

**Summer Training at
Fortis Hospital, Mohali
(April - June, 2013)**

- 1. STUDY OF COMPLIANCE WITH INTERNATIONAL PATIENT SAFETY GOAL-1 AND 4**
- 2. CARDIAC CATHETERIZATION LAB UTILIZATION.**
- 3. ANESTHESIA QUALITY INDICATORS AUDIT**
- 4. UNDER CONTINUOUS QUALITY IMPROVEMENT**
- 5. AUDIT OF USAGE AND DISPOSAL PRACTICES OF SINGLE USE DEVICES AND INITIATING RECORD MAINTENANCE**

**By
Ankuri Setia**

**Under the guidance of
Dr. Neetu Purohit**

**Post Graduate Diploma in Hospital and Health Management
2012-2014**



**Institute of Health Management Research,
Jaipur
2013**

CERTIFICATE

This is to certify that Dr. Ankuri Setia, 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 Fortis Hospital, Mohali and has done following projects:

1. Study of compliance with International Patient Safety Goal 1 and 4.
2. Cardiac Catheterization Lab Utilization.
3. Anesthesia Quality indicators audit under Continuous Quality Improvement.
4. Audit of usage and disposal practices of Single Use Devices and initiating record maintenance. .

The candidate has successfully carried out the mentioned studies assigned to her during summer training from April 1st, 2013 to June 22nd, 2013 and her approach to study has been sincere, scientific and analytical.

I wish her success in all his future endeavors.



Prof. Neetu Purohit
Associate Professor and Mentor
IHMR, Jaipur



Dr. Ashok Kaushik
Dean, Academics and Student Affair
IHMR, Jaipur

21-Jun-13

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. Ankuri Setia** has completed her Training, at Fortis Hospital, Mohali, **from 01-April-2013 to 30-June-2013.**

The projects undertaken by her during the training period were:

- **Evaluating Safety of Patient in tertiary care multispecialty hospital by monitoring compliance of international patient safety goal-1 and 4.**
- **Cardiac Catheterization Laboratory Utilization.**

She possesses a keen observation and conducts herself with confidence.

We wish her success in her future endeavors and pursuit of her career goals.

For Fortis Hospital


Kanwal Sandhu
Deputy Manager-Human Resource



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I would also like to express my heartfelt gratitude to Prof. Neetu Purohit my mentor for her constant assistance and extreme generosity that helped me a lot throughout the pursuit of this work. Without their guidance, this study would never have been materialized

I wish to express my deep sense of gratitude to Dr. Sonu Malhotra (Head Of Quality Assurance) Dr. Rajiv Kundra (OT Coordinator) and Dr. Rishi Mangat (CTVS and Cath Lab Coordinator) who gave me the opportunity to conduct this study in the hospital and gave valuable inputs and guidance, which have been an integral part of the study's outcomes.

My vocabulary falls short of words to express my feelings of extreme regards and thanks to Dr. Aadarsh Chandra Swami, Head Of Department (MSOT) for all his cooperation and allowing me to carry out observations inside OT being such critical area of hospital, which helped me in completing my real time observations as required for the study.

Last but not the least my heartfelt thanks to all MSOT and Cath lab nursing and support staff for their support in day to day activities carried out in the department.

Dr. Ankuri Setia

Student – PGDHM (Batch- 2012-14)

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Table of Contents

Content	PAGE NO
1. Acronyms/Abbreviations.....	5
2. Introduction.....	6
3. Organization Profile.....	7
4. Department wise Findings.....	11-23
5. Specific Project Findings.....	24
I. Study Of Compliance With International Patient Safety Goals 1 And 4 In Multispeciality Hospital.....	24-63
a. Literature Review.....	25
b .Aims and objectives.....	34
c. Methodology	34
d .Findings and Analysis.....	36
e. Facilitated actions.....	37
II. Cardiac Catheterization Lab Utilization.....	64
a. Literature Review	65
b. Aims and Objectives.....	65
c. Methodology.....	67
d. Findings and Analysis.....	68
e. Facilitated Actions.....	73

III. Anesthesia Quality indicators audit under CQI

a. Literature Review.....	60
b. Findings.....	61
c. Facilitated Actions.....	61

IV. Audit of usage and disposal practices of Single Use Devices and initiating record maintenance.

a. Literature Review.....	62
b. Findings	63
c. Facilitated Actions.....	64

V. Bibliography.....65

VI. Annexure.....67

1.Acronyms/Abbreviations:

- a. F.O.S. - Fortis Operating System
- b. I.P.D. - Inpatient Department
- c. I.T. - Information Technology
- d. J.C.I. - Joint Commission International
- e. G.D.A. - General duty attendant
- f. M.S.O.T. Multi-specialty Operation Theatres
- g. N.A.B.H. - National Accreditation Board of Healthcare
- h. O.P.D. - Outpatient Department
- i. O.T. - Operation Theatre
- j. E.C.H.S. - Ex-serviceman contributory health scheme
- k. N.I.C. - Non Invasive Cardiology
- l. P.F.T. - Pulmonary function tests
- m. C.T. - Computed Tomography
- n. F.O.A. - Front Office Assistant
- o. M.I.C.U. - Medical Intensive care Unit
- p. S.P.I.C.U. - Specialized Intensive Care Unit
- q. G.I.C.U. - General Intensive Care Unit
- r. NICU - Neonatal Intensive Care Unit
- s. E.R. - Emergency Room / Triage
- t. M.R.D. - Medical Records Department
- u. M.L.C. Medico Legal Case
- v. S.I.C.U. - Surgical Intensive Care Unit
- w. C.C.U. Cardiac Care Unit
- x. D.E.O. - Data Entry Operator
- y. IPD : In- Patient Department
- z. OPD: Out-Patient Department
- aa. Cath Lab: Catheterization Laboratory
- bb. CAG: Coronary Angiography
- cc. PTCA: Per Cutaneous Transluminal Coronary Angioplasty
- dd. CABG: Coronary Artery Bypass Graft
- ee. PAC: Pre anesthetic checkup
- ff. C.S.S.D. - Central Sterile Supply Department

2. Introduction

The summer training is an integral part of the course curriculum of PGDHM at IHMR Jaipur. As part of the course, students at the end of their first year are required to undergo training of two months to get an in-depth exposure to the various departments in the organization, as well as take up projects as per the requirements of the organization where the students get training. What is most crucial is to build a base of knowledge about the structure and functioning of the hospital, which can be used to understand and apply concepts in the subsequent study tenure at IHMR, Jaipur.

During my summer internship at Fortis Hospital, Mohali there were numerous learning experiences. These were enhanced due to the projects undertaken at the hospital, which are listed as follows:

- Study of compliance with International Patient Safety Goal 1 and 4.
- Cardiac Catheterization Lab Utilization.
- Anesthesia Quality indicators audit under CQI.
- Audit of usage and disposal practices of Single Use Devices and initiating record maintenance.

A brief report of the training of three months is presented below with the details of tasks undertaken and lessons learnt during the training.

3. Organization Profile



Fortis Healthcare Limited is a leading, pan Asia-Pacific, integrated healthcare delivery provider.

The healthcare verticals of the company span diagnostics, primary care, day care specialty and hospitals.

MISSION STATEMENT:

To create world class integrated healthcare delivery system in india, entailing the finest medical skills combined with compassionate patient care.

Late Dr. Parvinder Singh

Founder Chairman, Fortis Healthcare Limited

VISION

Fortis Healthcare is driven by the vision of becoming a global leader in the integrated healthcare delivery space and the larger purpose of saving and enriching lives through clinical excellence by bringing together the best of technology, medical expertise, and patient care.

Thus aspires “**To be a globally respected healthcare organization known for Clinical Excellence and Distinctive Patient care**”

About Fortis Hospital, Mohali.



Fortis Hospital, Mohali established in June, 2001, was the first step towards realizing the dream of the great visionary, Late Dr. Parvinder Singh, Chairman and Managing Director of Ranbaxy Laboratories Limited.

Set on a sprawling 8.22 acres(36,619 sq m) Its journey began as a cardiac care centre now has emerged as a leading 256 bedded multispecialty hospital offering nearly 29 specialties with accomplishments in numerous high end procedures such as Cardiac Remodeling, Kidney and Liver Transplants, Pediatric Arterial Switch Operation, Total Knee & Hip replacement, Aortic Aneurysms, Tumor Surgery. The hospital has been

9 | Page

designed and equipped with the latest technology, Information Technology systems, a telemedicine programme and carefully selected doctors, nurses and support staff.

Fortis, Mohali is the proud recipient of two very prestigious accreditations- Joint Commission International (JCI), USA, and National Accreditations Board of Hospitals (NABH), India, both of which are known for their stringent standards and intensive evaluations.

The hospital, which was awarded the Best Design Award by the American Institute of Architecture in 1999.

SPECIALLITIES OFFERED ARE:-

Cardiology with Digital Cath Lab, Cardio Thoracic And Vascular Surgery, Cardiac Surgery (Adult And Pediatric), Cosmetic, Plastic And Reconstructive Surgery

Dentistry, ENT, Endocrinology, Gastroenterology, General surgery, Obstetrics and Gynaecology, Internal Medicine, Medical Oncology, Nephrology with Dialysis Unit, Neurology, Neuro Surgery, Ophthalmology, Orthopedics, Pediatrics, Psychiatry, Pulmonology, Urology

Diagnostic Services: Radiology, Lab Medicine, Nuclear Medicine, Cardiology, Audiometric Tests, Sleep Study, N.I.C., Pulmonary Function Tests

A Rehabilitation Center: For follow up care of the patients and to provide calming reassurance of a non- hospital ambience, yet with all the facilities and support systems of a hospital.

day care facilities.

NABL certified path lab(Super Religare Laboratories)

State of art blood bank.

State of Art Operation Theatres with laminar flow with shadow less lighting and HEPA filters.

State of Art Cardiac Catheterization Laboratory.

A 24 hours Emergency Ambulance service.

A dedicated Emergency & Trauma centre.

Mohali's only 24hr Chemist Shop

Free home collection of Pathology Samples.

Miscellaneous services: Cafeteria, Restaurant: 24 hours service, ATM: 24 hours service, Pharmacy: 24 hours service, Florist ,IDBI Bank, Gift and Bookshop, Business centre, Cyber Cafe, 2 Prayer halls, Masterji, Patient Welfare Department, Kid's Corner, Gazebo.

Floor wise plan:

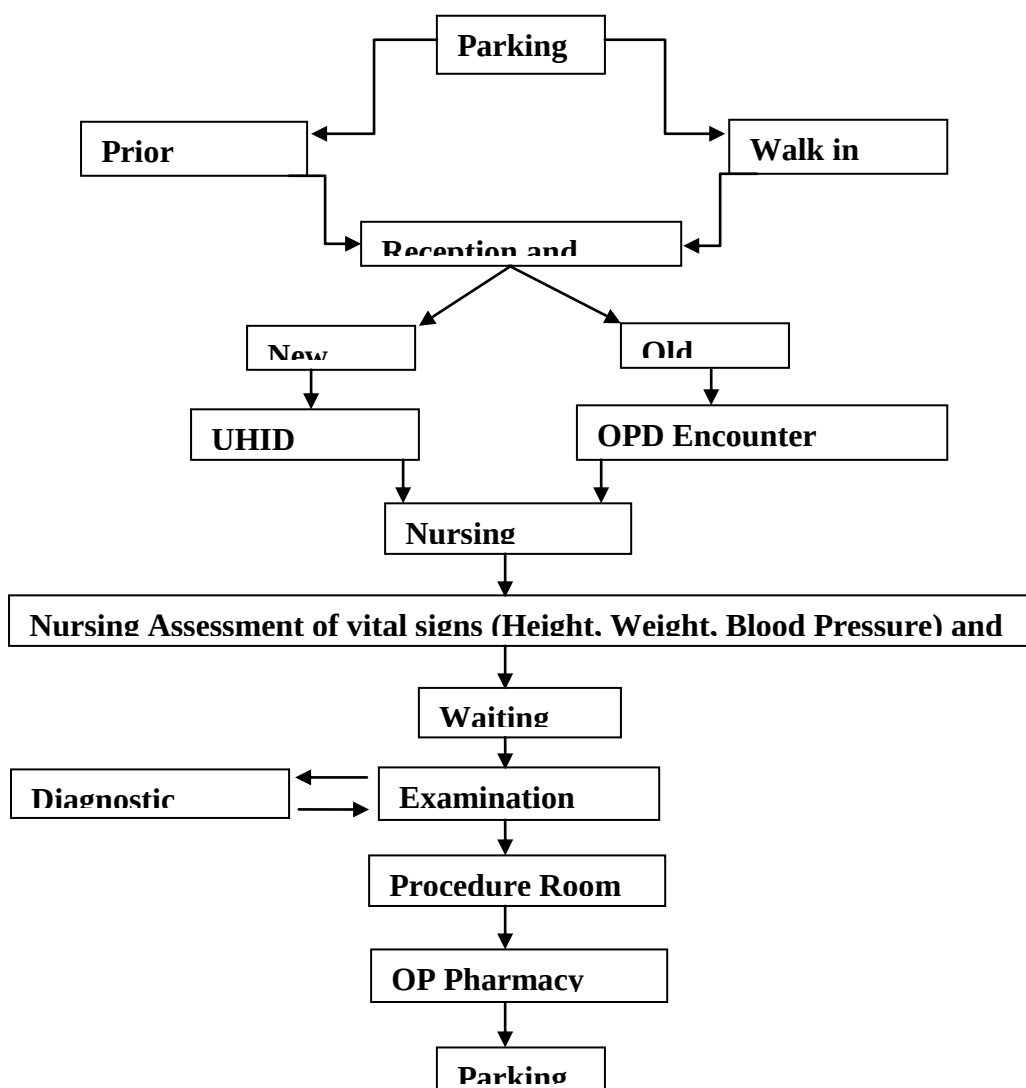
Floor	Specialties Available/ Institute
Basement	All staff entry and exit door, Administrative office with cabins of Human Resources and training department, C.S.S.D, Engineering House keeping, Laundry, Materials and Purchase, Medical Records , Mortuary, Staff Parking.
Ground floor	IN BLOCK A: OPD Waiting Area with all Front Desks Total Of 11 Desks Categorized As With Appointment ,Without Appointment, Reports, Procedure Billing Consultants Chamber , Sample Collection Room ,Primary Health Check(PHC), Radiology, Echo And Ultrasound ,Nuclear Medicine, Lab Medicine(SRL Laboratories) Dietetics, Physiotherapy, Fortis Inn and OPD pharmacy IN BLOCK B: Accident And Emergency, General ICU (GICU),IPD Reception ,IPD Billing and Corporate Office IPD Waiting Area, Café Coffee Day, Blood Bank, Paalna and Neonatal ICU (NICU), Patient Welfare Department, Centralized kitchen of hospital
Ist FLOOR :	OPD front desks for ECHS, CGHS, ESI and other cashless scheme, consultants chamber, Dialysis Unit, Multispecialty operation theatres, wards A1 and A2 ,SPICU-1, Ortho ICU- 1 ,OT Coordinator and Medical Superintendent office .
II FLOOR:	Cardiac Cath Lab with pre cath or PCR area , CCU(Cardiac care unit), SPICU -2, Cardiac OT complex, Surgical ICU(SICU) , Ortho OT(Joint Replacement OT) ,I.P. Pharmacy Store ,ward A5 (Cardiac ward).

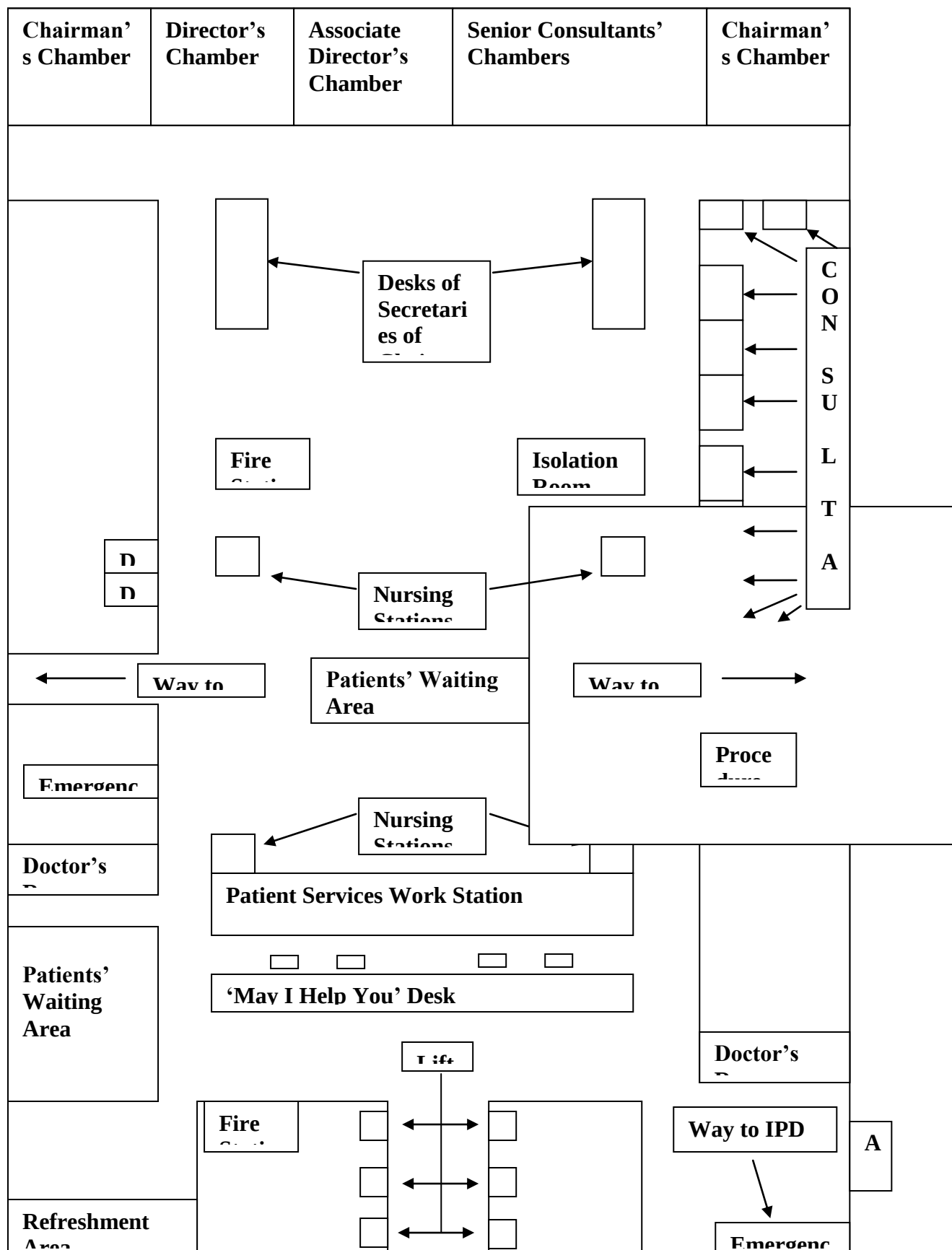
III rd FLOOR	all executive offices are located on this floor . Facility Director's office, FOS Head, Quality Assurance Department, Nursing Superintendent Room, Infection Control Cell, Board Room, IT Department, Marketing and Sales, Finance department, Ward A-3, A-4, MICU(Medical ICU), Nursing school, Auditorium Library, Central Buying Unit (C.B.U.) Café Jam Jaa Jee.
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4. DEPARTMENT WISE FINDINGS:

OPD

The general process flow that is followed in all the OPDs is as follows:





OPD was on two floors. Ground FLOOR HAD FRONT DESKS 3 Floor have Day care facilities. Appointments are centralized and are recorded on the Hospital Information Management System. As soon as appointments are fixed, a text message is sent to the patient confirming the appointment, and a reminder

message is sent on the day before the appointment. No walk-in patient is turned away, and the staffs try to accommodate these patients between the appointments already scheduled for the day. The daily volume is of approximately 500 patients across all the OPDs. Each floor has the capacity to handle 100 patients waiting.

b) Operation Theatre:

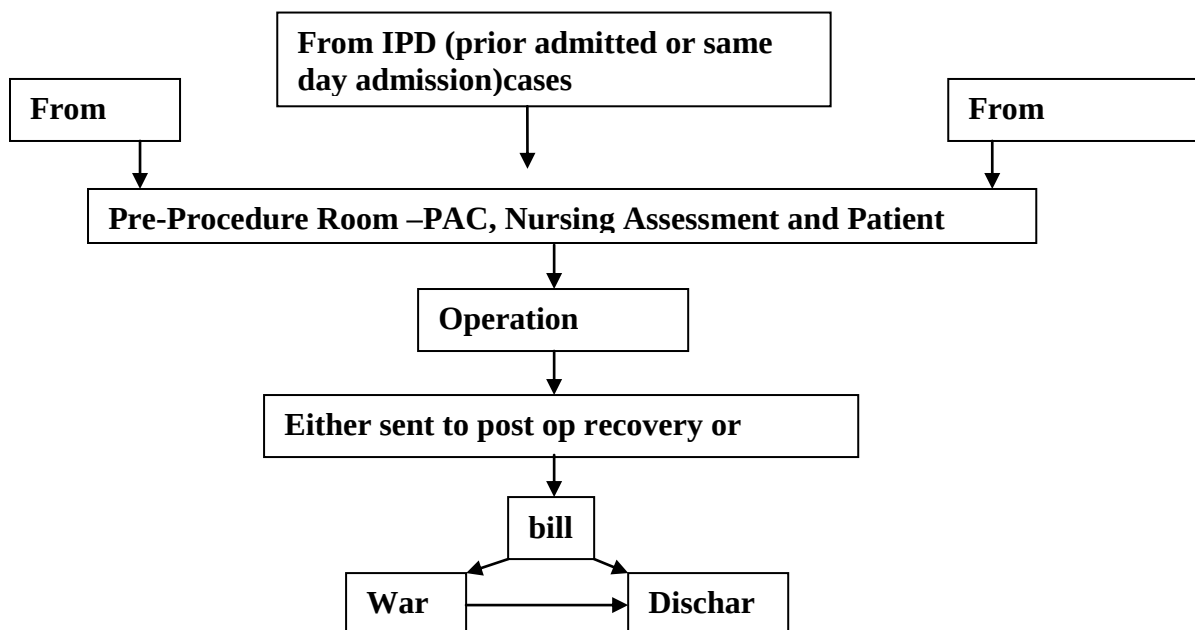
Currently 9 OT are functional composed of MSOT, COT, ORTHO OT.

The MSOT is situated on the 1st floor with currently 4 OTs functional (3 major & 1 minor) Cardiac O.T. – 3, Joint Replacement O.T.- 2

Staffing: Head Of Department Is The Chief Anaesthetist

Nursing Shifts: 3 Timings: 8am — 4.30p, 1 pm — 8.30pm, 8am — 8pm Staff in an O.T. 3 O.T. In Charge, 1 Nurse, 11 Technician, 1 Anesthetist. Observations: - Separate scrub areas for each O.T. - Dirty Utility and Clean Utility Rooms with Dumbwaiters - Equipment Room - Instrument Scrub Room - Hazmat Personal Protective Equipment - Pre Operative Preparation Room and Post Operative Recovery Room'

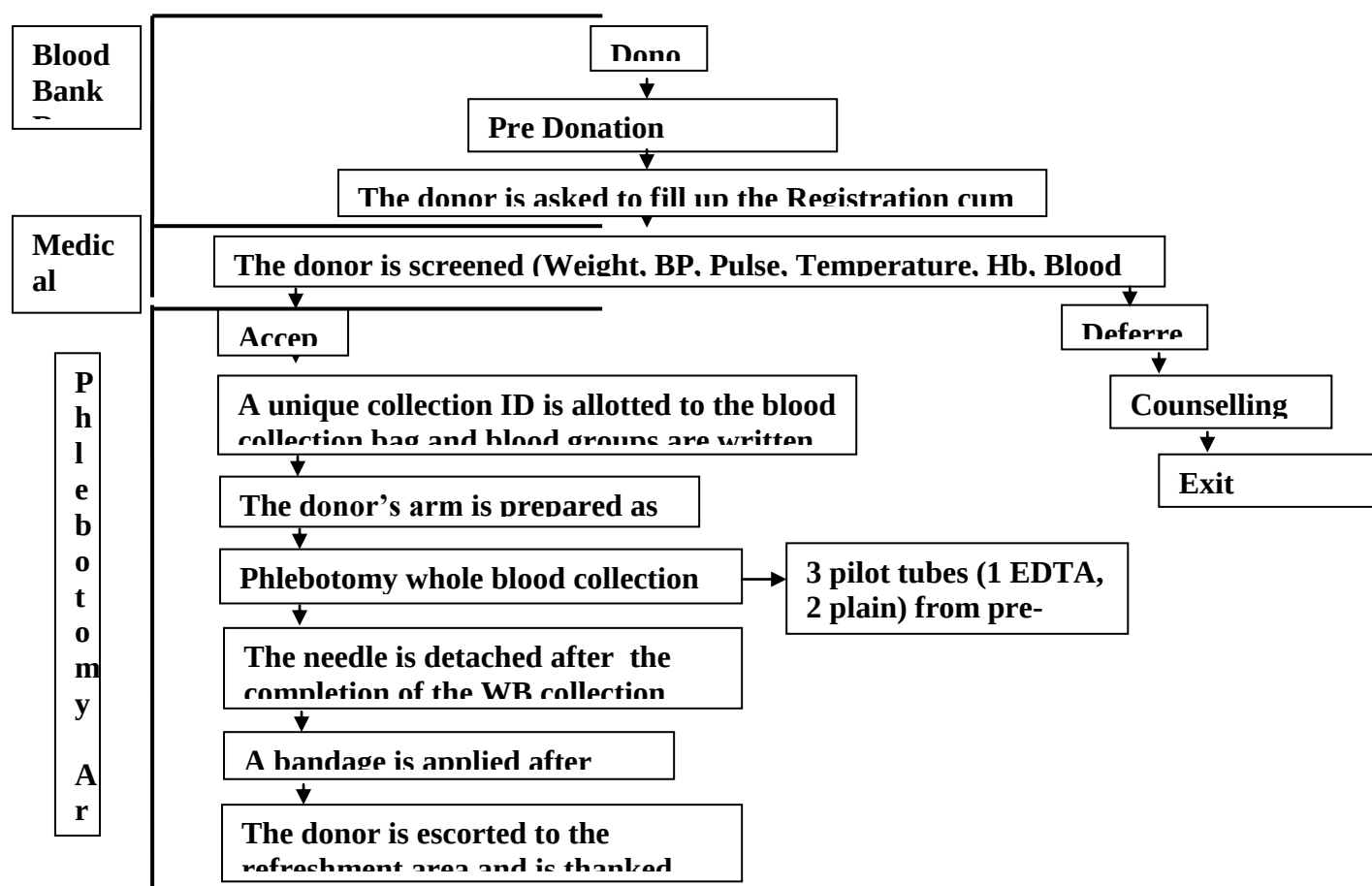
Around 40 to 50 surgeries are performed daily. The general flow of the patient in the OT is as follows.



For day care cases direct discharge from the pre op area after undergoing surgery and final billing.

c) Blood Bank:

The Blood Bank is situated on the Ground floor. Hospital has a policy of asking patients to arrange for a specific amount of blood before their procedures, so that there is no possibility of a situation arising where there is a shortage of blood during a procedure. The general process flow of whole blood donation in this department has been enumerated below.



Instead of beds, the blood donation area had couches where patients are asked to sit and the incline of reclining can be changed as per need. Blood donation consists of WB donation and Platelet Apheresis donation. After the whole blood is collected, the blood is split into separate components, and is stored in walk-in fridges after proper labelling.

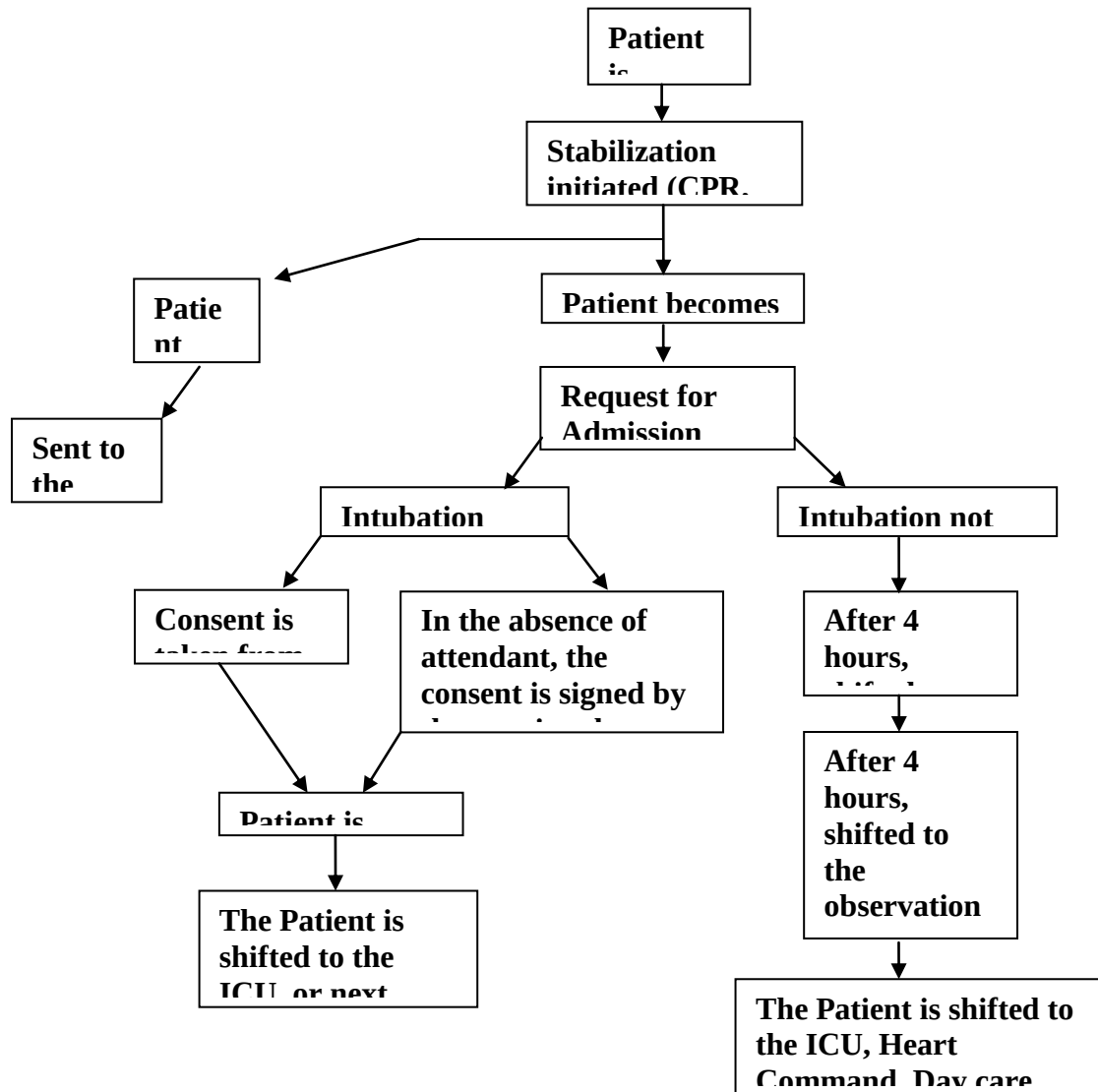
After splitting, the individual components can be stored for differing periods of time. Whole blood can be stored for 35-42 days, platelets can be stored for 5 days in agitators at a temperature of 22 degrees Celsius, Fresh Frozen Plasma can be

stored for up to 1 year at a temperature below -50 degrees Celsius and RBC can be stored for 4-6 days.

d) Emergency Department

The Emergency Department of Medanta the Medicity is situated on the Ground floor, and the entrance is from a route different than the main entrance to the hospital. The rough layout of the Emergency Department is shown below.

The flow of information in the Emergency Department is as has been enumerated below.



The Emergency Department offers ambulatory services, the details of which have been enumerated below.

Sr. No	Parameters	Details
1.	Number of Ambulances	3
2.	Types of Ambulances	Basic life support Advanced life support Air Ambulances
3.	Air Ambulance Staff	Anesthetist Cardiologist Emergency medical officer Nurse

e) CSSD

The Central Sterile Supply Department is situated in the basement. This CSSD is capable of catering to all the requirements of the hospital.

Hierarchy: Asst. Technician supervisor, 6 technicians, and 4 GDA Shifts: 8a.m. to 2p.m, 2 p.m. to 8 p.m.; 8 p.m. to 8 a.m. General shift (9 a.m. to 5 p.m.) Timings: Receiving time: 9 am to 11 am and 3 pm to 5 pm Observations: The dept is divided into 3 zones: Contaminated area, Normal, Sterile zones.

Contaminated Zone: is the receiving area, where assigned people from wards and other areas come to drop the equipment for sterilization. While for cardiac unit, OT, MSOT, and emergency room the supplies are round the clock with the help of Dumbwaiters. Normal zone: areas: 1) For packing unsterilised equipments in sets, 2) For Sterilizers: 2 Autoclaves(Steris & Mediquip), 2 ETO Machines (steris and M3)

Sterile zone is for storing and dipatching the sterilized equipments.

The various areas of the CSSD, along with a list of the activities that take place in each department are as have been enumerated below:

Sr. No	Area	Functions
1.	Receiving Area	All the infected instruments are received and their quantity is verified.
		They are washed under water and in ultrasonic cleaners.
		These instruments are then dried with an air gun and subsequently put in a Yorco oven for complete drying.
		All instruments are then put into a washer-disinfection machine. This machine is equipped with double doors in order to facilitate collection directly from the processing area.
2.	Processing Area	This area receives cleaned instruments and in this area, the instruments are separated by the personnel according to the checklists.
		The instruments thus separated are put into trays which are wrapped with a double layer for infection control.
		These trays are then labelled and indicators are put on these trays as a measure of the quality of sterilization.
		The sterilization method is selected according to the instruments in question.either autoclaved (steel instruments) or ETO treated (laproscopic and rubber instruments).
3.	Sterile Area	All the sterilized instruments are collected in the sterile zone through the doors of the sterilization

		equipment opening in that area.
		These equipments are separated according as per the quantities received from each department and are put on separate racks.
		Low temperature and positive pressure is maintained in this area for infection control.
4.	Issue Area	Instruments are sent to the OT directly from the sterile area through a lift in the issue area to prevent any kind of cross contamination.
		All the other instruments are loaded on to covered trolleys and are then sent to the issue areas of specific departments, to be issued as and when required.

f) Dietetics, and Food and Beverages

These offices are situated in the lower ground floor. These departments are tasked with managing the dietary needs of the patients coming into the hospital.

Staffing: 1 H.O.D.. 3 Junior Dieticians Shifts: Morning Shift: 7.30am to 4pm. General Shift: 10am to 7pm. Evening Shift: 11.30am to 8pm Observations: - Requisition Forms: sent by the nurse to the dietician. Carries all the information of any new admission. like Pt. name. UHID No. Diagnosis, prescribed diet by the doctor, diet remarks. Diagnosis remarks etc. - Nutritional Assessment Screening Form: This acts as a proof that the dietician has visited the patient, as she is supposed to visit each and every patient in the wards for their feedbacks on the food and any changes if required. - Pink slips and white slips are generated by the dieticians for ordering preplanned and specialized diets respectively for the patients, and are sent to the kitchen. - The orders made through the call centre should reach the patient within 20 min of the order generation.

Food and Beverage functions are outsourced from ISS caterers.

It comprises of four areas: 1) Mass Cooking area: where food for the hospital staff is cooked. 2) Patient Cooking area: where food only for patients is cooked. 3) Enteral Feed

Area: Here, enteral feed is prepared for patients who can not take oral diet. 4) Dish Washing Area: Here automatic dish washing machines are installed which clean and dry the utensils automatically.

Finally, these departments also maintain a chart of the amount of food wasted per day (wasted food is discarded) and thus, a strict control is maintained on the inventory of all food items.

g) Marketing

This department is situated on the third floor. The chief function of this department, as the name suggests, is to market the services of hospital.

Fortis is now at such a stage of its life cycle that it need not indulge in extensive marketing activities. It is a brand name recognized internationally, which is evident from its large international patient base. This uniqueness of the hospital lies in the services that it offers, and the quality of services offered. This is why most of the marketing that this hospital enjoys is through 'word of mouth'. A majority of the activities of the marketing department comprise of CSR initiatives. It has partnered with a number of charitable organizations and conducts periodic camps in various areas.

h) Engineering

The Engineering department is situated on the first basement. This department is responsible for catering to all the electrical needs of the entire hospital. The Engineering department is responsible for centrally providing water, electricity and air to the entire hospital. Eighty percent of the Engineering Department is outsourced, and the staff employed is tasked with supervising the functions of the outsourced staff and ensuring that quality work is delivered, as these requirements of water, electricity and air are crucial to any enterprise, and especially in hospitals. Various functions of engineering department in the hospital are-

1. Electrical (Backbone): Its main concern on transformers step down, UPS, all back ups and generators.
2. Civil: It looks after general maintenance, plumbing, carpentry, masonry, painting.
3. Mechanical: Boilers, water treatment, generators, A.C. duct maintenance, medical gas plants (Oxygen, Nitrous Oxide) and biomedical waste management. The software used by the staff here is WEB CTRL

i) Medical Records Department

The Medical Records Department is situated in the basement of the hospital. This department is tasked with storing all the physical medical records generated in the hospital. Once a medical record is received by the department, a unique reference number is generated through Microsoft Excel, and the medical record is stored according to this number.

Hierarchy: 1 officer; 2 Medical record Technicians; 2 GDA. Timing: 9 a.m.- 6 p.m.
Record kept for:

Routine records- 5 years

Death records- 7 years, MLC records- 30 years

Files are stored in open racks, which are indented as the prior ones are filled. MLC & Death files are kept in lock and key these files have a track file in routine record racks. In case of MLC / death, the medical superintendent, director administration, and the COO of the hospital approve records. The hospital authorities will furnish all records requested within 72 hours of request.

Apart from these functions, the personnel of the Medical Records Department may also be required to attend to calls from the courts of law, with the files of any patient as and when required.

j) Dialysis

The Dialysis unit is situated on the first floor. There are 20 dialysis machines corresponding to number of beds.

k) Housekeeping

This office of this department is situated in the basement of hospital and is tasked with managing the sanitation needs of the patients coming into the hospital. The outsourced manpower is given briefing and debriefing before and after each shift, about their work every day, and special tasks assigned. Separate trolleys and passage ways for clean utility and dirty supplies. Functions:

Laundry: Equipments: 1 disinfectant washer; 2 washers; 2 dryers; 1 calendar machine; 2 steam iron machines; 2 hand irons. Observations: - Each day a GDA goes for collecting

linen from wards; infected linen is packed in pink plastic bags. - They are segregated in laundry, and washed according to weight. - Clothes to be ironed are semi dried. Linen Room: - A separate room for storing linen of wards, operation theatres, staff and students; they are kept segregated according to the sizes and respective areas. - Also, all the staff drop their linen for washing; and collect a fresh set from his room. 2. Horticulture: Gardening in the hospital managed by house keeping persons. 3. Glass cleaning: Cleaning of outer side of the glass panes is outsourced to a diff company, while the inner side is cleaned by Fortis housekeeping staff. 4. Pest control: Various pesticides are used by them to keep control on pests whenever required.

Staffing: 9 staff supervisors (3 shifts). Outsoured: 4 contractors; 129 workers
Observations:

The outsourced manpower is given briefing and debriefing before and after each shift, about their work every day, and special tasks assigned. Separate trolleys and passage ways for clean utility and dirty supplies.

l) Biomedical: Staffing: 1 chief engineer, 5 Engineers Observations: - Preventive Management Schedule: made floor wise, for all equipments twice a year. - Calibration Schedule: made for all the biomedical equipment, as recommended by the vendor. - History Sheet: maintained for each equipment. Records the date of last breakdown, type of fault, date of action taken, type of action taken.

m) In-Patient Pharmacy

The In-Patient Pharmacy is situated on the second floor. This department is tasked with handling the responsibility of helping ensure that the correct medication is available with the IPDs of all clinical departments at all times..

The IPDs of all departments use a system of indenting to procure medication. These indents are sent to the In-Patient Pharmacy as and when required by the IPD. The indents are then ranked according to urgency by the dispensing pharmacist, stat orders are colour coded as red and these medicines are made available immediately by sending of GDA rest drugs are taken out from the stores two times a day and the change in quantity of the inventory these medicines is recorded by the pharmacist.

There are 4 types of licenses maintained by this department, obtained from with regard to the retail and wholesale of the following:

Narcotics
Denatured Spirit
Morphine
Fentanyl (2ml and 10ml)

The In-Patient Pharmacy department maintains buffer stock of inventory of medicines with it for emergencies, and ensures that medicines are returned to vendors 3 months prior to their expiry.

n) Fortis Operating System (FOS)

Fortis Operating System (FOS) was introduced in March 2007 at Fortis Hospital, Mohali to focus on streamlining non-clinical processes.

Objective Of FOS: • To ensure uniform high quality of customer facing processes across Fortis hospitals • To embed best practices in operational efficiency to yield bottom-line impact _ performance management across all sites through use of benchmarking approach.

o) Human Resource Department: Staffing: 1 Sr. Manager, 3 Clerks, 3 managers, 1 Training Head., 1 GDA Policies: • Training & development Policy • Policy on working hours and late coming. • Leave Policy • Festival and national holiday policy • Local conveyance policy • Business travel policy • Personal accident insurance

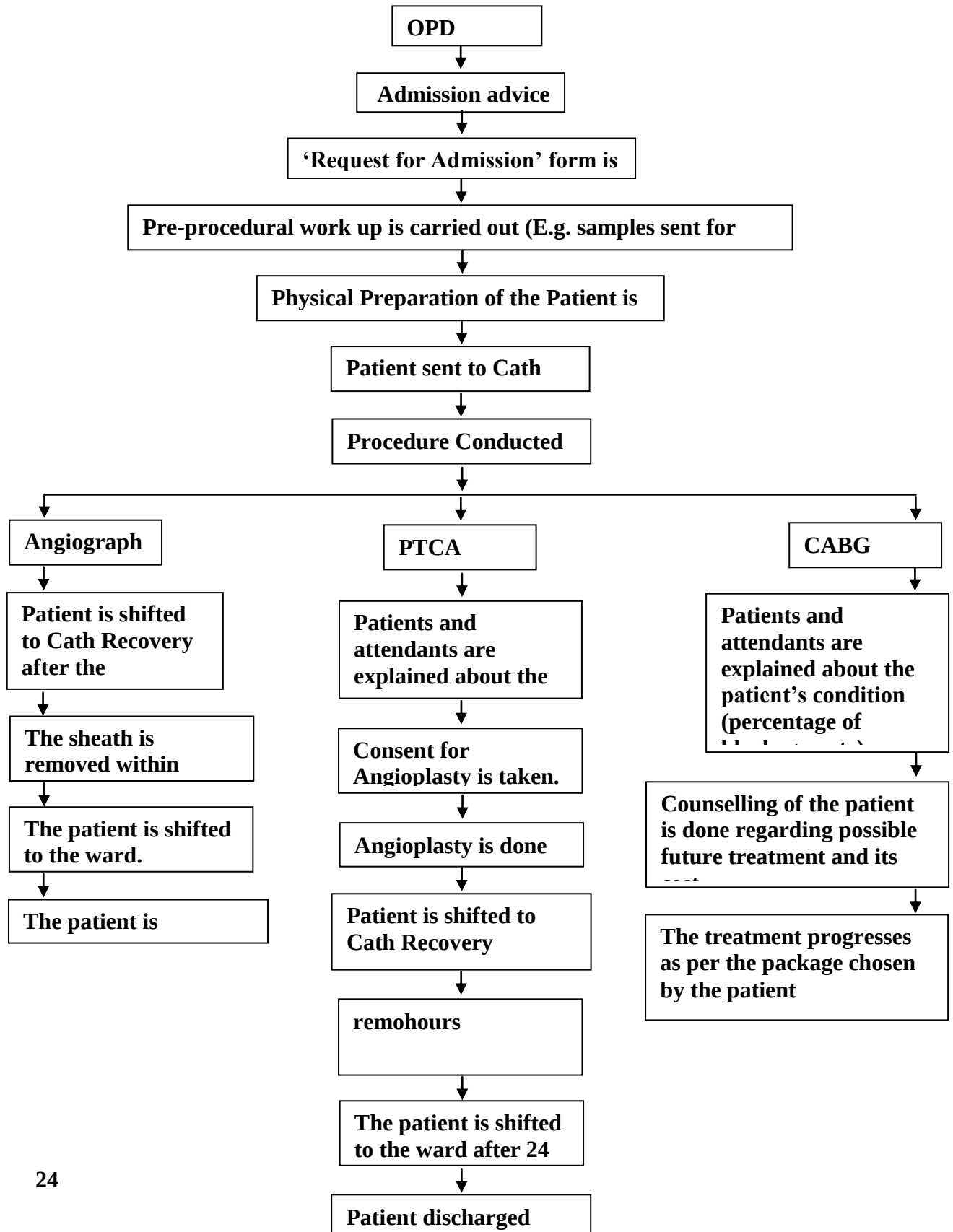
Medical reimbursement policy (with effective date as 23rd sept. 08) • Revised sexual harassment policy • Sexual harassment policy (presentation) • Internal job posting Medical Facilities • In-house medical facilities / benefit • Revised in house medical benefits • Group hospitalization insurance

p) Information Technology

Hierarchy: IT Managers, 2 programmers, 2 Sr. Network Executives, 2 Jr. Network Executives. Hardware: 13 Servers, 350 work stations. Observation: Medtrak - since Jan'07, used for all direct patient care service, like for IPD. OPD billing. indenting from nursing stations. Prodigious - used in accounts, purchase and pharmacy CLIMS - used in LAB MEDICINE, which was investigation centric. AVAYA telephone exchange - for intercom services.

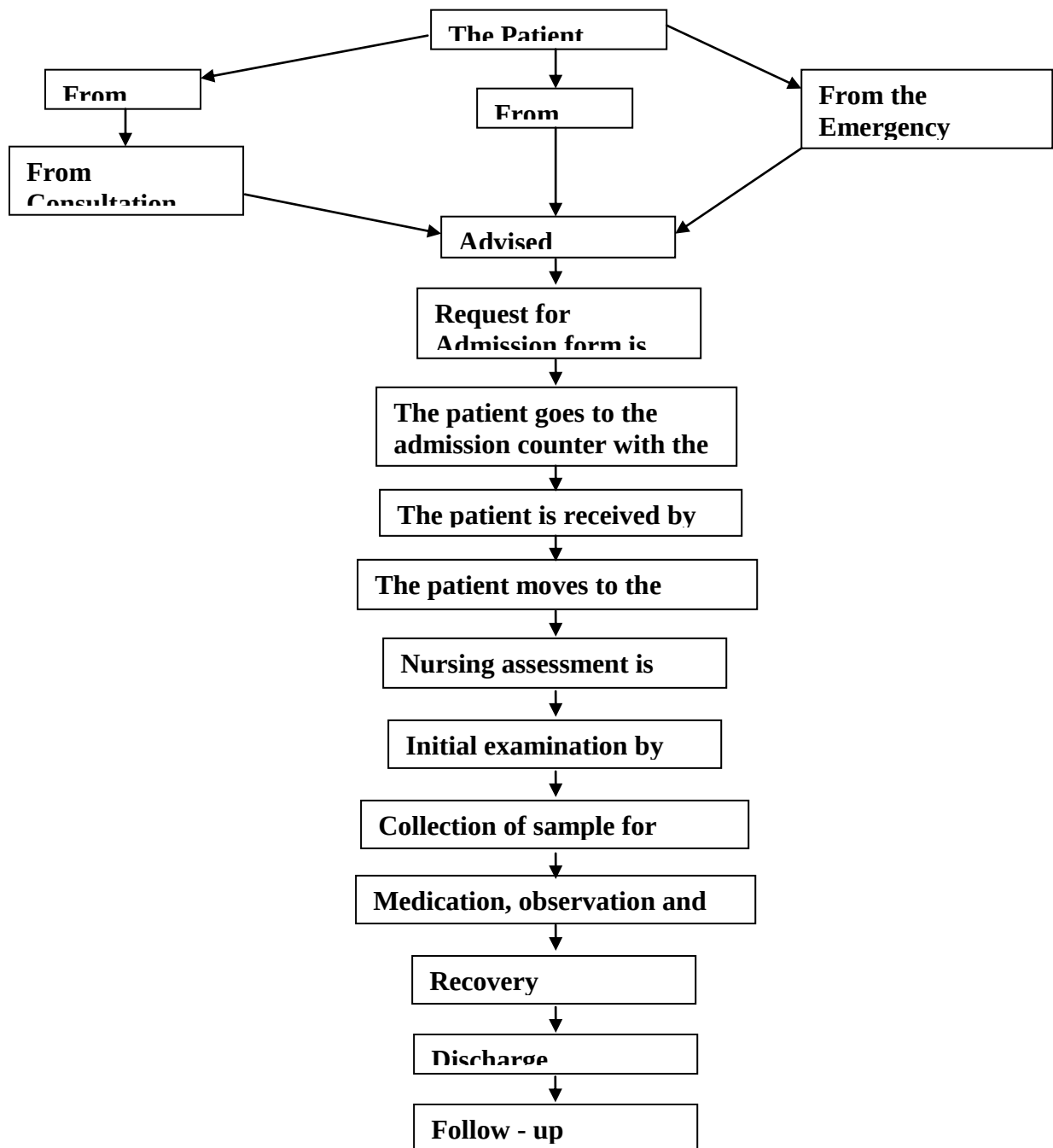
q) Cath Lab

The Cardiac Cath Lab is situated on the second floor in the IPD area. There are two Cath Labs. The flow of the Cath Lab takes place through the Pre Cath Region(PCR),Cardiac Care Unit (CCU) has been enumerated below.



r) In-Patient Department

. The general process flow is as has been enumerated below.



Project – 1

STUDY OF COMPLIANCE WITH INTERNATIONAL PATIENT SAFETY GOALS 1 and 4 IN A MULTISPECIALITY HOSPITAL



Source: SQUH (2009)

a. Literature Review

JCI is the international arm of The Joint Commission (U.S.A.); JCI's mission is to improve the quality and safety of health care in the international community.

For more than 75 years, The Joint Commission (U.S.A.) and its predecessor organization have been dedicated to improving the quality and safety of health care services. Today, The Joint Commission is the largest accreditor of health care organizations in the United States—it surveys nearly 16,000 health care programs through a voluntary accreditation process. The Joint Commission and JCI are both nongovernmental, not-for-profit United States corporations.

JCI accreditation is a variety of initiatives designed to respond to a growing demand around the world for standards-based evaluation in health care. The purpose is to offer the international community standards based, objective processes for evaluating health care organizations. The goal of the program is to stimulate demonstration of continuous, sustained improvement in health care organizations by applying international consensus standards, International Patient Safety Goals, and data measurement support.

International Patient Safety Goals (IPSG)

Overview

The purpose of the IPSG is to promote specific improvements in patient safety. The goals highlight problematic areas in health care and describe evidence- and expert-based consensus solutions to these problems.

Recognizing that sound system design is intrinsic to the delivery of safe, high-quality health care, the goals generally focus on system wide solutions, wherever possible.

Goals: The following is a list of all goals.

IPSG.1 Identify Patients Correctly

IPSG.2 Improve Effective Communication

IPSG.3 Improve the Safety of High-Alert Medications

IPSG.4 Ensure Correct-Site, Correct-Procedure, Correct-Patient Surgery

IPSG.5 Reduce the Risk of Health Care–Associated Infection

IPSG.6 Reduce the Risk of Patient Harm Resulting from Falls

GOAL 1

NATIONAL PATIENT SAFETY GOALS



**IMPROVE THE ACCURACY OF
PATIENT IDENTIFICATION.**

1.
USE AT LEAST TWO
PATIENT IDENTIFIERS
WHEN PROVIDING
CARE, TREATMENT,
AND SERVICES.

2.
ELIMINATE
TRANSFUSION
ERRORS RELATED
TO PATIENT
MISIDENTIFICATION.

**PROTECT
THIS** 
NATIONAL PATIENT SAFETY GOALS

Goal 1: Identify Patients Correctly

Standard IPSC.1

The organization develops an approach to improve accuracy of patient identifications.

Intent of IPSC.1

Wrong-patient errors occur in virtually all aspects of diagnosis and treatment. Patients may be sedated, disoriented, or not fully alert; may change beds, rooms, or locations within the hospital; may have sensory disabilities or may be subject to other situations that may lead to errors in correct identification. The intent of this goal is twofold:

- 1) first, to reliably identify the individual as the person for whom the service or treatment is intended
- 2) second, to match the service or treatment to that individual.

Policies and/or procedures are collaboratively developed to improve identification processes, in particular:-

the processes used to identify a patient when giving medications blood, or blood products taking blood and other specimens for clinical testing providing any other treatments or procedures. The policies and/or procedures require at least two ways to identify a patient, such as the patient's name, identification number, birth date, a bar-coded wristband, or other ways. The patient's room number or location cannot be used for identification in different locations of patient care areas.

Measurable Elements of IPSC.1

- 1) Patients are identified using two patient identifiers, not including the use of the patient's room number or location.
- 2) Patients are identified before administering medications, blood, or blood products.
- 3) Patients are identified before taking blood and other specimens for clinical testing.
- 4) Patients are identified before providing treatments and procedures.
- 5) Transfer of patient to another unit.

Goal 2: Improve Effective Communication

Standard IPSPG.2

The organization develops an approach to improve the effectiveness of communication among caregivers.

Intent of IPSPG.2

Effective communication, which is timely, accurate, complete, unambiguous, and understood by the recipient, reduces errors and results in improved patient safety. Communication can be electronic, verbal, or written.

The most error-prone communications are patient care orders given verbally and those given over the telephone, when permitted under local laws and regulations. Another error-prone communication is the report back of critical test results, such as the clinical laboratory telephoning the patient care unit to report the results of a STAT test.

Measurable Elements of IPSPG.2

☐ . The complete verbal and telephone order or test result is written down by the receiver of the order or

test result.

☐ The complete verbal and telephone order or test result is read back by the receiver of the order or test

result.

☐ The order or test result is confirmed by the individual who gave the order or test result.

☐ Policies and procedures support consistent practice in verifying the accuracy of verbal and telephone

communications.

Goal 3: Improve the Safety of High-Alert Medications

Standard IPSG.3

The organization develops an approach to improve the safety of high-alert medications.

Intent of IPSG.3

When medications are part of the patient treatment plan, appropriate management is critical to ensuring

patient safety. High-alert medications are those medications involved in a high percentage of errors and/or sentinel events, medications that carry a higher risk for adverse outcomes, as well as look-alike/sound-alike medications. The most effective means to reduce or to eliminate these occurrences is to develop a process for managing high-alert medications that includes removing the concentrated electrolytes from the patient care unit to the pharmacy.

Measurable Elements of IPSG.3

☐ Policies and/or procedures are developed to address the identification, location, labeling, and storage

of high-alert medications.

☐ The policies and/or procedures are implemented.

☐ Concentrated electrolytes are not present in patient care units unless clinically necessary, and actions

are taken to prevent inadvertent administration in those areas where permitted by policy.

☐ Concentrated electrolytes that are stored in patient care units are clearly labeled and stored in a manner

that restricts access.

Goal 4: Ensure Correct-Site, Correct-Procedure, Correct-Patient Surgery

Standard IPSG.4

The organization develops an approach to ensuring correct-site, correct-procedure, and correct-patient surgery.

Intent of IPSG.4

Wrong-site, wrong-procedure, wrong-patient surgery is an alarmingly common occurrence in health care

organizations. These errors are the result of ineffective or inadequate communication between members of the surgical team, lack of patient involvement in site marking, and lack of procedures for verifying the operative site. In addition, inadequate patient assessment, inadequate medical record review, a culture that does not support open communication among surgical team members, problems related to illegible handwriting, and the use of abbreviations are frequent contributing factors.

Evidence-based practices are described in The (US) Joint Commission's Universal Protocol for Preventing

Wrong Site, Wrong Procedure, Wrong Person Surgery™.

The essential processes found in the Universal Protocol are

- marking the surgical site;
- a preoperative verification process; and
- a time-out that is held immediately before the start of a procedure.

Marking the surgical site involves the patient and is done with an instantly recognizable mark. The mark

should be consistent throughout the organization; should be made by the person performing the procedure; should take place with the patient awake and aware; if possible, and must be visible after the patient is prepped and draped. The surgical site is

marked in all cases involving laterality, multiple structures (fingers, toes, lesions), or multiple levels (spine).

The purpose of the preoperative verification process is to

- verify the correct site, procedure, and patient;
- ensure that all relevant documents, images, and studies are available, properly labelled, and displayed
- verify any required special equipment and/or implants are present.

The time-out permits any unanswered questions or confusion to be resolved. The time-out is conducted in

the location the procedure will be done, just before starting the procedure, and involves the entire operative team. The organization determines how the time-out process is to be documented.

Measurable Elements of IPSC.4

☐ The organization uses an instantly recognizable mark for surgical-site identification and involves the

patient in the marking process.

☐ The organization uses a checklist or other process to verify preoperatively the correct site, correct procedure,

and correct patient and that all documents and equipment needed are on hand, correct, and

functional.

☐ The full surgical team conducts and documents a time-out procedure just before starting a surgical procedure.

☐ Policies and procedures are developed that will support uniform processes to ensure the correct site,

correct procedure, and correct patient, including medical and dental procedures done in setting.

Goal 5: Reduce the Risk of Health Care–Associated Infections

Standard IPSG.5

The organization develops an approach to reduce the risk of health care–associated infections.

Intent of IPSG.5

Infection prevention and control are challenging in most health care settings, and rising rates of health

care–associated infections are a major concern for patients and health care practitioner. Infections common to all health care settings include catheter-associated urinary tract infections, blood stream infections, and pneumonia (often associated with mechanical ventilation).

Central to the elimination of these and other infections is proper hand hygiene. Internationally acceptable

hand-hygiene guidelines are available from the World Health Organization (WHO), the United States Centre for Disease Control and Prevention (US CDC) and various other national and international

organizations.

The organization has a collaborative process to develop policies and/or procedures that adapt or adopt currently published and generally accepted hand-hygiene guidelines and for the implementation of those guidelines with the organization.

Measurable Elements of IPSG.5

❑ The organization has adopted or adapted currently published and generally accepted hand-hygiene

guidelines.

- ❑ The organization implements an effective hand-hygiene program.
- ❑ Policies and/or procedures are developed that support continued reduction of health care–associated infections

Goal 6: Reduce the Risk of Patient Harm Resulting from Falls

Standard IPSPG.6

The organization develops an approach to reduce the risk of patient harm resulting from falls.

Intent of IPSPG.6

Falls account for a significant portion of injuries in hospitalized patients. In the context of the population it

serves, the services it provides, and its facilities, the organization should evaluate its patients' risk for falls and take action to reduce the risk of falling and to reduce the risk of injury should a fall occur. The evaluation could include fall history, medications-and-alcohol-consumption review, gait and balance screening, and walking aids used by the patient. The program monitors both the intended and unintended consequences of measures taken to reduce falls.

Measurable Elements of IPSPG.6

- ❑ The organization implements a process for the initial assessment of patients for fall risk and reassessment

of patients when indicated by a change in condition or medications, among others.

- ❑ Measures are implemented to reduce fall risk for those assessed to be at risk.

- ❑ Measures are monitored for results, both successful fall injury reduction and any unintended related consequences.

- ❑. Policies and/or procedures support continued reduction of risk of patient harm resulting from falls in the organization.

IPSG GOAL - 1 AUDIT

b.Aims and objectives

AIM

Aim: To audit the compliance of IPSG goal -1 at the time of carrying out any bed side activity in all wards and ICU's of multi-specialty hospital so as to to determine gap areas as well as reasons for the observed non compliances.

OBJECTIVES

- ☐ To audit compliance with IPSG- 1.
- ☐ To determine the extent of gap between calculated value of percentage compliance and standard compliance rate .
- ☐ To identify the reasons leading to the gap.
- ☐ To facilitate implementation of the corrective actions.

c. METHODOLOGY:

Study design : Observational study

Study place: Fortis Hospital, Mohali

Audit duration: June,13

Sampling method :

IPSG 1 - Convenient Sampling from all wards[A1,A2,A3,A4,A5] and ICU's [SPICU,SICU, CCU,GICU,MICU].

Sample size: 30

AUDIT TOOL:

IPSG 1 - observation checklist and interview schedule.

Key Measures of IPSG 1:

Observation of care giver using 2 patient identifiers before:

Administering medications

Administering blood and blood products

Taking blood and other specimens for clinical testing.

Providing treatment and procedures

Transfer to another unit

Interviewing the patient and care giver on the use of patient identifiers at the above mentioned instances.

ACTIVITIES DONE:

Observing if all patients are wearing specific ID bands with correct colour coding as per patient's medical status.

To observe care giver whether checking patient's ID band before five pre-decided episodes of patient care taken as audit checklist points.

To interview patients and care giver's over checklist points and determining compliance rate as per their recorded and compiled responses.

All observations recorded in the field were later coded, compiled and analyzed based on following formulae:

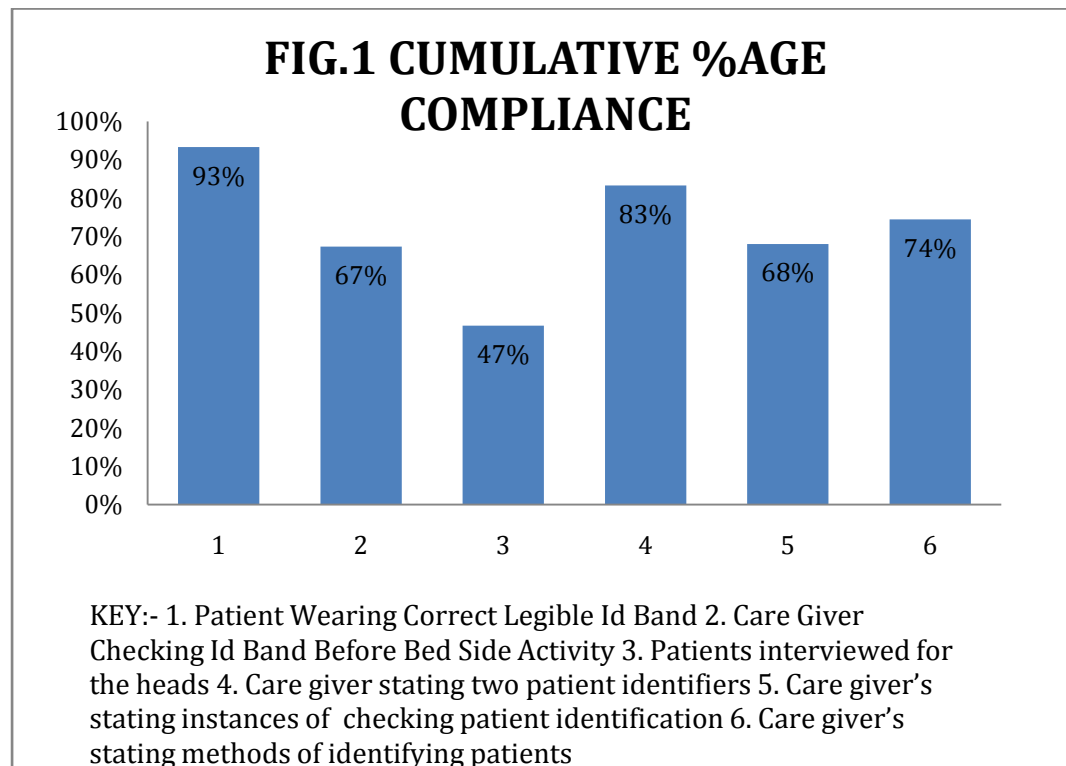
ID band compliance rate :

i)
$$\frac{\text{Number of patients wearing ID band with all particulars printed legibly}}{\text{total number of patients taken in a sample}} * 100$$

ii)
$$\frac{\text{Number of patients wearing correct ID band as per medical status}}{\text{total number of patients under consideration}} * 100$$

d. FINDINGS IPSG -1 2013

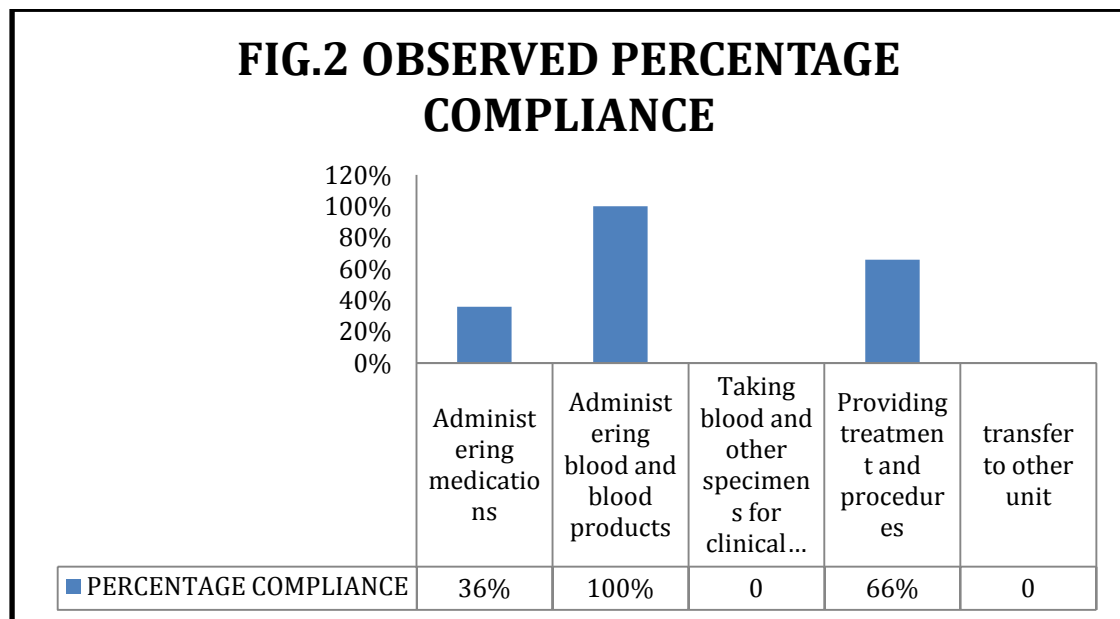
IPSG-1 Audit Checklist Compliance is seen to be:-



INTERPRETATION:

- Out Of The Total Sample Of 30 Patients 2 Patients Were Not Wearing The Id Band So Percentage Is 93 Instead Of 100%
- This is less in practice on site id band check patients file is the major source of recognition., Go more by memory less of on the spot checks.
- Patient responses are chiefly Subjective responses.
- Nurses responded well but are poor in practising.
- On stating methods nurses do Miss out on certain heads.

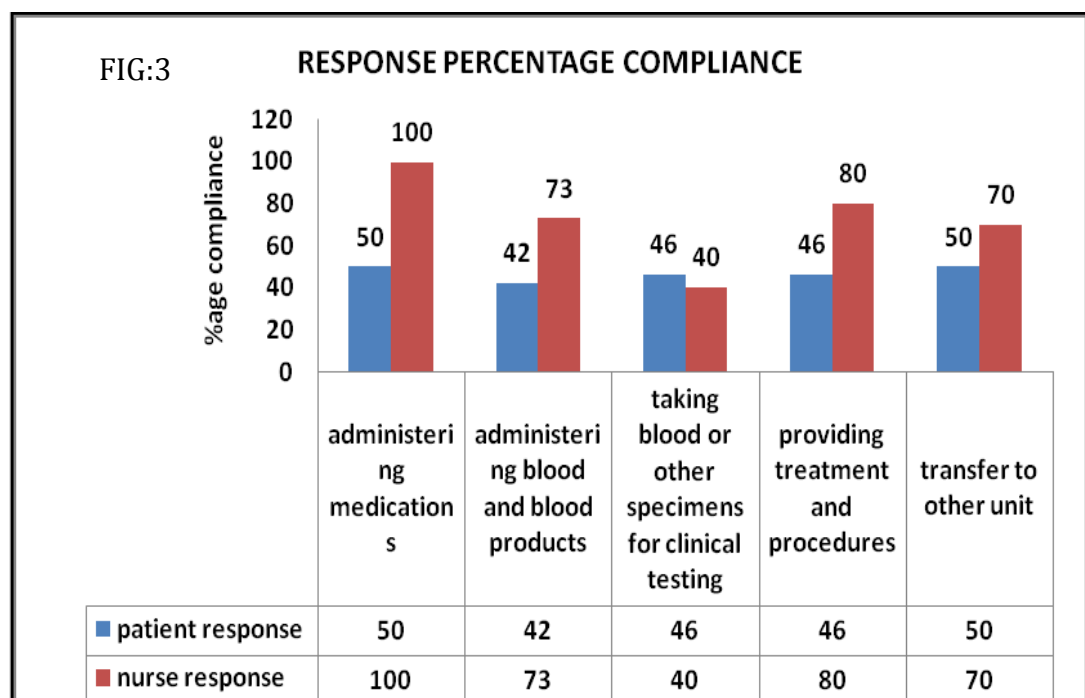
COMPLIANCE BASED ON OBSERVATIONS:



INTERPRETATION

- On observation patient were identified only in 36%cases before medication.
- Blood products were definitely given after patient recognition.
- Specimen and sample taking alsotransfer to other unit such cases were not encountered.
- During procedures 66%cases were verified for identification.

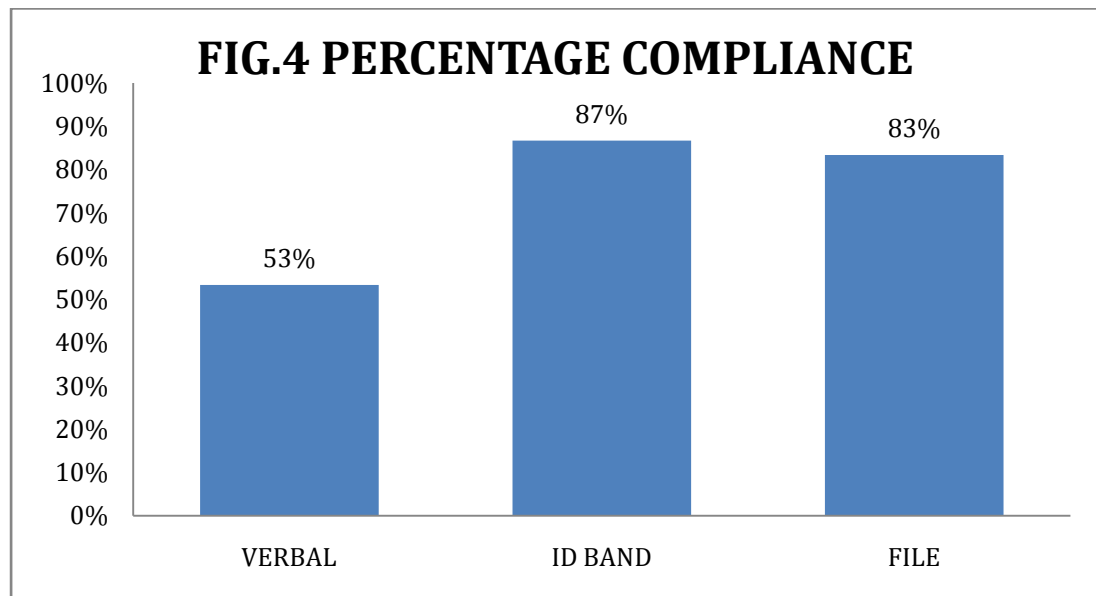
PARAMETER WISE %AGE COMPLIANCE



INTERPRETATION:

- Interviewing reflects huge difference in patients and nurse response at the time of administering medications.
- Same is for blood products but patients response can be subjective.
- Less no of times patients and nurses responded for specimen and sample taking since this activity is taken up at 4 am in the morning.

Mode of patient recognition as responded by the nurse:



INTERPRETATION:

- Accurate process of checking patient identification all 3 components- (patient, ID band, file) not followed instead just one identifier at a time was followed and is not cross checked before giving medications.
- Nurses do not carry out verbal confirmation of patients name from patient themselves very often as a medium of patient identification.

IPSG GOAL - 4 AUDIT

Aims and objectives

AIM: To audit the compliance of IPSG -4 using WHO Surgical Safety Checklist in Multispecialty Operation Theatre to determine gaps and consequently reasons for the same.

OBJECTIVES:

To verify usage of surgical safety checklist in all surgical cases reporting in MSOT.

To audit compliance with IPSG 4.

To determine the extent of gap between calculated value of percentage compliance and standard compliance rate .

To identify the reasons leading to the gap.

To facilitate implementation of the corrective actions.

METHODOLOGY:

Study design : Observational study

Study place: Fortis Hospital, Mohali

Audit duration: April to June,13

Sampling method :

IPSG 4 - a census of all patients undergone surgery in MSOT from April to June was taken under sample.

Sample size:

151 cases of GA and

127 cases of LA

AUDIT TOOL:

IPSG 4 - Surgical Safety Checklist (WHO manual)extra heads were added from hospital side.

ACTIVITIES DONE :-

To observe the usage of Surgical Safety checklist in all surgical cases operated in MSOT.

To identify deficiencies in the compliance rate for both verbalization and documentation separately of all heads of WHO Surgical Safety Checklist through auditing.

To determine the extent of gap from standard evident from calculated value of percentage compliance.

To give possible suggestions for raising the compliance percentage and overcoming of deficiencies.

Conducting of Audit in pre-op area of MSOT to monitor “sign in” head and inside the MSOT for” time out” and “sign out” heads.

In addition, safety-compromising events were identified and analyzed for contributing factors. All observations recorded in the field were later coded, compiled and analyzed.

In addition, safety-compromising events were identified and analyzed for their contribution.

Make feasible suggestions.

FINDINGS IPSG – 4, 2013

FINDINGS:

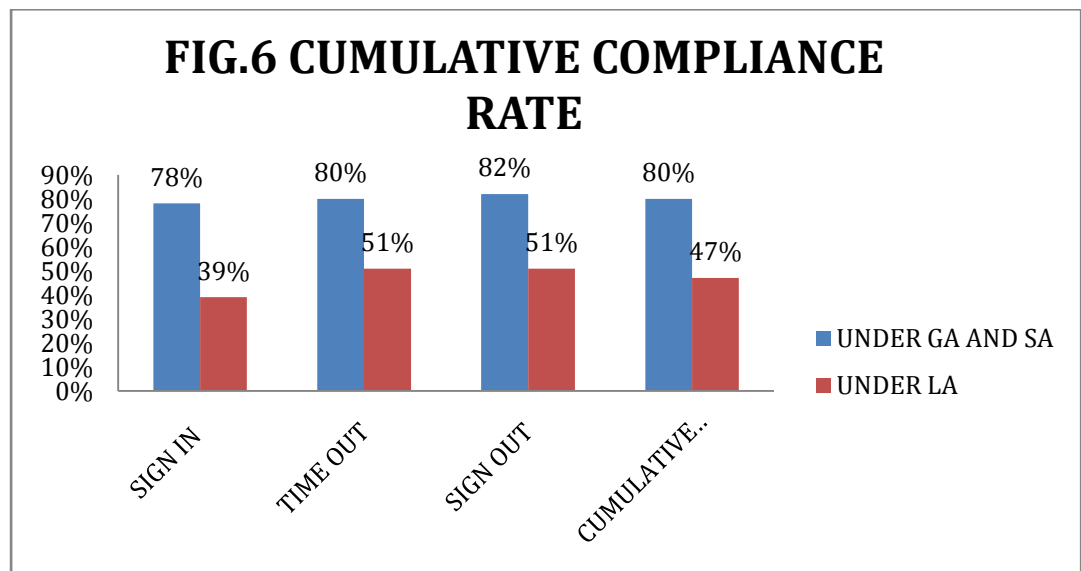
Surgical Safety Checklist Usage Percent Compliance is calculated as follows:

Number of times all three phases of SSC was performed using SSC $\times$ 100/ Total Surgeries = $151 \times 100 / 151 = 100\%$ (for GA/SA surgeries)

For surgeries under LA compliance to surgical safety checklist use and performing safety checklist = $127 \times 100 / 127 = 100\%$

Surgical Safety Checklist Compliance

SSC COMPLIANCE FOR MSOT

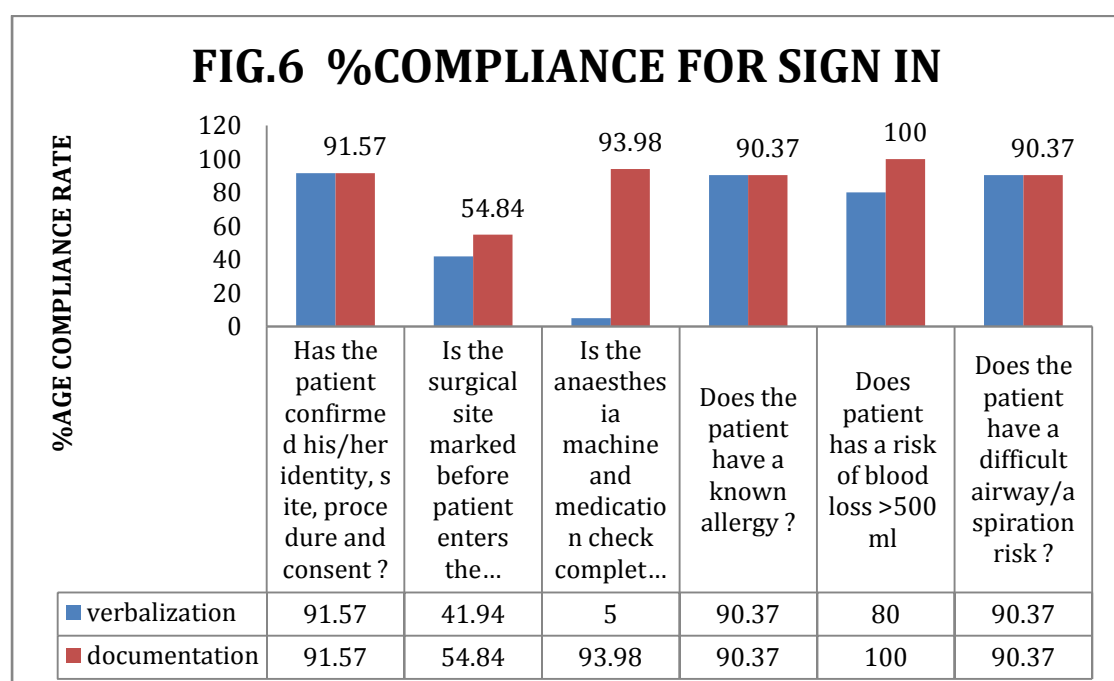


INTERPRETATION:

This is a cumulative results for all GA, LA and SA cases under both heads of verbalization and documentation.

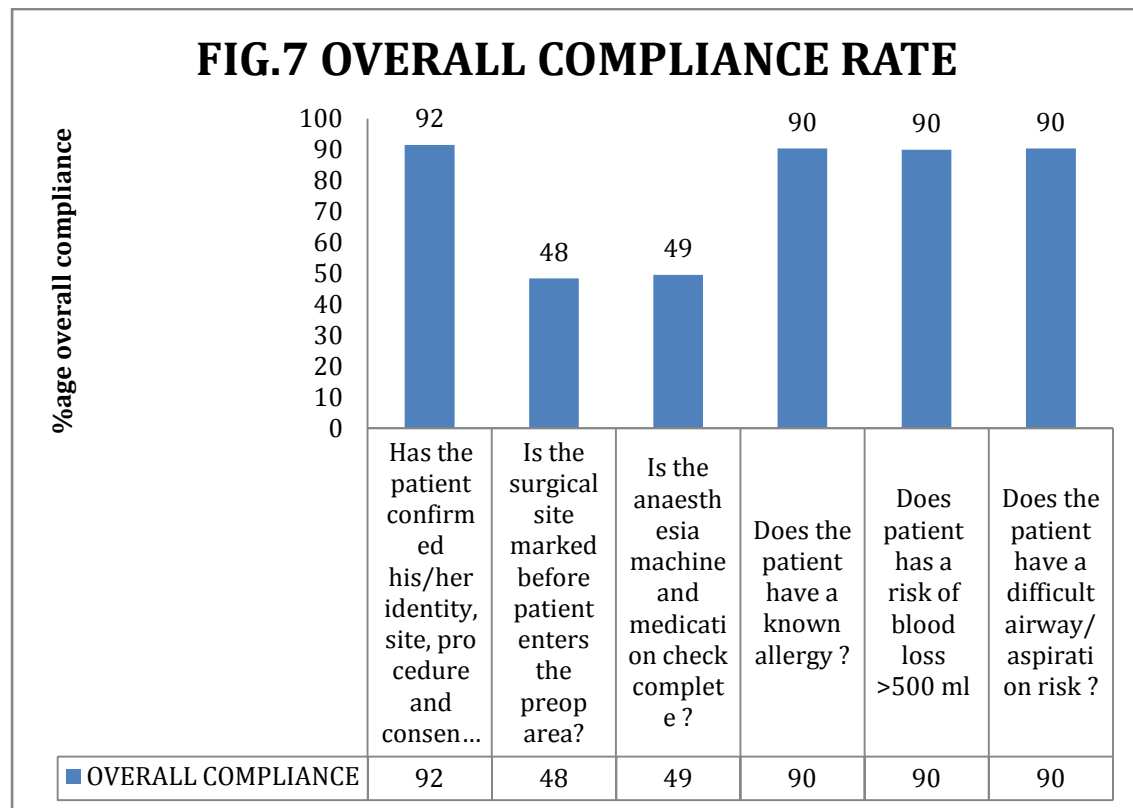
- As reflected in the graph compliance is quite good in GA and SA cases in comparison to that of LA cases which calls for necessary action.
- This 30% compliance lacking should be covered up by emphasizing practices for LA cases.

PARAMETER WISE %AGE COMPLIANCE RATE OF SIGN IN OF GA and SA CASES:

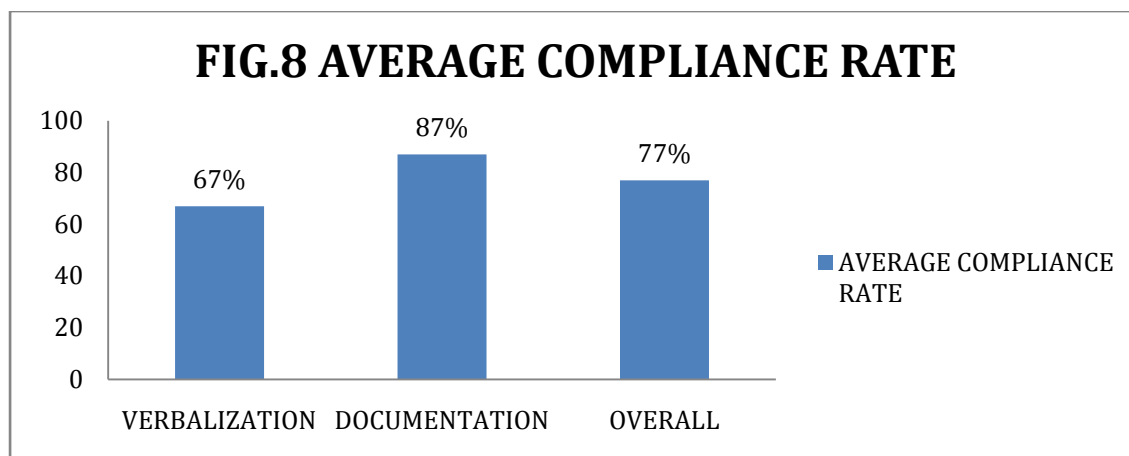


INTERPRETATION:

- For sign in heads both verbalization and documentation heads show good compliance 90 and above.
- Worrying results are for site marking and anesthesia machine check which were quite less verbalized.



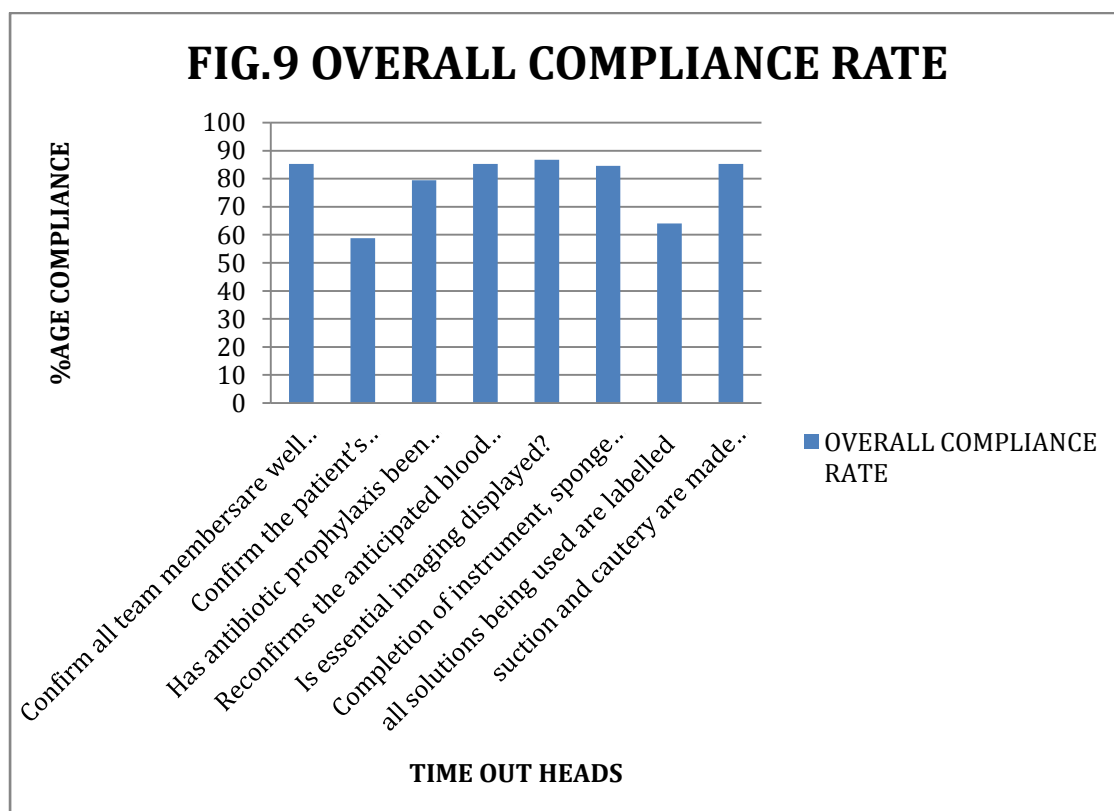
- This is combined compliance percentage for verbalization and documentation for each head of audit checklist.
- Due to poor verbalization for head 2 and 3 the overall percentage declined although documentation is quite good for them.
- Surgical site marking is mostly done by surgeon or at times by the DNB student in the pre-op area of OT irrespective of patients being OPD cases or same day admission cases and for even admitted cases site marking was done in pre -op.
- Defaulter cases are more from wards.
- Readiness of anaesthetic equipment is rarely verbalized.

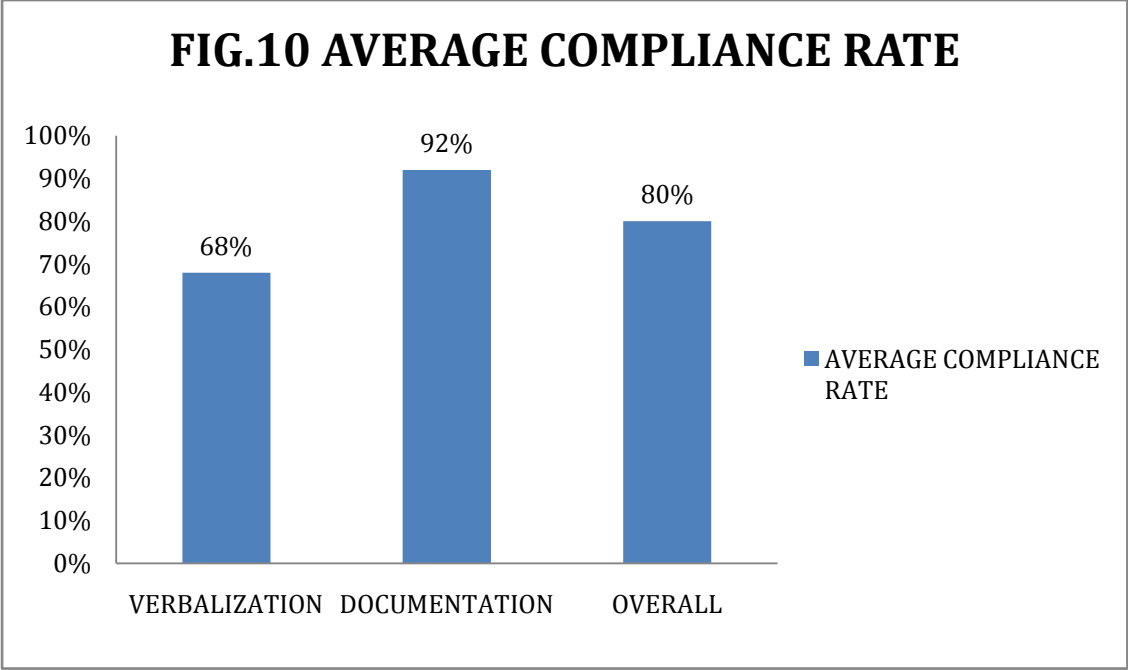


TIME OUT FOR GA and SA CASES:

Interpretation:

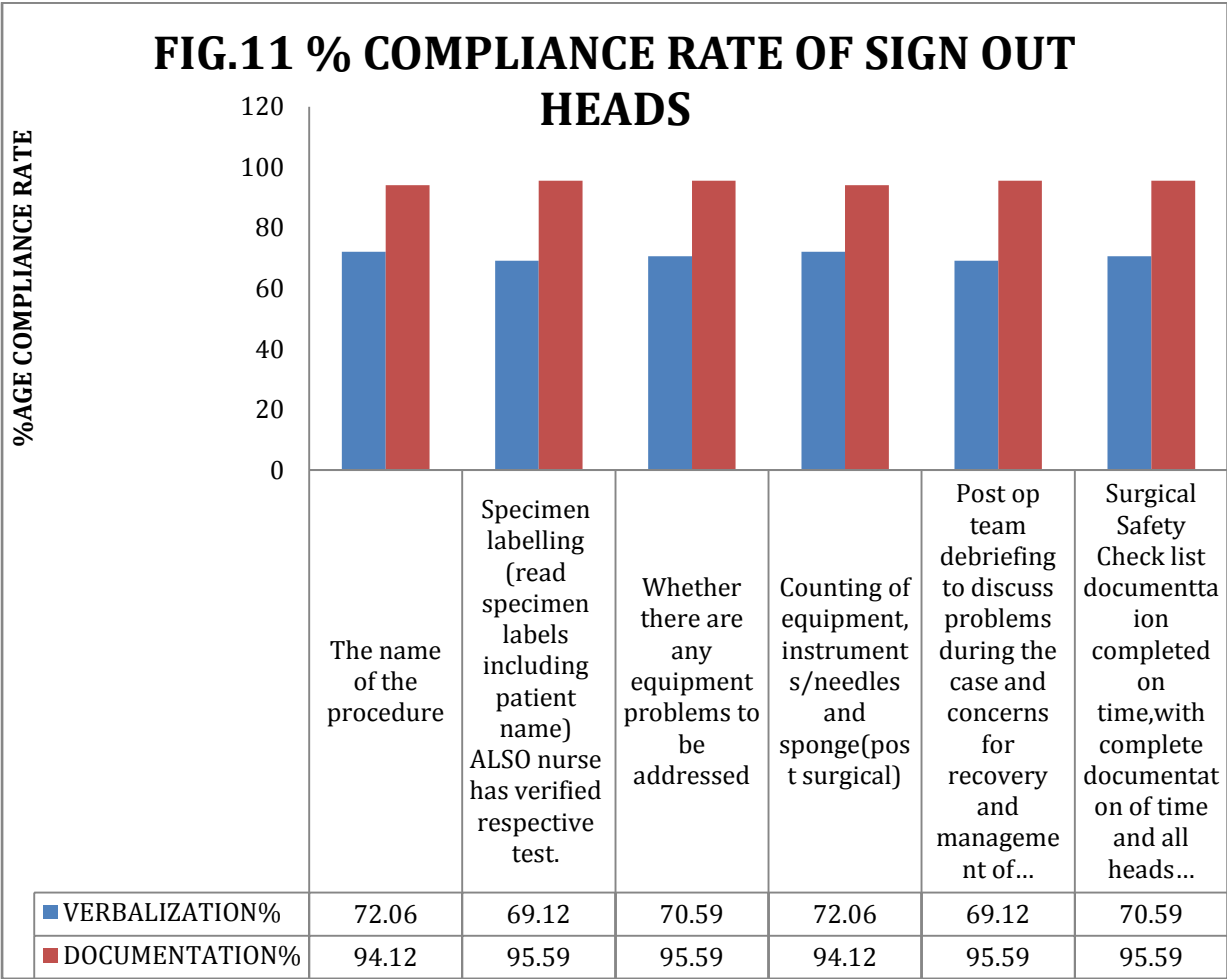
- Verbalization is lagging behind documentation here as well.
- Particularly head 2 shows lowest percent on account of lack of verbalizing incision.
- Solutions were not at all verbalized.





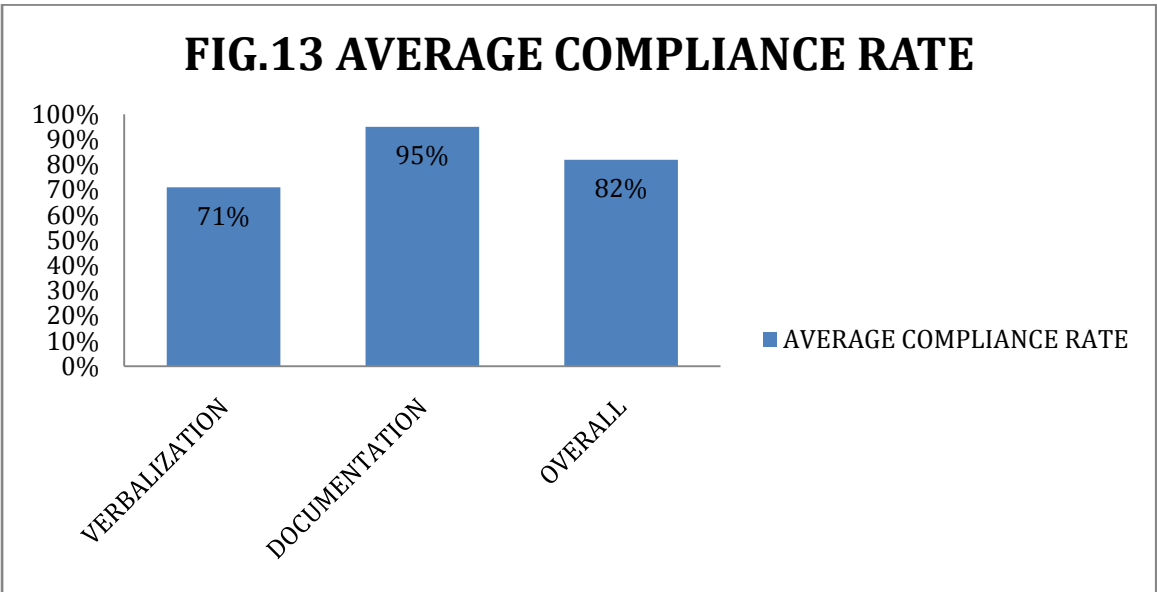
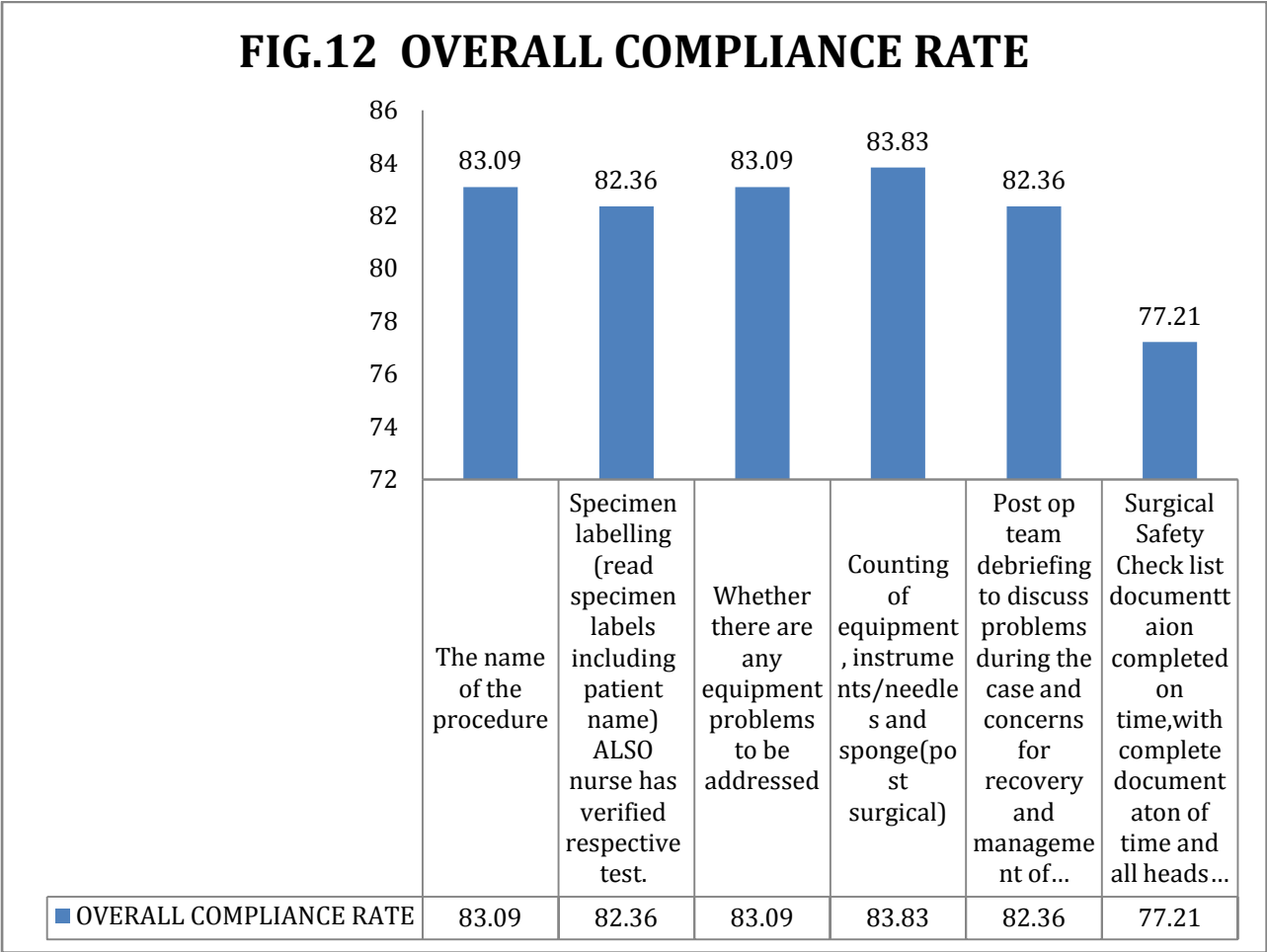
Overall verbalizing lags behind documentation here as well in time out .

SIGN OUT HEADS FOR GA and SA CASES:



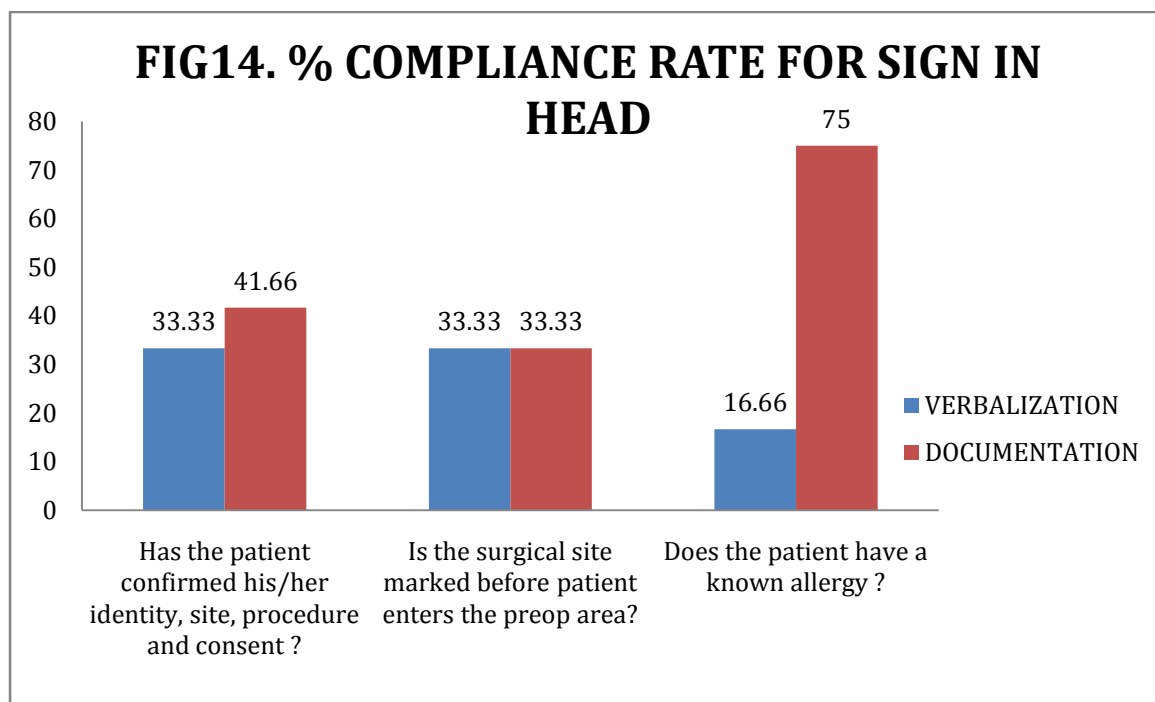
Interpretation

In sign out verbalization is equally lagging under each head of sign out still least for specimen test confirmation and post op team briefing in majority of the cases it is self decided.

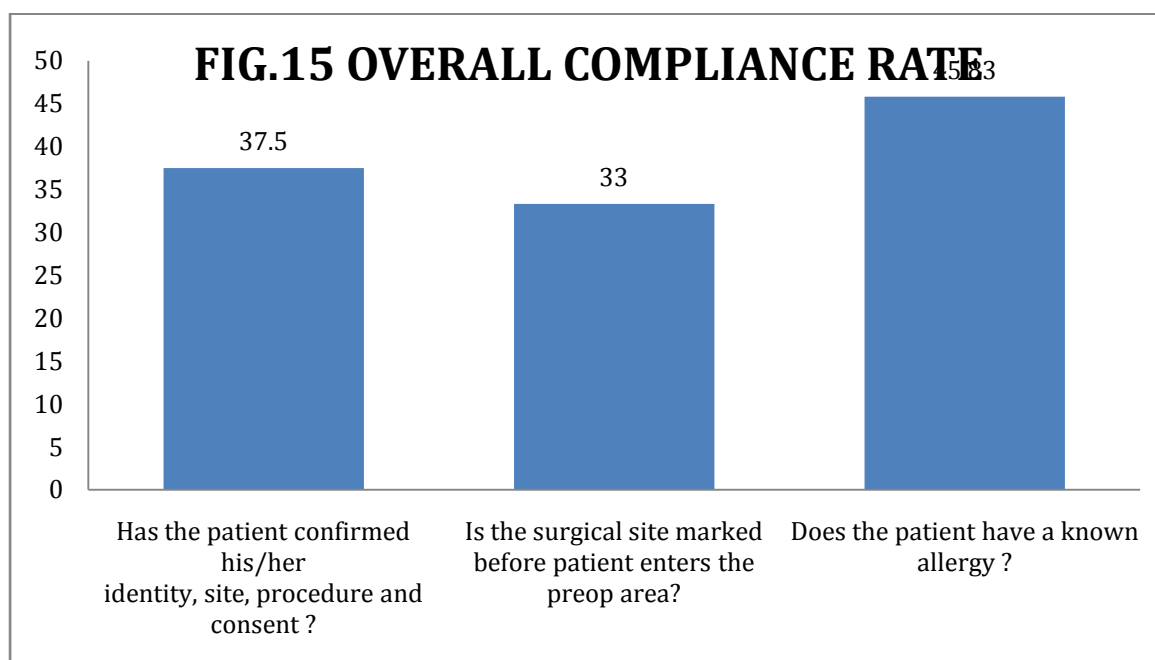


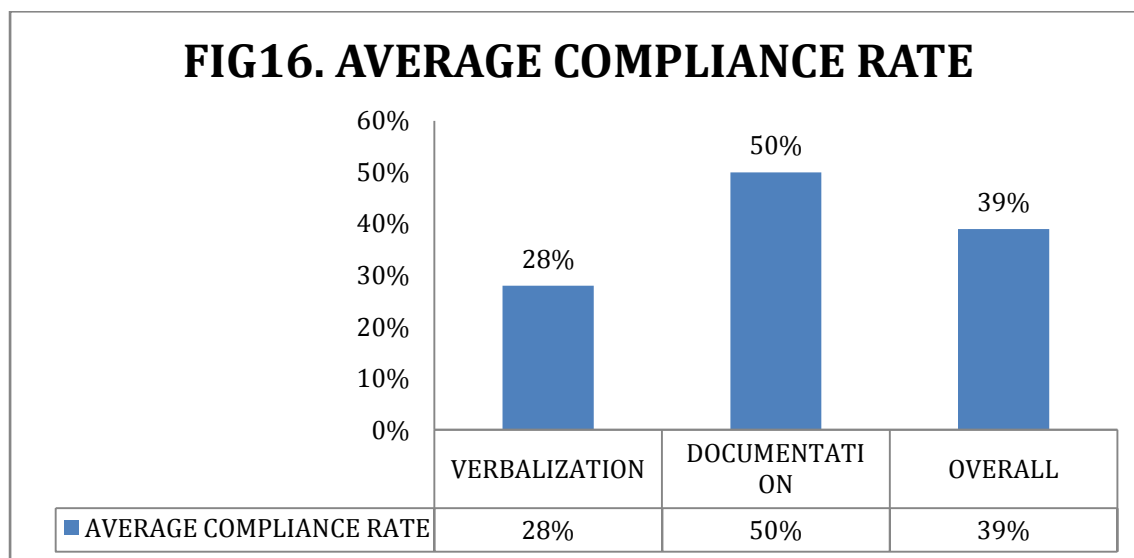
Surgeons signature have been found missing in many cases, sign are found missing even when patients with file has been shifted to the post op recovery room.

SIGN IN FOR LA CASES:



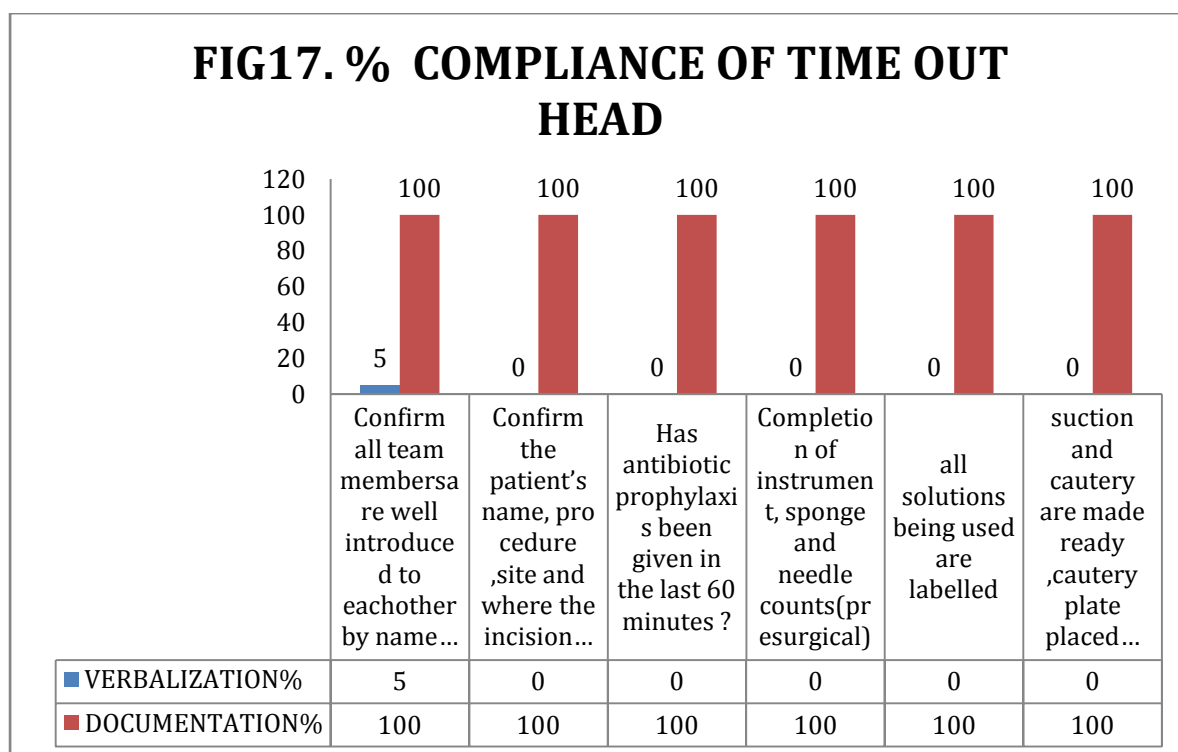
Both verbalization and documentation are lacking in LA cases on account of signing of blank surgical safety checklist at th time of taking in of patients for the surgery so verbal is also lacking.



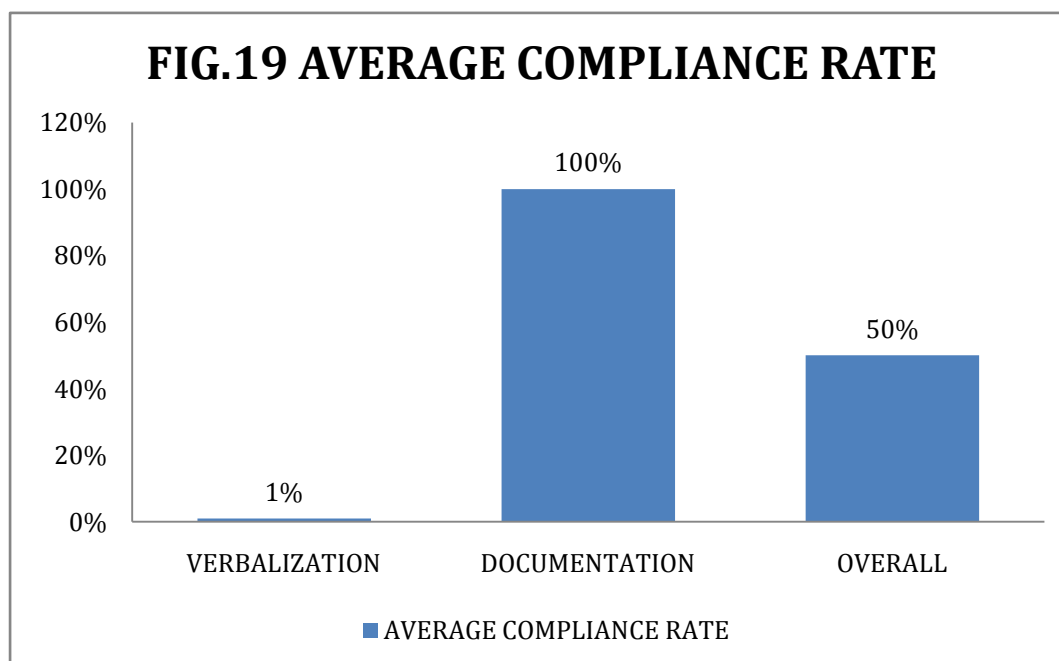
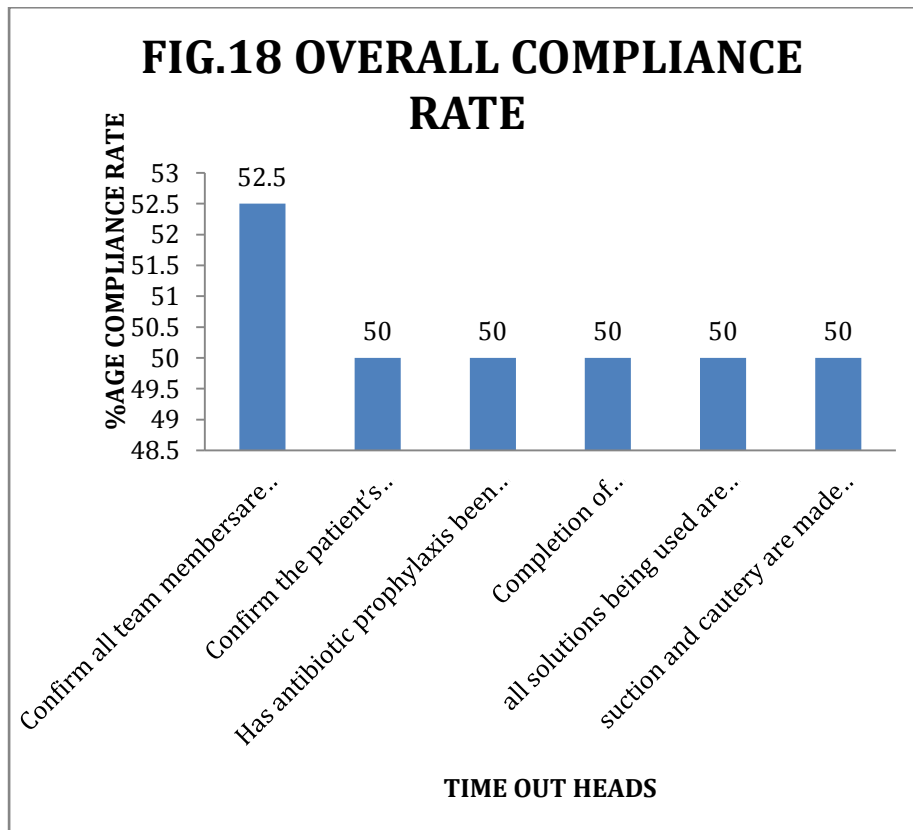


Documentation figure is more but still overall lacking can be seen in all considered heads.

TIME OUT FOR LA CASES

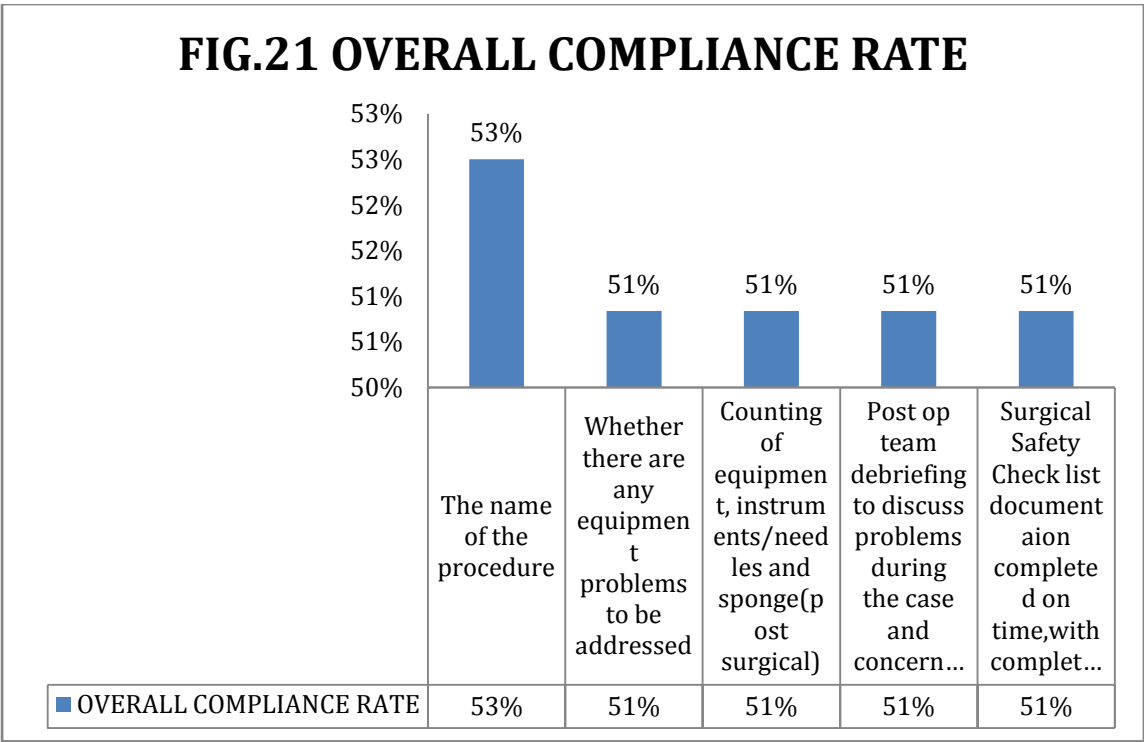
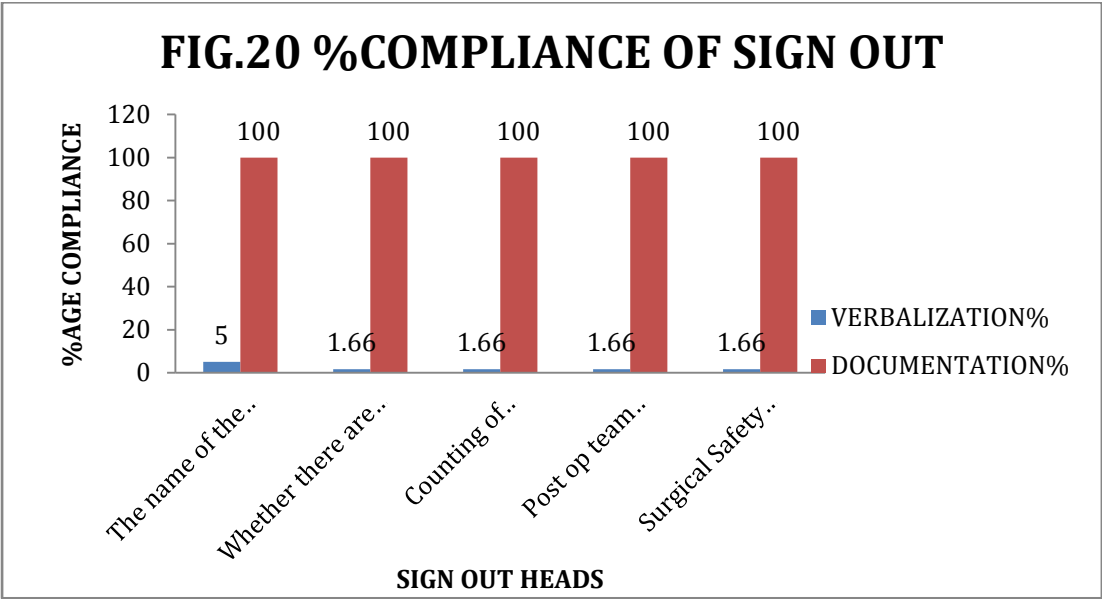


Mostly surgical checklists were filled up by circulating heads while the surgery is still going on so documentation was found to be up to date but verbalization was a rare practice.

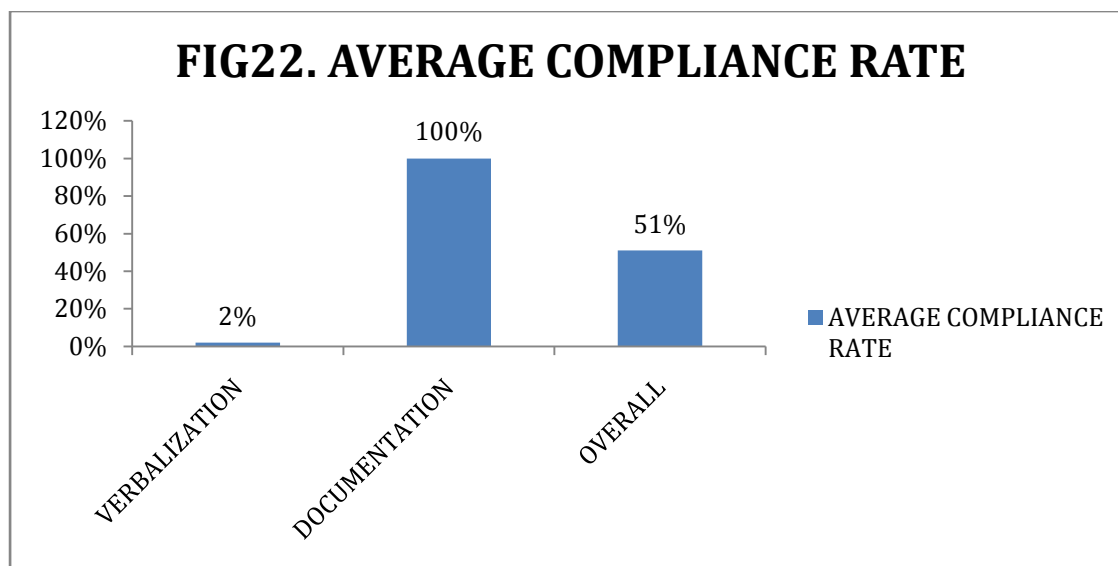


Clearly verbalization is seen to be lacking badly that brings the overall percentage down as well.

SIGN OUT FOR LA CASES:



Same goes for sign out heads as well time out and sign out are completed together by circulating nurse.



FOR LA CASES:

- Verbalization is found missing for all three patient ,procedure,site.
- Often blank Surgical Safety Checklist were sign in by assistant nurse not even by surgeon or assistant surgeon.
- Circulating nurse fills up all checklist heads even after the procedure.

FACILITATED ACTIONS :

FOR IPSG -1

- The findings of the audit communicated to head of quality department and medical coordinator of wards and ICU's.
- It was emphasized that 100% compliance is required in all parameters of IPSG-1 Audit Checklist.
- Training of the care givers is simultaneously done at the time of audit by communicating them the points they miss on and re emphasizing on the importance to check them by telling them the hazardous consequences that may arise out of such carelessness thus they should consider identifying patients correctly as their prime responsibility being a care giver.

FOR IPSG -4

- The findings of the audit communicated to each MSOT team.
- It was emphasized that 100% compliance is required in all parameters (verbalization and documentation) of Surgical Safety Checklist.

PROJECT 2

CARDIAC CATHETERIZATION LABORATORY UTILIZATION

Introduction

A Catheterization Laboratory or cath lab is an examination and interventional lab in a hospital with diagnostic imaging equipment used to visualise the arteries of the heart and the chambers of the heart and treat any stenosis or abnormality found. It requires sterilization similar to that of OT with laminar flow, temperature and humidity maintenance.

"Cardiac Catheterization" is a general term for a group of procedures that are performed using this method, such as coronary angiography, as well as left ventricle angiography. Once the catheter is in place, it can be used to perform a number of procedures including angioplasty, PCI (percutaneous coronary intervention) angiography, balloon septostomy, and an Electrophysiology study or Catheter ablation.

A list of procedures carried out in a Cath Lab includes:

Coronary Angiography or Coronary catheterization

Coronary Angioplasty or Percutaneous coronary intervention / PCI

Closure of some congenital heart defect

Treatment of stenotic heart valves

Permanent and temporary pacemaker implantations

The Cardiac Cath Lab Thus, Provide Adult And Paediatric Diagnostic And Intervention Services As Well As Treatment For Arrhythmias Using Electro-Physiological Studies (EPS) And Devices.

Fortis Hospital, Mohali Is a prestigious Heart Hospital well known for its Cardiac Diagnostic Services.

Patient crowd In Cath Lab Is chiefly that of elective and routine cases and thus constitutes a major revenue generating department for the Hospital.

a. Departmental Overview:

Cardiology department has right now two cath labs under it.

Cath Lab 1 is a newer lab

Cath Lab 2 Is older one.

Apart from labs there is a defined PCR (Pre Cath Region) just adjacent to lab where patients are made ready to be sent in lab for the procedure.

After procedure patient is sent to either CCU eg post PTCA cases and day care patients are given direct discharge after certain hours of observation.

Working hours of cath lab are 9am to 9 pm.for both the labs so total

Actual Functional Hours are number of hours for which lab was in working .

This is estimated by calculating hours from START and END time of the procedure.

b. Aims and objectives

Aim

To calculate the utilization rate for the Cardiac Cath Lab for the month of April and May 2013 to carry out comparative analysis of the productivity of labs and determining reasons for any evident loopholes along with providing with relevant suggestions.

Objectives

- To calculate percentage utilization for both the cath labs separately for April and May.
- To do comparative analysis of April and May data on various parameters under consideration.
- To identify deficient areas and determining reasons for the same.
- To give possible suggestions to overcome them and improving utilization.

c. Methodology:

Data collection method:

Retrospective data collected from maintained cath lab registers for the month of april and may 2013.

Period of study: 1 april'13 to 31 may'13

Determining sampling design and sample size:- All patients undergone the procedure whether diagnostic or interventional are included in the sample.

Thus, for April number of cases are 360 and for May 411 cases.

Registers for the month of april and may for both the labs were retrieved and following parameters were noted down:-

- All data for patient identification- name of the patient, age and sex, hospital UHID,IPID
- Respective diagnosis with consultants name and procedure patient underwent.
- Source of patient to the lab and lab in which patient underwent procedure.
- Patient wheel in (start time) and wheel out (end time) are noted down.
- Average lab preparation time (in between cases) has been taken as 20 minutes.
- Total time has been calculated by applying formula:-

Total time for procedure = procedure time +preparation time

$$\% \text{ age utilization rate calculate as } = \frac{\text{Actual functional hours}}{\text{Allotted functional hours}} * 100$$

CASE IDENTIFICATION: all cases undergoing any kind of procedure in the cath lab in the month of April and May 2013

Inclusion criteria : all cases undergoing any procedure in cath lab and for whom the start and end time are not found missing in the lab register already maintained. Exclusion criteria : all cases done on Sundays have not been included both in numerator and denominator actual and allotted functional hours respectively.

DATA COLLECTION: following data heads were collected from lab 1&2 registers:-

Date

Patient name

Age/sex

UHID/IPID

Source of patient

Respective lab 1or 2

diagnosis

consultant name

procedure done

start time

end time

procedure time= start-end time

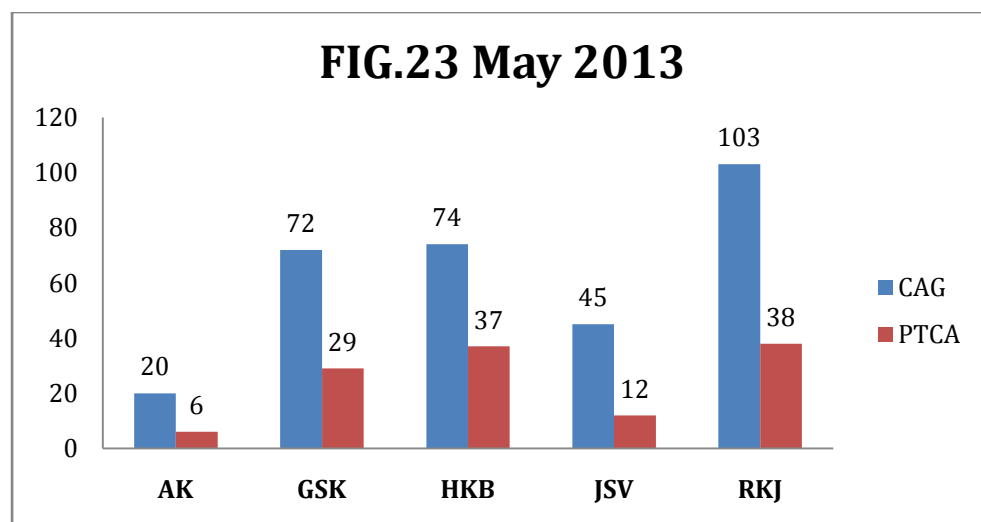
preparation time

total time = procedure +preparation time

Fluoroscopic time (FLT)

d. FINDINGS ON ANALYZING DATA: seven parameters are considered

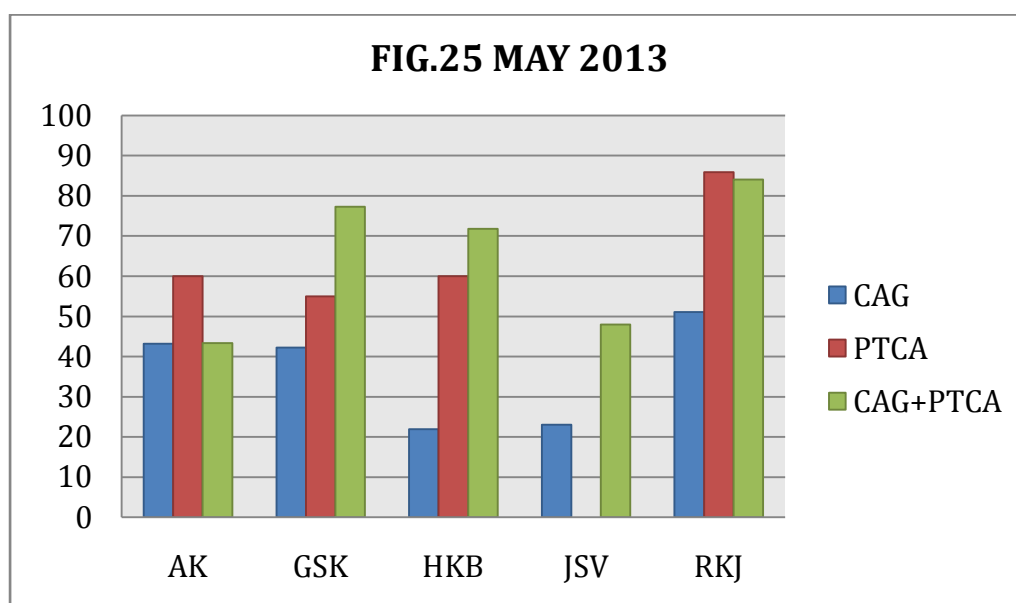
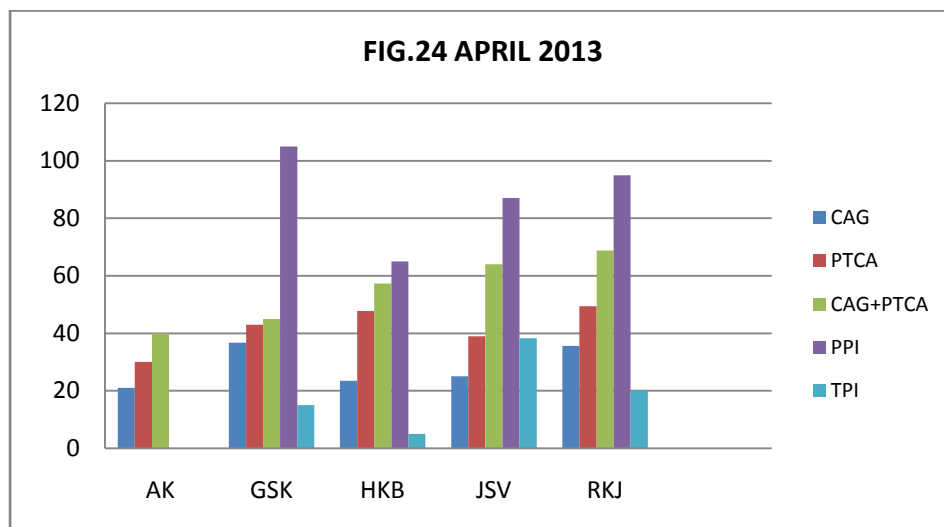
1. NUMBER OF CASES UNDER EACH CONSULTANT:



Conclusions:

- In April and May DR. R.K Jaiswal conducted maximum number of cases of CAG and PTCA.
- Next highest number of cases are done by DR. G.S Kalra.
- Next high number are of DR. H.K Bali.
- Next High Number Are Of DR. J.S Verma.
- Least workload is for DR . A.Kochar gets well adjusted between the slots.

2. Consultant wise average time for procedure IN APRIL and MAY 2013 respectively



CONCLUSIONS :

April and May data concludes :-

questionable pairing of DR. H.K BALI with DR. R.K JAISWAL

based on : 1) average length of procedure.

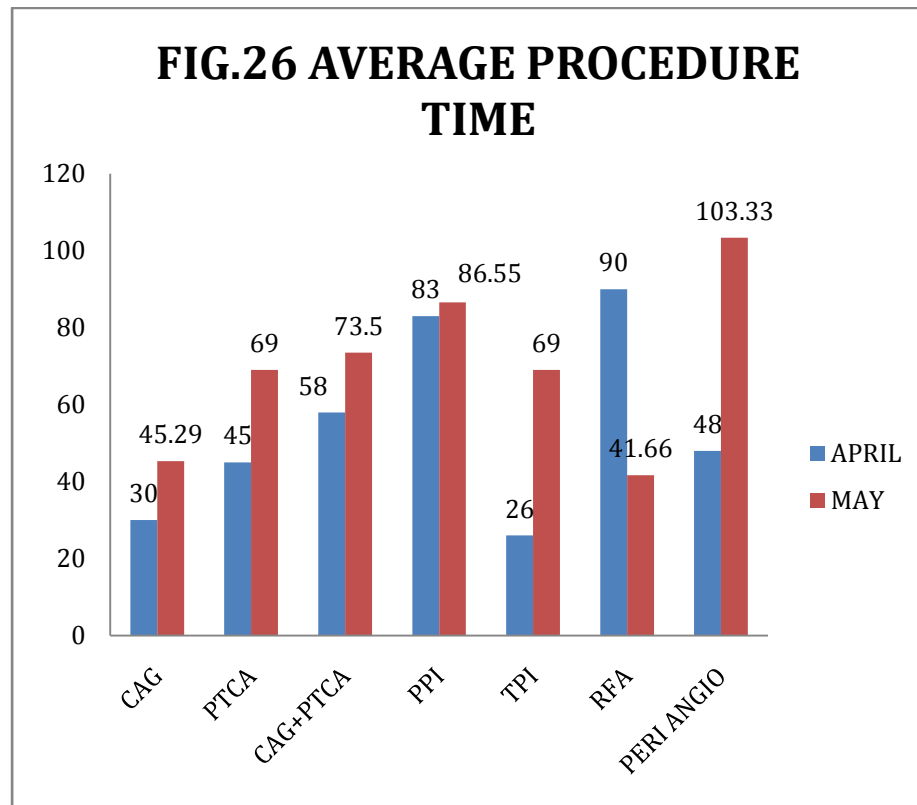
2) number of procedures under consultant.

Will maintain balance of actual hours utilized between both labs.

DR. A.KOCHAR gets well adjusted between the slots due to:

- 1) least number of cases.
- 2) least time for procedures.

3. PROCEDURE WISE AVERAGE TIME TAKEN:



CONCLUSIONS:

Average time of both labs for commom procedures are:-

CAG = 37.5 MINS

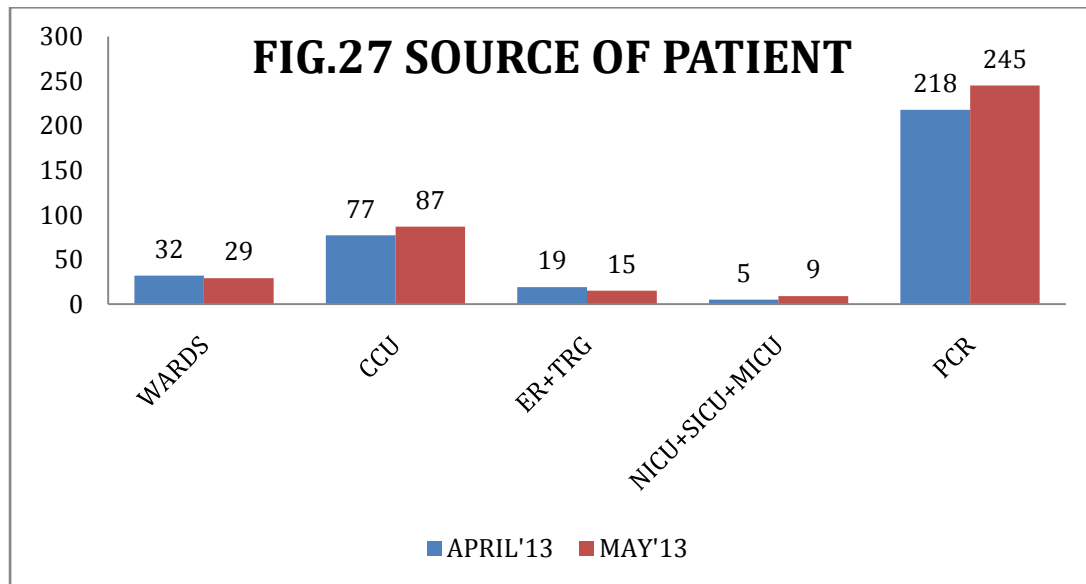
PTCA = 57 MINS

CAG+PTCA = 65.75 MINS

PPI = 84.5 MINS

TPI = 47.5 MINS

4. SOURCE OF PATIENTS TO CATH LAB



CONCLUSIONS:

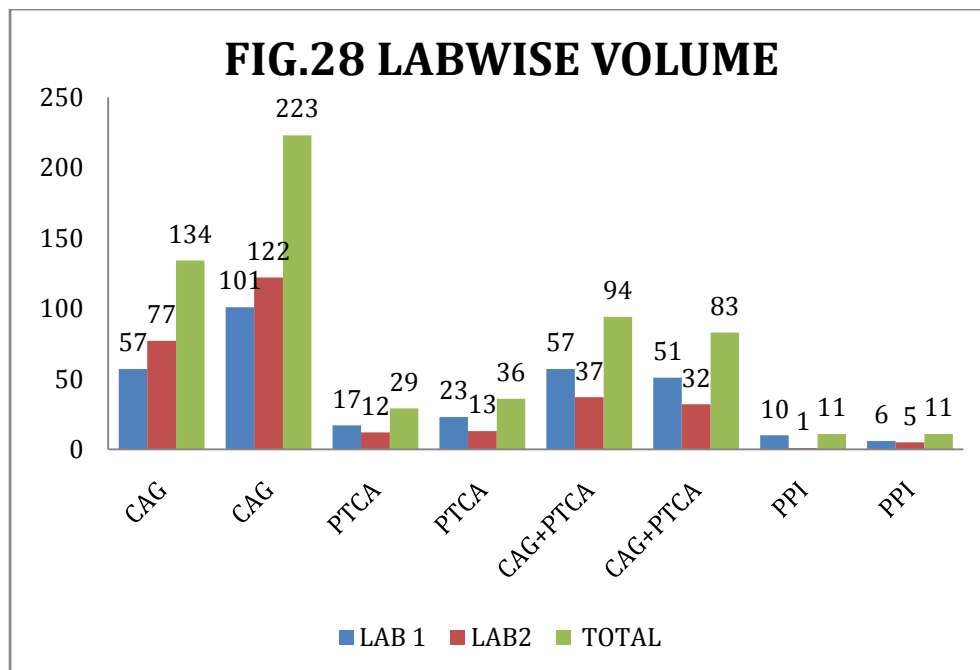
PCR offers maximum cases :Elective cases constitute 68% of total cases.

Next highest from CCU.

Next high are from wards.

Less emergencies reported.

5. LAB WISE CATEGORIZATION OF PROCEDURES(VOLUMEWISE)



CONCLUSIONS:

The volume of patients increased in may over april, chiefly CAG cases reported are twice in number.

Lab 1 is taken up for longer procedures lab 2 chiefly has higher load of CAG's.

PTCA cases are also more in may.

Total cases in april are 273(excluding sundays).

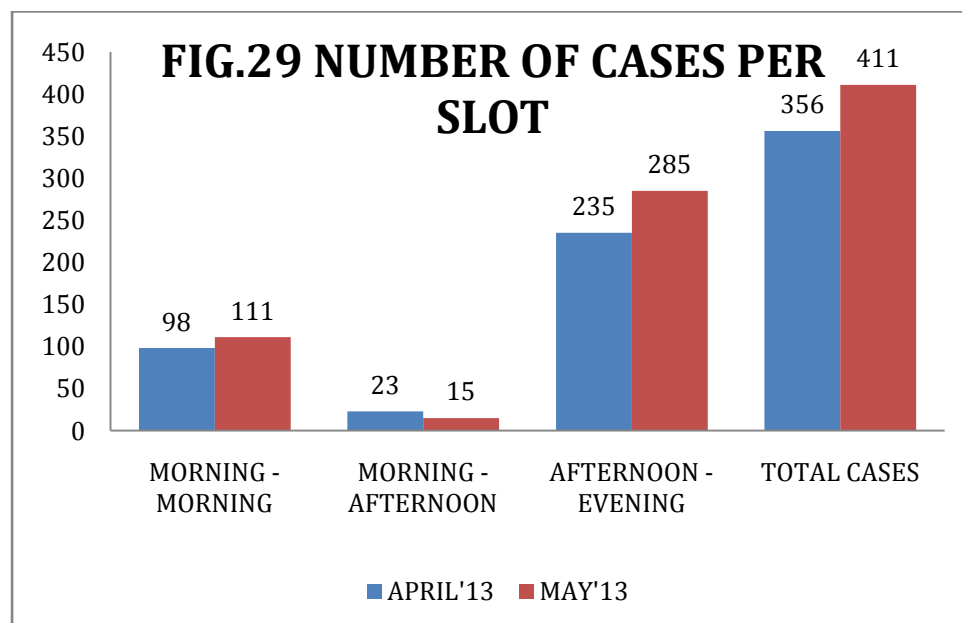
Total cases in may are 368(excluding sundays).

Lab 1 cases: april(141),may(181)

Lab 2 cases: april (130),may(172)

Inference: case division is optimal as of now.

6.NUMBER OF CASES AS PER SLOTS



CONCLUSIONS:

April and May data concludes:

1)evening cases twice of morning cases

2)evenings are busy.

7. PERCENTAGE UTILIZATION RATE LAB WISE:

% utilization given by = actual hours worked in the day / allotted functional hours * 100
FOR APRIL '13

for lab 1

actual hours worked = 219.12 hours

allotted functional hours = 312 hours

%utilization = $219.12 / 312 * 100 = 70.23\%$

So 70% (approx)

for lab 2

actual hours worked = 149.98 hours

allotted functional hours = 312 hours

%utilization = $149.98 / 312 * 100 = 48.07\%$

So 48% (approx)

FOR MAY '13

for lab 1

actual hours worked = 216.38 hours

allotted functional hours = 324 hours

% utilization = $216.38 / 324 = 66.78\%$

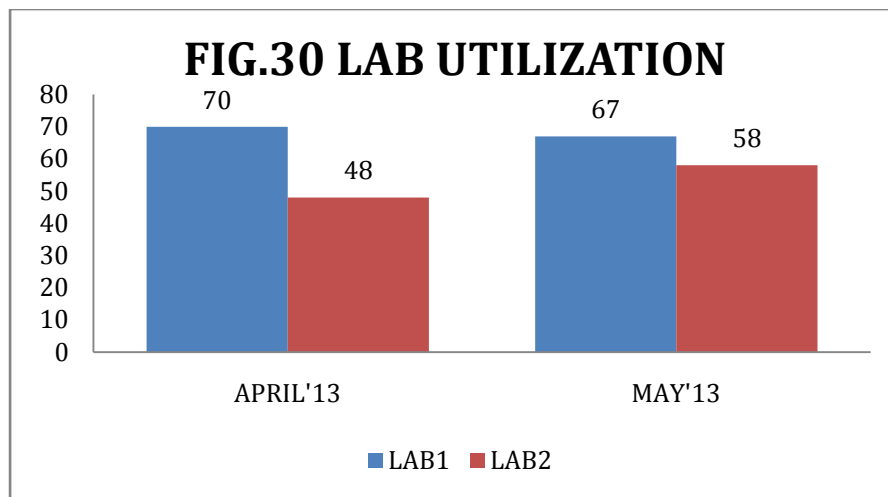
So 67% (approx)

for lab 2

actual hours worked = 188.39 hours

allotted functional hours = 324 hours

%utilization = $188.39 / 324 * 100 = 58.17\%$ So 58% (approx)



CONCLUSIONS:

COMPARATIVE ANALYSIS:

FOR LAB 1

%age utilization in April higher than may .

Reason: more number of longer procedures eg. PPI are done in april so actual hours utilized are more.

FOR LAB 2

%age utilization in may increased by 10% than april.

Reason: more number of cases done increased number of actual functional hours

SUGGESTIONS:

Based on the findings of the present study, the following recommendations are proposed:

1) Suggestion: Ideal pairing

DR. R.K Jaiswal : DR. J.S Verma

DR. G.S Kalra : DR. H.K Bali

Based on: number of procedures under consultant.

This uniformly distributes workload.

2) Suggestion: ideal pairing

DR. R.K Jaiswal : DR. J.S Verma

DR. G.S Kalra : DR. H.K Bali

Based on : 1) average length of procedure.

2) number of procedures under consultant.

This uniformly distributes workload will maintain balance of actual hours utilized between both labs.

3) Suggestion: reduce the average time per procedure by improving on patient flow process by well documented scheduling of cases “CATH SLOT BOOKING” with circulation of information to all concerned staff.

Possible Outcome: 1) better patient flow.

2) increased utilization.

(actual functional hours)

4) Suggestion: Staff rescheduling.

Includes: senior, experienced and more number of nursing and technician staff to be posted in evening shifts.

5) Suggestion : Enhanced marketing support for non-converted cases.

: Better maintenance to cut down the lab down time.

Reason: still non conversion is at a high rate of about > 20%.

Possible outcomes: 1) will help increase the number of elective cases.

2) Decrease the number of non conversions from present rate.

Assignment 1

Anesthesia Quality indicators audit under CQI.

a. Literature review:

Clinical indicators are increasingly developed and promoted by professional organizations, governmental agencies, and quality initiatives as measures of quality and performance. To clarify the number, characteristics, and validity of indicators available for anesthesia care, the authors performed a systematic review. They identified 108 anesthetic clinical indicators, of which 53 related also to surgical or postoperative ward care. Most were process (42%) or outcome (57%) measures assessing the safety and effectiveness of patient care. To identify possible quality issues, most clinical indicators were used as part of inter hospital comparison or professional peer-review processes.

Anaesthesia poses certain challenges in the identification of valid outcome indicators sensitive to variations in anaesthetic care. Metrics collected during the immediate post-anaesthetic recovery period, such as patient temperature, patient-reported quality of recovery, and pain and nausea, provide potentially useful information for the anaesthetist, yet this information is not routinely fed back. Reviews of the effects of feeding back performance data to healthcare providers suggest that this may result in small to moderate positive effects upon outcomes and professional practice, with stronger effects where

ANAESTHESIA INDICATORS			Month
% of modification of anesthesia plan	No. of patients in whom the anesthesia plan was modified X 100/No. of patients who underwent anesthesia	Numerator/ Denominator	
% of unplanned ventilation following anesthesia	No. of patients requiring unplanned ventilation following anesthesia X 100/No. of patients who Underwent anesthesia	Numerator/ Denominator	
% of adverse anesthesia events	No. of patients who developed adverse anaesthesia event X 100/No. of patient underwent anesthesia	Numerator/ Denominator	
Anesthesia related mortality rate	No. of patient who died due to anesthesia X 100/No. of patient who underwent anesthesia	Numerator/ Denominator	

feedback is integrated within a broader quality improvement strategy.

Indicators recommended for maintaining by Department Of Quality Assurance were:

b. Findings :

Since MSOT was not keeping a record of the listed indicators they were only reporting the incidents report under Continuous Quality Improvement form which was found to be inadequate in the process of improving quality under C QI.

Even number of all cases treated under anaesthesia should be kept in the record.

c.Facilitated actions:

A record register was highly recommended to be maintained in the department of MSOT.

Heads to be maintained were decided mutually with The Head Of Department of MSOT and Head Of Department of Quality Assurance.

Their practice was further followed up and monitored.

Assignment 2

Audit of usage and disposal practices of Single Use Devices and initiating record maintenance

a. Literature review:

The practice of reprocessing SUDs continues to be a controversial issue and is driven by the overall attempts to decrease the cost of providing quality patient care. Reuse has been practiced in hospitals since the late 1970s.¹⁰ Despite the long history of SUD reprocessing, the Federal Food and Drug Administration (FDA) determined that a higher level of public and patient safety needed to be addressed. The lack of good manufacturing processes, including tracking devices, quality assurance and control, and the lack of validated reprocessing procedures create a potential hazard to the patient. Therefore, the FDA made the decision that original equipment manufacturers and third-party processors should be regulated under the Food, Drug, and Cosmetic Act.

In 2000, the FDA published its policies for the reprocessing and reuse of SUDs that must be implemented by hospitals and third-party reprocessors. Additionally, the FDA implemented the Medical Device User Fee and Modernization Act of 2002 (MDUFMA), which has been updated for 2008-2012.

The Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008, presents evidence-based recommendations on the preferred methods for cleaning, disinfection and sterilization of patient-care medical devices and for cleaning and disinfecting the healthcare environment. This document supercedes the relevant sections contained in the 1985 Centers for Disease Control (CDC) Guideline for Handwashing and Environmental Control. ¹ Because maximum effectiveness from disinfection and sterilization results from first cleaning and removing organic and inorganic materials, this document also reviews cleaning methods. The chemical disinfectants discussed for patient-care

Policy:

Fortis Hospital, Mohali has adopted the following policy regarding the reprocessing of SUDs:

- I. Fortis Hospital, Mohali is committed to reprocess SUD's in a manner so as to ensure patient safety and stringent quality controls.
- II. SUDs that may be reprocessed are those listed in Appendix I. SUDs not listed cannot be reprocessed and should be discarded after single use.
- III. Authority for the program is vested with the Infection Control Committee which is a multidisciplinary group.

Procedure:

Sorting:

Cleaning:

An initial sort of each SUO shall take place to eliminate obvious rejects or unapproved products.

The SUD shall be cleaned thoroughly to eliminate any blood or other body fluids. Hollow instruments shall be rinsed with water under high pressure. The SUD shall be placed in Cidezyme solution to dissolve all protein residues. The SUD shall then be thoroughly rinsed with water and left to dry.

4.3 Testing:

Verifying that devices perform as intended shall be an integral component of the reprocessing cycle. This can involve injection of water through the catheters, or other device-specific functional indicators. adhere strictly to the cleaning, disinfection, and sterilization recommendations in this document and to instructions on product labels.

4.5Packaging: All devices shall be packaged, sealed and labeled in Hospital approved pouches for ETO purposes. Prior to packing, a dot/ring with a permanent marker shall be placed on the device, indicating the number of times it has been reusedSterilization

4.6 Sterilization shall be performed in state-of-the-art ETO gas sterilizer. Every load shall contain biological indicator that shall be sent to the Microbiology laboratory for testing

4.7Final Inspection & Product Release: After undergoing a final inspection, and quarantine for required time. The device shall be brought in use.Labeling requirements:

All reprocessed SUO's shall be labeled with the name of the device, size, date of ETO with expiry and user department. To facilitate recall, ETO lot no. shall be written.

4.8 Incident reporting:

Any incident due to a reprocessed SUO shall be immediately reported on the "Patient Incident" Form. The data shall be collected and analyzed by the Risk Manager. The Infection Control Committee shall also review the data periodically.

4.9 SUD Recall:

Any SUO found to be unsafe due to repetitive incidents or due to a report by Microbiology or from manufacturers, shall be immediately recalled and disposed of as per hospital policy for bio-medical waste.

4.10 Disposal:

All devices that have been reused the number of times as per policy, shall be disposed off in the red waste bags.

Incident reporting:

Any incident due to a reprocessed SUO shall be immediately reported on the "Patient Incident" Form. The data shall be collected and analyzed by the Risk Manager. The Infection Control Committee shall also review the data periodically.

SUD Recall:

Any SUO found to be unsafe due to repetitive incidents or due to a report by Microbiology or from manufacturers, shall be immediately recalled and disposed of as per hospital policy for bio-medical waste.

Disposal:

All devices that have been reused the number of times as per policy, shall be disposed off in the red waste bags.

Findings:

Since MSOT was not keeping a written record of the SUD's usage pattern ,the number of times each device is being used and even the disposal protocols were not well defined. So tracking of devices was very much required.

A written record was made and following heads were recommended for recording so as to track the device right from the time it is opened till the time it is disposed off.

Name of item	Batch no./lot no	Number of times used(number marked on instrument)	Date of last done sterilization	Method of disposal	Signatures of respective scrub nurse

Facilitated actions:

- A record register was highly recommended to be maintained in the department of MSOT.
- Heads to be maintained were decided mutually with The Head Of Department of MSOT and Head Of Department of Quality Assurance and Head Of Infection Control Committee.
- Their practice was further followed up and monitored.

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BOD January 2013

ANNEXURES

IPSG 1 AUDIT TOOL

QUESTIONNAIRE					
Patient		UHID	UHID	UHID	UHID
Do the nurses and other care givers check your <i>ID Band</i> before:					
i	Administering medications				
ii	Administering blood and blood products				
iii	Taking blood and other specimens for clinical testing.				
iv	Providing treatment and procedures				
v	Transfer to another unit				
Nurse/Care giver					
State two patient identifiers?					
Give 5 instances of care giving when you check Patients Name and ID band?					
i	Administering medications				
ii	Administering blood and blood products				
iii	Taking blood and other specimens for clinical testing.				
iv	Providing treatment and procedures				
v	Transfer to another unit				
Method of checking Patients identity? (verbal + ID band + File)					

	Surgical Safety Checklist Audit Tool	CODES USED: 1:YES,2:NO,3:Partial Compliance		
S.No	Before induction of anesthesia (SIGN IN)	Action	Responsibility	UHID
1	Has the patient confirmed his/her identity, site, procedure and consent?	The Pre-op Nurse verifies with patient against the file and Patient ID band in the presence of anesthetist(in case of children/incapacitated adults involve family member)	Pre-op Nurse	
2	Is the surgical site marked before patient enters the preop area?	Physically checks for site marking	Pre-op Nurse	
3	Is the anesthesia machine and medication check complete?	Circulating nurse verbally verifies this with the anesthetist in O'I	Circulating Nurse	
4	Does the patient have a known allergy?	Circulating nurse asks the anesthetist if patient has any allergy and if YES-specify (This info is written on the O'I Board)	Circulating Nurse	
5	Does patient has a risk of blood loss >500 ml	anesthetist takes estimate from surgeon	Anesthetist	
6	Does the patient have a difficult airway/aspiration risk?	Anesthetist reconfirms if patient has a risk of difficult airway or aspiration risk	Anesthetist	

	Before skin Incision (TIME OUT)	Action	Responsibility	UHID
1	Confirm all team members have introduced themselves by name and role	Anesthetist ensures that all team members ^{are} known to each other	Anesthetist	
2	Confirm the patient's name, procedure and where the incision will be made	"Before we make the skin incision", and then continue, "Does everyone agree that this is patient X, undergoing a right inguinal hernia repair? " <i>(example). Anesthetist, scrub nurse and surgeon must verbally confirm this. Involve patient if not sedated</i>	Circulating Nurse	
3	Has antibiotic prophylaxis been given in the last 60 minutes?	Anesthetist needs to verify this verbally to circulating nurse	Circulating Nurse	
4	Reconfirms the anticipated blood loss and time taken for surgery?	Anesthetist verifies this from surgeon	Anesthetist	
5	Is essential imaging displayed?	Circulating nurse verifies this with Surgeon and Anesthetist	Circulating Nurse	
6	Completion of instrument, sponge and needle counts(pre surgical)	circulating nurse writes down count told by scrub nurse on board	Circulating Nurse	
7	All solution used in O'T are well labeled	Scrub nurse should label the sterilized bowls containing solution used in O'I	Scrub Nurse	
8	suction and cautery are made ready	circulating nurse verbally confirms it from scrub nurse and GDA	Circulating Nurse	

S.NO	Before patient leaves operating room(SIGN OUT)	Action	Responsibility	UHID
1	The name of the procedure	The circulating nurse verifies the procedure done with the surgeon	Circulating Nurse	
2	Specimen labeling (read specimen labels including patient name) ALSO nurse has verified respective test.	Circulating nurse verbally verifies the sample and test being requested	Circulating Nurse	
3	Whether there are any equipment problems to be addressed	Circulating nurse verifies any problems with surgeon, anesthetist and scrub nurse. If there were problems the same need to be documented	Circulating Nurse	
4	Counting of equipment, instruments/needles and sponge(post surgical)	Circulating nurse verifies correct count from Scrub Nurse before closure		
5	Post op team debriefing to discuss problems during the case and concerns for recovery and management of patients	The surgeon, anesthetist and nurse should review the post-operative recovery and management plan, focusing in particular on intraoperative or anesthetic issues that might affect patient	Surgeon/ Anesthetist and nurse	
6	Surgical Safety Check list documentation completed on time	The check list is completed and signed off by all concerned before leaving the O'T	All concerned	

IPSG-I- AUDIT POINTS - OBSERVATION		UHID	UHID	UHID	UHID	UHID	UHID	UHID	UHID	UHID	UHID	
1	Patient has WHITE 10 Band with correct and legible details											
2	Vulnerable patient has ORANGE ID Band with correct and legible details											
3	Care giver checks Patient's <i>ID Band</i> for his/her Name and UHID before:											
	i	Administering medications										
	ii	Administering blood and blood products										
	iii	Taking blood and other specimens for clinical testing.										
	iv	Providing treatment and procedures										
	v	Transfer to another unit										
IPSG-I - AUDIT POINTS - OBSERVATION		UHID	UHID	UHID	UHID	UHID	UHID	UHID	UHID	UHID	UHID	
1	Care giver asks conscious patient to state his/her <i>name verbally</i> before:											
	i	Surgery (pre-op area)										
	ii	Blood transfusion -										

INTERVIEW SCHEDULE					
Patient		UHID	UHID	UHID	UHID
Do the nurses and other care givers check your <i>ID</i>					
<i>Band</i> before:					
i	Administering medications				
ii	Administering blood and blood products				
iii	Taking blood and other specimens for clinical testing.				
iv	Providing treatment and procedures				
v	Transfer to another unit				
Nurse/Care giver					
State two patient identifiers?					
Give 5 instances of care giving when you check					
Patients Name and 10 band?					
i	Administering medications				
ii	Administering blood and blood products				
iii	Taking blood and other specimens for clinical testing.				
iv	Providing treatment and procedures				
v	Transfer to another unit				
Method of checking Patients identity? {verbal + 10 band + File)					