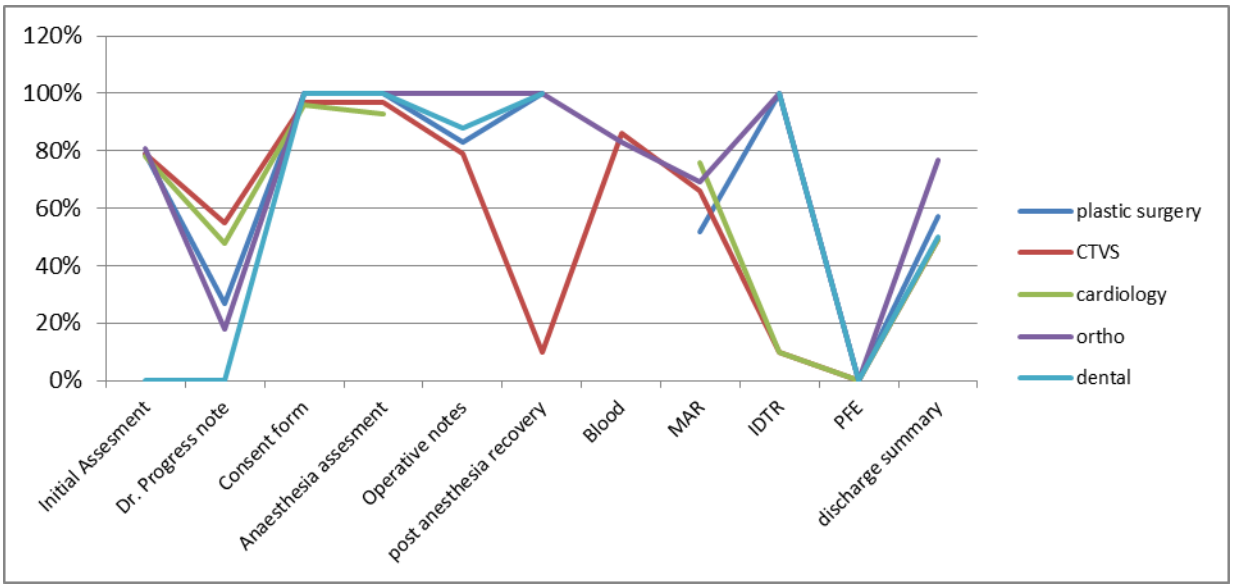
***The above figure shows the compliance rate of discharge summary of various specialties.**

Observations:

- Intra hospital medications are not at all mentioned by the cardiology and CTVS team in the discharge summary.
- Orthopaedicians have the most compliance rate in this area.
- No physical activities precautions or advise is given in the discharge summary by cardiology and CTVS team

COMPLETE COMPARISON





***The above figures show the complete compilation of all the parameters, of all the specialties in the study**

Observations:

- All the specialities have been seen to have the least compliance in PFE forms and the maximum in initial assessment.
- CTVS has the least compliance in post anaesthesia recovery compared to other specialities and maximum in progress notes.
- Dental has the least compliance in PFE and progress notes and the maximum in anaesthesia assessment compared to other specialities.
- Othodopaedics department is seen to have the best compliance among all other departments

Recommendation:

- There should be regular check of the records by the floor co coordinator at the floors to see if the clinical details are filled or not.

- Clinician should be made reminded again and again about the importance of maintaining the records and especially the areas where they tend to skip regularly.

Conclusions:

The main objective of the study was to analyze different aspects related to clinical files that need to be filled regularly. From the analysis it was found that there are various areas where there is lack in filling the components regularly.

The clinician in a rush forgets to write the notes at times. If the details are not mentioned a few components can be taken against the clinician. So the importance should be made understood to the clinicians by regular training.

I express my sincere thanks to all who helped me by giving their valuable information about the procedures.

Referrences-

1) *Operating Theatre Management System (OTMS first year)*

.www.ha.org.hk/haconvention/hac2006proceedings/doc/SPP7_3.pdf

2) *Ideal operating room complex*,

http://medind.nic.in./iadt07i3p193.pdf

3) *Operation Room Utilization* at AIIMS, a *Prospective Study*
www.indmedica.com/journals.php?journalid=6&issueid

4) *Operating room efficiency improvement and utilization study*

www.ncbi.nlm.nih.gov/pubmed/23298950

5) *Operation Theatre* Management - Scribd 6
www.scribd.com/doc/3343555/Operation-Theatre-Management

6 *) Medical Record Departement*

gmch.gov.in/mrd.htm

Annexure

RIGHTS:

- To know the treating consultant.
- To know the diagnosis & plan of treatment.

- To know the cost of treatment.
- May refuse a treatment.
- May ask for second opinion.
- May ask for medical records.
- May ask for change of consultant.
- To know the result of surgery/procedure.
- Patient's privacy and confidentiality is preserved.
- Right to safety.
- May ask for bill updates.
- To be told about the alternative treatment if allowed/possible.
- To know the approximate duration for full recovery.
- To know the risks and benefits consequent to surgery procedure.
- To be briefed about the medication along with the timeline.
- To be briefed by the consultant regarding patients progress.
- To be educated about preventing infections.
- Timely delivery of services like housekeeping and F&B to patient or attendant.
- Patient may complaint to hospital authorities.
- Right to know information regarding facilities.
- They are taught in a language and format that they can understand.

RESPONSIBILITIES:

- To follow consultant's instructions.
- To understand the treatment plan and follow up.
- To pay up the hospital dues as per the policy.
- To get actively involved in the treatment plan.
- To follow hospital's rules and regulations.

- To respect both the consultant and the hospital staff.
- To agree or disagree with diagnosis.
- Not to carry any weapon in the hospital.
- To ensure all consent forms are thoroughly understood.
- To give consent for treatment or procedure.
- To take own decision and clarify all doubts prior to treatment.
- To maintain the hospital decorum and help the authorities to do the same.
- Not to take any kind of intoxications like alcohol etc and to follow the guidelines.