

**Summer Training at
BLK Super Speciality Hospital, New Delhi
(April 3 to June 2, 2017)**

**To Study the Assessment of Patient Safety in BLK Super Specialty
Hospital, New Delhi**

**By
Anubha Saini**

**Under the guidance of
Brig. (Dr.) S.K. Puri**

**MBA Hospital & Health Management
2016-2018**


**Institute of Health Management Research
The IIHMR University, Jaipur
2017**

CERTIFICATE

This is to certify that **Dr. Anubha Saini** has undergone summer training in **BLK Super Speciality Hospital, New Delhi** from **3rd April to 2nd June 2017**.

The candidate herself completed the project assign to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish her success in all her future endeavors.



Col. (Dr.) Ashok Kaushik
Dean (Academic & Student Affair)
The IIHMR University, Jaipur



Mentor
Brig. S.K. Puri (Retd.)
Advisor
The IIHMR University, Jaipur

Ref: - BLK/HR/2017/JUNE/04

Dated: 02.06.2017

TO WHOMSOEVER IT MAY CONCERN

Sub: Internship Completion Letter

This is to certify that **Ms. Anubha Saini** has undertaken Internship Training at BLK Super Speciality Hospital from 3rd April 2017 to 2nd June 2017 in the department of Quality.

During her tenure, her conduct was found to be excellent.

We wish her all the best for her future.

Yours Sincerely,
For BLK Hospital


Bhuvanesh Kohli
Senior Manager-Training & Development

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Managed by Radiant Life Care Private Limited



Acknowledgement

I would like to express my special thanks to **Mr. Ashok Kaushik** (Dean, IIHMR University) and Mr. Hem Bhargava (Placement & Training Head, IIHMR University) for giving me the golden opportunity to pursue my summer internship at **BLK Super Speciality Hospital, New Delhi**.

Secondly i would also like to thank my parents and friends who helped me a lot in finalizing my projects within the limited time frame.

I am using this opportunity to express my gratitude to everyone who supported me throughout the course of my summer internship at at BLK Super Speciality Hospital, New Delhi.

I am highly thankful to **Mr. Sanjay Mehta, Chief Executive Officer, BLK Super Specialty Hospital**, for granting me the Opportunity for training. **Dr Sanjay Durani, Deputy Medical Superintendent**, for being helpful, supportive and receptive. His dynamic thinking, his broad and profound knowledge, his critical thinking has given me constant encouragement to achieve the task allotted and perform better.

Special thanks to **Mr. Virinder Kumar Mehta, Quality Head, BLK Super Specialty hospital** for his aspiring guidance, invaluable constructive suggestions and friendly advices during my tenure at BLK.

I am sincerely grateful to **Dr. Indu Bala, Quality Manager**, for being my mentor throughout the training, and for giving me incredible opportunities to gain knowledge about management of a healthcare organization. I am also indebted to her for sharing his valuable experiences and giving her truthful and illuminating views on a number of issues related to management.

I express my warm thanks to **Mr. Bhuvanesh Kholi (Training & Development)** for his constant support and guidance throughout my conduct at BLK.

Also, my successful completion of the projects would not have been possible without the helping deeds the entire Quality department and staff of BLK Hospital as they are always being so cooperative. Without their co-operation and warm attitude this project would have been a distant dream.

I would also like to thank my mentor **Brig. Dr. SK Puri (Professor IIHMR University)** for his constant supervision and support in completing the projects.

ABBREVIATIONS

JCI	Joint commission international
NABH	National accreditation board of hospitals
IPSG	International Patient Safety Goals
SOP	Standard Operating Procedure
CSSD	Central Sterile Supply Department
ICU	Intensive Care Unit
OT	Operating Theatre
HOD	Head Of Department
ID	Identification
GRE	Guest Relation Executives
NICU	Neonatal intensive care unit
PICU	Paediatric intensive care unit
BLS	Basic life support

BLK SUPER SPECIALITY HOSPITAL



HOSPITAL PROFILE

ABOUT THE HOSPITAL

Dr. B L Kapur, an eminent Obstetrician and Gynaecologist, set up a Charitable Hospital in 1930 at Lahore. In 1947, he moved to post-partition India and set up a Maternity Hospital at Ludhiana. In 1956 on the invitation of the then Prime Minister, Dr. B L Kapur initiated the project for setting up a 200-bed hospital in Delhi. The hospital was inaugurated by the Prime Minister, Pt. Jawaharlal Nehru on 2nd January 1959.

In the late 1990s, the Trustees of the hospital felt the need to upgrade it to a tertiary care hospital and tied up with Radiant Life Care Private Limited to re-develop and manage the facility . Today, a modern state-of-the-art tertiary care hospital has come up in place of the old hospital. It is one of the biggest standalone private Hospitals in the National Capital Region today.

Vision:

To create a patient-centric, tertiary healthcare organization focused on non-intrusive quality care utilizing leading edge technology with a human touch.

Mission:

- Achieve Professional Excellence in delivering Quality care.
- Ensure care with Integrity and Ethics.
- Push frontiers of care through Research and Education.
- Adhere to National and Global Standards in Healthcare.
- Provide Quality healthcare to all Sections of Society

A passion for healing:

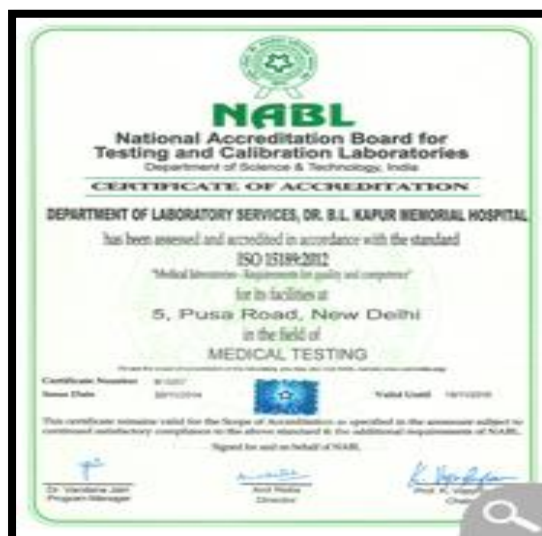
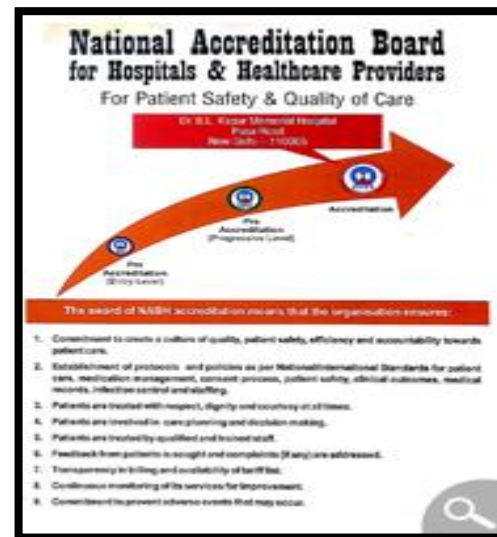
At BLK, they are passionate about delivering the highest standard of healthcare. Be it the finest Doctors, cutting-edge medicine, state-of-the-art infrastructure or nursing with a smile.

ACCREDITATION AND QUATILY:

Drive towards continuous improvement

With the collective belief that the simplest is often the most effective, the BLK leadership team follows the quality cycle of planning, designing, checking and applying the learning to continuously improve the services. Quality indicators have been defined for every significant process, and are monitored to ensure continuous quality improvement

More importantly, extensive interactions take place between the management and the staff so that the organization's passion of constant learning and improving cascades down to the last rank.



Hospital Management

The BLK Super Speciality Hospital is now being managed by Radiant Life Care Private Limited. Prior to taking over management of the Hospital, Radiant Life Care was responsible for financing and re-developing the erstwhile general hospital known primarily for mother & child care services and establishing in its place a ultra-modern and one of India's most comprehensive tertiary care Hospitals.

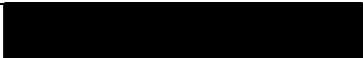
In order to manage the day to day operations of BLK Super Speciality Hospital, Radiant Life Care has deputed the entire leadership team including the CEO, Director - Finance & Strategy, Director - Operations & Planning, Head of Human Resources, Head of Marketing and Administration. In addition, Radiant Life Care has been effective in putting in place processes and global best practices encompassing both clinical and managerial facets of Hospital operations. Attainment of NABH & NABL accreditation in the very first year of operations is testimony to the hospital's commitment for patient safety and quality. Radiant Life Care continues to facilitate the pursuit of excellence by assisting in procuring of not only the best clinical and non-clinical talent but also state of the art equipment and technology enabling delivery of the highest standards of services to the patients.

Journey So Far

The hospital has gone from strength to strength over the last 2 years. Today, BLK Super Speciality Hospital offers one of the most comprehensive bouquets of services for tertiary & quaternary care, at par with country's most renowned institutes like AIIMS and Tata Memorial in Mumbai . We have India's largest Bone Marrow Transplant centre which is amongst the biggest in Asia as well. BLK Cancer Centre is amongst the regions' most comprehensive cancer centres of its kind, with over 100 beds dedicated for oncology services. Our Bariatric program is the largest in the Region. BLK was the youngest Hospital to have achieved NABH and NABL accreditations.

Besides the domestic patients, Hospital's international patient base has grown significantly over the last 12 months, owing to it being one of the most advanced healthcare facilities in the region.

CODES

CODES	SCOPE	EXTENSION NO.	
Blue	Individual disaster	3023	
Grey	Internal disaster	3055	
Pink	Child Abduction	3055	
Green	Trauma Response Team	3023	
Black	Death	3055	
Yellow	External Disaster	3055	
Red	Fire	3023	

FLOOR PLAN OF BLK SUPER SPECIALITY

GROUND FLOOR	1 ST FLOOR	3 RD FLOOR	6 TH FLOOR	BASEMENT
• EMERGENCY • TRANSFUSION MEDICINE • INTERVENTIONAL RADIOLOGY • MAMOGRAPHY • WAITING LOUNGE & RECEPTION • OPD-1 • OPD-2 • DAIGNOSTICS • NUCLEAR MEDICINE • FINANCIAL COUNSELLING • PHARMACY • CAFETERIA	• INTERNATIONAL PATIENT LOUNGE • OPD-3 • OPD-4 • OPD-5 • OPD-6 • OPD-7 • OPD-8	• INPATIENT ROOMS • ECP • SLEEP LAB	• INPATIENT ROOMS • BONE MARROW TRANSPLANT UNIT	• RADIATION ONCOLOGY • CSSD • MEDICAL RECORD DEPARTMENT • LT ROOM • PARKING
	2 ND FLOOR	4 TH FLOOR	7 TH FLOOR	
	• ICU • CTVS	• INPATIENT ROOMS • LABOUR ROOM • NICU • PAEDIATRIC ICU	• AESTHETIC CENTRE • BONE MARROW TRANSPLANT UNIT • IVF CENTRE	
		5 TH FLOOR		
		• INPATIENT ROOMS • CHEMOTHERAPY & DAY CARE		

CENTRES OF EXCELLENCE:

1. BLK Heart Centre
2. BLK Centre for Bone Marrow Transplant
3. BLK Cancer Centre
4. BLK Centre for Neurosciences
5. BLK Centre for Digestive and Liver Diseases
6. BLK Centre for Renal Sciences & Kidney Transplant
7. BLK Centre for Orthopaedics, Joint Reconstruction and Spine Surgery
8. BLK Centre for Plastic, Reconstructive, Aesthetics, Burns & Craniofacial Injuries
9. BLK Children's Heart Institute
10. BLK Centre for Critical Care

SPECIALTY AT BLK HOSPITAL:

- Anaesthesiology
- Ayurveda
- Bariatric and Adv. Laparoscopy Surgery
- Dental & Maxillofacial surgery
- Dermatology
- Emergency & Acute Care Medicine
- Endocrinology and Endocrine Surgery
- ENT & Cochlear Implant
- External Counter Pulsation
- General and Minimal Access Surgery
- GYNAECOLOGY & OBSTETRICS
- HEPATOPANCREATO BILIARY SYSTEM
- INTERNAL MEDICINE
- INTERVENTIONAL RADIOLOGY
- IVF & INFERTILITY TREATMENT
- LIVER TRANSPLANTATION
- NUCLEAR MEDICINE
- OPHTHALMOLOGY
- PAIN MANAGEMENT
- PATHOLOGY
- PAEDIATRIC
- PAEDIATRIC SURGERY
- PHYSIOTHERAPY & REHABILITATION
- PSYCHIATRY
- RESPIRATORY MEDICINE, ALLERGY & SLEEP DISORDERS
- RHEUMATOLOGY
- SURGICAL GASTROENTEROLOGY

OBSERVATIONAL LEARNING

CLINICAL SERVICES

- **OPD DEPARTMENT**

BLK has got 8 centralized OPD wings

Functions

Offers a complete facility of healthcare to the individual of all ages

Quality Indicators

- Patient's seen within scheduled appointment time
- Turnover time between two patients
- Patient's Satisfaction

- **EMERGENCY DEPARTMENT**

- The EMR department at BLK is located on the Ground floor facing the main road and has a Separate Entrance. It has Waiting Lounge at its Entrance and EMR reception.
- EMR is provided with its own Drugs and Stores

- **OT DEPARTMENT**

OT is committed to provide the highest standards of surgical care to the patients

Scope and Complexity of Services

17 modular operation theatres equipped with most modern facilities.

- **INTENSIVE CARE UNIT**

An intensive care unit is a specialty staffed and equipped separate and self-contained action of the hospital for the management of patients with life threatening or potentially life threatening clinical conditions.

ICU consists of dedicated 125 critical beds equipped with most modern equipment.

- **BLOOD BANK**

Goal-

- To have sufficient blood of all types to support an emergency, IPD, OPD, OT
- To maintain higher standards in all products and activities following Good Laboratory Practices and Good Manufacturing Practices
- To recreate ready accessible records of in-house eligible donors according to their blood group

Days and hours of operation:

24 hours working 365 days a year

- **MEDICAL RECORD DEPARTMENT**

It is to provide efficient storing, maintaining, coding and verification of medical records

Services Provided:

- For storing of all medical records
- Verification of all records
- Issue of duplicate records
- Receipts and reply of mails
- Preparation and coordination in providing records for court cases and consumer cases
- Maintenance of MTP records
- Maintenance of MLC, Birth and Death registers
- Coordination with IT department for Backup of scanned records

- **RADIOLOGY DEPARTMENT**

Functions:

- Provides complete diagnostic and imaging services of high quality and minimum error.
- Has developed standard operating procedures(SOP)
- Has established goals, objectives and standards of performance that are consistent with both the hospitals philosophy of patient care and practice of professional service delivery and match international standards.

Services provided:

- Cyber knife VSI
- PET CT Scan
- Neuro Vascular Biplane Cath Lab
- A TrilogyTx Linear Accelerator with cone beam CT for Radiation Oncology
- MRI
- CT Scan
- Cath Lab
- Nuclear medicine
- Blood Bank
- Laboratories
- Ultrasound Mammography
- X - Ray
- Bone Mineral Density Dental Facilities
- Endoscopy Suites
- Ambulance Services
- Bronchoscopy

UTILITY SERVICES:

• CENTRAL STERILE SUPPLY DEPARTMENT (CSSD)

It provides steady and efficient supply of sterile linen and instruments of all the functional departments in the hospital.

Operations of the Department

- Sterile supplies are dispatched to the wards as required to them and used instruments are collected for autoclaving and cleaning.
- Timings are 8:00am to 2:00pm
- Sterile Supply to Operation theatre and Emergency department is a day prior before 8:00 pm and as when required.

• FOOD AND BEVERAGES

Food and Beverages department is responsible for supplying food to In-patient and to their attendant (if ordered by them) arrange food for various meetings and conference in hospitals as well as for staff. They also have home delivery service for discharge patient.

The department proficiently delivers to 2700 meals daily. To provide efficient, timely and hygienic environment, the department has a team which includes:

Menu offered

1. Afghani

- Soft diet
- Normal diet
- Soft diet
- Normal diet

2. Continental

3. Indian

Meal Timings

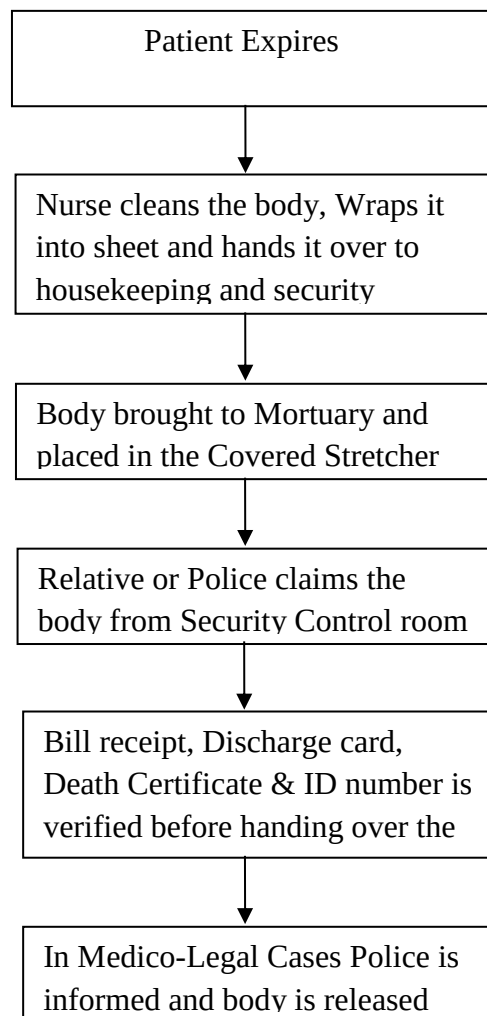
Morning bed tea	6 am
Breakfast	8 to 9 am
Mid-morning meal	11 to 11:30 am
Lunch	1 to 2 pm
Evening tea	5 pm
Dinner	7:30 to 8:30 pm
Bed Milk	9:30 pm

- **MORTUARY**

It is a place where dead bodies are kept before they are claimed by the relative of the patients or added over to the police in Medico-Legal cases. It is located in the basement with a capacity of keeping 6 dead bodies at a given time. The head security guard posted is responsible for releasing the body to the concerned person.

Temperature maintained 2 to 4 C.

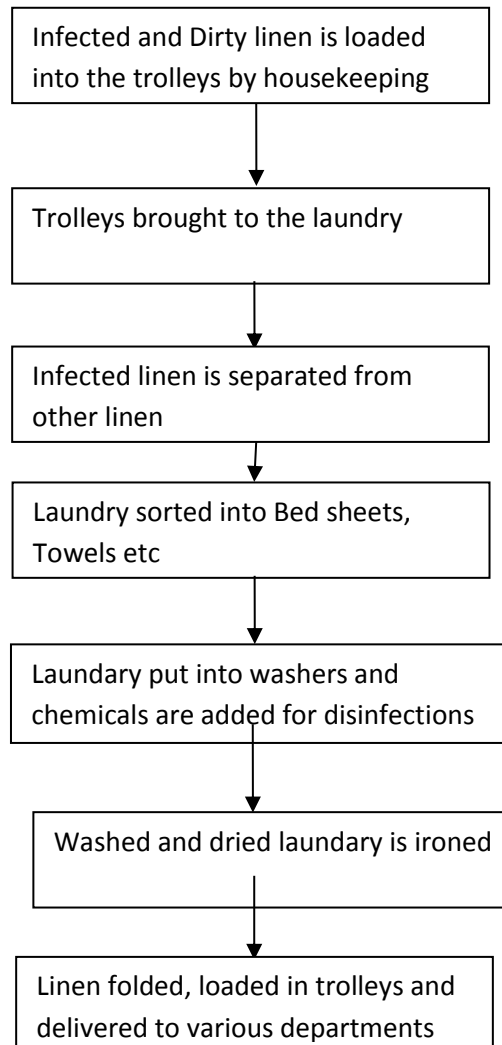
Work Flow



- **LAUNDRY**

It provides fresh linen to all hospital. It has a major role maintaining hygienic environment and in infection control. The staff of laundry is a mix of Contract labor and BLK workers

Work Flow



ADMINISTRATIVE SERVICES

- Medical superintendent office
- Finance office
- Material department
- Marketing department
- IT department
- HR department
- Quality department

Project

**TO STUDY THE ASSESSMENT OF
PATIENT SAFETY IN BLK SUPER SPECIALITY
HOSPITAL, NEW DELHI.**

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1. INTRODUCTION

Patient safety is an important and serious global issue in hospital in developed countries, 12 per cent of patients are harmed in hospital care. In developing countries, the risk of health care-associated infection is as much as 21 times higher than in developed countries. Now, countries have found the importance of improving patient safety.

According to WHO it is stated that, 10 patient faces safety issue consisting of improving patient safety, harm is generally caused by the range of errors, risk of health care associated infection, health care associated infection could be reduced by following hand hygiene, safety of medical equipment, surgical safety and infection caused by reused needles, the economic benefit of improving patient safety, perceived higher risk industries had better safety record compared to health care and patient experience and their health.

Various factors like medication error, transfusion error, testing error, wrong person procedure and discharge of infants to the wrong families are making patient safety at risk. The major error prone situation in hospital is taking verbal orders and those given on telephone, when permitted under local law and regulations. Another error prone communication is reporting of critical lab reports. High alert medication is not kept separated specially mixing of look-alike and sound- alike medicine. Marking of wrong site at the time of surgery, wrong patient or wrong procedure is an alarming occurrence in health organisations.

The JCI (Joint Commission International) certifies 21,000 health organizations in U.S. The accreditation and certification of JCI is recognised worldwide as a symbol of quality which reflects the commitment and performance standards of the organization.

International Patient Safety Goal promotes improvement in patient safety. IPSG specifically highlight the problematic area and give evidence and expert advice based on consensus solutions to these problems. Delivery of safe, high quality health care; IPSG generally focus on wide solutions whenever possible.

This study titled “A study of assessment of Patient Safety in a BLK Super Speciality Hospital” was designed to study the extent of patient safety as per JCI guidelines modified for use in BLK Hospital and thereby provide remedial suggestions for improving patient safety culture.

2. LITERATURE REVIEW

JCI has given standardized International Patient Safety Goals (IPSG) to ensure patient safety. The purpose was to improve patient safety. They focus on problems in health care safety and how it should be solved.

Goal 1: IDENTIFY PATIENT CORRECTLY

The hospital develops and implements a process to improve accuracy of patient identifications.

Measurable Elements of IPSG.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 providing treatments and procedures.
3. Patients are identified before any diagnostic procedures.

Goal 2: Improve Effective Communication

Standard IPSG.2

The hospital develops and implements a process to improve the effectiveness of verbal and/or telephonic communication among caregivers.

Standard IPSG.2.1

The hospital develops and implements a process of reporting critical results of diagnostic tests.

Standard IPSG.2.2

The hospital develops and implements a process for handover communication.

Measurable Elements of IPSG.2

1. The complete verbal order is documented and read back by the receiver and confirmed by the individual giving the order.
2. The complete telephone order is documented and read back by the receiver and confirmed by the individual giving the order.
3. The complete test result is documented and read back by the receiver and confirmed by the individual giving the result.

Measurable Elements of IPSG.2.1

1. The hospital has defined critical values for each type of diagnostic test.
2. The hospital has identified by whom and to whom critical results of diagnostic tests are reported.

3. The hospital has identified what information is documented in the patient record.

Measurable Elements of IPSG.2.2

1. Standardized critical content is communicated between health care providers during handovers of patient care.
2. Standardized forms, tools, and methods support a consistent and complete handover process.
3. Data from handover communications are tracked and used to improve approaches to Safe handover communication.

Goal 3: Improve the Safety of High-Alert Medications

Standard IPSG.3

The hospital develops and implements a process to improve the safety of high-alert medications.

Standard IPSG.3.1

The hospital develops and implements a process to manage the safe use of concentrated electrolytes.

Measurable Elements of IPSG.3

1. The hospital has a list of all high-alert medications, including look-alike/ sound-alike medications, that is developed from hospital-specific data.
2. The hospital implements strategies to improve the safety of high-alert medications, which may include specific storage, prescribing, preparation, administration, or monitoring processes.
3. The location, labelling and storage of high-alert medications, including look-alike/ sound-alike medications, is uniform throughout the hospital.

Measurable Elements of IPSG.3.1

1. The hospital has a process that prevents inadvertent administration of concentrated electrolytes.
2. Concentrated electrolytes are present only in patient care units identified as clinically necessary.
3. Concentrated electrolytes that are stored in patient care units are clearly labeled and stored in a manner that promotes safe use.

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

Standard IPSG.4

The hospital develops and implements a process for ensuring correct-site, correct-procedure, and correct-patient surgery.

Standard IPSG.4.1

The hospital develops and implements a process for the time-out that is performed in the operating theatre immediately prior to the start of surgery to ensure correct-site, correct-procedure, and correct-patient surgery.

Measurable Elements of IPSG.4

1. The hospital uses an instantly recognizable mark for surgical-and invasive procedure- site identification that is consistent throughout the hospital.
2. Surgical-and invasive procedure-site marking is done by the person performing the procedure and involves the patient in the marking process.
3. The hospital uses a checklist or other process to document, before the procedure, that the informed consent is appropriate to the procedure; that the correct site, correct procedure, and correct patient are identified; and that all documents and medical technology needed are on hand, correct, and functional.

Measurable Elements of IPSG.4.1

1. The full surgical team conducts and documents a time-out procedure in the area in which the surgery/invasive procedure will be performed, just before starting a surgical/invasive procedure.
2. The components of the time-out include correct patient identification, correct side and site, agreement of the procedure to be done, and confirmation that the verification process has been completed.
3. When surgery is performed, including medical and dental procedures done in settings other than the operating theatre, the hospital uses uniform processes to ensure the correct site, correct procedure, and correct patient.

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

Standard IPSG.5

The hospital adopts and implements evidence-based hand-hygiene guidelines to reduce the risk of health-care associated infections.

Measurable Elements of IPSG.6

1. The hospital implements a process for assessing all inpatients and those outpatients whose condition, diagnosis, situation or location identifies them as at high risk for fall.
2. The hospital implements a process for the initial and ongoing assessment, reassessment, and intervention of inpatients and outpatients identified as at risk for falls based on documented criteria.
3. Measures are implemented to reduce fall risk for those identified patients, situations, and locations assessed to be at risk.

3. RATIONALE

To assess and study the extent of Patient Safety according to the International Patient Safety Goals (*IPSG*) and provide suggestions for further improvement in the patient safety culture in the hospital by using Patient Safety Audit Questionnaire.

4. OBJECTIVE:

- To study the extent of patient safety at BLK Super Speciality Hospital.
- To know the patient safety standards in the hospital in accordance to the International Patient Safety Goals (Joint Commission International, JCI)
- Suggest the remedial actions for patient safety improvement if any.

5. METHODOLOGY

Study design: Observational, cross-sectional, randomized sampling design.

Period of Study: April 2, 2017 to MAY31, 2017.

Study Population: Patients and Staff of BLK Super Speciality Hospital.

Total Observations: 30 randomized opportunities (Observations) for each Question (parameter), in total, 1050 observations across the hospital.

Inclusion Criteria:

- Patient admitted in hospital for a minimum of 24 hours.
- Staff of BLK Super Specialty hospital.

Exclusion Criteria:

- OPD Patient
- Day care Patient
- Emergency Patient

Methodology

- The study had an observational, cross-sectional design and was conducted over a period of two months in a tertiary care hospital in New Delhi.
- The study instrument used for the study to assess the extent of Patient Safety was Self-administered Patient Safety Questionnaire which was developed using International Patient Safety Goals as per Joint Commission International (JCI), 5th edition.
- The study instrument, Patient Safety Scale (PSS), was suitably modified to a 35-item scale, retaining all the essential elements of IPSPG. The modified scale was thoroughly scrutinized by two domain experts for its content validity. The modified PSS is a single page Observational Scale and answered using two-point Rating (compliance and non-compliance). The instrument measures Patient Safety along six dimensions (goals), namely Patient Identification (7 items), Effective communication (5 items), high-alert medication safety (6 items), surgical safety (3 items), healthcare associated infection risk control (6 items), and fall risk assessment (8 items).
- For each item, scoring was done on a two-point rating scale. 0 indicated Non-compliance and 1 indicated Compliance.
- All collected data was systematically entered into Microsoft Excel and suitably formulated for statistical analysis using percentage and pie-charting for data interpretation.

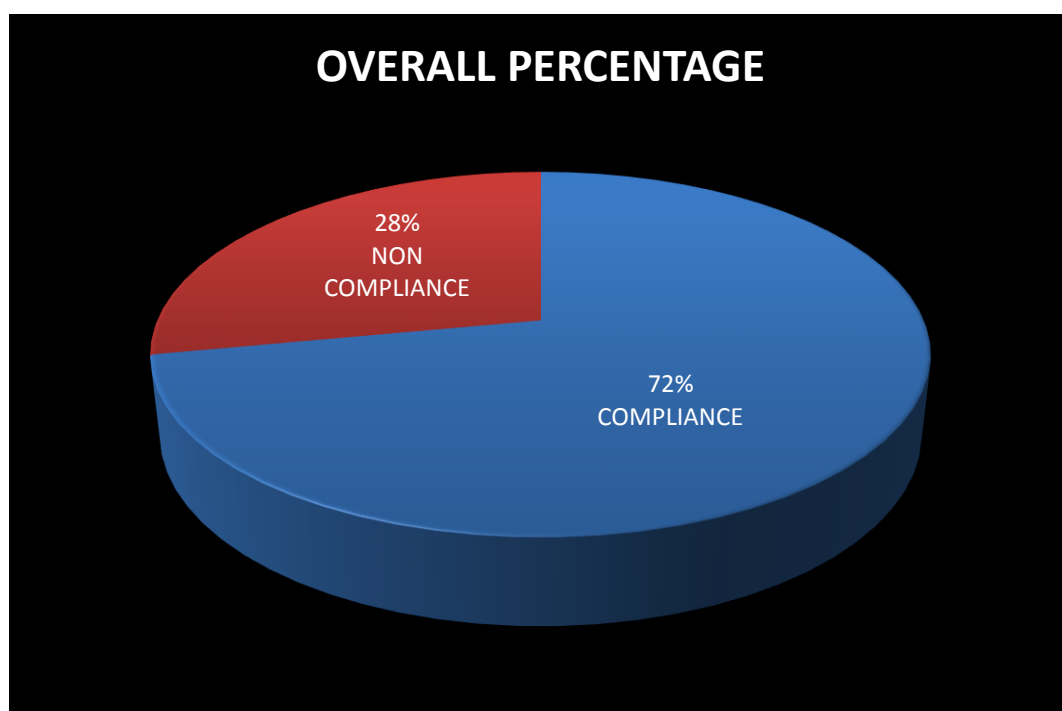
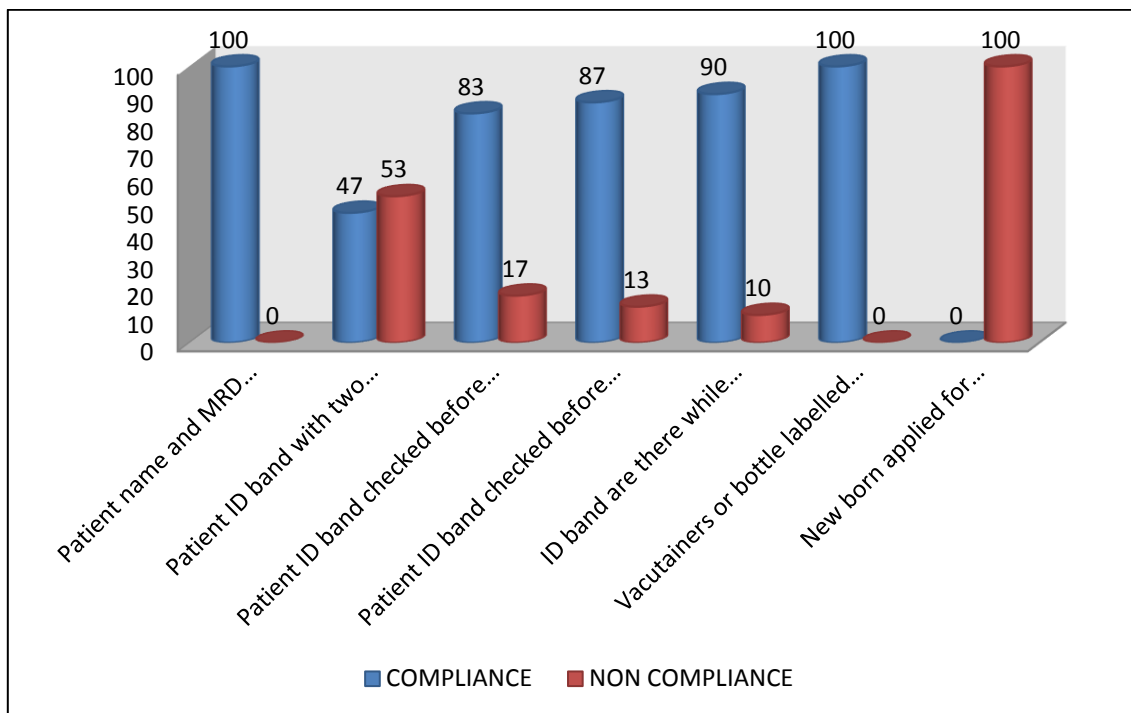
6. STATISTICAL ANALYSIS

FINDINGS: Salient findings are summarized below in relevant tables and graphs.

(6.1) TABLE 1: PATIENT IDENTIFICATION

ACTIVITY/OBSERVATION	COMPLIANCE	NON-COMPLIANCE	TOTAL
Patient name and MRD number (Patient File)	30	0	30
Patient ID band with two identifications (name, MRD) placed on the Patient.	14	16	30
Patient ID band checked before blood sample collection.	25	5	30
Patient ID band checked before administering the drugs.	26	4	30
ID band are there while transferring the patient.	27	3	30
Vacutainers or bottle labelled before withdrawing the blood.	30	0	30
New born applied for identification (Nursery and NICU)	0	30	30
TOTAL	152	58	210
PERCENTAGE	72	28	100

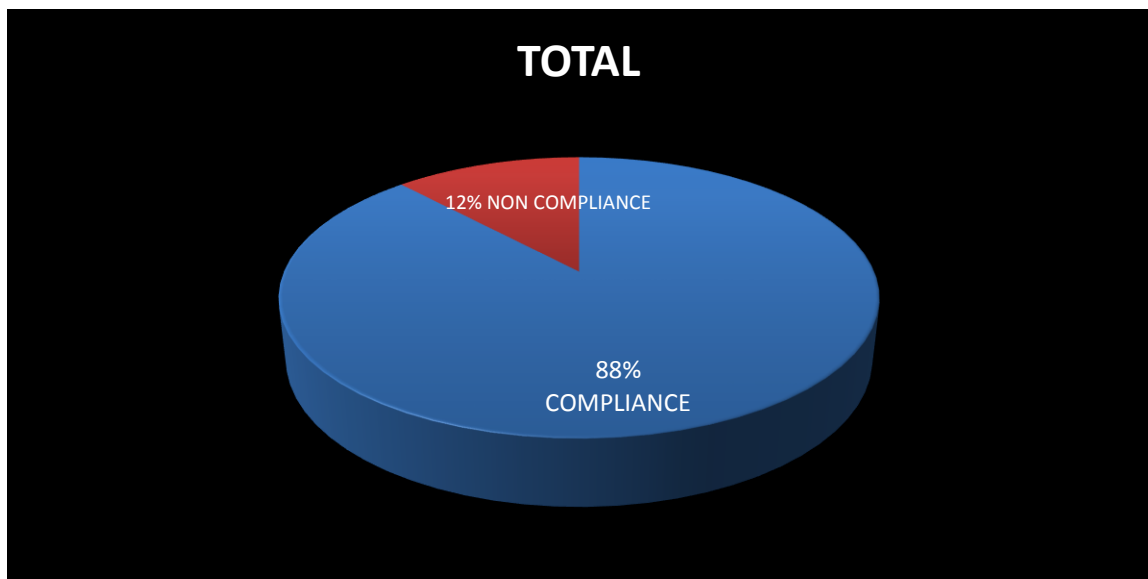
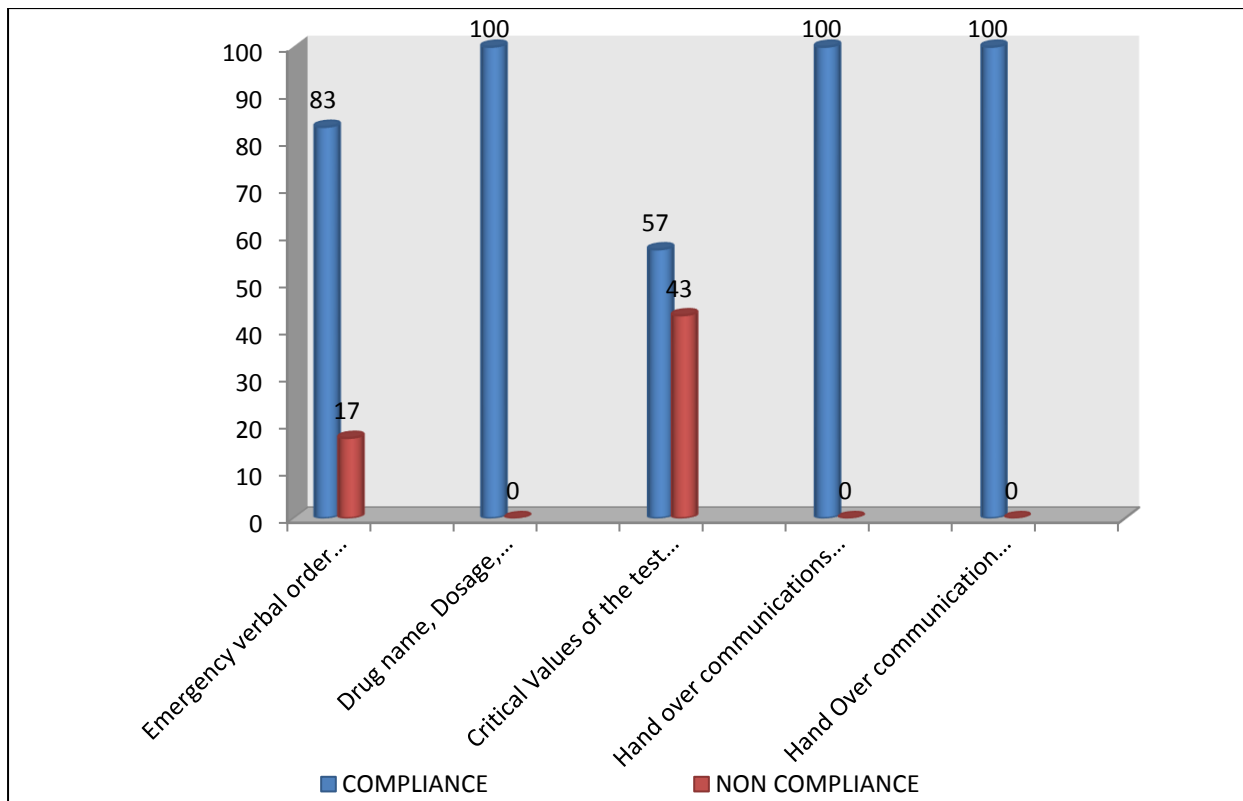
ACTIVITY/OBSERVATION	COMPLIANCE Percentage (%)	NON-COMPLIANCE Percentage (%)	TOTAL Percentage (%)
Patient name and MRD number (Patient File)	100	0	100
Patient ID band with two identifications (name, MRD) placed on the Patient.	47	53	100
Patient ID band checked before blood sample collection.	83	17	100
Patient ID band checked before administering the drugs.	87	13	100
ID band are there while transferring the patient.	90	10	100
Vacutainers or bottle labelled before withdrawing the blood.	100	0	100
New born applied for identification (Nursery and NICU)	0	100	100
OVERALL PERCENTAGE	72	28	100



(6.2) TABLE 2: EFFECTIVE COMMUNICATION

ACTIVITY / OBSERVATION	COMPLIANCE	NON-COMPLIANCE	TOTAL
Emergency verbal order maintained & documented with name, date and time (24 hrs signature)	25	5	30
Drug name, Dosage, Strength and concentration with frequency	30	0	30
Critical Values of the test reported to the doctor documented in critical callout register (laboratory/radiology)	17	13	30
Hand over communications present in patient files	30	0	30
Hand Over communication duly filled and signed with special instruction.	30	0	30
TOTAL	132	18	150
PERCENTAGE	88%	12%	100%

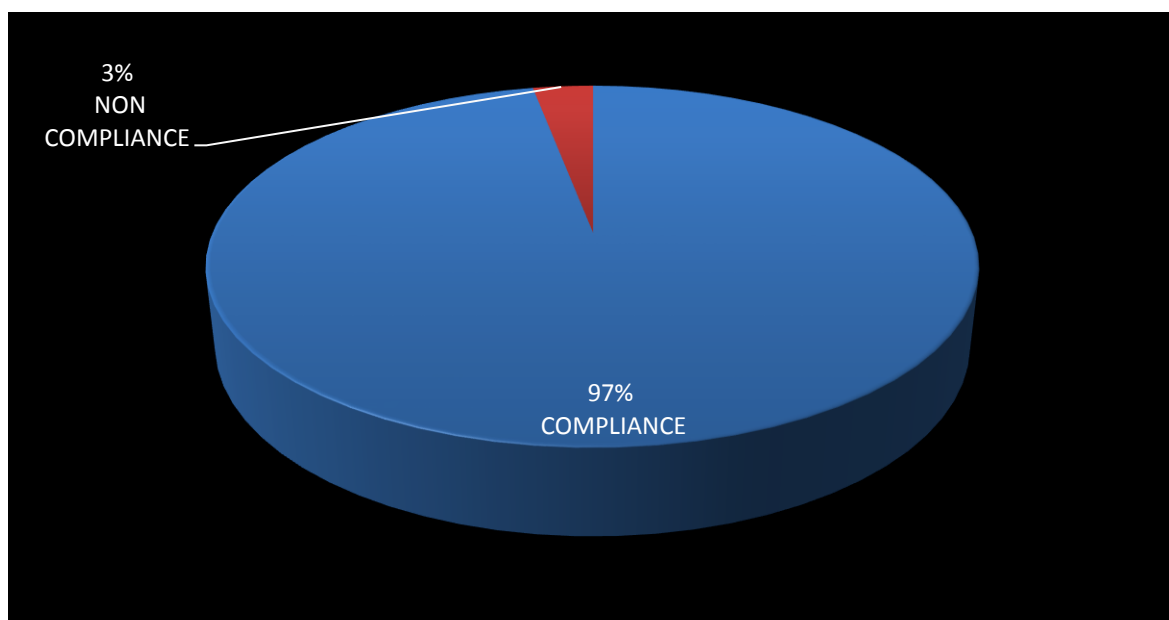
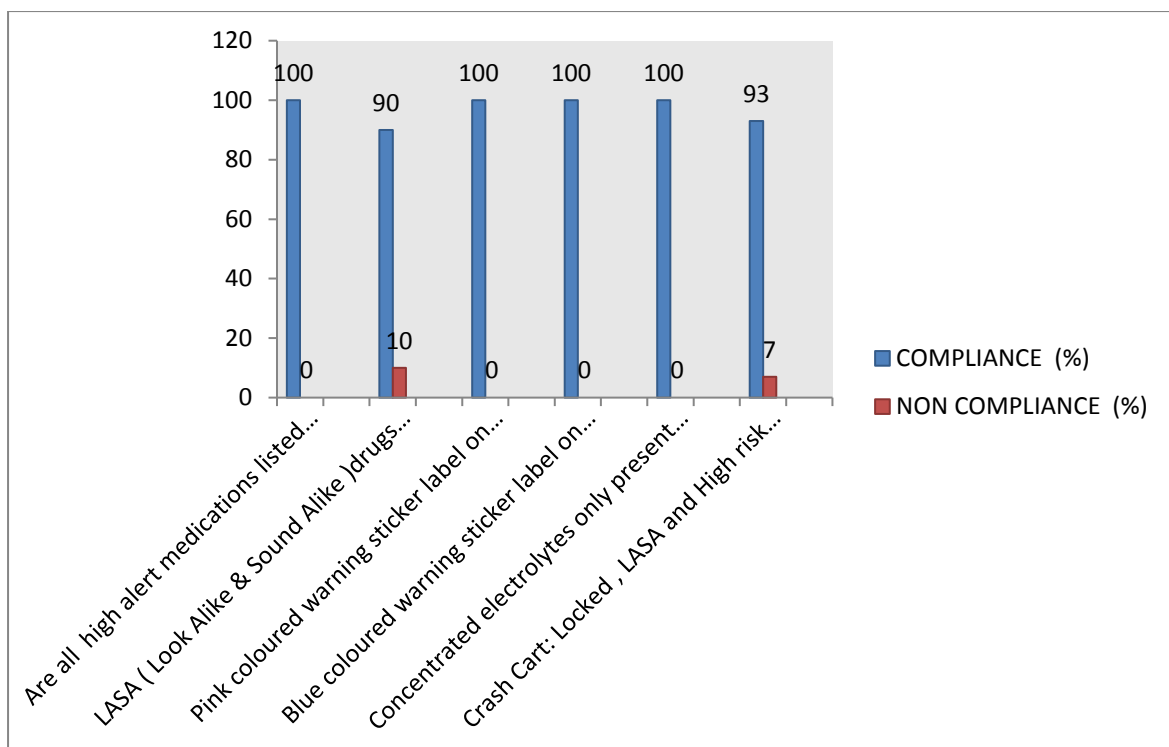
ACTIVITY / OBSERVATION	COMPLIANCE Percentage (%)	NON-COMPLIANCE Percentage (%)	TOTAL Percentage (%)
Emergency verbal order maintained & documented with name, date and time (24 hrs signature)	83	17	30
Drug name, Dosage, Strength and concentration with frequency	100	0	30
Critical Values of the test reported to the doctor documented in critical callout register (laboratory/radiology)	57	43	30
Hand over communications present in patient files	100	0	30
Hand Over communication duly filled and signed with special instruction.	100	0	30
TOTAL	88%	12%	100



(6.3) TABLE 3: HIGH-ALERT MEDICATION SAFETY

ACTIVITY/OBSERVATION	COMPLIANCE	NON-COMPLIANCE	TOTAL
Are all high alert medications listed area wise?	30	0	30
LASA (Look Alike & Sound Alike) drugs kept separately and uniformly	27	3	30
Pink coloured warning sticker label on Look Alike Medications cupboard	30	0	30
Blue coloured warning sticker label on Sound Alike Medications	30	0	30
Concentrated electrolytes only present in ICU, OT and Emergency	30	0	30
Crash Cart: Locked, LASA and High-risk medication storage is separate or not	28	2	30
TOTAL	175	5	180
PERCENTAGE	97%	3%	100

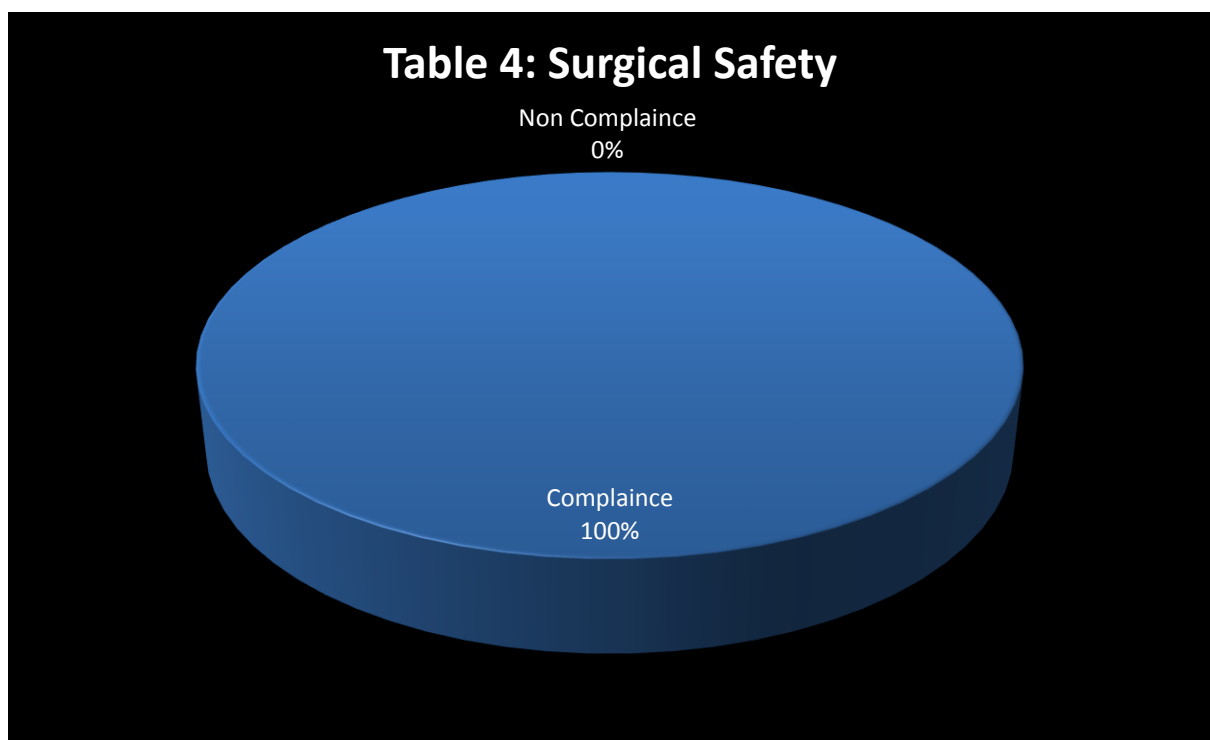
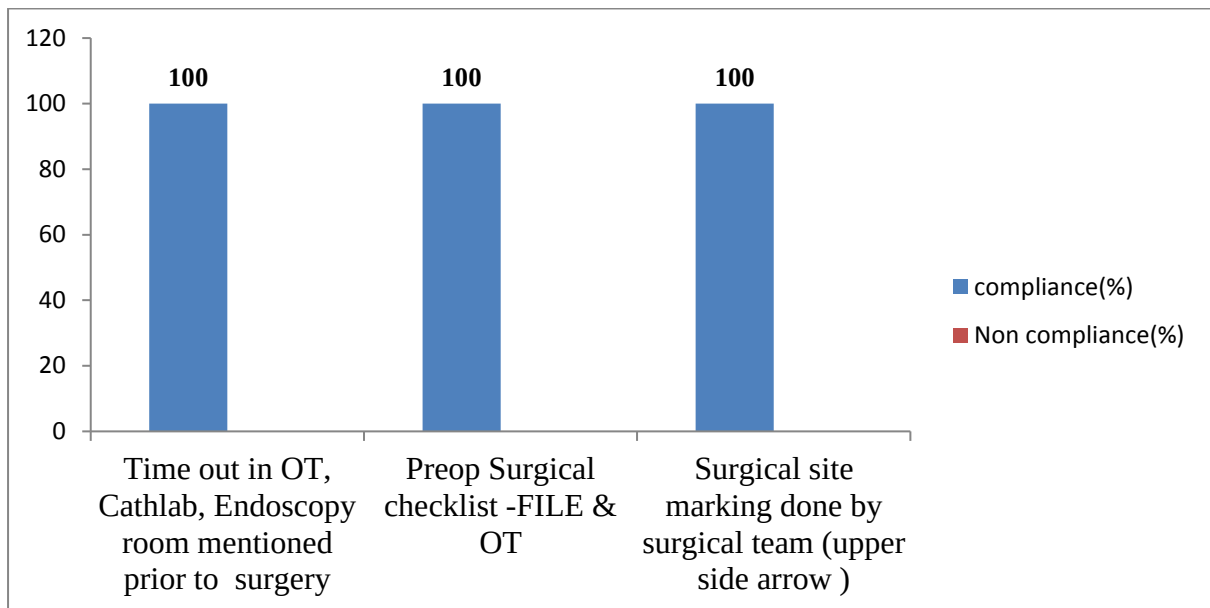
ACTIVITY/OBSERVATION	COMPLIANCE Percentage (%)	NON-COMPLIANCE Percentage (%)	TOTAL Percentage (%)
Are all high alert medications listed area wise	100	0	100
LASA (Look Alike & Sound Alike) drugs kept separately and uniformly	90	10	100
Pink coloured warning sticker label on Look Alike Medications cupboard	100	0	100
Blue coloured warning sticker label on Sound Alike Medications	100	0	100
Concentrated electrolytes only present in ICU, OT and Emergency	100	0	100
Crash Cart: Locked, LASA and High-risk medication storage is separate or not	93	7	100
TOTAL	97%	3%	100%



(6.4) TABLE 4: SURGICAL SAFETY

ACTIVITY/OBSERVATION	COMPLIANCE	NON-COMPLIANCE	TOTAL
Time out in OT/ Cath lab/Endoscopy room mentioned prior to surgery	30	0	30
Pre-operative Surgical checklist -FILE	30	0	30
Surgical site marking done by surgical team (upper side arrow)	30	0	30
TOTAL	90	0	90
PERCENTAGE	100	0	100

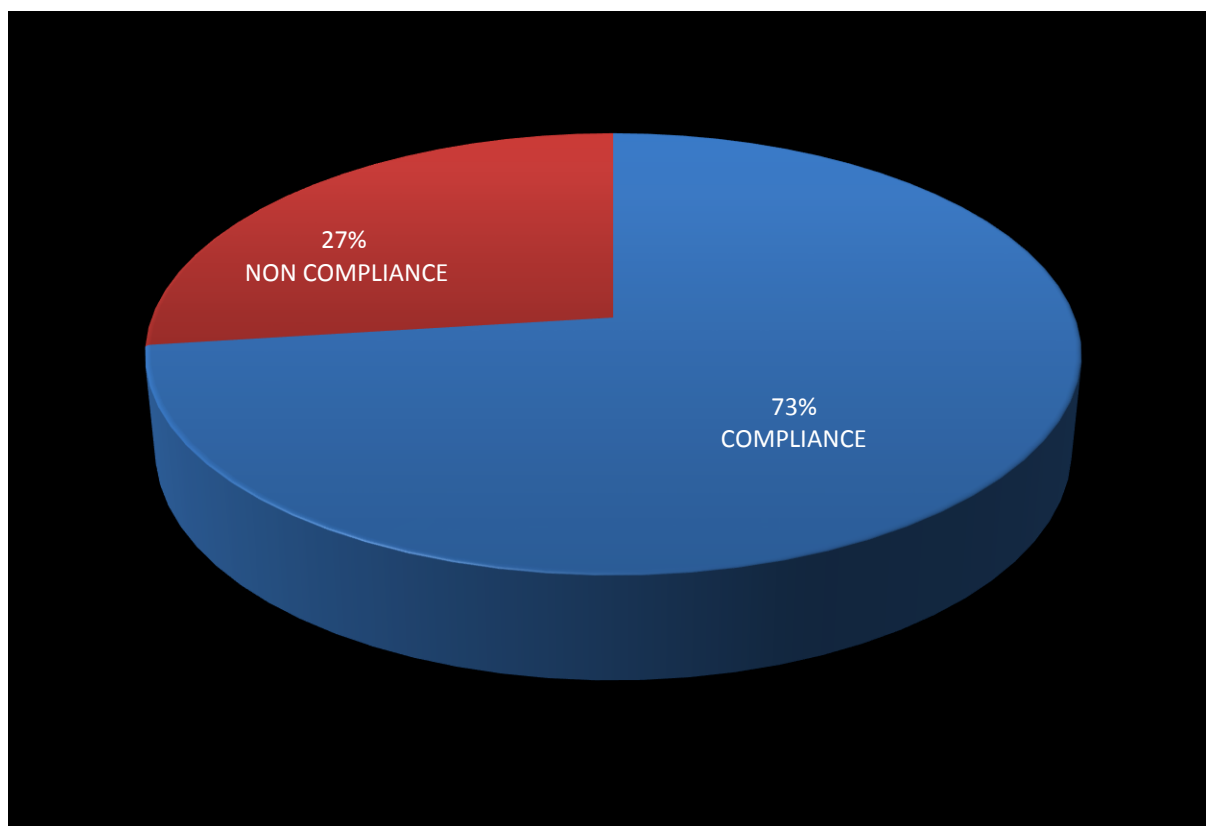
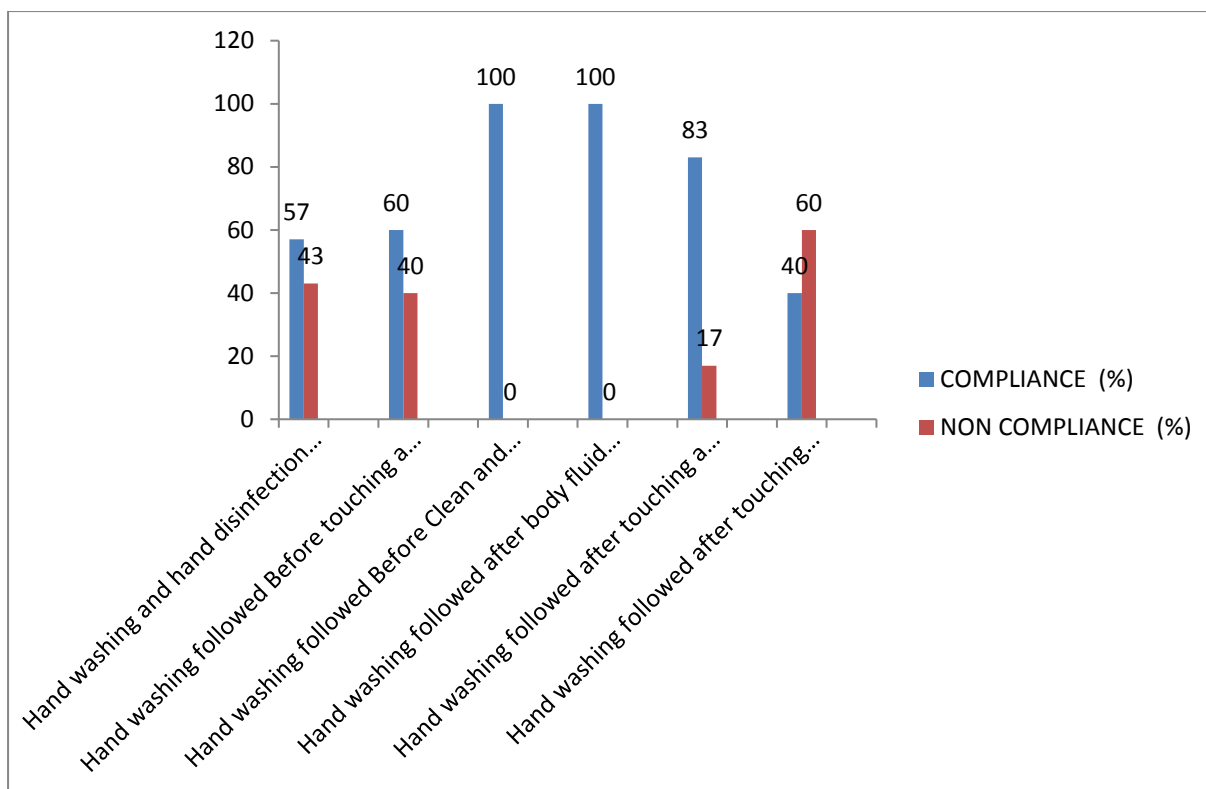
ACTIVITY/OBSERVATION	COMPLIANCE Percentage (%)	NON-COMPLIANCE Percentage (%)	TOTAL Percentage (%)
Time out in OT/ Cath lab/Endoscopy room mentioned prior to surgery	100	0	100
Pre-operative Surgical checklist - FILE	100	0	100
Surgical site marking done by surgical team (upper side arrow)	100	0	100
PERCENTAGE	100	0	100



(6.5) TABLE 5. HEALTH CARE ASSOCIATED INFECTIONS

ACTIVITY/OBSERVATION	COMPLIANCE	NON-COMPLIANCE	TOTAL
Hand washing and hand disinfection followed	17	13	30
Hand washing followed Before touching a patient	18	12	30
Hand washing followed Before Clean and aseptic procedure	30	0	30
Hand washing followed after body fluid exposure	30	0	30
Hand washing followed after touching a patient	25	5	30
Hand washing followed after touching patient surroundings	12	18	30
TOTAL	132	48	180

PERCENTAGE	73%	27%	100%
ACTIVITY/OBSERVATION	COMPLIANCE Percentage (%)	NON-COMPLIANCE Percentage (%)	TOTAL Percentage (%)
Hand washing and hand disinfection followed	57	43	100
Hand washing followed Before touching a patient	60	40	100
Hand washing followed Before Clean and aseptic procedure	100	0	100
Hand washing followed after body fluid exposure	100	0	100
Hand washing followed after touching a patient	83	17	100
Hand washing followed after touching patient surroundings	40	60	100
PRCENTAGE	73%	27%	100%

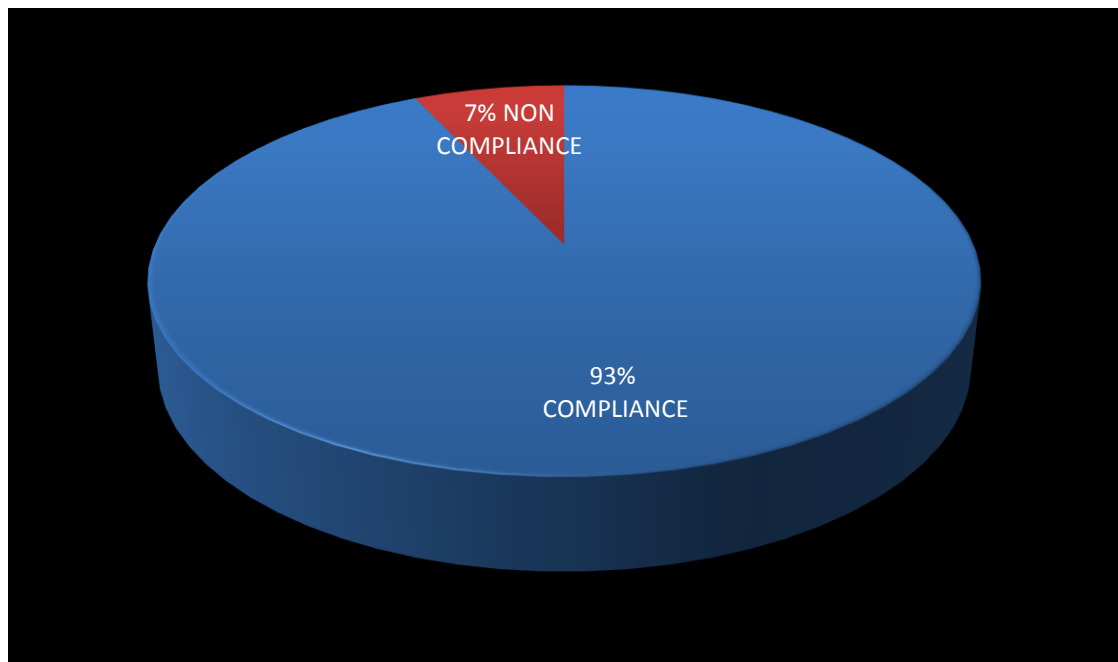
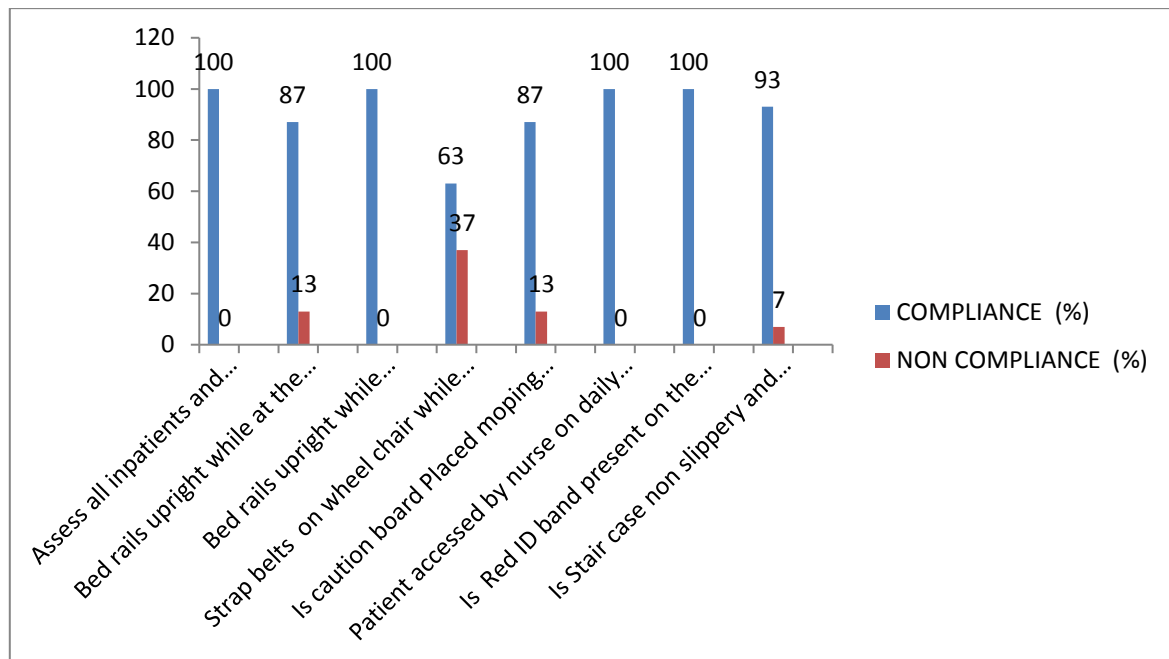


(6.6) TABLE 6: FALL RISK ASSESSMENT

ACTIVITY/OBSERVATION	COMPLIANCE	NON-COMPLIANCE	TOTAL
Assess all inpatients and outpatients for risk of fall	30	0	30
Bed rails upright while at the room-RISK OF FALL	26	4	30
Bed rails upright while transportation	30	0	30
Strap belts on wheel chair while transporting	19	11	30
Is caution board Placed moping the floor	26	4	30
Patient accessed by nurse on daily basis and documented	30	0	30
Is Red ID band present on the patient	30	0	30
Is Stair case non-slippery and obstruction free	28	2	30
TOTAL	221	21	240
PERCENTAGE	92%	9%	100%

ACTIVITY/OBSERVATION	COMPLIANCE Percentage (%)	NON-COMPLIANCE Percentage (%)	TOTAL Percentage
Assess all inpatients and outpatients for risk of fall	100	0	100
Bed rails upright while at the room-RISK OF FALL	87	13	100
Bed rails upright while transportation	100	0	100
Strap belts on wheel chair while transporting	63	37	100
Is caution board Placed moping the floor	87	13	100
Patient accessed by nurse on daily basis and documented	100	0	100

Is Red ID band present on the patient	100	0	100
Is Stair case non-slippery and obstruction free	93	7	100
PERCENTAGE	93%	7%	100%

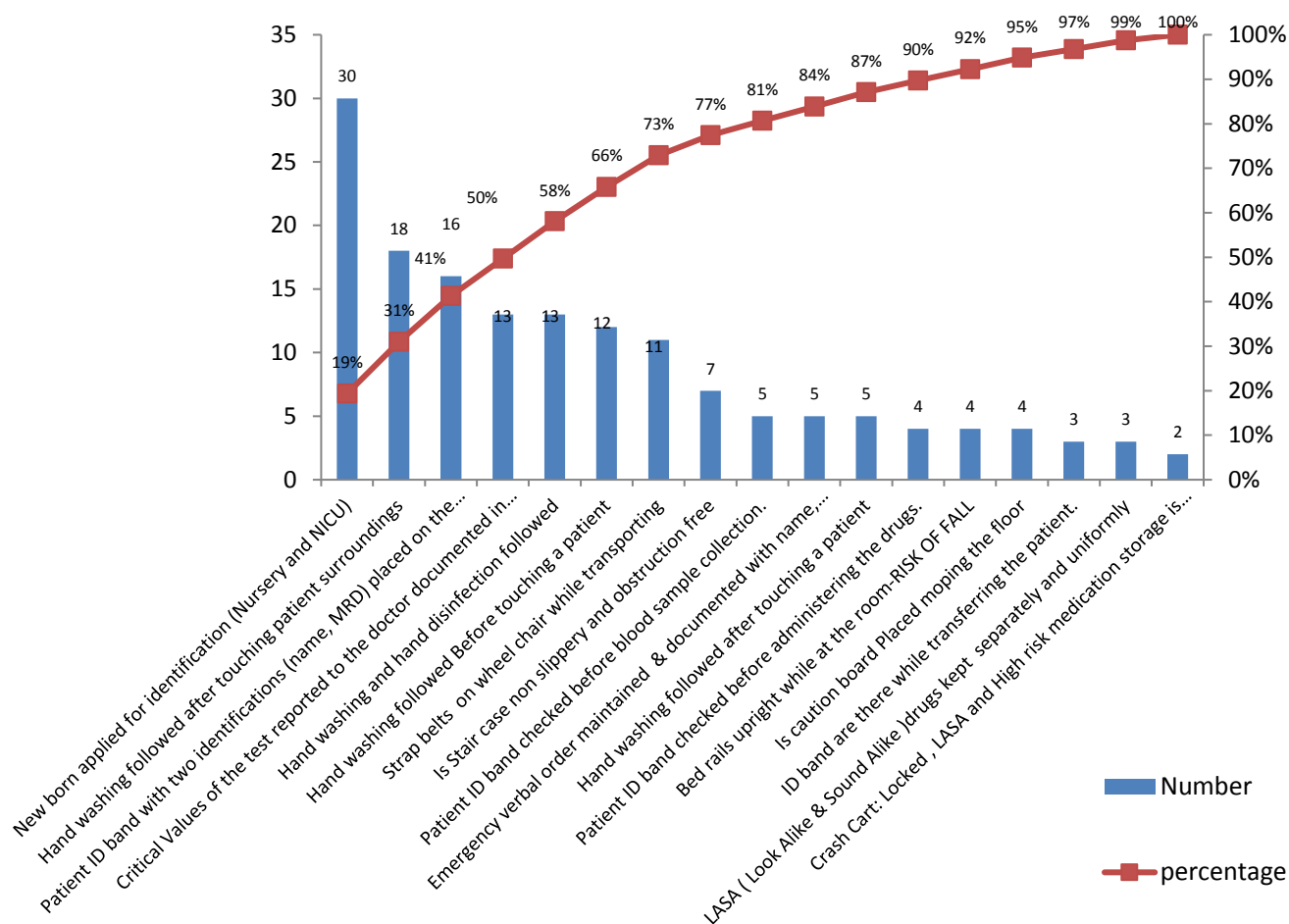


7. Pareto analysis

Pareto analysis is used to analysis the data as, by this method all the root causes of a problem is determine and which ones have the greatest frequency could be analysed. The rationale behind the analysis is that a whole collection of potential causes can be broken down into the one, which seldom happen and to those, which happen on a more frequent basis. The technique is called as **Pareto analysis** because; it is based on the Pareto Principle, which is also known as the 80/20 Rule. This rule states that says 80% of the problems happen because of 20% of the possible causes.

Problem / Non-Compliance	Number	Cumulative Frequency	Percentage
New born applied for identification (Nursery and NICU)	30	30	19%
Hand washing followed after touching patient surroundings	18	48	31%
Patient ID band with two identifications (name, MRD) placed on the Patient.	16	64	41%
Critical Values of the test reported to the doctor documented in critical callout register (laboratory/radiology)	13	77	50%
Hand washing and hand disinfection followed	13	90	58%
Hand washing followed Before touching a patient	12	102	66%
Strap belts on wheel chair while transporting	11	113	73%
Is Stair case non-slippery and obstruction free	7	120	77%
Patient ID band checked before blood sample collection.	5	125	81%
Emergency verbal order maintained & documented with name, date and time (24 hrs signature)	5	130	84%
Hand washing followed after touching a patient	5	135	87%
Patient ID band checked before administering the drugs.	4	139	90%
Bed rails upright while at the room-RISK OF FALL	4	143	92%
Is caution board Placed moping the floor	4	147	95%
ID band are there while transferring the patient.	3	150	97%
LASA (Look Alike & Sound Alike) drugs kept separately and uniformly	3	153	99%
Crash Cart: Locked, LASA and High-risk medication storage is separate or not	2	155	100%

7.1 Pareto analysis chart



According to Pareto Analysis it was found that 80% of the problems arise due to non-compliance of following parameters:

1. New born applied for identification (NICU & Nursery)
2. Hand washing followed after touching patient surrounding
3. Critical Values of the test reported to the doctor documented in critical callout register
4. Patient ID band with two ID placed on the Patient
5. Hand washing and hand disinfection followed
6. Hand washing followed before touching patient.
7. Strap belts on wheel chair while transporting
8. Is Stair case non-slippery and obstruction free
9. Patient ID band checked before blood sample collection-Nursing station

8. Results

This study has explored the various dimensions of patient safety in a tertiary care hospital and provides the detailed insight into the level of patient safety measure in the hospital across six dimensions in accordance to International Patient Safety Goals.

The results obtained were scored into six dimensions, namely, Patient Identification (7 items), Effective communication (5 items), high-alert medication safety (6 items), surgical safety (3 items), healthcare associated infection risk control (6 items), and fall risk assessment (8 items). For each item, in total 30 observations were made.

The score was lowest in the dimension:

- Patient identification, with compliance rate of 72%
- Health-care associated infection at 73% compliance
- Effective communication at 88% compliance.
- Fall risk assessment at 93% compliance
- High-alert medication safety 97%
- 100% compliance in surgical safety.

The major reason for lowest compliance rate is

Dimension 1, Patient Identification was non-compliance in the following two observations, Patient ID band with two identifications (name, MRD) placed on the Patient and New born applied for identification (Nursery and NICU). In second observation the identification was present at bedside instead on the new-born leading to complete noncompliance in all 30 observations.

In Dimension 2, Effective Communication, the main reason for the non-compliance was that the emergency verbal orders were documented but not signed by the treating doctor within 24 hours.

In Dimension 3, High-Alert Medication safety, LASA (Look Alike & Sound Alike)drugs were not kept separately and uniformly and Crash Cart: were not locked , LASA and High risk medication storage is not separate.

In Dimension 4, Surgical Safety 100% compliance is noted.

In Dimension 5, Health-Care Associated Infection, the non-compliance was due to following observations; some nurses were not washing their hand before touching the patient and in some cases after visiting the patient surroundings.

In Dimension 6, Fall Risk assessment, the major reason for noncompliance was due to the fact that the strap belt of the wheel chair was not put around while transferring the patient and

the caution board was not put while wet mopping of the floor. In one place (ground floor to first floor, main staircase) the stairs were found to be slippery resulting in noncompliance.

9. LIMITATIONS AND RECOMMENDATIONS

(9.1) LIMITATIONS

- Sample size was small.
- OPD, day care and emergency patients not taken into consideration.
- Cross-sectional study.
- Limited time duration of the study.
- Since it is an observational, one time study the exact duration for the noncompliance cannot be confirmed.
- Patient Safety Score (PSS) modified as per JCI 5th edition effective April 2014. Latest available are effective January 2016.

(9.2) RECOMMENDATIONS: -

- For New-born softer and flexible ID band can be used.
- Admitted patients should be applied barcoded patient ID band.
- For hand washing sensor based touch free hand washing taps.
- Regular training and update sessions for every employee for their regular up gradation about quality parameters.
- Staff should be sensitized about the fall risk involved due to noncompliance of strap belt on wheelchairs.
- Floor material should be inspected before installation for their anti-slip properties.

10.CONCLUSIONS

It is concluded that patient safety is a very important aspect in maintaining patient care quality and can be effectively assessed using validated questionnaire or observational scales. Depending on the respondent variations in different dimensions of patient safety, focus areas requiring continuous and sustained quality improvement efforts can be identified and improved.

11. APPENDICES

ANNEXURE [CHECK LIST FOR PATIENT SAFETY (IPSG)]

Department: -

Date: -

Ward no: -

Patient Safety Questionnaire

Audit

Observation

Patient Identification: -

Patient name and MRD number (Patient File)

Patient ID band with two ID placed on the Patient

Patient ID band checked before blood sample collection-Nursing station

Patient ID band checked before administering the drugs

ID band are there while transferring the patient

Vacutainer or bottle labelled before withdrawing the blood.

New born applied for identification (NICU & Nursery)

Communication:-

Emergency verbal order maintained & documented with name, date and time
(24 hrs. signature)

Drug name, Dosage, Strength and concentration with frequency

Critical Values of the test reported to the doctor documented in critical callout
register (laboratory/radiology)

Hand over communications present in patient files

Hand Over communication duly filled and signed with special instruction.
(nurses)

Medication :-

Are all high alert medications listed area wise

LASA (Look Alike & Sound Alike) drugs kept separately and uniformly

Pink coloured warning sticker label on Look Alike Medications cupboard

Blue coloured warning sticker label on Sound Alike Medications

Concentrated electrolytes only present in ICU, OT and Emergency

Crash cart: Locked, LASA and High-risk medication storage is separate or not

Surgical Safety:-

Time out in OT, Cath lab, Endoscopy room mentioned prior to surgery

Pre-op Surgical checklist -FILE & OT

Surgical site marking done by surgical team (upper side arrow)

Health care associated Infection: -

Hand washing and hand disinfection followed
Hand washing followed, before touching the patient.
Hand washing followed, before any aseptic procedure
Hand washing followed, after body fluid exposure.
Hand washing followed, after touching the patient.
Hand washing followed, after touching the patient surroundings.

Fall:-

Assess all inpatients and outpatients for risk of fall
Bed rails upright while at the room-RISK OF FALL
Bed rails upright while transportation
Strap belts on wheel chair while transporting
Is caution board Placed moping the floor
Patient accessed by nurse on daily basis and documented
Is Red ID band present on the patient
Is Stair case non-slippery and obstruction free

12. **BIBLIOGRAPHY**

1. Brig Abhijit Chakravarty, Maj Anupam Sahu, Brig Manas Biswas, Surg Capt Kaustuv Chatterjee, Subrata Rath. A study of assessment of patient safety climate in tertiary care hospitals. Medical Journal Armed Forces India 71 (2015) 152-157
2. <https://www.jointcommission.org/>
3. https://en.wikipedia.org/wiki/Patient_safety
4. James Conway, M.S. Getting Boards on Board: Engaging Governing Boards in Quality and Safety
5. Ali Baba-Akbari Sari, Trevor A Sheldon, Alison Cracknell, Alastair Turnbull. Sensitivity of routine system for reporting patient safety incidents in an NHS hospital: retrospective patient case note review. BMJ, doi:10.1136/bmj.39031.507153.AE