INTERNSHIP TRAINING

AT

A

PROJECT REPORT ON

QUALITY ASSESSMENT OF ARTEMIS HOSPITAL, DWARKA, NEW DELHI

BY

COL MADAN MOHAN THAKUR

PG/15/043

UNDER THE GUIDANCE OF

DR AK AGARWAL
DEAN, IIHMR, NEW DELHI

Post Graduate Diploma in Hospital and Health Management

2015-2017

International Institute of Health Management Research

New Delhi

ABSTRACT

Topic: Quality Assessment of Artemis Hospital, Dwarka, New Delhi.

Back ground: This study is focussed towards Quality Assessment of ARTEMIS Hospital which is to review the available service management to ensure continuous Quality Improvement. It is an efficient base to know the deficient areas of the hospital system. Hence this study was undertaken to identify the areas for improvement and to take necessary steps for rectification the study identifies the areas for improvement on all the observed Clinical areas and non-clinical areas of hospital. Then these are reviewed and analysed on the basis checklist prepared by using NABH standards.

Objectives: To carry out Quality assessment of ARTEMIS HOSPITAL, DELHI accredited by The National Accreditation Board for Hospitals & Healthcare Providers.

Methodology: This was an observational descriptive hospital based cross sectional study. Evaluation is done on the parameters of Quality Assessment Tool Kit. Information regarding the organization's location, history, manpower, organizational hierarchy, Standard Operating Procedure, Legal Compliances applicability with current working and future plans were identified for clinical and non-clinical services such as Operation Theatre, Radiology, Laboratory, Infection Control, housekeeping, Front Office, pharmacy, Linen & Laundry, Medical Records Department etc. A score of 5, 0, 10 is given against each objective element by using NABH checklist. The study group included the healthcare personnel at random including doctors, nurses& Technicians.

Results: Through the analysis the hospital is fulfilling the Quality Standards as per NABH for further assessment by NABH. We compare findings by using NABH checklist, with the second Quality Indicators and find that it is fulfilling the requirement for Quality assessment of NABH. Regular monitoring and audits should be done to keep up the compliance rate that in turn strengthens the existing service delivery system of the hospital.

Conclusion: This study revealed that there is the necessity towards continuous training and awareness programme for Quality Improvement of Hospital and to include all the stakeholders in such a programme. Hospital is fulfilling the required criteria in maintaining the Quality Standards desired by NABH. It also shows that the administration has left no stone unturned towards continuous Quality Improvement, however, administration needs further protocols put in place for better compliance.

Key word: Indicators, Elements and standards, NABH.

ACKNOWLEDGEMENT

1. I write this to place on record my deep sense of gratitude and appreciation for the valuable guidance, constructive comments and constant encouragement and guidance provided by my project guide Dr. A.K. Agarwal, Dean, MD, DNB, DHSA (UK), Academics and Student Affairs IIHMR, who is expert in the subject and is also the President of Indian Society of Hospital Waste Management (ISHWM). The successful completion of the project study would never have been possible but for her whole-hearted support.

2. I would also like to record my appreciation for the invaluable support I received from Dr. Sunjay Pathak, Medical Superintendent, Artemis Hospital, Dwarka and Mr Kannu Sharma, Team Leader, Quality & Systems, who played a key role in supporting and inspiring me not only to take this study but bring it to logical conclusion. Their whole-hearted support and making all the resources available for the study has substantiated the results of the study. My candid thanks and gratefulness to Dr. Amrita Dwivedi, Pathologist, Mrs. Priyanka AGTL Medical Services, Mrs Namrata Team Leader-OP, IP, Mr Prabhu, Infection Control Nurse, Mr Amit Sr. Executive Dietary services and Mr Hemant Bisht, Sr Executive Housekeeping, Ms. Asha Executive MRD Artemis Hospital, Dwarka. They took time off their busy schedule to guide and offer their comments and suggestions to improve the quality of the report. Without their guidance, this report would never have reached near perfection.

3. I express my deep sense of gratitude and sincere thanks to the faculty of Artemis Hospital, Dwarka for their constant guidance, support and encouraging me to take this study. I am sure that but for their constant encouragement and support I would never have successfully completed this study. I can only remember with thanks the practical advice they gave me at many junctures that helped me in successfully completing this study.

Col Madan Mohan thakur

PG/15/043

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF SYMBOLS AND ABBREVIAIONS

S. No.	Abbreviated form	Full form
1.	AAC	Access, Assessment and Continuity of care
2.	FMS	Facility Management System
3.	HIC	Hospital Infection Control
4.	HMIS	Hospital Management Information System
5.	HRM	Human Resource Management
6.	IIHMR	International Institute of Health Management Research
7.	IMS	Information Management System
8.	MOM	Management of Medication
9.	NABH	National Accreditation Board for Hospitals and Healthcare Providers
10.	PRE	Patient Right and Education
11.	ROM	Responsibilities of Management
12.	HK	Housekeeping
13.	LAMA	Left Against Medical Advice
14.	MLC	Medico legal case
15.	NCI	Nursing Council of India
16.	MCI	Medical Council of India
17.	UHID	Unique Hospital Identity
18.	MSDS	Material Safety Data Sheet
19.	SOP	Standard Operating Procedure
20.	AMC	Annual Maintenance Contract
21.	CMC	Comprehensive Maintenance contract
22.	ICD	International classification Of Diseases

PART – I

INTERNSHIP REPORT

Introduction.

I did my internship from Artemis Hospital, Dwarka for the period of three months from 01 February to 30 April 2017. Three month of extensive internship provides me with the chance to meet different set of people within and outside the organization. This gives an inside view about the hospital services. I came to know the practicalities of the healthcare set up that moulds us for the future undertakings. Tasks performed and key learning's are as listed:

1. **Quality Assessment**. The hospital has provided a framework for quality assurance and quality improvement, while focusing on patient safety and quality of care. These include a strong culture of safety that has been inculcated, a decrease in the incidence of adverse events, and constant monitoring of quality within the system. The aim is to ensure that the hospital follows all the guidelines in accordance to NABH.

    - To review the requirements in form of Policies, Procedures / SOPs, Protocols, define indicators and methods of audits / reviews, initiate and coordinate for Corrective/ Preventive actions.
    - Preparing tools for the Capturing the data.
    - Analysing and assessing quality assurance based on captured data.
    - Comparing the results of the assessment with defined criteria's.
    - Steps to improve quality based on this assessment of captured data.
    - Identify the standard benchmarks, understand and ensure that all have understood their departmental benchmarks.

2. **Patient satisfaction with quality of nursing care.** Patient satisfaction has become increasingly popular, as a critical component in the measurement of quality of care. Nursing service is one of the most important components of hospital service. Understanding how things are looking through the patient's eye should be central part of quality improvement. The level of patient satisfaction with nursing care is an important indicator of quality of care provided in hospitals.

3. **Monitoring of Key Performance Indicators.** Continuous monitoring, setting benchmarks, Sharing results and improvements, Setting department indicators, Management dashboard of the indicators.

4. **Manuals and Updating.** Continuous review of manuals, Review of protocols, Updating of forms.

INTRODUCTION: ARTEMIS HOSPITAL

FIG 1

Hospital Overview

1. Artemis Hospital, established in 2007, spread across 9 acres, is a 380 bed; state-of-the-art multi-speciality hospital located in Gurgaon, India. Artemis Hospital is the first JCI and NABH accredited hospital in Gurgaon.

Designed as one of the most advanced in India, Artemis provides a depth of expertise in the spectrum of advanced medical & surgical interventions, comprehensive mix of inpatient and outpatient services. Artemis has put modern technology in the hands of renowned from across the country and abroad to set new standards in healthcare. The medical practices and procedures followed in the hospital are research oriented and benchmarked against the best in the world. Top-notch services, in a warm, open centric environment, clubbed with affordability, have made us one of the most revered hospitals in the country.

Artemis Hospital, Dwarka is a part of Artemis Hospital Gurgaon, located at sector 20 Dwarka. It is a 47 bed, state-of-the-art multi-specialty hospital designed as one of most advanced in India. Artemis provides depth of expertise in the spectrum of advanced medical & surgical interventions comprehensive mix of inpatient and outpatient services. Artemis has put modern technology in the hands of renowned from across the country and abroad to set new standards healthcare. The medical practices and procedures followed hospital are research oriented and benchmarked against in the world. World class services in a warm open centric environment clubbed with affordability has made as one of the most revered hospital in the country. It acts as an independent unit providing healthcare facilities and also as a referral unit for its main hospital located at Gurgaon which is a multi-specialty 350 Bed Hospital, spread across 9 acres, in the Capital Region, India. Artemis Hospital is the first JCI and NABH accredited hospital in Gurgaon.

Organisation

2. The Hospital has a full time Medial Superintendence in location for effective command and control and ensue the smooth functioning of hospital. However the hospital is governed by the boards of directors located at Artemis Gurgaon.

Board of Directors

Mr. Onkar S. Kanwar, Chairman, Artemis Health Sciences

Ms. Shalini Kanwar Chand

Mr. Neeraj Kanwar

Dr. Devlina Chakravarty, Executive Director, Artemis Hospitals

Dr. S. Narayan

Dr. Sanjaya Baru

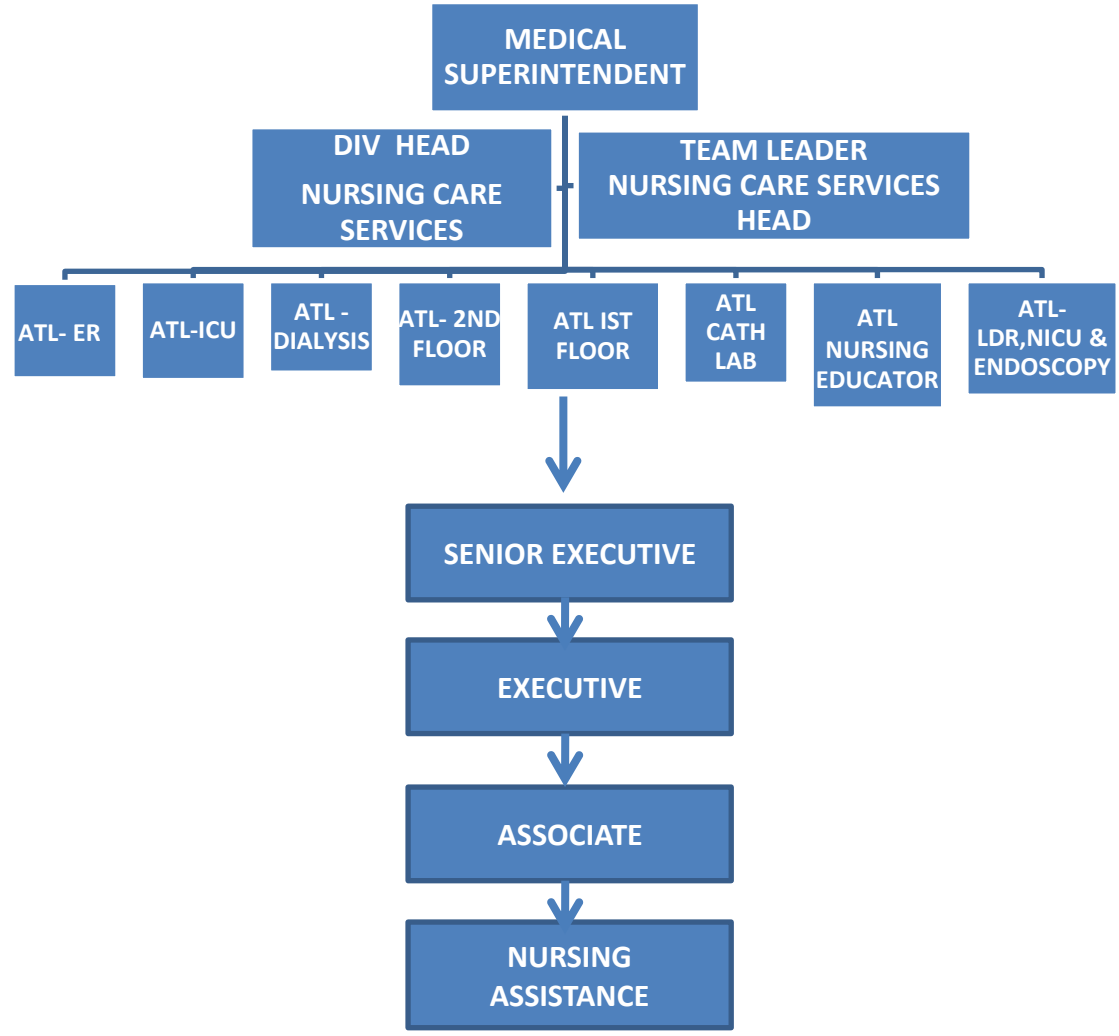
Dr. Nirmal K. Ganguly

Mr. Naveen Kapur

Mr. Prem Narain Wahal

Mr. Akshay Kumar Chudasama

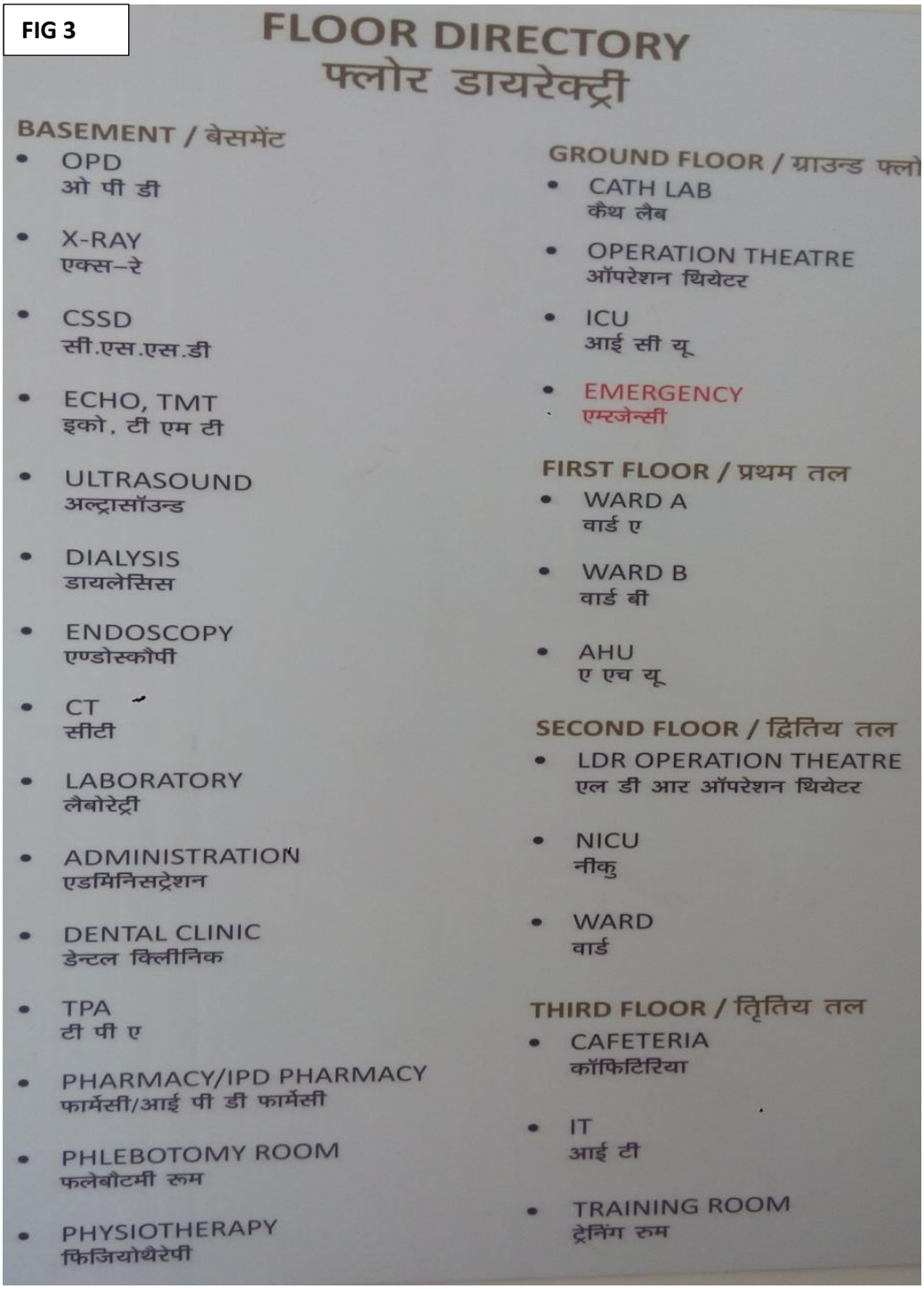
ORGANOGRAM (FIG 2)



INFRASTRUCTURE:

3. The Artemis hospital, Dwarka has a compact building consisting of three floors. The floor directory pasted under illustrates the facilities on each floor.

FIG 3



VISION, MISSION AND CORE VALUES

FIG 4

VISION

"To create an Integrated World Class Healthcare System, Fostering, Protecting, Sustaining and Restoring Health through Best in Class Medical Practices and Cutting Edge Technology developed through in depth Research carried out by the World's Best Scientific Minds."

FIG 5

Mission

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

FIG 6

Core Values

The corporate value system at Artemis is founded on three pillars – Service, Compassion and Integrity.

- ✓ Care for customer
- ✓ Respect for Associates
- ✓ Excellence through Teamwork
- ✓ Always Learning
- ✓ Trust Mutually
- ✓ Ethical Practices

QUALITY POLICY AT ARTEMIS

FIG 7

- ✓ Deliver world class patient care through medical excellence.
- ✓ Create a patient-centric environment
- ✓ Ensure high standards and safety of treatment during the patient's stay.
- ✓ Continuous Quality Improvement through implementation of robust clinical and non-clinical process and protocols.
- ✓ Having world-class infrastructure and cutting edge technology utilized by highly skilled employees.
- ✓ Complying with statutory regulations.

HR Vision & Philosophy

HR Vision

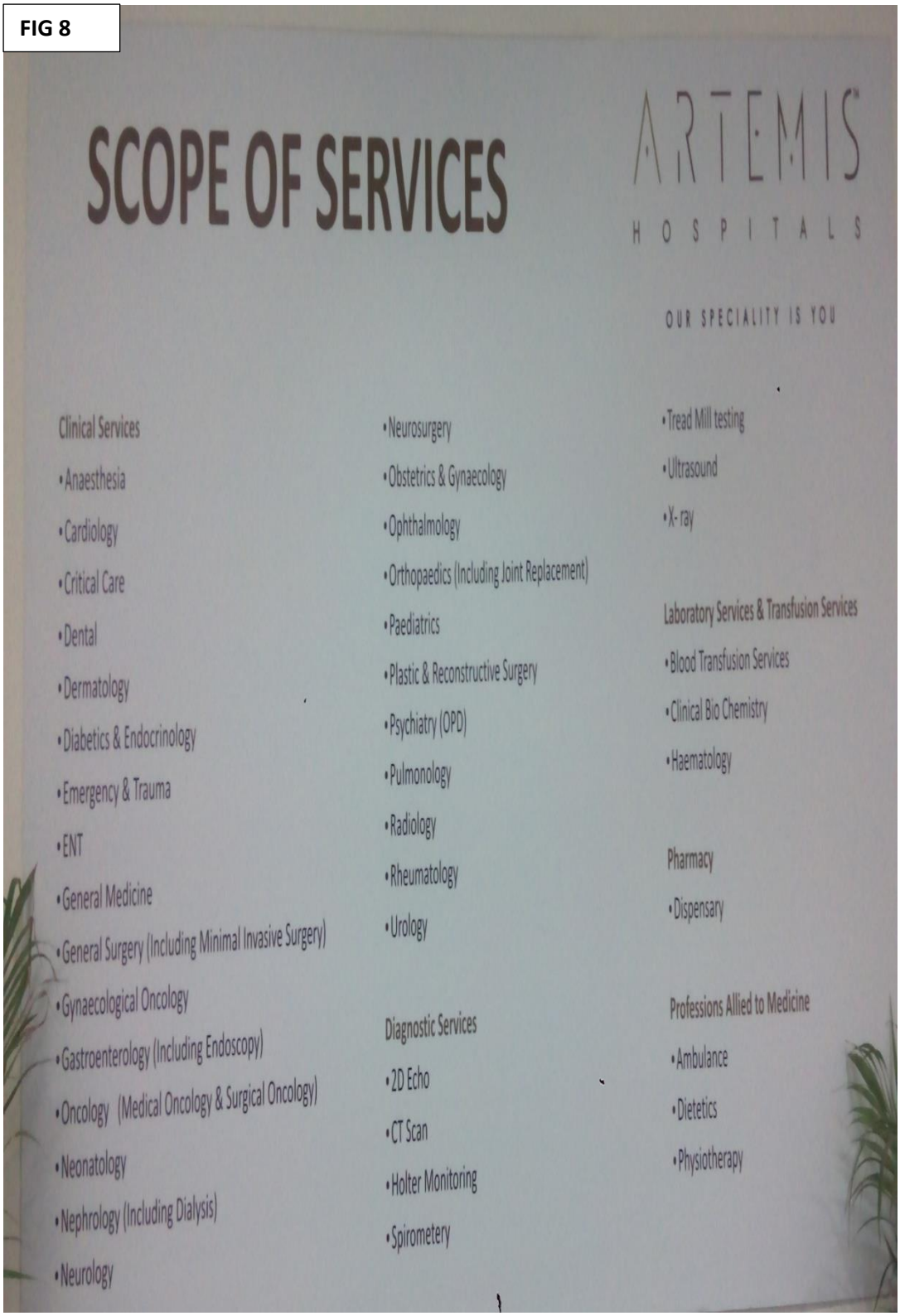
- We are the 'Employer of Choice' for people with professional talent and drive
- We aspire to provide excellent opportunities for professional and personal growth
- We believe in a paradigm shift from 'People Management' to 'Aspiration Management'
- We encourage collaboration, creativity continuous learning and fun based work environment

HR Philosophy

- Recruit best of the talent
- Develop an environment of trust and respect for each other
- Empower employees with adequate resources
- Recognize and appreciate innovative effort and accomplishments
- Facilitate fun at work place and ensure that employee's efficiency
- Treat all employees uniformly, honestly and with dignity
- Create an environment where teamwork and team goals are encouraged
- Create an open forum to address employee grievances

FACILITIES AT ARTEMIS HOSPITAL, DWARKA

FIG 8



LIST OF SPECIALITIES

Anaesthesia & Pain Medicine Artemis	Obstetrics & Gynaecology
Special Child Centre	Oncology
Blood Bank & Transfusion medicine	Ophthalmology
Cardio Thoracic and Vascular Surgery	Organ Transplant
Cardiology	Orthopaedics
Cosmetic & Plastic Surgery	Paediatric
Critical Care & ICU	Paediatric Cardiology & Cardiac Surgery
Dentistry	Paediatric Surgery
Dermatology & Cosmetology	Radiology
Emergency & Trauma Services	Reproductive Medicine
Endocrinology	Respiratory Critical Care & Sleep medicine
ENT	Rheumatology & Clinical Immunology
Fetal Medicine	Scoliosis Surgery
Gastroenterology Unit I	Spine Surgery
Gastroenterology Unit II	Stem Cell Transplantation
General & MI Surgery	Urology
Haematology	
Holistic Medicine/Psychology	
Internal Medicine	
Laboratory Services	
Nephrology	
Neurology	
Neurosurgery	
Nuclear Medicine	

COST AND INSURANCE

Artemis Hospitals is dedicated to ensuring patients understanding of the hospital's billing and insurance policies. We are empanelled with the following to provide insurance policies:

CORPORATE

Artemis Hospitals is the preferred healthcare destination for the employees of various businesses. They get access to quality healthcare with extra personal care, minimal formalities during admission and a variety of corporate offers. In order to ensure better health for employees & their families, Artemis Hospitals actively partners with various corporates by getting empanelled as their favoured healthcare service provider.

The following services are provided to the business houses:
Executive Health Checks | Workplace clinics for counselling | Outpatient and hospitalisation services | Healthcare education and awareness programs | First Aid and BLS Training | Emergency Services | Organisational Healthcare Audit

PART II

DISSERTATION

ON

"QUALITY ASSESSMENT OF ARTEMIS HOSPITAL, DWARKA FOR NABH PREPAREDENESS"

QUALITY ASSESSMENT OF ARTEMIS HOSPITAL, DWARKA FOR CONTINUOUS QUALITY IMPROVEMENT

EXECUTIVE SUMMARY

- Quality assessment of Artemis Hospital, Dwarka was conducted. The analysis as per NABH norms was done to assess the existing status of the hospital and prepare it for continuous Quality improvement as per NABH standards. A visit to hospital premises and personal interviews of all categories of hospital staff was organized during this period. The purpose was to assess the functional areas of hospital services with a view of preparing the hospital for Quality Assessment.
- Hospital Care system has been broadly divided into two categories specifically for this hospital. This includes base quality assessment of various departments of the hospital as per normal workflow and basic system and processes followed and other criteria includes quality parameters followed in the department which includes documentation and assessment by the way of indicators. The analysis was done with the help of Quality-Assessment Toolkit. For getting the required data the various activities in the hospital were observed, policy manuals and records were referred and patients and hospital staff were interviewed. According to the toolkit the documentation and implementation of each objective element was checked and scores were given accordingly. After this the average scores for the standards and departments were calculated. Then these were checked against the Quality Indicators. It was found that the analysis results matched with the required criteria and there were few observations. Therefore, great effort and focus is required for fulfilling the observations and preparing the hospital for Quality improvement.

INTRODUCTION

- Focus on quality health care has increased greatly because of intention for Health Promotion, Patient Safety, and increasing consumer awareness. Market forces, such as medical tourism, Insurance and corporate sector have accelerated the demand for quality in healthcare services. Hospital accreditation has established comprehensive voluntary standards of health care service. In fact, those hospitals without NABH accreditation will lose out on their credibility and even be excluded from any form of currently universally available subsidy, loans, exemptions from notified taxes and duty payments, empanelment's etc. Artemis Hospital, Dwarka is already an Accredited Hospital of NABH accreditation program. Therefore, Quality Assessment was carried out for preparing the hospital to maintain the standards prescribed by the NABH.

- The process of assessing Quality will strive towards the journey of Assessment. The advantage to the hospital would be its national recognition as a Quality Care hospital. Patients are the biggest beneficiary. Analysing observations and results in high quality of care and patient safety. The patients get services by credential medical staff. Rights of patients are respected and protected. Patient satisfaction will regularly evaluate.

DEFINITION AND SCOPE OF STUDY

NABH ACCREDITATION

- National Accreditation Board for Hospitals and Healthcare Professionals (NABH) is a constituent board of QCI (Quality Council of India), set up with co-operation of the Ministry of Health and Family Welfare, Government of India and the Indian Health Industry. This Board caters to the much-desired needs of the consumer and will set standards for progress of the Health Industry.
- Patients are the biggest beneficiaries from the NABH Accreditation, as it results in a high quality of care and patient safety. The patients get services by credential medical staff. It also helps the staffs of the hospital as it provides continuous learning and good working environment.
- NABH Accreditation to a hospital stimulates continuous improvement. It enables the hospital in demonstrating commitment to quality care and raises the community confidence in the services provided by the hospital. It also provides opportunity to bench mark with the best.
- NABH Standards for hospitals and health care providers has 10 chapters with 103 standards and 636 objective elements which are all related to the important functions like patient centred, hospital centred, community centred, and environment centred of the hospitals.

ACCREDITATION

- A public recognition of the achievement of accreditation standards by a healthcare organization, demonstrated through an independent external peer assessment of that organization's level of performance in relation to the standards.

PURPOSE FOR NABH ACCREDITATION

- The main purpose of NABH accreditation is to help planners to promote, implement, monitor and evaluate robust practices in order to ensure that occupies a central place in the development of the health care system.
- Current policies and process for health care are inadequate or not responsive to ensure health care services of acceptable quality and prevent negligence. Problem range from inadequate and inappropriate

treatment, excessive use of higher technologies, and wasting of scarce resource, to serious problems of medical malpractices and negligence.

- Quality assurance should help improves effectiveness, efficiency and in cost containment, and should address accountability and the need to reduce errors and increase safety in the system.
- Thus, the objective of NABH accreditation is on continuous improvement in the organizational and clinical performance of health services, not just the achievements of a certificate or award or merely assuring compliance with minimum acceptable standards.

REQUIREMENTS FOR NABH ACCREDITATION

- NABH standards for hospitals have been drafted by technical Committee of the NABH and contain complete set of standards for evaluation of hospitals for grant of accreditation. The standards provide framework for quality assurance and quality improvement for hospitals. The standard focus on patient safety and quality of patient care. The standards are equally applicable to hospital and nursing homes in the government as well as in the private sector.
- Patients are increasingly and appropriately aware of healthcare issues and desires participation in decisions affecting their health. The ultimate responsibility of a health care system is to the patient. Adherence of high standards, such as those related to timeliness of treatment, diagnostic accuracy, clinical relevance of the tests performed and interventions, qualifications and training of personnel, and prevention of errors, is an ethical responsibility of all hospital staff.

BENEFITS OF ACCREDITATION

- Accreditation benefits all Stake Holders. Patients are the biggest beneficiaries. Accreditation results in high quality of care and patient safety. The patients get services by credential medical staff. Rights of patients are respected and protected. Patient satisfaction is regularly evaluated.
- Accreditation to a Hospital stimulates continuous improvement. It enables hospital in demonstrating commitment to quality care. It raises community confidence in the services provided by the hospital. It also provides opportunity to healthcare unit to benchmark with the best.
- The Staff in an accredited hospital are satisfied lot as it provides for continuous learning, good working environment, leadership and above all ownership of clinical processes. It improves overall professional development of Clinicians and Paramedical staff and provides leadership for quality improvement within medicine and nursing. Accreditation provides an objective system of empanelment by insurance and other Third Parties. Accreditation provides access to reliable and certified information on facilities, infrastructure and level of care.

ASSESSMENT AS PER NABH STANDARDS

- Assessment is a component of NABH ACCREDITATION PROGRAMME. It is a tool that helps an organization to compare its actual performance with its potential performance. At its core are two questions “where are we?” and “where do we want to be?”
- The goal of Assessment is to identify the gap between the optimized allocation and integration of the inputs, and the current level of allocation. This helps provide the company with insight into areas which could be improved. The process involves determining, documenting and approving the variance between business requirements and current capabilities. Once the general expectation of performance in the industry is understood, it is possible to compare that expectation with the organisation's current level of performance. This comparison becomes the gap analysis. Such analysis can be performed at the strategic or operational level of an organization. Gap analysis is a formal study of what the organization is doing currently and where it wants to go in the future.
- This study will help to identify various gaps in the hospital and enable the staff to take necessary actions towards improvement and implementation as per the NABH standards.

PROBLEM STATEMENT

Assessment is a technique which uncovers any shortfalls in some process or characteristics. It is done against the template or model. The technique is often used to discover where to invest efforts for the improvement. It compares the characteristics of the organisation’s operations against an appropriate model. Assessment highlights those areas where the requirements of the model are not fully realized and details the changes necessary. The required changes indicate the gap that exists between the organisation current operations and the desired state and which area is likely to be more responsive to improvement efforts.

JUSTIFICATION

- An assessment report is a document, which evolves as per circumstantial requirement of the organization to know scope of activities required to meet standards to achieve project goal i.e. NABH accreditation status.
- There is a requirement of measuring the performance of hospital. The performance can be measured once the standards or benchmarks for the same are available. The accreditation of healthcare facilities is concerned with assessing the quality of organizational process and performance using agreed upon standards.

- The purpose of accreditation is to establish and encourage best practices, in the organization. It is based on the premises that there are certain actions which should be undertaken to create a good healthcare organization. Accreditation is a process by which an authoritative body gives a formal recognition that an organization is competent to carry out specific tasks.

REVIEW OF LITERATURE

The management and the safety of the hospital facility is an important part of quality improvement and patient safety. The following literatures review attempts to demonstrate and support the study.

1. **NABH 4th Edition Dec 2015.** The National Accreditation Board for Hospitals & Healthcare Providers (NABH) Standards is today the highest benchmark standard for hospital quality in India. Though developed by the Quality Council of India on the lines of International Accreditation Standards like the JCI, ACHS and the Canadian Hospital Accreditation Standards, the NABH is however seen as a more practical set of Standards, topical and very relevant to India's unique healthcare system requirements.

NABH standards: A standard is a statement that defines the structures and processes that must be substantially in place in an organization to achieve outcome and enhance the quality of care.

Patient centred standards

1. Access, Assessment and Continuity of Care (AAC)
2. Care of Patients (COP)
3. Management of Medication (MOM)
4. Patient Rights and Education (PRE)
5. Hospital Infection Control (HIC)

Organization cantered standards

1. Continuous Quality Improvement (CQI)
2. Responsibilities of Management (ROM)
3. Facility Management and Safety (FMS)
4. Human Resource Management (HRM)
5. Information Management System (IMS)

- Within just 2 years of its launch, the Indian Accreditation Standards, the NABH was accepted by ISQUA, the International Society for Quality Assurance in Healthcare, as an International Accreditation on par with the world's best.

- More important than the infrastructure, it is essential to know if the hospital has a documented process for its healthcare activities. Patient care not only involves the core clinical care, but also other support activities like requisition of tests, medicines, nurse doctor coordination, infection control practices, training, and so on. These needs to run seamlessly in the background to provide the best experience to the patient and the relative.
- The changing health care environment with revised hospital accreditation guidelines have sharpened the clinical and administrative hospital staff's concern for evaluating the quality of care they provide. Clinicians now see accreditation standards as a framework by which organizational processes will be improved and their patients will receive better care. Physicians and administrators now must face the challenge of establishing comprehensive and vigorous systems of quality assurance and learn to avoid the traps that impede implementation of such systems. Quality assurance is a very simple process that deals with finding problems and fixing them.
- A comprehensive definition of quality health care would be, "The optimal achievable result for each patient, the avoidance of physician-induced (iatrogenic) complications, and attention to patient and family needs in a manner that is both cost effective and reasonably documented."

2. **Lallu Joseph, Quality Manager, Christian Medical College Vellore on Accreditation for Hospitals and Retaining the Quality Advantage Post Accreditation.** Accreditation is a process in which certification of competency, authority, or credibility is presented to an organization. A self-assessment and external peer assessment process used by healthcare organizations to accurately assess their level of performance in relation to established standards and then to implement ways to continuously improve it.

RETAINING THE QUALITY ADVANTAGE- POST ACCREDITATION.

- Continuous Quality Improvement.
- Quality Improvement is the mandate
- Meticulous follow-up
- Bench Marking
- Top management involvement
- Involvement of the entire team
- Continuous training and re-training
- Train the trainers
- Retrain the juniors

MONITORING OF KEY PERFORMANCE INDICATORS

- Continuous monitoring
- Setting benchmarks
- Sharing results and improvements
- Setting department indicators
- Management dashboard pf the indicators

3. **WHO Performance Assessment Tool for Quality Improvement in Hospitals (PATH).**

This brochure provides an overview on the WHO Performance Assessment Tool for Quality Improvement in Hospitals(PATH). It includes a description of the conceptual model, a presentation of the indicators selected to fit the model and data collection procedures and reporting of performance. The Performance Assessment Tool for Quality Improvement in Hospitals (PATH) was developed by the WHO Regional Office for Europe to support hospitals in collecting data on their performance, identifying how they are doing in comparison to their peer group and initiating quality improvement activities. PATH is designed for internal use and on voluntary basis only - it is not meant to be used for external reporting, accreditation or restructuring purposes.

The PATH framework includes 4 steps:

Motivate - Hospital participation is voluntary. PATH is designed around and for hospitals as the main users. It presumes their active involvement at all steps.

Measure - The PATH framework relies on 17 indicators in a core set but countries can select additional indicators proposed in a tailored set.

Make sense - Data are the prerequisite for improvement; however, they are not an end in themselves but a starting point for action. Evaluation of indicators always needs to be done locally, comparing the institutions' performance to reference points and relating performance to local contexts.

Move - The aim of PATH is to provide support to quality improvement strategies. It should ultimately impact on actions for quality improvement.

Path offers:

- A multidimensional approach to hospital performance assessment;
- A tool to disseminate values within a hospital, and initiate or support quality improvement Strategies;

- A tool to make the most of the large amount of data that is collected but very little Used;
- Technical support for implementation of performance measurement within hospitals;
- An opportunity to question current information systems and learn from experiences.
- Educational material, including general presentation of quality improvement principles and Detailed description of indicators;
- Template for reporting results to individual hospitals;
- Voluntary participation in an (inter)-national benchmarking network to compare results and Interpret them and to share success stories; and
- Be part of an international "community" of hospitals with innovative managerial practices.

AIM OF THE STUDY:

To review the quality practices of ARTEMIS HOSPITAL, DWARKA as per NABH standards.

Objectives:

1. To assess the existing service delivery standards of the hospital.
2. To review all the quality indicators.
3. To suggest measures/procedures for improvement to meet the requirements.

Research Question:

1. To study and identify the approach of Hospital to collect, record and analyse the Quality Indicators.
2. To study the effectiveness of corrective and preventive action plan.

RESEARCH METHODOLOGY

- Information regarding the organization's location, history, manpower, organizational hierarchy, Standard Operating Procedure, Legal Compliances applicability with current working and future plans of implementation will be identified for clinical and non-clinical services such as operation theatre, radiology, laboratory, Infection control, housekeeping, Front Office, pharmacy, Linen & Laundry, Medical Records Department, Engineering services etc.
- A schedule of visit to the identified area for assessment and proceedings to complete the observations will be prepared and quality coordinator of that respective department will have contacted for regular evaluation and implementation.
- The observational findings and the information collected compiled and a report will be prepared.
- Research Design: - Descriptive study.

- Tools of Data Collection: -

Primary data: -

- Observation.
- Interview (Interaction with concerned authorities)
- Quality Assessment tools.

Secondary data: - Hospital policy, procedures and records.

LIMITATION OF STUDY

1. Only 4 clinical services and 10 non-clinical services are assessed for Assessment.
2. Resistance of staff towards one to one Interaction.

EVALUATION CRITERIA

The Quality assessment of ARTEMIS HOSPITAL, DWARKA as per NABH norms has been done by using the Quality assessment tool.

Methodology by using NABH checklist.

Quality assessment Tool of department

Quality Indicators being developed as per NABH standards.

36 Quality Indicators for measuring the performance.

Three months i.e. Oct, Nov & Dec 16 have been considered for study.

The following criteria are used for scoring: Compliance to the requirement – 10

Partial compliance – 5

Non-Compliance – 0

FINDINGS

After filling up of the NABH Quality assessment toolkit the following scores were calculated:

1. The average score of each individual standard
2. The average score of each department
3. The average score of all standards

The scores and the findings of each department are being assessed based on evaluation criteria of NABH so that we can get useful results.

ASSESSMENT CHECKLIST AS PER NABH STANDARDS : CLINICAL DEPARTMENT

Table 1:- Checklist of Operation Theatre.

Elements		Observation	Remarks	Scores (0/ 5/ 10)
PRIMARY				
	COP.14: Documented policies and procedures guide the administration of anaesthesia.			**10**
a	There is a documented policy and procedure for the administration of anaesthesia. *	Documented policy being followed.		10
b	Patients for anaesthesia have a pre-anaesthesia assessment by a qualified anaesthesiologist.	Being done before the patient is wheeled into the OT complex for both routine and emergency cases.		10
c	The pre-anaesthesia assessment results in formulation of an anaesthesia plan which is documented.	The plan exists and well documented.		10
d	An immediate preoperative re-evaluation is performed and documented.	A pre-induction assessment is done by an anaesthesiologist.		**10**
e	Informed consent for administration of anaesthesia is obtained by the anaesthesiologist.	Risks, benefits are explained and educated to the Patient and family.		10
f	During anaesthesia monitoring includes regular recording of temperature, heart rate, cardiac rhythm, respiratory rate, blood pressure, oxygen saturation and end tidal carbon dioxide.	Are well documented.		10
g	Patient's post-anaesthesia status is monitored and documented.	Monitoring of vitals are done till the patient recovers completely from anaesthesia.		10
h	The anaesthesiologist applies defined criteria to transfer the patient from the recovery area. *	Are well documented.		10
i	The type of anaesthesia and anaesthetic medications used are documented in the patient record.*	Are well documented.		10
j	Procedures shall comply with infection control guidelines to prevent cross-infection between patients.	Documented as a part of the infection control manual.		10
k	Adverse anaesthesia events are recorded and monitored.	Documented and monitored for taking corrective and preventive action.		10
	COP.15: Documented policies and procedures guide the care of patients undergoing surgical procedures.			**10**
a	The policies and procedures are documented. *	List of surgical procedures are well documented.		10

b	Surgical patients have a preoperative assessment and a provisional diagnosis documented prior to surgery.	Patients are assessed pre-operatively and a provisional diagnosis is made which is documented.		10
c	An informed consent is obtained by a surgeon prior to the procedure.	The consent is taken by the surgeon/team prior to the surgery, the same is explained to the patient/ family and is documented.		10
d	Documented policies and procedures exist to prevent adverse events like wrong site, wrong patient and wrong surgery. *	Procedure is available for preventing adverse events.		10
e	Persons qualified by law are permitted to perform the procedures that they are entitled to perform.	Persons with qualification(s), training and experience performs the procedures		10
f	A brief operative note is documented prior to transfer out of patient from recovery area.	Are well documented.		10
g	The operating surgeon documents the postoperative care plan.	The plan exists and well documented.		10
h	Patient, personnel and material flow conform to infection control practices.	Layout of the theatre confirms the requirement.		10
i	Appropriate facilities and equipment/appliances/instrumentation are available in the operating theatre.	Operating theatre has facilities.		10
j	A quality assurance programme is followed for the surgical services. *	Is an integral part of the overall quality assurance programme.		10
k	The quality assurance programme includes surveillance of the operation theatre environment. *	Monitoring of humidity, temperature, pressure differential, integrity of filter being done.		10
	MOM.3: Documented policies and procedures guide the storage of medication.			10
e	The list of emergency medications is defined and is stored in a uniform manner.*	list is prepared in consonance with good clinical practices and documented.		10
f	Emergency medications are available all the time.	Adequate quantity of emergency medicines are stocked at all times.		10
g	Emergency medications are replenished in a timely manner when used.	follows a system of emergency cart		10
	MOM.9: Documented procedures guide the use of narcotic drugs and psychotropic substances.			**10**
a	Documented procedures guide the use of narcotic drugs and psychotropic substances which are in consonance with local and national regulations.*	Are well documented.		10
b	These drugs are stored in a secure manner.	Stored under lock and key with a designated person.		10

c	A proper record is kept of the usage, administration and disposal of these drugs.	Strict inventory control for these drugs in place.		10
d	These drugs are handled by appropriate personnel in accordance with the documented procedure.	Complied with.		10
	MOM.12: Documented policies and procedures guide the use of implantable prosthesis and medical devices.			**10**
a	Usage of implantable prosthesis and medical devices is guided by scientific criteria for each individual item and national / international recognised guidelines for such specific item(s).	Committee in place for approving the use of a particular implant.		10
b	Documented policies and procedures govern procurement, storage/stocking, issuance and usage of implantable prosthesis and medical devices incorporating manufacturer's recommendation(s).*	Complied with.		10
c	Patient and his/her family are counselled for the usage of implantable prosthesis and medical device including precautions, if any.	Precautions being taken.		10
d	The batch and serial number of the implantable prosthesis and medical devices are recorded in the patient's medical record, the master logbook and the discharge summary.	Suitable mechanisms in place.		10
	PRE.4: A documented procedure for obtaining patient and/or family's consent exists for informed decision making about their care.			10
d	Informed consent includes information regarding the procedure, it's risks, benefits, alternatives and as to who will perform the procedure in a language that they can understand.	The consent is taken and explained to the patient/ family and is documented.		10
e	The procedure describes who can give consent when patient is incapable of independent decision making.*	Taken into consideration the statutory norms when the patient is incapable of independent decision making.		10
f	Informed consent is taken by the person performing the procedure.	Complied with.		10
g	Informed consent process adheres to statutory norms.	Complied with.		10
h	Staff are aware of the informed consent procedure.	Yes		10
	HIC.2: The organisation implements the policies and procedures laid down in the Infection Control Manual in all areas of the hospital.			10

a	The organisation identifies the various high-risk areas and procedures and implements policies and/or procedures to prevent infection in these areas. *	Infection control program includes all areas of the hospital		10
b	The organisation adheres to standard precautions at all times.*	yes		10
c	The organisation adheres to hand-hygiene guidelines. *	yes		10
d	The organisation adheres to transmission-based precautions at all times.*	yes		10
e	The organisation adheres to safe injection and infusion practices.*	yes		10
f	The organisation adheres to cleaning, disinfection and sterilization practices.*	yes		10
g	An appropriate antibiotic policy is established and documented *	yes		10
h	The organisation implements the antibiotic policy and monitors rational use of antimicrobial agents.	yes		10
k	The organisation has appropriate engineering controls to prevent infections. *	yes		10
	HIC.5: The organisation provides adequate and appropriate resources for prevention and control of Healthcare Associated Infections (HAI).			10
a	Adequate and appropriate personal protective equipment, soaps, and disinfectants are available and used correctly.	PPEs are available at the point of use. The staff uses PPE appropriate to the risks involved.		**10**
b	Adequate and appropriate facilities for hand hygiene in all patient-care areas are accessible to healthcare providers.	Infrastructure is in place.		**10**
c	Isolation/barrier nursing facilities are available.	The organisation has a defined conditions where isolation is required and the conditions wherein barrier nursing are required.		10
d	Appropriate pre- and post-exposure prophylaxis is provided to all staff members concerned.*	Infection Control Nurse maintains documentation.		10
	HIC.7: There are documented policies and procedures for sterilization activities in the organisation.			10
a	The organisation provides adequate space and appropriate zoning for sterilization activities.	Adequate space available for CSSD, where sterilization activities are carried out.		10
b	Documented procedure guides the cleaning, packing, disinfection and/or sterilization, storing and issue of items.*	The sterilized/disinfected equipment/sets are stored in an appropriate manner.		10

c	Reprocessing of instruments and equipment are covered.*	Documented procedure is in place.		10
d	The organisation shall have a documented policy and procedure for reprocessing of devices whenever applicable.*	The documented policies and procedures with the available good practices.		10
e	Regular validation tests for sterilization are carried out and documented.*	Accepted methods in place.		10
f	There is an established recall procedure when breakdown in the sterilization system is identified.*	Ensures that the sterilization procedure is regularly monitored and in the eventuality of a breakdown it has a procedure for withdrawal of such items.		10
	FMS.2: The organisation's environment and facilities operate in a planned manner to ensure safety of patients, their families, staff and visitors and promotes environment friendly measures.			9.16
a	Facilities are appropriate to the scope of services of the organisation.	Practices as per guidelines.		10
d	The provision of space shall be in accordance with the available literature on good practices (Indian or International Standards) and directives from government agencies.	Standards, directives and guidelines being adhered to.	Space constraint	5
f	Potable water and electricity are available round the clock.	Arrangements for supply of adequate potable water and electricity is available.		10
g	Alternate sources for electricity and water are provided as backup for any failure / shortage.	Alternate electric supply in the form of DG sets, UPS backup is available.		10
h	The organisation regularly tests these alternate sources.	Are documented.		10
i	There are designated individuals (with appropriate equipment) responsible for the maintenance of all the facilities.	Person is designated to be in-charge of maintenance of facilities. has the required number of supervisors and tradesmen to manage the facilities.		10
	FMS.3: The organisation has a programme for engineering support services and utility system.			10
a	The organisation plans for equipment in accordance with its services and strategic plan.	The plans are fully implemented with a process for periodic review of plans.		10
b	Equipment are selected, rented, updated or upgraded by a collaborative process.	There is involvement of end-user, management, finance and engineering departments during equipment selection		10

c	Equipment are inventoried and proper logs are maintained as required.	A unique identification is provided to each equipment With test certificate retained as part of documentation.		10
d	Qualified and trained personnel operate, inspect, test and maintain equipment and utility systems.	Inventories like bulbs, paints are held by engineering team. and qualified by experience or training.		10
e	Utility equipment are periodically inspected and calibrated (wherever applicable) for their proper functioning.	Calibrates the equipment as per manufacturer's guidelines/standards.		10
f	There is a documented operational and maintenance (preventive and breakdown) plan.*	The operator is trained in handling the equipment.		10
k	There is a documented procedure for equipment replacement and disposal.*	Disposal of (condemn) unusable equipment and other engineering waste material are being done in a systematic manner. All records pertaining to condemnation of equipment are maintained.		10
	FMS.5: The organisation has a programme for medical gases, vacuum and compressed air.			10
a	Documented procedures govern procurement, handling, storage, distribution, usage and replenishment of medical gases.*	It follows a uniform colour coding system and adhere to statutory requirements under the provisions of Act & rules.		10
b	Medical gases are handled, stored, distributed and used in a safe manner.	Standardised colour coding of the cylinders and pipelines are maintained.		10
c	The procedures for medical gases address the safety issues at all levels.	Includes from the point of storage/source area, gas supply lines and the end-user area. Appropriate safety measures are developed and implemented for all levels.		10
d	Alternate sources for medical gases, vacuum and compressed air are provided for, in case of failure.	Stand by system in place.		10
e	The organisation regularly tests these alternate sources.	The results of tests shall be documented.		10
f	There is an operational, inspection, testing and maintenance plan for, piped medical gas, compressed air and vacuum installation.*	Plans formulated as per manufacturer‘s recommendations.		10
	HRM.10. There is a process for credentialing and privileging of nursing			10

	professionals, permitted to provide patient care without supervision.			
a	Nursing staff permitted by law, regulation and the organisation to provide patient care without supervision are identified.	Identified the individuals who have the required qualification(s), training and experience to provide patient care.		10
	Secondary			
	COP.5: Documented policies and procedures guide the care of patients requiring cardio-pulmonary resuscitation.			9
a	Documented policies and procedures guide the uniform use of resuscitation throughout the organisation. *	Procedure is well documented. The protocols for Basic life support are displayed prominently.		10
b	Staff providing direct patient care are trained and periodically updated in cardio-pulmonary resuscitation.	Has a CPR team. All doctors, and nursing staff are trained to provide basic life support.		10
c	The events during a cardiopulmonary resuscitation are recorded.	Are recorded.		10
d	A post-event analysis of all cardiopulmonary resuscitations is done by a multidisciplinary committee.	Multidisciplinary committee does the analysis within a defined time frame.		10
e	Corrective and preventive measures are taken based on the post-event analysis.	Corrective and preventive measures are taken.	Training modified	5
	COP.6: Documented policies and procedures guide nursing care.			**10**
a	There are documented policies and procedures for all activities of the nursing services. *	Complied with.		10
b	These reflect current standards of nursing services and practice, relevant regulations and purposes of the services.	Nursing practice is in accordance with accepted Standards.		10
c	Assignment of patient care is done as per current good practice guidelines.	Complied with.		10
d	Nursing care is aligned and integrated with overall patient care.	yes		10
e	Care provided by nurses is documented in the patient record.*	yes		10
f	Nurses are provided with adequate equipment for providing safe and efficient nursing services.	yes		10
g	Nurses are empowered to take nursing-related decisions to ensure the timely care of patients.	yes		10
	COP.7: Documented procedures guide the performance of various procedures.			10
a	Documented procedures are used to guide the performance of various clinical procedures. *	Broad guideline to all the procedures are followed.		**10**

b	Only qualified personnel order, plan, perform and assist in performing procedures.	Internal audit of various procedures are carried out.		10
c	Documented procedures exist to prevent adverse events like a wrong site, wrong patient and wrong procedure. *	In place		10
d	Informed consent is taken by the personnel performing the procedure, where applicable.	Yes. All such procedures are supervised by the treating doctor.		10
e	Adherence to standard precautions and asepsis is adhered to during the conduct of the procedure.	yes		10
f	Patients are appropriately monitored during and after the procedure.	yes		10
g	Procedures are documented accurately in the patient record.*	yes		**10**
	COP.8: Documented policies and procedures define rational use of blood and blood components.			**10**
a	Documented policies and procedures are used to guide the rational use of blood and blood components. *	yes		10
d	Informed consent is obtained for donation and transfusion of blood and blood components.	yes		10
e	Informed consent also includes patient and family education about the donation.	yes		10
g	Post-transfusion form is collected, reactions if any identified and are analysed for preventive and corrective actions.	yes		10
h	Staff are trained to implement the policies.	Trained and Records are maintained.		**10**
	HIC.8: Biomedical waste (BMW) is handled in an appropriate and safe manner.			**10**
b	Proper segregation and collection of biomedical waste from all patient-care areas of the hospital is implemented and monitored.	Wastes are segregated and collected in different colour coded bags and containers as per statutory provisions.		10
e	Appropriate personal protective measures are used by all categories of staff handling biomedical waste.	Staff handling bio-medical waste are provided with personal protective equipment (PPE). The staff uses PPE while handling the waste.		10
	FMS.6: The organisation has plans for fire and non-fire emergencies within the facilities.			9
a	The organisation has plans and provisions for early detection, abatement and containment of fire, and non-fire emergencies. *	Have a plan in place.		10

b	The organisation has a documented safe-exit plan in case of fire and non-fire emergencies.	Fire-exit plan are displayed on each floor.		10
c	Staff is trained for their role in case of such emergencies.	Staff training is being carried out.		10
d	Mock drills are held at least twice in a year.	Mock drills are conducted once a year for fire and important non-fire emergencies.	Should be done twice in a year.	5
e	There is a maintenance plan for fire-related equipment & infrastructure. *	The plan is in place to address inspection, testing, preventive & breakdown maintenance.		10

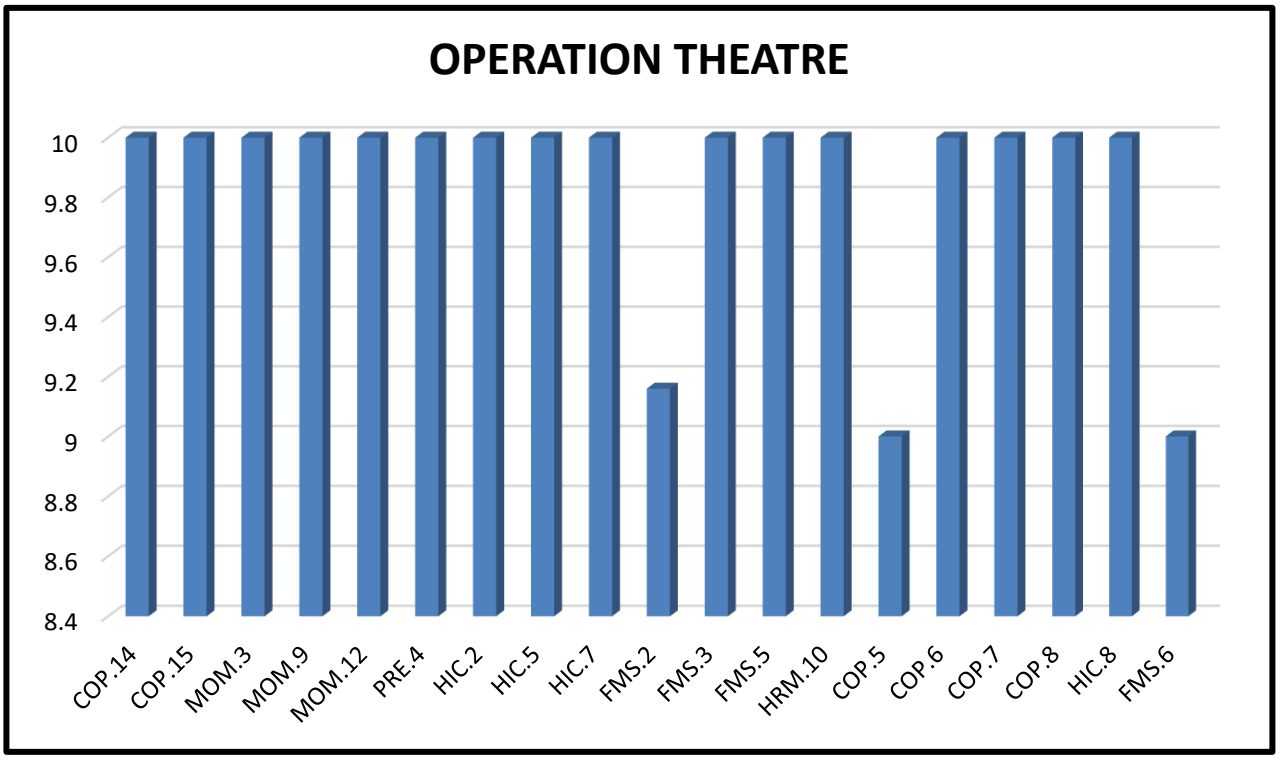


Figure 9:- Score for OT

Table 2:- Checklist of Imaging: X Ray / USG / Mammography / DEXA Scan / CT Scan / MRI.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	AAC.9: Imaging services are provided as per the scope of services of the organisation.			10
a	Imaging services comply with legal and other requirements.	The organisation maintains and updates its compliance status of legal and other requirements in a regular manner.		10
b	Scope of the imaging services is commensurate to the services provided by the organisation.	yes		10
c	The infrastructure (physical and equipment) and manpower is adequate to provide for its defined scope of services.	Limitations of space.	waiting area at radiology has very few sitting	5
d	Adequately qualified and trained personnel perform, supervise and interpret the investigations.	As per AERB guidelines		10
e	Documented policies and procedures exist to ensure correct identification and safe and timely transportation of patients to and from the imaging services. *	Procedure in place for safe and timely transportation to and from the imaging services.		10
f	Imaging results are available within a defined timeframe. *	yes		10
g	Critical results are intimated immediately to the personnel concerned. *	yes		10
h	Results are reported in a standardised manner.	yes		10
i	There is a mechanism to address recall / amendment of reports whenever applicable.	yes		10
j	Imaging tests not available in the organisation are outsourced to organisation(s) based on their quality assurance system.*	yes		10
	AAC.10: There is an established quality assurance programme for imaging services.			9.16
a	The quality assurance programme for imaging services is documented. *	QA programme as per norms.		10
b	The programme addresses periodic internal / external peer review of imaging protocols and results using appropriate sampling.	A peer review system in place to review the reports and outcomes of interventional procedures performed.		10
c	The programme addresses surveillance of imaging results in collaboration with	Structured peer review of the imaging protocols and		10

	referring clinicians for follow up wherever applicable *	procedures are periodically performed and modified.		
d	A system is in place to ensure the appropriateness of the investigations and procedures for the clinical indication.	The investigation orders are screened prior to performing of the imaging procedure		10
e	The programme includes periodic calibration and maintenance of all equipment. *	As per AERB guidelines and manufacturer's recommendations		10
f	The programme includes the documentation of corrective and preventive actions. *	Deviations noted from the laid down quality assurance programme	To be acted upon.	5
	AAC.11: There is an established safety programme in the Imaging services.			10
a	The radiation-safety programme is documented. *	Is documented.		10
b	This programme is aligned with the organisation's safety programme.	Imaging safety programme is aligned with the organisation's safety programme		10
c	Patients are appropriately screened for safety / risk prior to undergoing an imaging on a particular modality.	yes		10
d	Handling, usage and disposal of radio-active and hazardous materials are as per statutory requirements.	Hazardous materials are disposed of as per guidelines.		10
e	Imaging personnel and patients are provided with appropriate radiation safety and monitoring devices where applicable.	Shielding of body parts of staff and patients, attendants are adhered to using appropriate aprons and shields.		10
f	Radiation-safety and monitoring devices and are periodically tested and results are documented. *	Protective devices in place.		10
g	Imaging and ancillary personnel are trained in imaging safety practices and radiation-safety measures.	Imaging safety practices in place		10
h	Imaging signage are prominently displayed in all appropriate locations.	Safety signage are displayed.		10
	Secondary			
	MOM.3: Documented policies and procedures guide the storage of medication.			10
e	The list of emergency medications is defined and is stored in a uniform manner. *	This list is prepared in consonance with good clinical practices and documented.		10
f	Emergency medications are available all the time.	Quantity of emergency medicines are stocked at all times.		10

g	Emergency medications are replenished in a timely manner when used.	An inventory check is done daily to avoid stock out.		10
	PRE.4: A documented procedure for obtaining patient and/or family's consent exists for informed decision making about their care.			10
d	Informed consent includes information regarding the procedure, it's risks, benefits, alternatives and as to who will perform the procedure in a language that they can understand.	The consent has the name of the doctor performing the procedure.		10
e	The procedure describes who can give consent when patient is incapable of independent decision making. *	The consent is taken from the patient in all cases.		10
f	Informed consent is taken by the person performing the procedure.	The person performing is procedure is responsible for the entire consent process.		10
	HIC.2: The organisation implements the policies and procedures laid down in the Infection Control Manual in all areas of the hospital.			10
e	The organisation adheres to safe injection and infusion practices.*	Yes, which includes One needle, One syringe, Only one time as recommended by CDC.		10
f	The organisation adheres to cleaning, disinfection and sterilization practices.*	Organisation follows a uniform policy.		10
	FMS.3: The organisation has a programme for engineering support services and utility system.			10
c	Equipment are inventoried and proper logs are maintained as required.	A unique identification is provided to each equipment.		10
d	Qualified and trained personnel operate, inspect, test and maintain equipment and utility systems.	Inventories like bulbs, paints are held by engineering team.		10
e	Utility equipment are periodically inspected and calibrated (wherever applicable) for their proper functioning.	Calibrates the utility equipment as per manufacturer's guidelines/standards.		10
f	There is a documented operational and maintenance (preventive and breakdown) plan.*	The operator is trained in handling the equipment. The operational plan must assist the operator in operating the equipment on a daily basis.		10
k	There is a documented procedure for equipment replacement and disposal.*	The regular checking of pH, TDS, hardness etc. are included in this plan.		10
	FMS.4: The organisation has a programme for bio-medical equipment management.			**9**

c	Equipment are inventoried and proper logs are maintained as required.	A unique identifier is provided for each equipment.		10
d	Qualified and trained personnel operate and maintain the medical equipment.	The operator of the medical equipment is trained to use medical equipment in safe and effective manner.		10
e	Equipment are periodically inspected and calibrated for their proper functioning.	Has weekly/monthly/ annual schedules of inspection and calibration of equipment.		10
f	There is a documented operational and maintenance (preventive and breakdown) plan for equipment.*	The operator is trained in handling the equipment.	The operational plan to assist in operating on a daily basis.	5
g	There is a documented procedure for equipment replacement and disposal. *	Strategic plans, upgrade/ update path and the equipment log while condemning(dispose) equipment in a systematic manner.		10

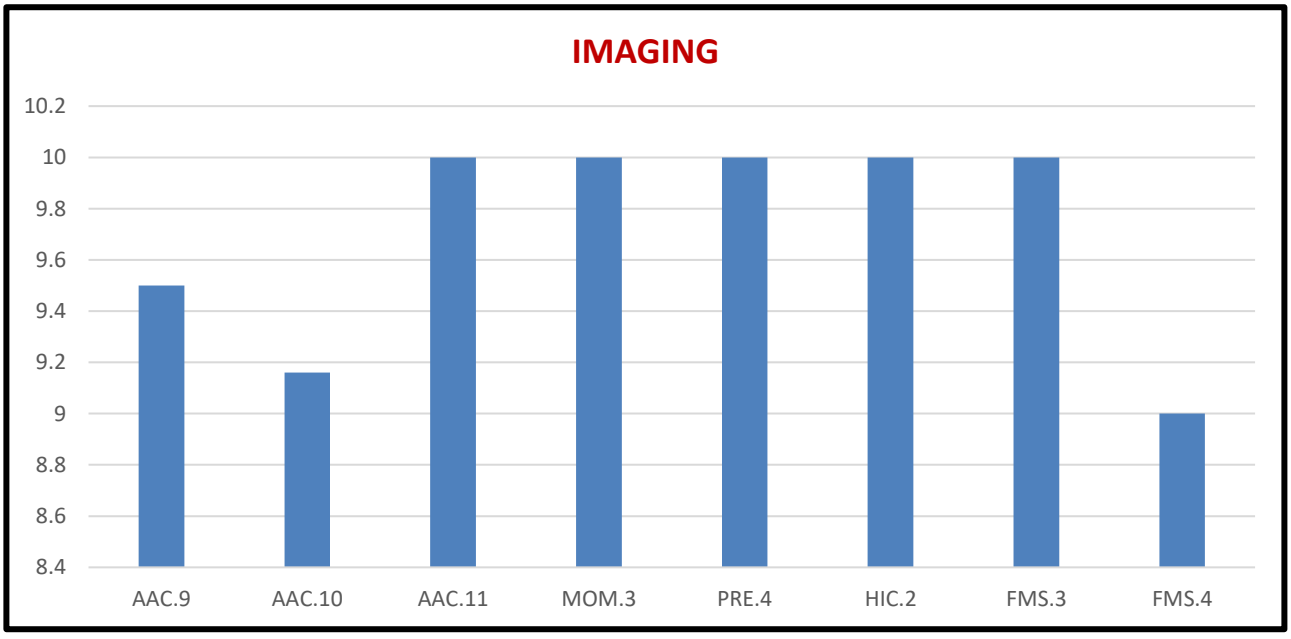


Figure 10:- Score for Imaging department

Table 3:- Laboratory: Haematology/ Biochemistry/ Pathology/ Microbiology.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	AAC.6: Laboratory services are provided as per the scope of services of the organisation.			10
a	Scope of the laboratory services commensurate to the services provided by the organisation.	Availability of laboratory services commensurate with the healthcare services offered.		10
b	The infrastructure (physical and equipment) is adequate to provide the defined scope of services.	Laboratory shall have insufficient space and to meet its defined scope of services.	Hospital has Space constraints.	5
c	The manpower is adequate to provide the defined scope of services.	laboratory personnel commensurate with the work load with sufficient staff for each shift and emergencies.		10
d	Qualified and trained personnel perform, supervise and interpret the investigations.	The staff employed in the lab are suitably qualified and trained to carry out the tests.		10
e	Documented procedures guide ordering of tests, collection, identification, handling, safe transportation, processing and disposal of specimens. *	Has documented procedures for various processes to ensure safety of the specimen.		10
f	Laboratory results are available within a defined time frame. *	Has a defined turnaround time for all tests.		10
g	Critical results are intimated immediately to the personnel concerned. *	Has its biological reference intervals for different tests.		10
h	Results are reported in a standardised manner.	Report includes the name of the organisation, the patient ‘s name, the unique identification number, reference range of the test and the name and signature of the person reporting the test result.		10
i	There is a mechanism to address recall / amendment of reports whenever applicable.	Includes recall for errors due to pre-analytical, analytical and post analytical factors.		10
j	Laboratory tests not available in the organisation are outsourced to organisation(s) based on their quality assurance system.*	Has a documented procedure for outsourcing tests for which it has no facilities.		10

	AAC.7:There is an established laboratory quality assurance programme.			10
a	The laboratory quality assurance programme is documented. *	The organisation has a documented quality assurance programme.		10
b	The programme addresses verification and / or validation of test methods. *	System in place for Verification of an analytical procedure with an acceptable level of performance.		10
c	The programme addresses surveillance of test results. *	Surveillance of laboratory are periodically assessed by the designated individual(s).		10
d	The programme includes periodic calibration and maintenance of all equipment.*	Traceability certificate(s) of all calibration done are documented and maintained.		10
e	The programme includes the documentation of corrective and preventive actions.*	yes		10
	AAC.8:There is an established laboratory safety programme.			10
a	The laboratory safety programme is documented. *	A well-documented laboratory safety manual is available in the lab.		10
b	This programme is aligned with the organisation's safety programme.	Laboratory safety programme is aligned with the safety programme of the organisation.		10
c	Written procedures guide the handling and disposal of infectious and hazardous materials. *	The laboratory staff should follow standard precautions.		10
d	Laboratory personnel are appropriately trained in safe practices.	All the laboratory staff undergo training regarding safe practices in the laboratory.		10
e	Laboratory personnel are provided with appropriate safety equipment / devices.	Adequate safety devices are available in the lab, e.g. PPE, eye wash facilities, dressing materials, disinfectants, fire extinguishers etc.		10
	Secondary			
	PRE.4: A documented procedure for obtaining patient and/or family's consent exists for informed decision making about their care.			**10**

b	General consent for treatment is obtained when the patient enters the organisation.	yes		10
c	Patient and/or his family members are informed of the scope of such general consent.	The organisation has a defined scope of the general consent and INFORMED to the patient and family members.		10
	HIC.8: Biomedical waste (BMW) is handled in an appropriate and safe manner.			10
b	Proper segregation and collection of biomedical waste from all patient-care areas of the hospital is implemented and monitored.	Wastes are segregated and collected in different colour coded bags and containers as per statutory provisions.		10
	FMS.6: The organisation has plans for fire and non-fire emergencies within the facilities.			**9**
a	The organisation has plans and provisions for early detection, abatement and containment of fire, and non-fire emergencies.*	Has a fire plan		10
b	The organisation has a documented safe-exit plan in case of fire and non-fire emergencies.	Fire-exit plan are displayed on floors particularly close to lifts.		10
c	Staff is trained for their role in case of such emergencies.	In case of fire, a designated person is assigned a particular work.		10
d	Mock drills are held at least twice in a year.	Mock drills are conducted once a year for fire and non-fire emergencies.	Should be done twice a year.	5
e	There is a maintenance plan for fire-related equipment & infrastructure. *	The plan addresses inspection, testing, preventive & breakdown maintenance.		10

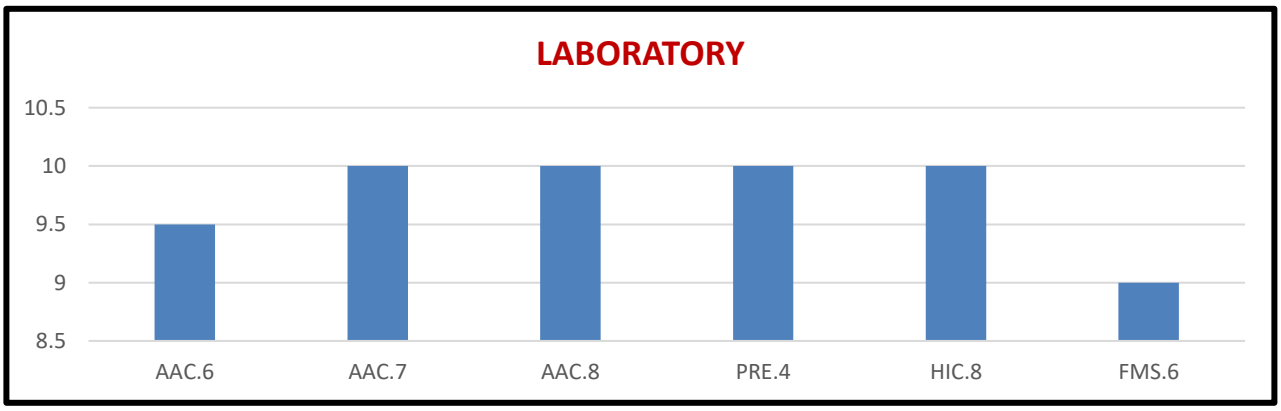


Figure 11:- Score for Laboratory department

Table 4:-Hospital Infection Control (HIC).

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	HIC.1: The organisation has a well-designed, comprehensive and coordinated Hospital Infection Prevention and Control (HIC) programme aimed at reducing/eliminating risks to patients, visitors and providers of care.			9.16
a	The hospital infection prevention and control programme is documented which aims at preventing and reducing the risk of healthcare associated infections in all areas of the hospital.*	The policies and procedures in place towards prevention and control of infection in all areas of the hospital and its monitoring.		10
b	The infection prevention and control programme is a continuous process and updated at least once in a year.	The update is done based on newer literature on infection prevention and outbreak prevention mechanisms, infection trends and outcomes of the audit processes.		10
c	The hospital has a multi-disciplinary infection control committee, which co-ordinates all infection prevention and control activities.*	Has Microbiologist, Physician/Infection control specialist, Surgeon, Nursing Manager (Nursing Supervisor), staffs from CSSD and other support services and the hospital infection control nurse.		5
d	The hospital has an infection control team, which coordinates implementation of all infection prevention and control activities.*	The team is responsible for day-to-day functioning of infection prevention and control programme.		10
e	The hospital has designated infection control officer as part of the infection control team.*	yes		10
f	The hospital has designated infection control nurse(s) as part of the infection control team.*	yes		10
	HIC.2: The organisation implements the policies and procedures laid down in the Infection Control Manual in all areas of the hospital.			9.58
a	The organisation identifies the various high-risk areas and procedures and implements policies and/or procedures to prevent infection in these areas. *	Infection control program includes all areas of the hospital		10

		and the manual identify the high-risk areas of the hospital		
b	The organisation adheres to standard precautions at all times.*	yes	Continuous monitoring	5
c	The organisation adheres to hand-hygiene guidelines. *	yes		10
d	The organisation adheres to transmission-based precautions at all times.*	yes		10
e	The organisation adheres to safe injection and infusion practices.*	One needle, one syringe, one time as recommended by CDC.		10
f	The organisation adheres to cleaning, disinfection and sterilization practices.*	yes		10
g	An appropriate antibiotic policy is established and documented *	yes		10
h	The organisation implements the antibiotic policy and monitors rational use of antimicrobial agents.	yes		10
i	The organisation adheres to laundry and linen management processes. *	yes		10
j	The organisation adheres to kitchen sanitation and food-handling issues.*	yes		10
k	The organisation has appropriate engineering controls to prevent infections.	yes		10
l	The organisation adheres to housekeeping procedures.*	yes		10
	HIC.3: The organisation performs surveillance activities to capture and monitor infection prevention and control data.			8.88
a	Surveillance activities are appropriately directed towards the identified high-risk areas and procedures.	Has evidence of conducting periodic surveillance activities in its identified high-risk areas and procedures.		10
b	A collection of surveillance data is an on-going process.	It has a process in place to collect surveillance data and to ensure that it is able to capture all such data.	Continuous monitoring	5
c	Verification of data is done on a regular basis by the infection control team.	The data collected be authenticated by the infection control team to validate the process.	Continuous monitoring	5
d	The scope of surveillance activities incorporates tracking and analysing of infection risks, rates and trends.	Being done at regular intervals & takes suitable steps based on the analysis.		10

e	Surveillance activities include monitoring the compliance with hand-hygiene guidelines.	Being done every month.		10
f	Surveillance activities include mechanisms to capture the occurrence of epidemiological significant diseases and multi-drug-resistant organisms, and highly virulent infections.	Closely monitors the occurrence of multidrug resistant organisms (MDROs)		10
g	Surveillance activities include monitoring the effectiveness of housekeeping services.	Done on a regular basis.		10
h	Appropriate feedback regarding healthcare associated infection(HAIs) rates is provided on a regular basis to appropriate personnel.	The feedback includes the rates, trends and opportunities for improvement including data from other surveillance activities.		10
i	In cases of notifiable diseases, information (in relevant format) is sent to appropriate authorities.	Identifies all notifiable diseases after taking into consideration the local/state/national laws, rules, regulations and notifications.		10
	HIC.4: The organisation takes actions to prevent and control Healthcare Associated Infections (HAI) in patients.			10
a	The organisation takes action to prevent catheter associated urinary tract Infections.	As per guidelines.		10
b	The organisation takes action to prevent Ventilator Associated Pneumonia.	As per guidelines.		10
c	The organisation takes action to prevent catheter linked blood stream infections.	As per guidelines.		10
d	The organisation takes action to prevent surgical site infections.	As per guidelines.		10
	HIC.5: The organisation provides adequate and appropriate resources for prevention and control of Healthcare Associated Infections (HAI).			10
a	Adequate and appropriate personal protective equipment, soaps, and disinfectants are available and used correctly.	Available at the point of use and maintains an adequate inventory.		10
b	Adequate and appropriate facilities for hand hygiene in all patient-care areas are accessible to healthcare providers.	Necessary infrastructure Available.		10
c	Isolation/barrier nursing facilities are available.	Necessary resources for isolation/barrier nursing are available.		10

d	Appropriate pre- and post-exposure prophylaxis is provided to all staff members concerned.*	Infection Control Nurse maintains documentation of all occupational injuries and pre- and post-exposure prophylaxis records.		10
	HIC.6: The organisation identifies and takes appropriate action to control outbreaks of infections.			8.75
a	Organisation has a documented procedure for identifying an outbreak.*	The organisation have baseline rates to define as to what constitutes an outbreak.	Proactive approach.	5
b	Organisation has a documented procedure for handling such outbreaks.*	Investigates outbreaks according to the laydown procedures.		10
c	This procedure is implemented during outbreaks.	In place to identify the outbreak.		10
d	After the outbreak is over appropriate corrective actions are taken to prevent recurrence.	Basic procedures in place to prevent recurrence.		10
	HIC.8: Biomedical waste (BMW) is handled in an appropriate and safe manner.			9
a	The organisation adheres to statutory provisions with regard to biomedical waste.	Authorized by the prescribed authority for management and handling of BMW.	Latest BMW rules be implemented	5
b	Proper segregation and collection of biomedical waste from all patient-care areas of the hospital is implemented and monitored.	Wastes are segregated and collected in different colour coded bags and containers as per statutory provisions.		10
c	The organisation ensures that biomedical waste is stored and transported to the site of treatment and disposal in properly covered vehicles within stipulated time limits in a secure manner.	The waste is transported to the pre-defined site at definite time intervals as per biomedical waste management rules in a safe manner.		10
d	The biomedical waste treatment facility is managed as per statutory provisions (if in-house) or outsourced to authorized contractor(s).	Outsourced it to a central facility.		10
e	Appropriate personal protective measures are used by all categories of staff handling biomedical waste.	Staff handling bio-medical waste are provided with personal protective equipment (PPE).		10
	HIC.9: The infection control programme is supported by the management and includes training of staff.			10

a	The management makes available resources required for the infection control programme.	Resources required by the personnel are available.		10
b	The organisation earmarks adequate funds from its annual budget in this regard.	There is separate budget demarcated for HIC activity.		10
c	The organisation conducts induction training for all staff.	Yes, has a well-documented evidence of induction training.		10
d	The organisation conducts appropriate "in-service" training sessions for all staff at least once in a year.	yes		10

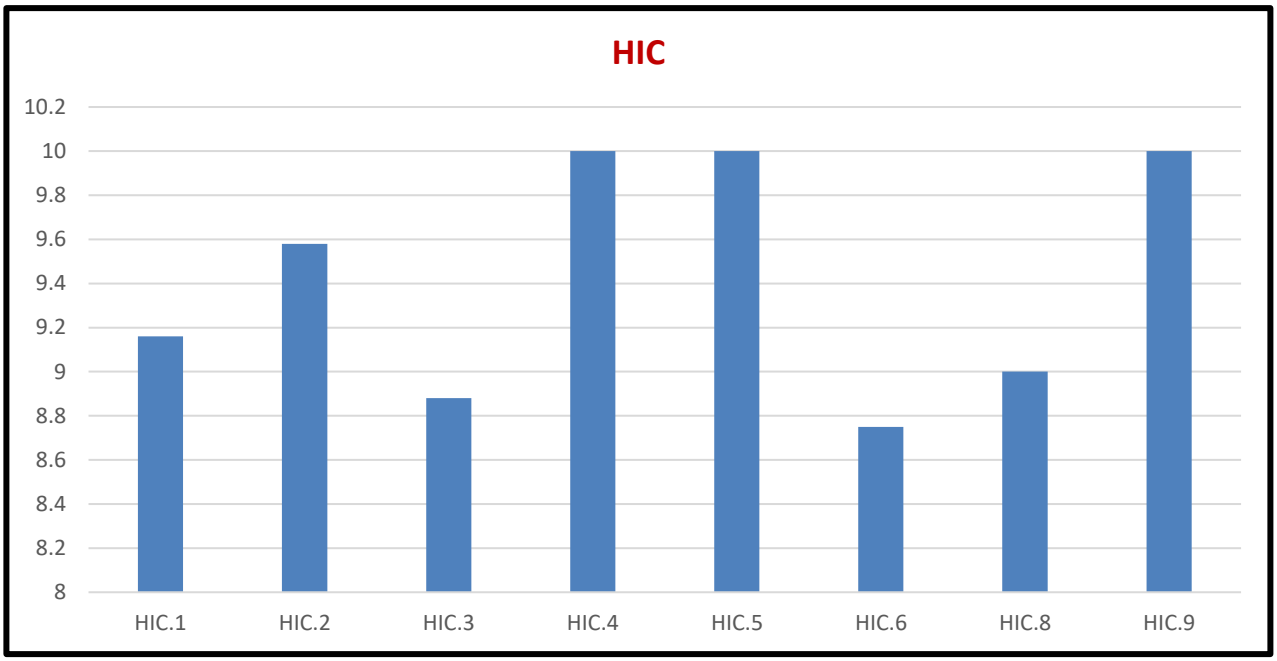


Figure 12:- Score for Hospital Infection Control

ASSESSMENT CHECKLIST AS PER NABH STANDARDS : NON-CLINICAL DEPARTMENT

Table 5 :-Medication Management: Pharmacy and Pharmacy Store.

Primary		Observation	Remarks	Scores (0/ 5/ 10)
	MOM.1: Documented policies and procedures guide the organisation of pharmacy services and usage of medication.			10
a	There is a documented policy and procedure for pharmacy services and medication usage.*	Policies and procedures in place for procurement, storage, formulary, prescription, dispensing, administration, monitoring and use of medications.		10
b	Policies and procedures comply with the applicable laws and regulations.	Complied.		10
d	There is a procedure to obtain medication when the pharmacy is closed.*	Organisation has a 24-hour pharmacy.		10
	MOM.2. There is a hospital formulary.			10
a	A list of medications appropriate for the patients and as per the scope of the organisation's clinical services is developed collaboratively by the multidisciplinary committee.	Formulary prepared by multidisciplinary committee.		10
b	The list is reviewed and updated collaboratively by the multidisciplinary committee at least annually.	Being reviewed.		10
c	The formulary is available for clinicians to refer and adhere to.	The formulary is made available to all treating doctors of the organisation.		10
d	There is a defined process for acquisition of these medications*	Procured centrally by Gurgaon unit.		10
e	There is a process to obtain medications not listed in the formulary. *	Procedure in place.		10
	MOM.3: Documented policies and procedures guide the storage of medication.			10
a	Documented policies and procedures exist for storage of medication. *	Issues pertaining to temperature (refrigeration), light, ventilation, preventing entry of pests/rodents and vermin in place.		10
b	Medications are stored in a clean, safe and secure environment; and incorporating manufacturer's recommendation(s).	Storage requirements of the drug as specified by the manufacturer are adhered to.		10
c	Sound inventory control practices guide storage of the medications in all areas throughout the organisation.	Follows ABC, VED, FSN, FIFO, lead time analysis.		10

d	Look-alike and Sound-alike medications are identified and stored physically apart from each other.*	These are identified periodically and the LASA list are made available in all units where drugs are stored.		10
e	The list of emergency medications is defined and is stored in a uniform manner.*	This list is prepared in consonance with good clinical practices and documented.		10
f	Emergency medications are available all the time.	Adequate quantity of emergency medicines is stocked always.		10
g	Emergency medications are replenished in a timely manner when used.	An inventory check is done daily to ensure this.		10
	MOM.4: Documented policies and procedures guide the safe and rational prescription of medications.			9.61
a	Documented policies and procedures exist for prescription of medications.*	yes		10
b	These incorporate inclusion of good practices/guidelines for rational prescription of medications.	Yes, ensured clinicians are trained /sensitised on the rational prescription of medications.		10
c	The organisation determines the minimum requirements of a prescription.*	Prescriptions generated within the organisation (IPD, OPD and emergency) adhere to national/ international guidelines and regulatory bodies.		10
d	Known drug allergies are ascertained before prescribing.	Good practice to document drug allergies in a prominent manner in the medical record, both in OP and IP.		10
e	The organisation determines who can write orders.*	Done by a doctor who holds a MBBS qualification.		10
f	Orders are written in a uniform location in the medical records which also reflects patient's name and unique identification number.	All the orders for medicines are recorded on a uniform location of the case sheet.		10
g	Medication orders are clear, legible, dated, timed, named and signed.	Efforts are made that all hand-written prescriptions are written in Capital letters.		10
h	Medication orders contain the name of the medicine, route of administration, dose to be administered and frequency/time of administration.	Medicine having two or more drugs (tablet/capsule / injection) the dose of all the individual drugs are written.		10
i	Documented policy and procedure on verbal orders is implemented.*	Policy in place to address who can give verbal orders and how these orders will be validated.		10
j	The organisation defines a list of high-risk medication(s).*	Has defined High risk /high alert medications for		10

		adverse outcomes and catastrophic harm whenever there is an error.		
k	Audit of medication orders/prescription is carried out to check for safe and rational prescription of medications.	Done at least once a month using a representative sample size.		10
l	Reconciliation of medications occur at transition points of patient care.	Medication reconciliation is ensured and patient receives up to date in relation to past clinical conditions and present Care plan.		10
m	Corrective and/or preventive action(s) is taken based on the analysis, where appropriate.	yes	Continuous process.	5
	MOM.8: Near misses, medication errors and adverse drug events are reported and analysed.			9
a	Documented procedure exists to capture near miss, medication error and adverse drug event.*	Process in place for identifying, documenting, reporting, analysing and acting.		10
b	Near miss, medication error and adverse drug event are defined.*	In consonance with best practices.		10
c	These are reported within a specified time frame. *	Timeframe defined for reporting once any of this has occurred.		10
d	They are collected and analysed.	The analysis is completed in a defined time frame.		10
e	Corrective and/or preventive action(s) are taken based on the analysis where appropriate.	yes	Continuous process.	5
	MOM.9: Documented procedures guide the use of narcotic drugs and psychotropic substances.			10
a	Documented procedures guide the use of narcotic drugs and psychotropic substances which are in consonance with local and national regulations.*	This is in context of Narcotic Drugs and Psychotropic Substances Act.		10
b	These drugs are stored in a secure manner.	Stored under lock and key with a designated person being responsible.		10
c	A proper record is kept of the usage, administration and disposal of these drugs.	A very strict inventory control for these drugs.		10
d	These drugs are handled by appropriate personnel in accordance with the documented procedure.	yes		10
	Secondary			10
	MOM.1: Documented policies and procedures guide the organisation of pharmacy services and usage of medication.			10

c	A multidisciplinary committee guides the formulation and implementation of these policies and procedures.*	Committee meets once in three months.		10
	PRE.5: Patient and families have a right to information and education about their healthcare needs.			10
a	Patient and/or family are educated about the safe and effective use of medication and the potential side effects of the medication, when appropriate.	A list of such drugs regarding the importance of taking a drug at a specific time.		10
b	Patient and/or family are educated about food-drug interaction	Patient and family are educated about their diet during medication.		10
c	Patient and/or family are educated about diet and nutrition.	yes		10
d	Patient and/or family are educated about immunisations.	yes		10
	Patient interview on safe and effective use of medicines and food-drug interactions			

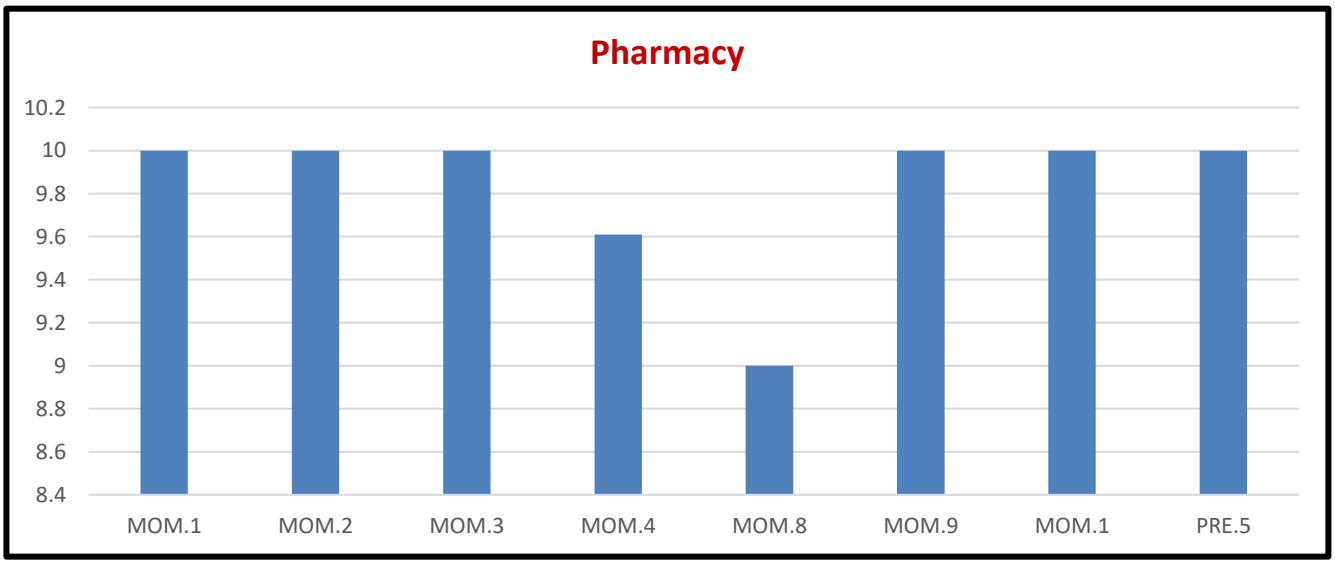


Figure 13:- Score for Pharmacy Department

Table 6 :- Quality Management.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	CQI.1: There is a structured quality improvement and continuous monitoring programme in the organisation.			10
a	The quality improvement programme is developed, implemented and maintained by a multi-disciplinary committee.*	This committee have representation from management, various clinical and support departments of the organisation.		10
b	The quality improvement programme is documented which is comprehensive and covers all the major elements related to quality assurance.*	The document incorporates the mission, vision, quality policy, quality objectives, service standards, data collection, important indicators as identified, frequency of mock drills, audit schedules, committees and their terms of reference, review policy and implementation of corrective and preventive action.		10
c	There is a designated individual for coordinating and implementing the quality improvement programme.*	Yes. Has a Team leader heading the Quality.		10
d	The quality improvement programme promotes and demonstrates use of innovations to improve process efficiency and effectiveness.	The quality improvement program encourages the use of novel strategies to improve both clinical and managerial processes.		10
e	The designated programme is communicated and coordinated amongst all the staff of the organisation through appropriate training mechanism.	Staff are made aware of the structure of the quality assurance program in the hospital.		10
f	The quality improvement programme identifies opportunities for improvement based on review at pre-defined intervals.*	The quality improvement programme is a dynamic process.		10
g	The quality improvement programme is a continuous process and updated at least once in a year.	The inputs for the updates could be based on audits, feedback mechanisms, the review carried out by the quality improvement committee, etc.		10
h	Audits are conducted at regular intervals as a means of continuous monitoring.*	Choice and frequency of audits are defined for priority areas in the organisation and for areas		10

		of concern as identified by trends in indicators, identified risk, etc.		
i	There is an established process in the organisation to monitor and improve quality of nursing care.*	The organisation has identified key performance indicators that reflect excellence in nursing care.		10
	CQI.2: There is a structured patient-safety programme in the organisation.			10
a	The patient-safety programme is developed, implemented and maintained by a multi-disciplinary committee.	Committee has representation from management, various clinical and support departments of the organisation.		10
b	The patient safety programme is documented.*	Documented as a manual.		10
c	The patient safety programme is comprehensive and covers all the major elements related to patient safety and risk management.	Risk management include risk identification and risk mitigation in a structured manner.		10
d	The scope of the programme is defined to include adverse events ranging from “no harm” to “sentinel events”.	Has clearly defined what constitutes no harm and sentinel events with regards to the patient.		10
e	There is a designated individual for coordinating and implementing the patient-safety programme.	Safety officer having a good knowledge of both patient and general safety.		10
f	The designated programme is communicated and coordinated amongst all the staff of the organisation through appropriate training mechanism.	Through regular training programme or printed materials.		10
g	The patient-safety programme identifies opportunities for improvement based on review at pre-defined intervals.	Patient safety is reviewed at regular pre-defined intervals.		10
h	The patient-safety programme is a continuous process and updated at least once in a year.	The updates are based on findings of audits.		10
i	The organisation adapts and implements national/international patient-safety goals/solutions.	Organisation adheres to the current national patient-safety goals or WHO patient-safety solutions.		10
	CQI.6: The quality improvement programme is supported by the management			10
a	The leaders at all levels in the organisation are aware of the intent of the quality improvement program and the approach to its implementation.	The organisation and departmental leaders are aware of the quality improvement program, its intent and applicability to the respective		10

		areas and how it contributes to the organisation as a whole.		
b	The management makes available adequate resources required for quality improvement programme.	This includes the men, material, machine, money and method.		10
c	Organisation earmarks adequate funds from its annual budget in this regard.	Appropriate fund allocation done by the organisation for the smooth functioning of the programme.		10
d	The management identifies organisational performance improvement targets.	The management has identified the organisation and department level quality objectives, set targets, monitor.		10
	CQI.7: There is an established system for clinical audit.			10
a	Medical and nursing staff participates in this system.	The organisation has identified personnel mix of clinicians, administrators and nurses.		10
b	The parameters to be audited are defined by the organisation.	Identified and worked on audits in identified priority patient care aspects. Done using predefined parameters so that there is no bias.		10
c	Patient and staff anonymity is maintained.	Names of the patients and the hospital staff figured in the audit documents are not disclosed.		10
d	All audits are documented.	Checklist with the predefined parameters and the audit findings are recorded on this sheet.		10
e	Remedial measures are implemented.	All remedial measures are documented and implemented. improvements are recorded to complete the audit cycle.		10
	CQI.8: Incidents are collected and analysed to ensure continual quality improvement.			8.75
a	The organisation has an incident reporting system.*	yes		10
b	The organisation has established processes for analysis of incidents	yes		10
c	Corrective and preventive actions are taken based on the findings of such analysis.	To continually improve the quality of patient-care services.	Continuous improvement.	5
d	The organisation shall have a process for informing various stakeholders in case of a near miss / adverse event.	Based on the nature of the near miss or adverse event the organisation informs the stakeholders initiating the corrective and preventive action.		10

	CQI .9 Sentinel events are intensively analysed.			10
a	The organisation has defined sentinel events. *	The list of the identified and relevant sentinel events are documented		10
b	The organisation has established processes for intense analysis of such events.	Reporting of such events done on standardised incident report forms.		10
c	Sentinel events are intensively analysed when they occur.	Root-cause analysis of all such events are carried out by a multi-disciplinary committee		10
d	Corrective and preventive actions are taken based on the findings of such analysis.	The findings and recommendations after the analysis are communicated to all personnel concerned to correct the systems and processes to prevent recurrences.		10

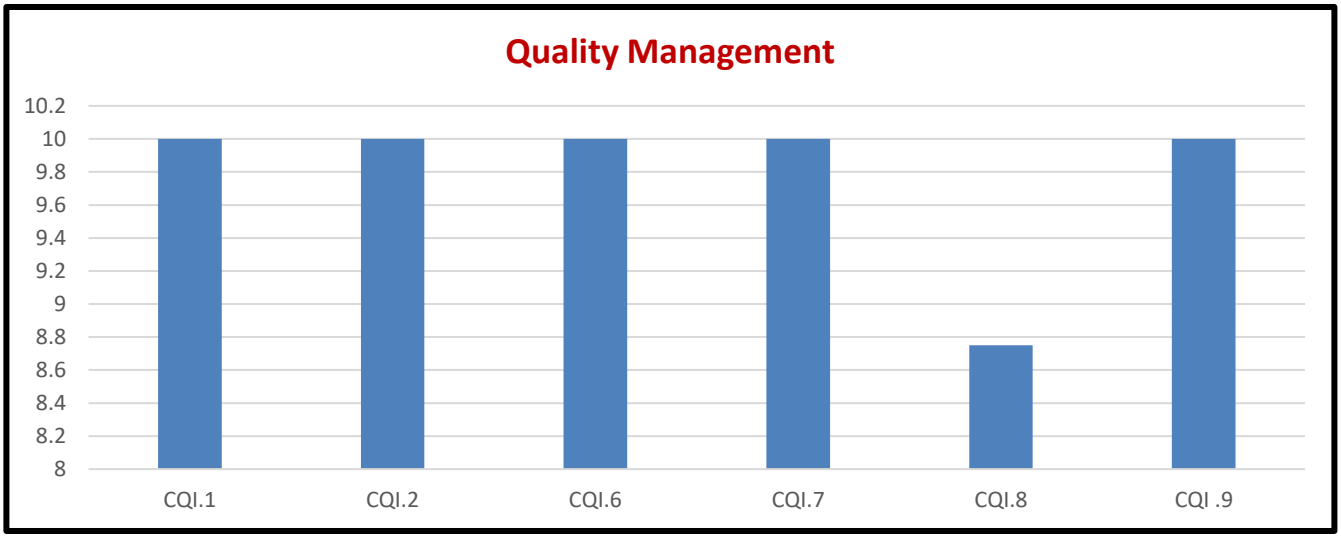


Figure 14:- Score for Quality Management

Table 7 :- Medical Record Department (MRD).

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	IMS.2. The organisation has processes in place for effective control and management of data.			10
a	The organisation has an effective process for document control.*	All documents including forms, formats, policies and procedures are current and updated.		10
b	Formats for data collection are standardized.	MIS/HIS data are collected in standardized format.		10
c	Necessary resources are available for analysing data.	makes available men, material, space and budget.		10
d	Documented procedures are laid down for timely and accurate dissemination of data.*	A timely feedback is given to relevant stakeholders after data generation and analysis.		10
e	Documented procedures exist for storing and retrieving data.*	Data management policy and ensured adequate safeguards for protection of data, wherever physical or electronic data is stored.		10
f	Appropriate clinical and managerial staff participates in selecting, integrating and using data.	By a multi-disciplinary committee for the appropriate selection of indicators, measurement of trends and initiating action.		10
	IMS.3. The organisation has a complete and accurate medical record for every patient.			10
a	Every medical record has a unique identifier.	Every sheet in the medical record have unique identifier.		10
b	Organisation policy identifies those authorized to make entries in medical record.	Have a written policy authorizing to make entries and the content of entries.		10
c	Entry in the medical record is named, signed, dated and timed.	All entries are documented		10
d	The author of the entry can be identified.	By writing the full name and by mentioning the employee code number & stamp.		10
e	The contents of medical record are identified and documented.*	The organisation identifies documents forming part of the medical records.		10
f	The organisation has a documented policy for usage of abbreviations and develops a list based on accepted practices.	A standardized list of approved abbreviations shall		10

		be used throughout the organisation.		
g	The record provides a complete, up-to-date and chronological account of patient care.	Every medical record has all the identified sheets filed in the proper order.		10
h	Provision is made for 24-hour availability of the patient's record to healthcare providers to ensure continuity of care.	System in place by which authorised personnel can open the MRD and retrieve the record.		10
	IMS.4. The medical record reflects continuity of care.			10
a	The medical record contains information regarding reasons for admission, diagnosis and care plan.	The final diagnosis is documented by the treating doctor in all records.		10
b	The medical record contains the results of tests carried out and the care provided.	Medical record partially reflects any delay in tests and treatment planned or provided for the patient.	Special attention.	5
c	Operative and other procedures performed are incorporated in the medical record.	Includes name and details of the operative and other procedures performed.		10
d	When patient is transferred to another hospital, the medical record contains the date of transfer, the reason for the transfer and the name of the receiving hospital.	Clinical condition of the patient is mentioned before transfer is affected.		10
e	The medical record contains a copy of the discharge summary duly signed by appropriate and qualified personnel.	Yes		10
f	In case of death, the medical record contains a copy of the cause of death certificate.	The organisation provides the death certificate as per the International Form of Medical Certificate of Cause of Death (WHO).		10
h	Care providers have access to current and past medical record.	The organisation provides access to medical records to designated healthcare providers.		10
	IMS.5. Documented policies and procedures are in place for maintaining confidentiality, integrity and security of records, data and information.			10
a	Documented policies and procedures exist for maintaining confidentiality, security and integrity of records, data and information.*	The organisation controls the accessibility to the MRD and to its Hospital Information System.		10
b	Documented policies and procedures are in consonance with the applicable laws.	yes		10
c	The policies and procedure (s) incorporate safeguarding of data/ record against loss, destruction and tampering.	For physical, records the organisation ensured adequate pest and rodent control measures.		10

d	The organisation has an effective process of monitoring compliance of the laid down policy and procedure.	The organisation carries out regular audits/rounds to check compliance with policies.		10
e	The organisation uses developments in appropriate technology for improving confidentiality, integrity and security.	The organisation reviews and updates its technological features to improve confidentiality, integrity and security of information.		10
f	Privileged health information is used for the purposes identified or as required by law and not disclosed without the patient's authorization.	The organisation defines the procedure for privileged communication.		10
g	A documented procedure exists on how to respond to patients/physicians and other public agencies requests for access to information in the medical record in accordance with the local and national law.*	Information in accordance with the Code of Medical Ethics 2002 are kept in mind.		10
	IMS.6. Documented policies and procedures exist for retention time of records, data and information.			10
a	Documented policies and procedures are in place on retaining the patient's clinical records, data and information.*	The organisation has defined retention period for each category of medical records: Out-patient, in-patient and MLC.		10
b	The policies and procedures are in consonance with the local and national laws and regulations.	yes		10
c	The retention process provides expected confidentiality and security.	yes		10
d	The destruction of medical records, data and information is in accordance with the laid-down policy.	Yes, after taking approval of the concerned authority		10
	IMS.7. The organisation regularly carries out review of medical records.			9.28
a	The medical records are reviewed periodically.	yes		10
b	The review uses a representative sample based on statistical principles.	Review is based on total discharges including deaths, total indoor patients.		10
c	The review is conducted by identified individuals.	yes		10
d	The review focuses on the timeliness, legibility and completeness of the medical records.	yes		10
e	The review process includes records of both active and discharged patients.	yes		10
f	The review points out and documents any deficiencies in records.	On missing final diagnosis, absence of OT notes in an operated patient,		10

g	Appropriate corrective and preventive measures are undertaken within a defined period of time and are documented.	To continually improve the quality of patient-care services.	Continuous improvement.	5
	AAC.14: Organisation defines the content of the discharge summary.			10
a	Discharge summary is provided to the patients at the time of discharge.	The discharge summary is signed by the treating doctor.		10
b	Discharge summary contains the patient's name, unique identification number, date of admission and date of discharge.	yes		10
c	Discharge summary contains the reasons for admission, significant findings and diagnosis and the patient's condition at the time of discharge.	yes		10
d	Discharge summary contains information regarding investigation results, any procedure performed, medication administered and other treatment given.	yes		10
e	Discharge summary contains follow-up advice, medication and other instructions in an understandable manner.	Incorporate preventive aspects as follow-up advice		10
f	Discharge summary incorporates instructions about when and how to obtain urgent care.	The organisation outlines conditions regarding when' to obtain urgent care.		10
g	In case of death, the summary of the case also includes the cause of death.	In case the cause of death is not clear and a post mortem is being performed (Eg MLC), the same are documented.		10
	COP.7:Documented procedures guide the performance of various procedures.			10
c	Documented procedures exist to prevent adverse events like a wrong site, wrong patient and wrong procedure. *	Method as unique hospital ID.		10
	COP.14: Documented policies and procedures guide the administration of anaesthesia.			10
e	Informed consent for administration of anaesthesia is obtained by the anesthesiologist.	Patient or, family are educated on the risks, benefits, and alternatives of anaesthesia by the anaesthesiologist.		10
	PRE.4: A documented procedure for obtaining patient and/or family's consent exists for informed decision making about their care.			10
b	General consent for treatment is obtained when the patient enters the organisation.	yes		10
d	Informed consent includes information regarding the procedure, it's risks, benefits, alternatives and as to who will	The consent has the name of the doctor performing the procedure.		10

	perform the procedure in a language that they can understand.			
	AAC.4: Patients cared for by the organisation undergo an established initial assessment.			10
i	The care plan is countersigned by the clinician in-charge of the patient within 24 hours.	The treatment of the patient could be initiated by a junior doctor and countersigned by the treating doctor within 24 hours.		10
	AAC.13:The organisation has a documented discharge process.			10
b	Documented procedures exist for coordination of various departments and agencies involved in the discharge process (including medico-legal and absconded cases). *	The discharge procedures are documented to ensure coordination and discharge papers are completed well within time.		10
c	Documented policies and procedures are in place for patients leaving against medical advice and patients being discharged on request. *	Has a documented policy for such cases.		10
d	A discharge summary is given to all the patients leaving the organisation (including patients leaving against medical advice and on request).	The organisation hands over the discharge summary and reports to the patient/ attendant in all cases and a copy is retained in the medical record.		10
	PRE.3: The patient and/or family members are educated to make informed decisions and are involved in the care planning and delivery process.			10
a	The patient and/or family members are explained about the proposed care including the risks, alternatives and benefits.	The proposed care is discussed by the attending doctor with the patient and/or family members.		10
	COP.12: Documented policies and procedures guide paediatric services.			10
f	Patient assessment includes detailed nutritional, growth, developmental and immunisation assessment.	well documented.		10
h	The children's family members are educated about nutrition, immunisation and safe parenting and this is documented.*	Includes growth chart, immunisation chart.		10
	COP.10: Documented policies and procedures guide the care of vulnerable patients.			10
a	Policies and procedures are documented and are in accordance with the prevailing	The organisation identifies the vulnerable patients and		10

	laws and the national and international guidelines. *	assessed for risk of falls and the same documented.		
b	Care is organised and delivered in accordance with the policies and procedures.	Standard operating procedures (SOPs) for delivery of care in place.		10
	Secondary			
	HIC.3: The organisation performs surveillance activities to capture and monitor infection prevention and control data.			10
i	In cases of notifiable diseases, information (in relevant format) is sent to appropriate authorities.	The organisation identifies all notifiable diseases after taking into consideration the local/state/national laws, rules, regulations.		10

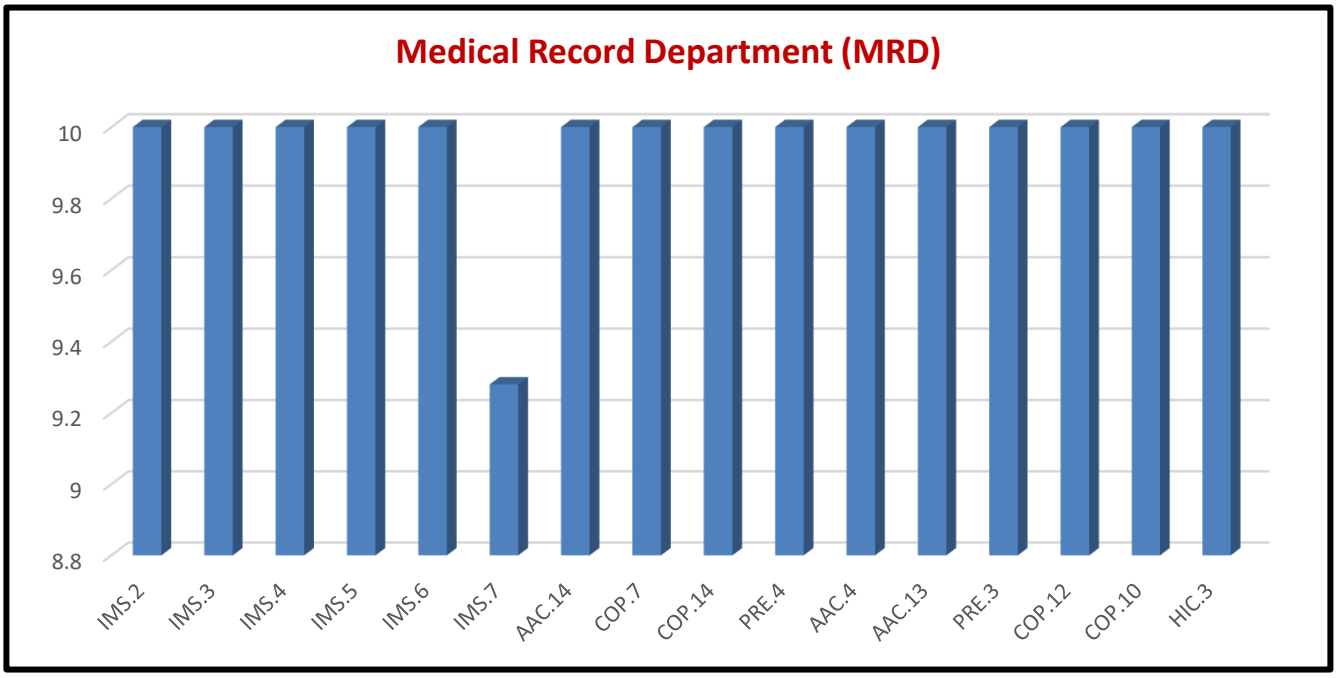


Figure 15:- Score for Medical Record Department (MRD)

Table 8 :- Front office: Registration, Admission and Billing counters.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	AAC.1: The organisation defines and displays the healthcare services that it provides.			10
a	The healthcare services being provided are clearly defined and are in consonance with the needs of the community.	The services provided are clearly defined by senior management and are in consonance with the requirements of the community.		10
b	Each defined service should have appropriate diagnostics and treatment facilities with suitably qualified personnel who provide out-patient, in-patient and emergency cover.	The organisation ensured that before starting a service, suitably qualified medical and nursing staff are available to take care of patient ‘s clinical needs.		10
c	The defined healthcare services are prominently displayed.	The services are displayed prominently in anarea visible to all patients entering the organisation.		10
d	The staff are oriented to these services.	All the staff in the hospital in the reception/registration, OPD, IPD are oriented through regular training programme.		10
	AAC.2: The organisation has a well-defined registration and admission process.			10
a	Documented policies and procedures are used for registering and admitting patients. *	Organisation prepared document(s) detailing the policies and procedures for registration and admission of patients.		10
b	The documented procedures address out-patients, in-patients and emergency patients. *	Separately addressed.		10
c	A unique identification number is generated at the end of registration.	The organisation ensures that every patient gets a unique number which is generated at the end of registration of the first interaction.		10
d	Patients are accepted only if the organisation can provide the required service.	The staff handling admission and registration are aware of the services that the organisation can provide.		10
e	The documented policies and procedures also address managing patients during non-availability of beds. *	The organisation is aware of the availability of alternate organisations where the patients may be directed in case of non-availability of		10

		beds.		
f	Access to the healthcare services in the organisation is prioritised according to the clinical needs of the patient.	Patients with clinical problem which warrant an earlier response are identified and prioritised in all care settings.		10
g	The staff are aware of these processes.	All the staff handling these activities should be oriented to the applicable policies and procedures.		10
	PRE.4: A documented procedure for obtaining patient and/or family's consent exists for informed decision making about their care.			10
b	General consent for treatment is obtained when the patient enters the organisation.	yes		10
c	Patient and/or his family members are informed of the scope of such general consent.	The organisation defines as to what is the scope of the general consent and the same is communicated to the patient and/or his family members.		10
	PRE.6: Patients and families have a right to information on expected costs.			10
a	There is a uniform pricing policy in a given setting (out-patient and ward category).	Billing policy which defines the charges are levied for various activities.		10
b	The relevant tariff list is available to patients.	There is an updated tariff list and available for reviewing to patients when required.		10
c	The patient and/or family members are explained about the expected costs.	Patients are given an estimate of the expenses on account of the treatment.		10
	ROM.4: The organisation is managed by the leaders in an ethical manner.			10
a	The leaders make public the vision, mission and values of the organisation.	Done by displaying the same prominently.		10
	Secondary			
	COP.10: Documented policies and procedures guide the care of vulnerable patients.			10
b	Care is organised and delivered in accordance with the policies and procedures.	Organisation has standard operating procedures (SOPs) for delivery of care.		10
c	The organisation provides for a safe and secure environment for the vulnerable group.	The organisation provides proper environment taking into account the requirement of the vulnerable group.		10
d	A documented procedure exists for obtaining informed consent from the appropriate legal representative. *	The informed consent for this group of people should be		10

		obtained from their family or legal representative.		
e	Staff are trained to care for this vulnerable group.	All staff involved in the care of this group are adequately trained in identifying and meeting their needs.		10
	COP.11: Documented policies and procedures guide obstetric care.			10
b	The organisation defines and displays whether high-risk obstetric cases can be cared for or not.	Assessment of these patients including nutrition, immunisations and education are done.		10
c	Persons caring for high-risk obstetric cases are competent.	By doctors and nursing staff as well.		10
	COP.12: Documented policies and procedures guide paediatric services.			10
b	The organisation defines and displays the scope of its paediatric services.	The scope shall include various paediatric sub specialities and special clinics.		10
	PRE.2: Patient and family rights support individual beliefs, values and involve the patient and family in decision making processes.			10
h	Patient and family rights include right to complain and information on how to voice a complaint	The displayed patient rights should include the right to make a complaint.		10
i	Patient and family rights include information on the expected cost of the treatment.	yes		10
	PRE.7: The organisation has a mechanism to capture patient's feedback and redressal of complaints.			9
a	The organisation has a mechanism to capture feedbacks from patients which includes patient satisfaction and patient's experience.	Patient experience goes beyond patient satisfaction and making patient happy.		10
b	The organisation has a documented complaint redressal procedure.*	This incorporates the mechanism for lodging complaints, method of compiling them, analysing complaints including the time frame, the person(s) responsible and documents the action taken.		10
c	Patient and/or family members are made aware of the procedure for giving feedback and /or lodging complaints.	By display or providing written information.		10
d	All feedback and complaints are reviewed and/or analysed within a defined time frame.	The entire process is documented and also informed regarding the outcome.		10

e	Corrective and/or preventive action(s) are taken based on the analysis where appropriate.	To continually improve the quality of patient-care services.	Continuous improvement.	5
	FMS.2: The organisation's environment and facilities operate in a planned manner to ensure safety of patients, their families, staff and visitors and promotes environment friendly measures.			10
c	There is internal and external sign postings in the organisation in a language understood by patient, families and community.	Signage's are displayed in bilingual which guides the patients and visitors.		10

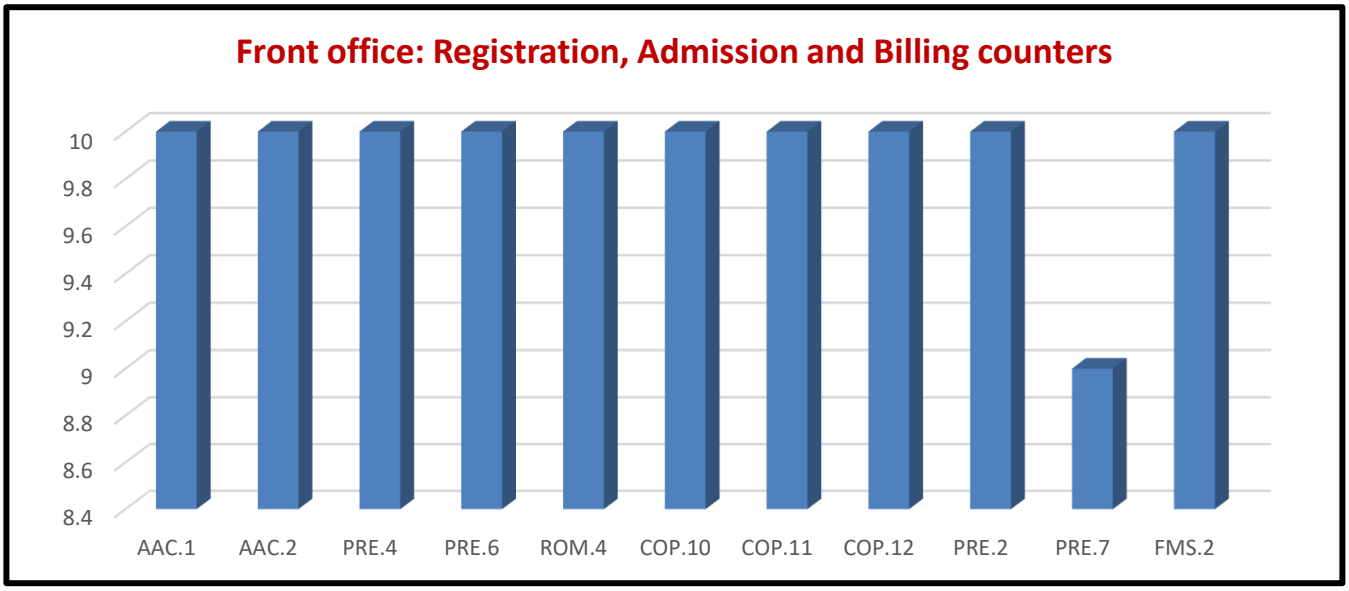


Figure 16:- Score for Front office: Registration, Admission and Billing counters

Table 9 :- Biomedical Equipment Management: Equipment, Medical Gases, Vacuum System etc..

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	FMS.4: The organisation has a programme for bio-medical equipment management.			10
a	The organisation plans for equipment in accordance with its services and strategic plan.	The equipment is appropriate to its scope of services.		10
b	Equipment are selected, rented, updated or upgraded by a collaborative process.	During equipment selection there is involvement of end-user, management, finance, engineering and biomedical departments.		10
c	Equipment are inventoried and proper logs are maintained as required.	A unique identifier is provided for each equipment.		10
d	Qualified and trained personnel operate and maintain the medical equipment.	The operator of the medical equipment is trained to use medical equipment in safe and effective manner.		10
e	Equipment are periodically inspected and calibrated for their proper functioning.	The organisation has weekly/monthly/annual schedules of inspection and calibration of equipment, which involve measurement, in an appropriate manner.		10
f	There is a documented operational and maintenance (preventive and breakdown) plan for equipment.*	The operator is trained in handling the equipment. The operational plan assist the operator in operating the equipment on a daily basis.		10
g	There is a documented procedure for equipment replacement and disposal.*	The organisation has plan for this keeping in mind the strategic plans, upgrade/ update path and the equipment log.		10
h	The procedures addresses medical equipment recalls.*	Recalls are on based on letters/hazard notice issued from manufacturer and or from regulatory authorities.		10
i	Response times are monitored from reporting to inspection and implementation of corrective actions.	A complaint attendance register is maintained to indicate the date and time of receipt of complaint, allotment of job and completion of job.		10
	FMS.5: The organisation has a programme for medical gases, vacuum and compressed air.			10
a	Documented procedures govern procurement, handling, storage, distribution, usage and replenishment of medical gases.*	Applicable to all gases used in the organisation. It also address the issue of statutory requirements and approvals		10

		wherever applicable. It follows a uniform colour coding system.		
b	Medical gases are handled, stored, distributed and used in a safe manner.	Standardised colour coding of the cylinders and pipelines are maintained.		10
c	The procedures for medical gases address the safety issues at all levels.	This includes from the point of storage/source area, gas supply lines and the end-user area.		10
d	Alternate sources for medical gases, vacuum and compressed air are provided for, in case of failure.	Stand by air compressor and vacuum pump unit available.		10
e	The organisation regularly tests these alternate sources.	Results of these tests shall be documented.		10
f	There is an operational, inspection, testing and maintenance plan for, piped medical gas, compressed air and vacuum installation.*	As per manufacturer ‘s recommendations.		10
	HRM.3. There is an on-going programme for professional training and development of the staff.			10
c	Training also occurs when job responsibilities change/ new equipment is introduced.	The training focus on the revised job responsibilities as well as on the newly introduced equipment and technology.		10

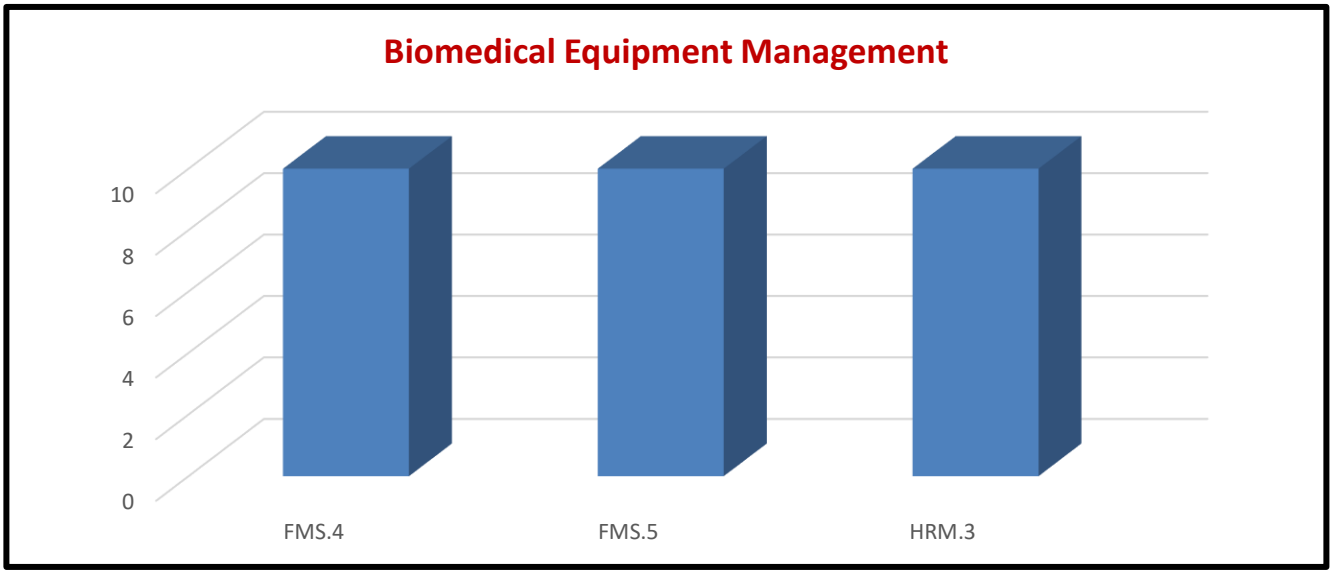


Figure 17:- Score for Biomedical Equipment Management

Table 10 :- Facility Management: Engineering and Maintenance.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	ROM.2: The organisation is responsible for and complies with the laid down and applicable legislations, regulations and notifications.			10
a	The management is conversant with the applicable laws and regulations and undertakes the responsibility to adhere to the same.	The management of the hospital is conversant with the different statutory requirements as per scope of services and adhere to.		10
b	The management ensures that the policies and procedures pertaining to patient care are in compliance with the prevailing laws, regulations and notifications.	yes		10
c	The management has a mechanism which ensures implementation of these requirements.	yes		10
d	Management has a mechanism which regularly updates any amendments in the prevailing laws of the land.	yes		10
e	There is a mechanism to regularly update licenses/registrations/ certifications.	yes		10
	FMS.1: The organisation has a system in place to provide a safe and secure environment.			9.28
a	Safety committee coordinates development, implementation, and monitoring of the safety plan and policies.	Committee functions on a regular basis to coordinate development, implementation and monitoring of the safety plans to provide a safe and secure facility and environment.		10
b	Patient-safety devices & infrastructure is installed across the organisation and inspected periodically.	Provisions are made available for physically challenged/ vulnerable person as per regulatory requirement example special toilet for physically challenged.		10
c	The organisation is a non-smoking area.	The organisation adheres to statutory requirements.		10
d	There is a procedure which addresses the identification and disposal of material(s) not in use in the organisation.*	Organisation condemn and dispose in a systematic manner the material which is not in usage.		10
e	Facility inspection rounds to ensure safety are conducted at least twice in a year in patient-care areas and at least once in a year in non-patient-care areas.	Rounds are carried out by members of safety committee.		10

f	Inspection reports are documented and corrective and preventive measures are undertaken.	The inspection report tracker is maintained & reviewed periodically.		5
g	There is a safety education programme for staff.	This is included as part of employee induction & refresher training programme.		10
	FMS.2: The organisation's environment and facilities operate in a planned manner to ensure safety of patients, their families, staff and visitors and promotes environment friendly measures.			10
a	Facilities are appropriate to the scope of services of the organisation.	yes		10
b	Up-to-date drawings are maintained which detail the site layout, floor plans and fire-escape routes.	A designated person maintains the drawings.		10
c	There are internal and external sign postings in the organisation in a language understood by patient, families and community.	Signage's are displayed in bilingual which guides the patients and visitors.		10
d	The provision of space shall be in accordance with the available literature on good practices (Indian or International Standards) and directives from government agencies.	As per IPHS standards and directive of government agencies like AERB guidelines for Radiation equipment, etc.		10
e	Operational planning describes access to different areas in the hospital by staff, patients, visitors and vendors.	There is a process and means to identify staff, visitors, vendors in the hospital.		10
f	Potable water and electricity are available round the clock.	The organisation has arrangements for supply of adequate water and electricity.		10
g	Alternate sources for electricity and water are provided as backup for any failure / shortage.	yes		10
h	The organisation regularly tests these alternate sources.	The results of these tests shall be documented		10
i	There are designated individuals (with appropriate equipment) responsible for the maintenance of all the facilities.	A person in the organisation is designated to be in-charge of maintenance of facilities.		10
j	Maintenance staff is contactable round the clock for emergency repairs.	The maintenance escalation matrix is available in nursing station and departments.		10
k	There is a maintenance plan for facility and furniture.*	As per manufacturer 's recommendations.		10
l	Response times are monitored from reporting to inspection and implementation of corrective actions.	A complaint attendance register is maintained.		10
m	The organisation takes initiatives towards an energy efficient and environmental friendly hospital.*	Concepts of reduce, recycle and reuse in promoting the basic concepts of green hospital.		10

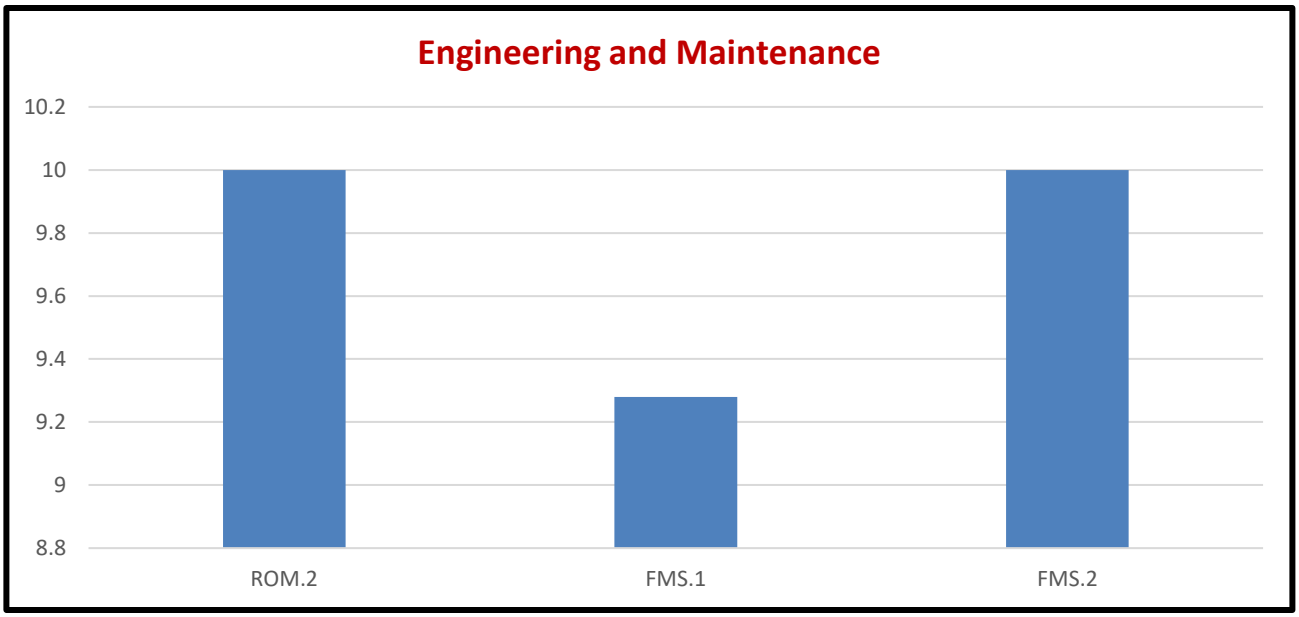


Figure 18:- Score for Engineering and Maintenance

Table 11 :- Housekeeping.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	HIC.3: The organisation performs surveillance activities to capture and monitor infection prevention and control data.			10
g	Surveillance activities include monitoring the effectiveness of housekeeping services.	This is done on a regular basis.		10
	HIC.5: The organisation provides adequate and appropriate resources for prevention and control of Healthcare Associated Infections (HAI).			10
a	Adequate and appropriate personal protective equipment, soaps, and disinfectants are available and used correctly.	They are available at the point of use and the organisation ensures that it maintains an adequate inventory.		10
	FMS.7: The organisation has a plan for management of hazardous materials.			10
a	Hazardous materials are identified within the organisation.*	Identifies the hazardous materials and has a documented procedure for their sorting, storage,handling, transpirations, disposal mechanism, and method for managing spillages and adequate training for these jobs.		10
b	The organisation implements processes for sorting, labelling,	Conducts an exercise of hazard		10

	handling, storage, transporting and disposal of hazardous material.*	identification and risk analysis (HIRA) associated with handling of hazardous materials and taken all necessary steps to eliminate or reduce such hazards and associated risks.		
c	Requisite regulatory requirements are met in respect of radioactive materials.	yes		10
d	There is a plan for managing spills of hazardous materials.*	yes		10
e	Staff are educated and trained for handling such materials.	yes		10

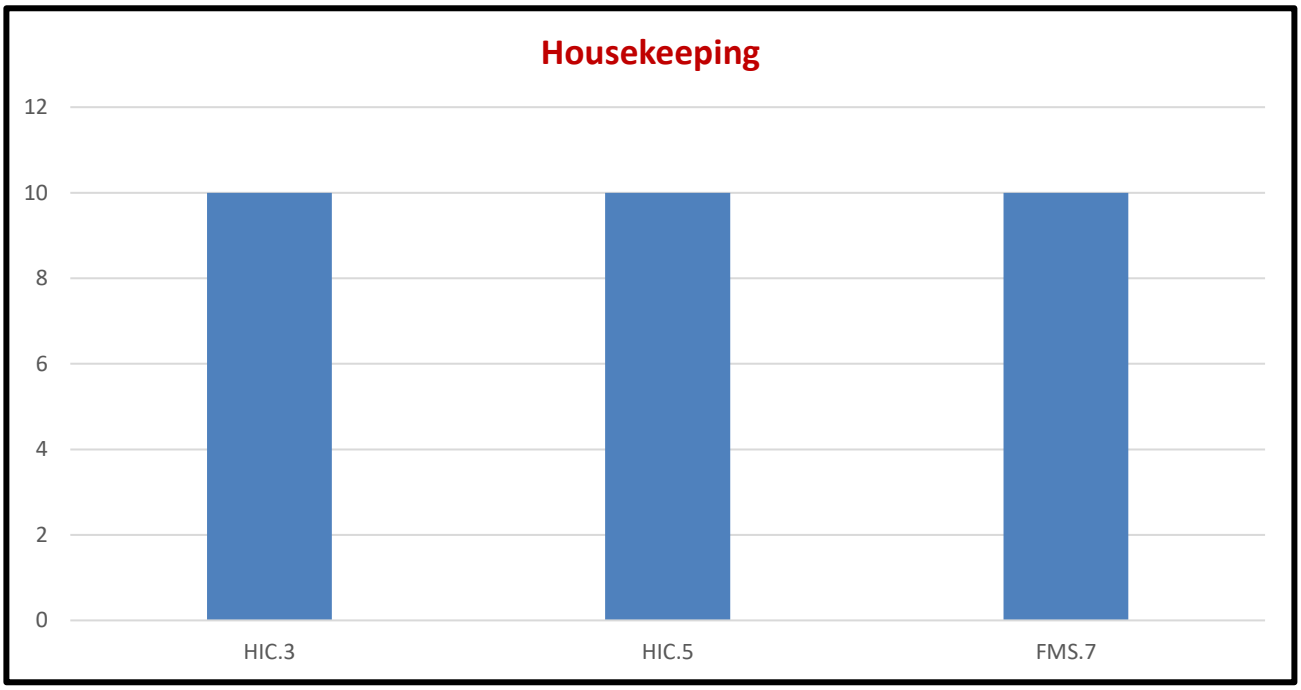


Figure 19:- Score for Housekeeping Department

Table 12 :- Laundry and Linen.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	HIC.2: The organisation implements the policies and procedures laid down in the Infection Control Manual in all areas of the hospital.			10
i	The organisation adheres to laundry and linen management processes.*	The laundry is outsourced. The organisation shall has a policy for change of linen.		10
	FMS.2: The organisation's environment and facilities operate in a planned manner to ensure safety of patients, their families, staff and visitors and promotes environment friendly measures.			10
a	Facilities are appropriate to the scope of services of the organisation.	yes		10
b	Up-to-date drawings are maintained which detail the site layout, floor plans and fire-escape routes.	A designated person maintains the drawings.		10
j	Maintenance staff is contactable round the clock for emergency repairs.	Designated as in-charge of maintenance of facilities.		10
k	There is a maintenance plan for facility and furniture.*	yes		10
	FMS.3: The organisation has a programme for engineering support services and utility system.			10
h	There is a maintenance plan for electrical systems.*	yes		10
	Secondary			
	FMS.7: The organisation has a plan for management of hazardous materials.			10
a	Hazardous materials are identified within the organisation.*	Identify, list and document the hazardous materials and has a documented procedure with adequate training of the personnel for these jobs.		10
b	The organisation implements processes for sorting, labelling, handling, storage, transporting and disposal of hazardous material.*	Conducts an exercise of hazard identification and risk analysis (HIRA) associated with handling of hazardous materials and taken all necessary steps to eliminate or reduce such hazards and associated risks.		10
c	Requisite regulatory requirements are met in respect of radioactive materials.	yes		10
d	There is a plan for managing spills of hazardous materials.*	yes		10
e	Staff are educated and trained for handling such materials.	yes		10

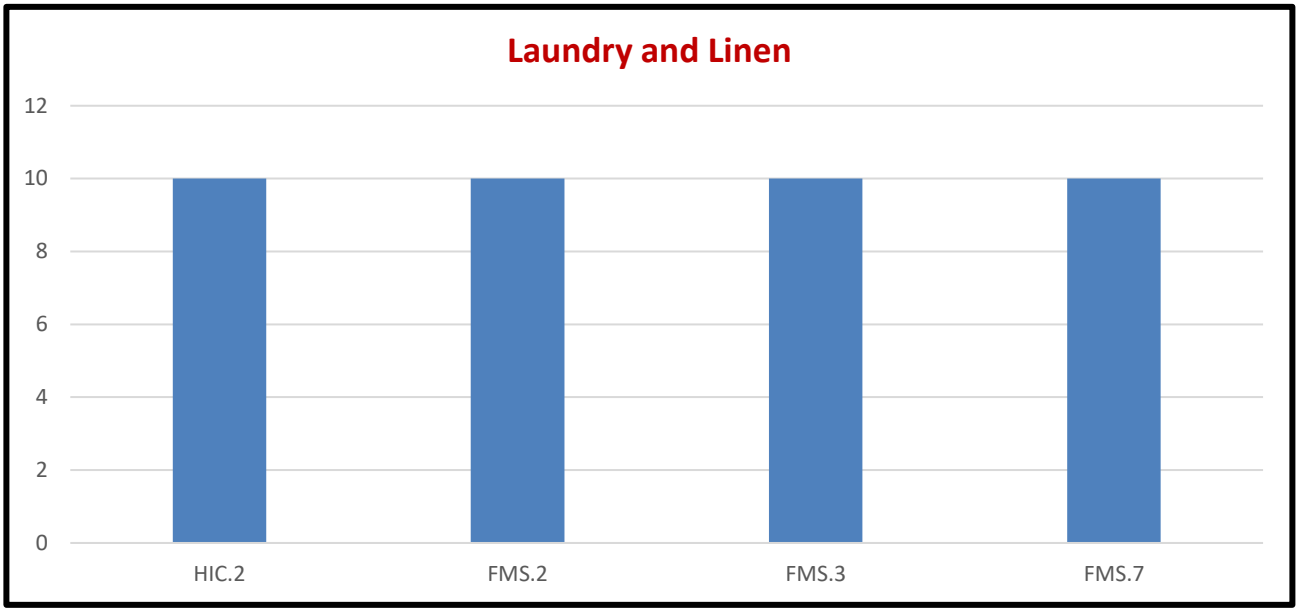


Figure 20:- Score for Laundry and Linen

Table 13 :- Kitchen/Canteen.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	COP.21: Documented policies and procedures guide nutritional therapy.			10
a	Documented policies and procedures guide nutritional therapy including assessment and reassessment. *	Nutritional assessment is done, type of diet is planned, prepared and delivered to the patient.		10
b	Nutritional therapy is planned and provided in a collaborative manner.	The dietician planned in consultation with the treating doctor. patient/patient ‘s relative after taking into patient ‘s food habits , likes and dislikes.		10
c	There is a written order for the diet.	The dietician prepares a diet sheet and patient receives food accordingly.		10
d	Patients receive food according to their clinical needs.	Dietician does the assessment of the patient in consultation with the clinician and advice regarding food.		10
e	Food is prepared, handled, stored and distributed in a safe manner.	The dietary services are designed in a manner there is no criss-cross of traffic.		10
f	When families provide food, they are educated about the patient’s diet limitations.	The dietician/nurse ensures this during planning.		10

	HIC.2: The organisation implements the policies and procedures laid down in the Infection Control Manual in all areas of the hospital.			10
j	The organisation adheres to kitchen sanitation and food-handling issues.*	Yes, though the activity is outsourced.		10
	ROM 2 The organisation is responsible for and complies with the laid down and applicable legislations, regulations and notifications.			10
a	The management is conversant with the applicable laws and regulations and undertakes the responsibility to adhere to the same.	The management is conversant with the different statutory requirements as per the scope of services.		10
b	The management ensures that the policies and procedures pertaining to patient care are in compliance with the prevailing laws, regulations and notifications.	Implementation and adherence to the requirements.		10
	FMS 2 The organisation's environment and facilities operate in a planned manner to ensure safety of patients, their families, staff and visitors and promotes environment friendly measures.			10
c	There is internal and external sign postings in the organisation in a language understood by the patient, families and community.	Signage's are bilingual. Statutory requirements are met.		10
d	The provision of space shall be in accordance with the available literature on good practices (Indian or international standards) and directives from government agencies.	yes		10
e	Operational planning describes access to different areas in the hospital by staff, patients, visitors and vendors.	There is a process and means to identify staff, visitors, vendors in the hospital.		10
	FMS.3: The organisation has a programme for engineering support services and utility system.			10
h	There is a maintenance plan for electrical systems.*	Incorporated statutory requirements where applicable.		10
	HRM.7. The organisation addresses the health needs of the employees.			7.5
b	Health problems of the employees are taken care of in accordance with the organisation's policy.	In consonance with the law of the land and good clinical practices.		10
c	Regular health checks of staff dealing with direct patient care are done at least once a year and the findings/ results are documented.	The results are documented in the personal file.		5

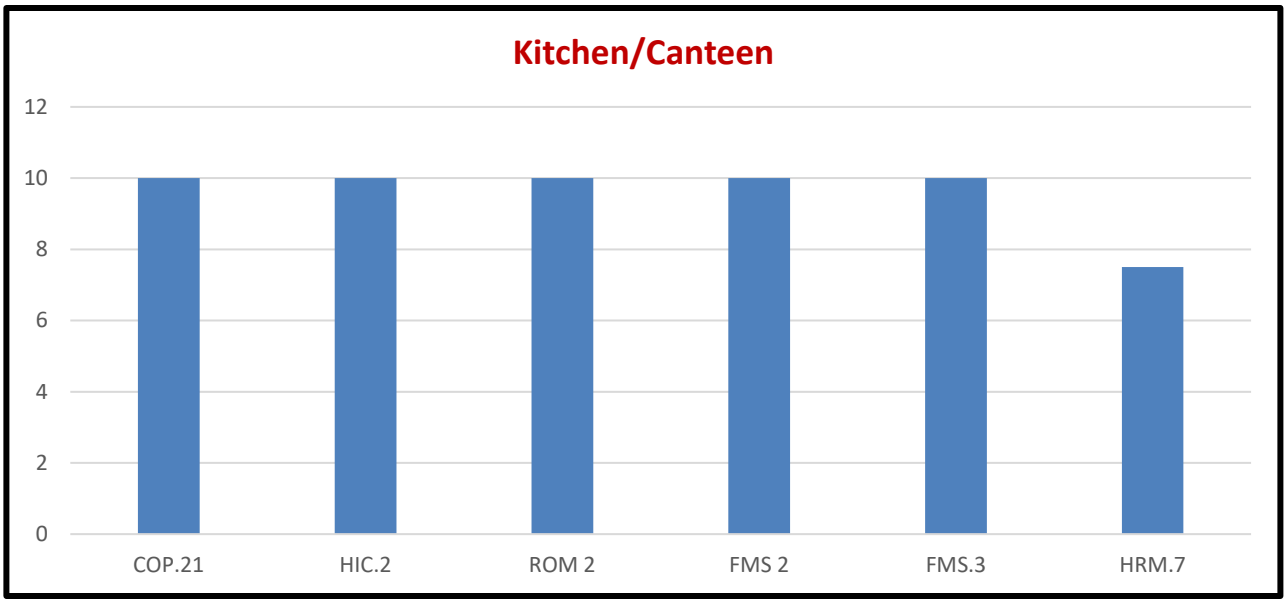


Figure 21:- Score for Kitchen/Canteen

Table 14 :- CSSD.

	Primary	Observation	Remarks	Scores (0/ 5/ 10)
	HIC.7: There are documented policies and procedures for sterilization activities in the org.			10
a	The organisation provides adequate space and appropriate zoning for sterilization activities.	Sufficient space is available to ensure activities can be performed properly.		10
b	Documented procedure guides the cleaning, packing, disinfection and/or sterilization, storing and issue of items.*	The sterilized/disinfected equipment/sets are stored in an appropriate manner across the organisation.		10
c	Reprocessing of instruments and equipment are covered.*	Documented procedure to address cleaning, disinfection or sterilization of various accessories, instruments and equipment between patients.		10
d	The organisation shall have a documented policy and procedure for reprocessing of devices whenever applicable.*	Identified devices which are meant for reuse.		10
e	Regular validation tests for sterilization are carried out and documented.*	Are done by accepted methods.		10
f	There is an established recall procedure when breakdown in the sterilization system is identified.*	Sterilization procedure is regularly monitored and in the eventuality of a breakdown it has a procedure for withdrawal of such items.		10

	HIC.2: The organisation implements the policies and procedures laid down in the Infection Control Manual in all areas of the hospital.			10
f	The organisation adheres to cleaning, disinfection and sterilization practices.*	Addressed at all levels of the organisation, e.g. ward, OT and CSSD.		10
	FMS.3: The organisation has a programme for engineering support services and utility system.			10
d	Qualified and trained personnel operate, inspect, test and maintain equipment and utility systems.	The necessary inventories like bulbs, paints are held by engineering team.		10
e	Utility equipment are periodically inspected and calibrated (wherever applicable) for their proper functioning.	As per manufacturer's guidelines/standards.		10
f	There is a documented operational and maintenance (preventive and breakdown) plan.*	The operator is trained in handling the equipment.		10
k	There is a documented procedure for equipment replacement and disposal.*	The organisation has a strategic plan, upgrade/update path and the equipment log.		10

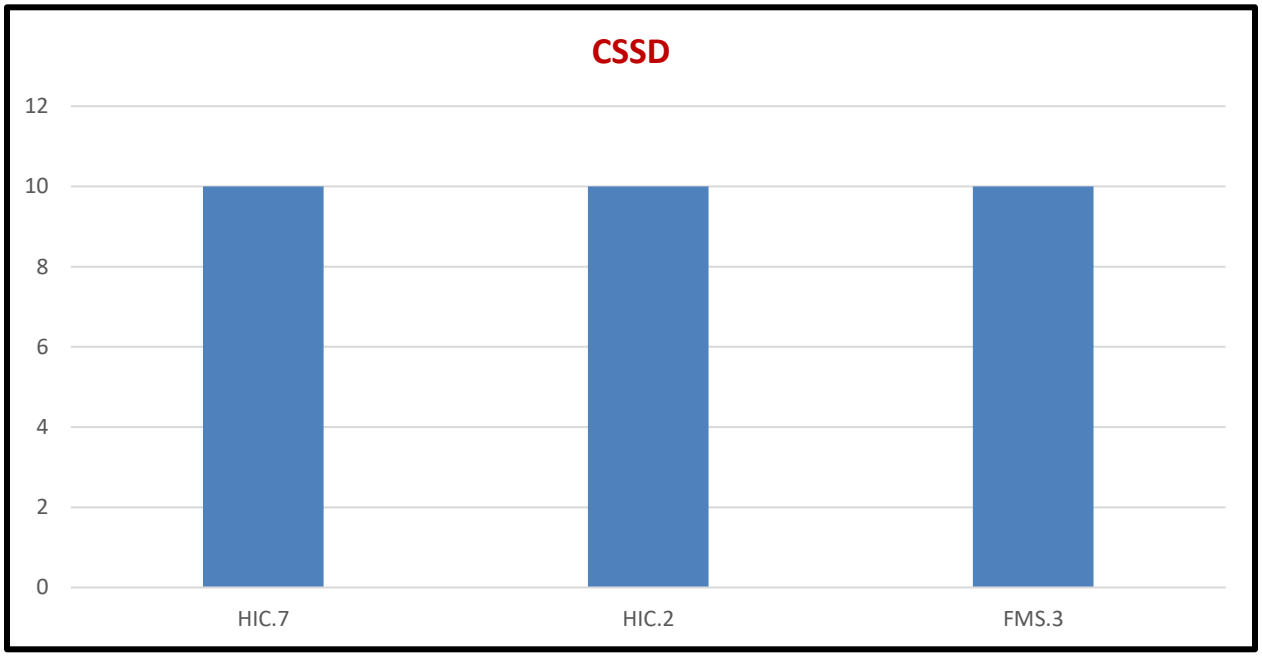


Figure 22:- Score for CSSD

Matrix for capturing Quality Indicators

Table 15 :- QC of Radiology.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 3b	Number of reporting errors/1000 investigations	Reporting errors include those picked	Number of reporting errors / Number of tests performed X 1000	0.00%	0.00%	0.00%
	Percentage of re-dos	This shall also include tests repeated before release of the result(to confirm the finding).	Number of re-dos / Number of tests performed X100	0.70%	0.70%	0.72%
	Percentage of reports correlating with clinical diagnosis (CT)	Co-relation means that the test results should match either	Number of reports correlating with clinical diagnosis / Number of tests performed X100	100%	100%	100%
	Percentage of adhereance to safety precautions by employees working in Radiology (CT, MRI, Mammo & Xray)		Number of employees adhering to safety precautions / Number of employees	100%	100%	93%

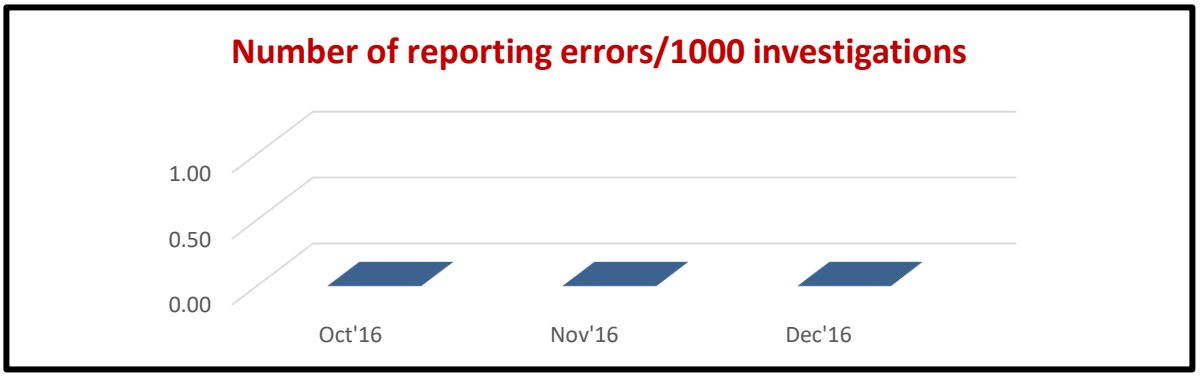


Figure 23:- Number of reporting errors/1000 investigations

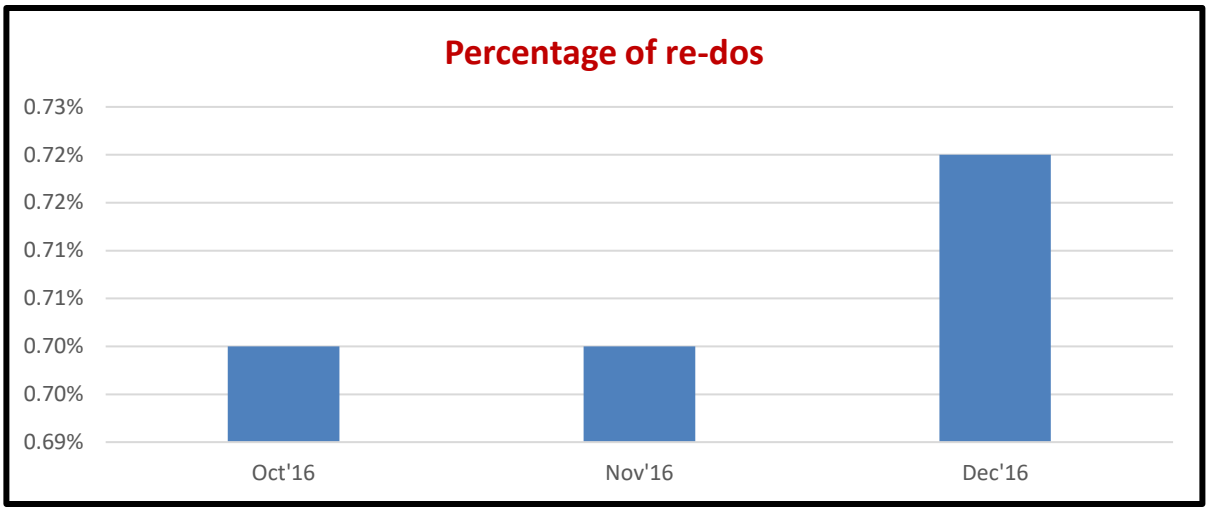


Figure 24:- Percentage of re-dos

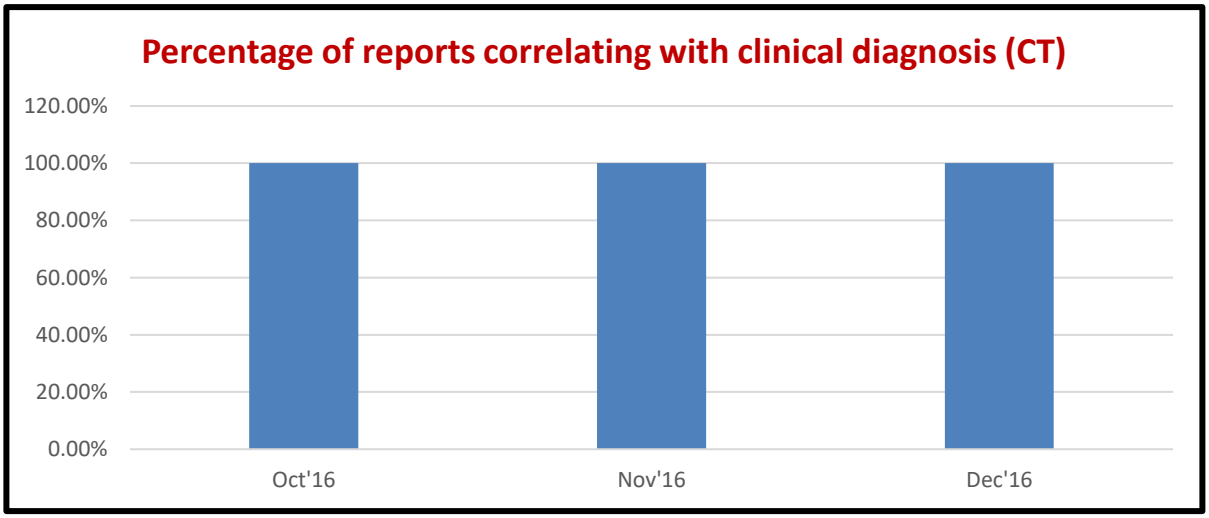


Figure 25:- Percentage of reports correlating with clinical diagnosis (CT)

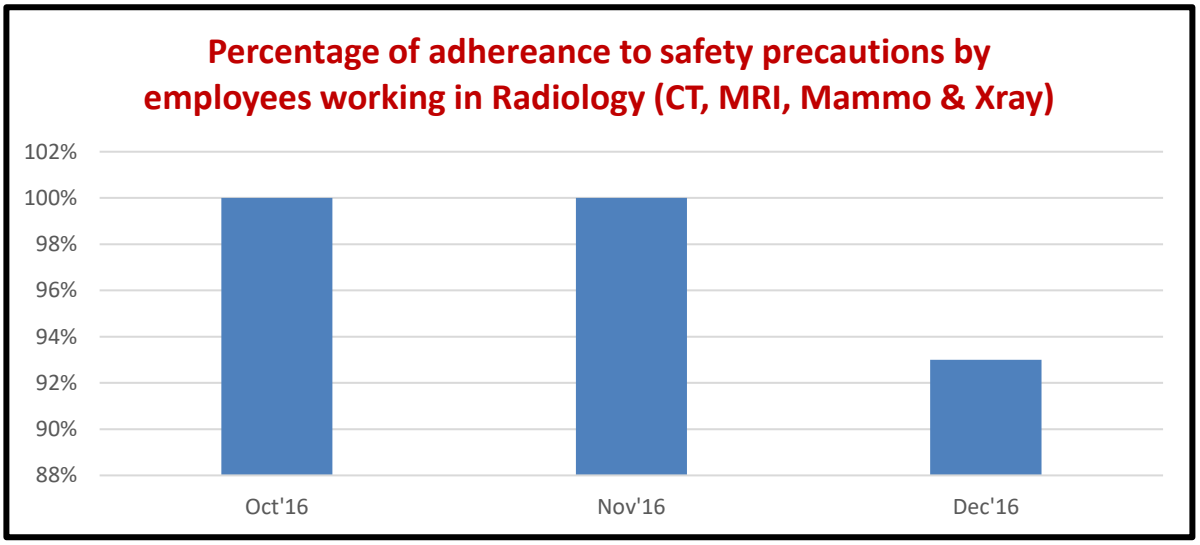


Figure 26:- Percentage of adherence to safety precautions by employees working in Radiology

Table 16 :- QC of Labs.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 3b	Number of reporting errors/1000 investigations			0.01%	0.03%	0.03%
	Percentage of re-dos			0.17%	0.14%	0.15%
	TAT for Routine Biochem Lab results			1:52	1:37	1:58
	TAT for routine Haematology Lab results			2:54	2:47	3:01
	Percentage of adhereance to safety precautions by employees working in diagnostics			100%	100%	100%
	Percentage of Reports Corelating with clinical diagnosis			100.00%	100.00 %	100.00 %

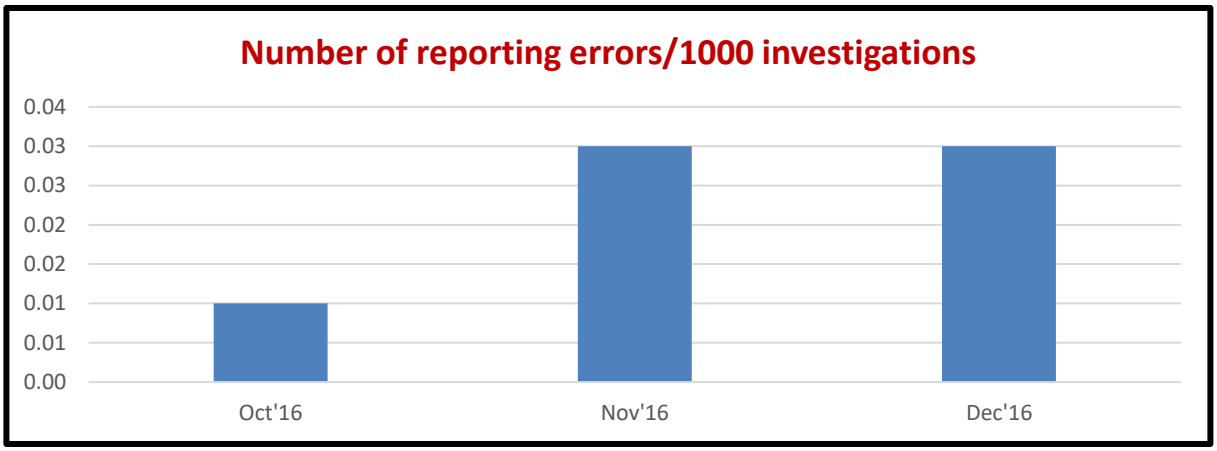


Figure 27:- Number of reporting errors/1000 investigations

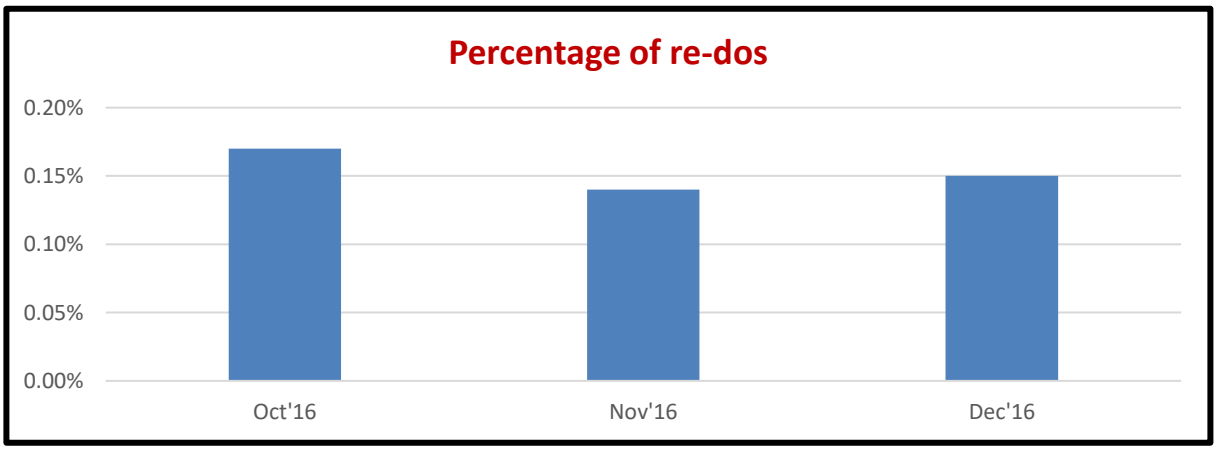


Figure 28:- Percentage of re-dos

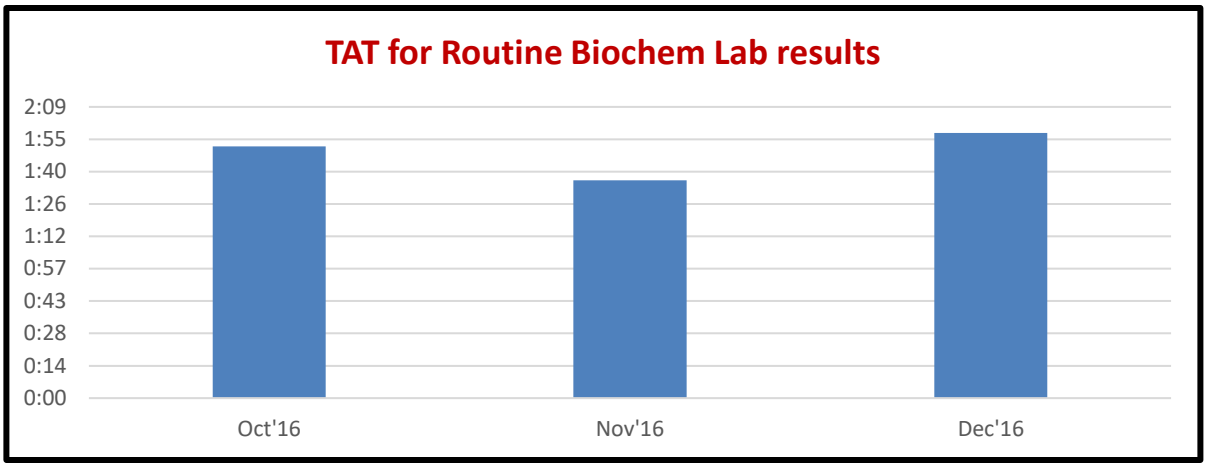


Figure 29:- TAT for Routine Biochem Lab results

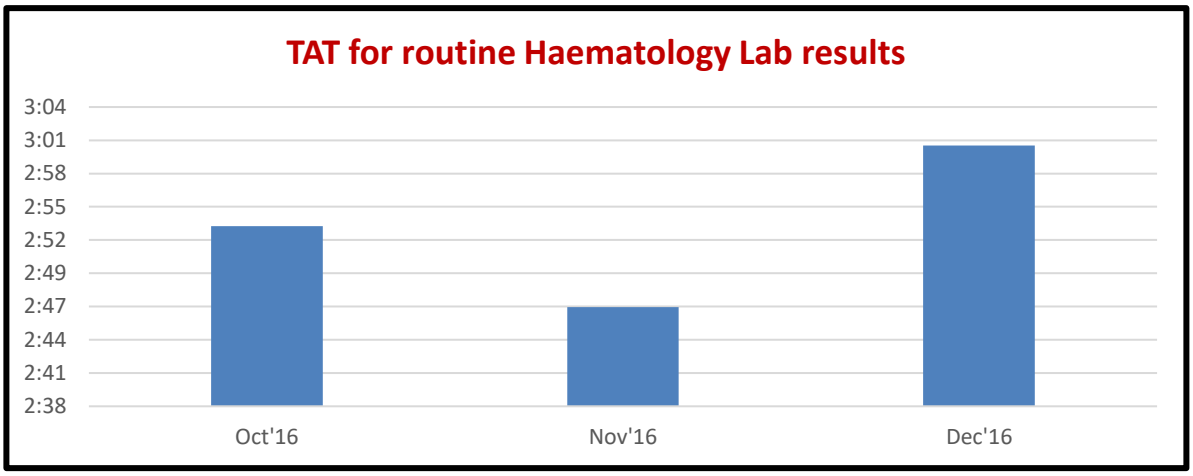


Figure 30:- TAT for routine Hematology Lab results

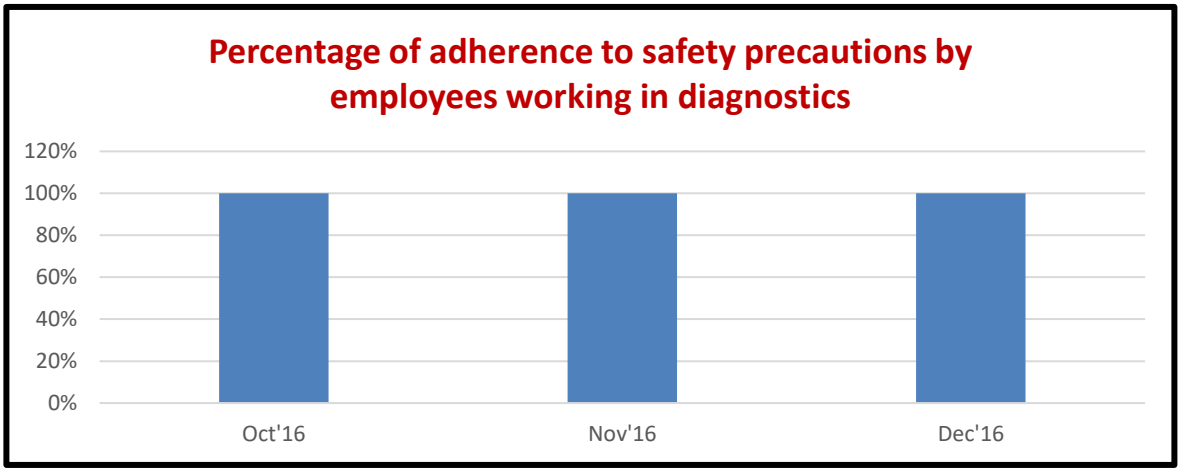


Figure 31:- Percentage of adherence to safety precautions by employees working in diagnostics

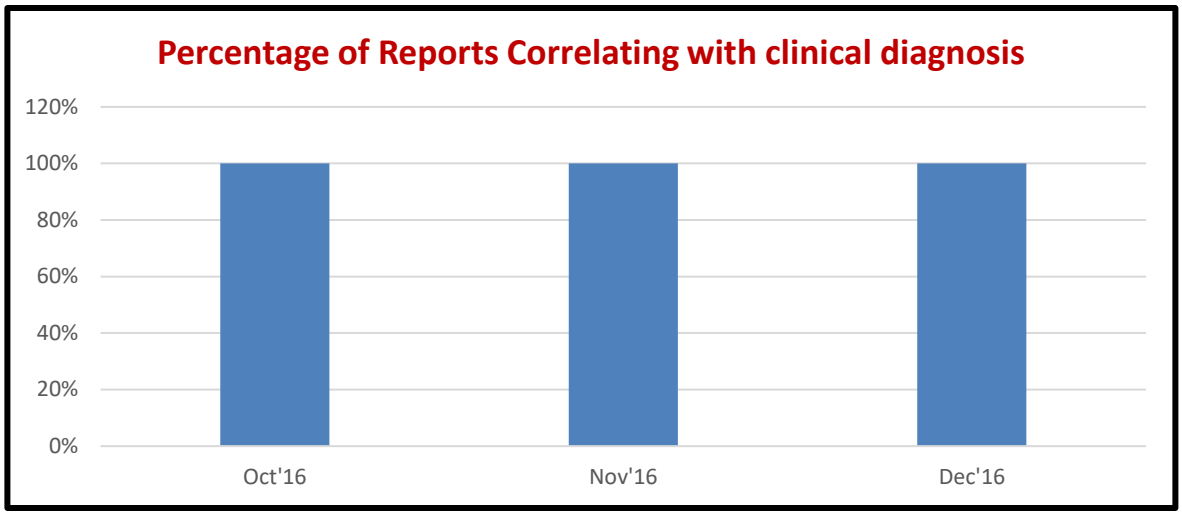


Figure 32:- Percentage of Reports Correlating with clinical diagnosis

Table 17 :- Anaesthesia Monitoring.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 3d	Percentage of modification of anaesthesia plan	The anaesthesia plan is the outcome of preanaesthesia assessment. Any changes done after this shall be considered as modification of anaesthesia plan.	Number of patients in whom the anaesthesia plan was modified / Number of patients who underwent anaesthesia X 100	0.00%	0.00%	0.00%
	Percentage of unplanned ventilation following anaesthesia		Number of patients requiring unplanned ventilation following anaesthesia / Number of patients who underwent anaesthesia X 100	0.00%	0.00%	0.00%
	Percentage of adverse anaesthesia events	Adverse anaesthesia event is any untoward medical occurrence that may present during treatment with an anaesthetic product but which does not necessarily have a causal relationship with this treatment.	Number of patients who developed adverse anaesthesia event / Number of patients who underwent anaesthesia X 100	0.00%	0.00%	0.00%
	Anaesthesia related mortality rate	Any death where the cause is possible, probable (likely) or certain to be due to anaesthesia shall be included.	Number of patients who died due to anaesthesia / Number of patients who underwent anaesthesia X 100	0.00%	0.00%	0.00%

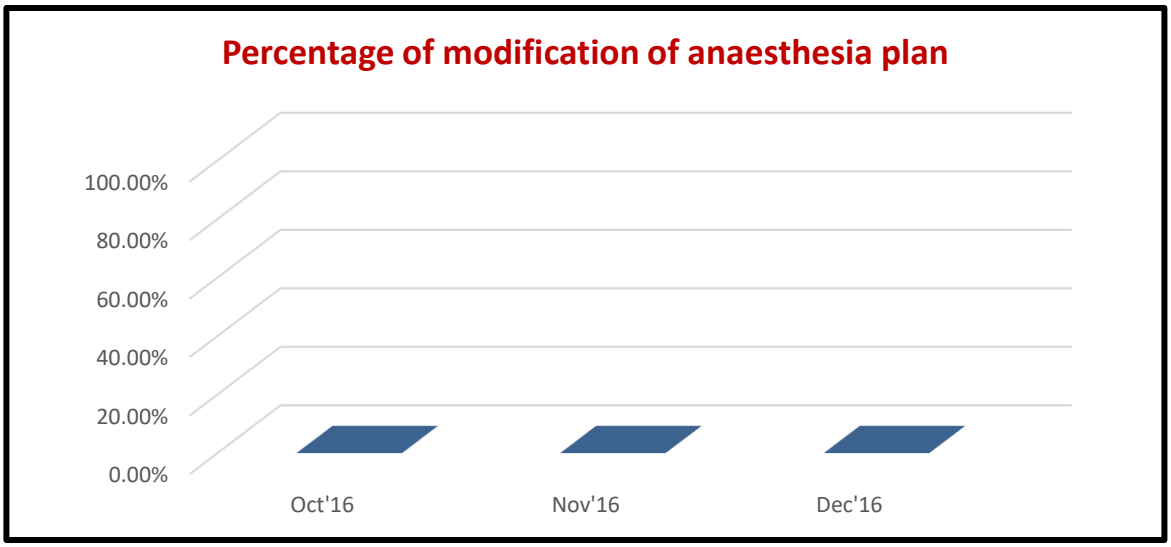


Figure 33:- Percentage of modification of anesthesia plan

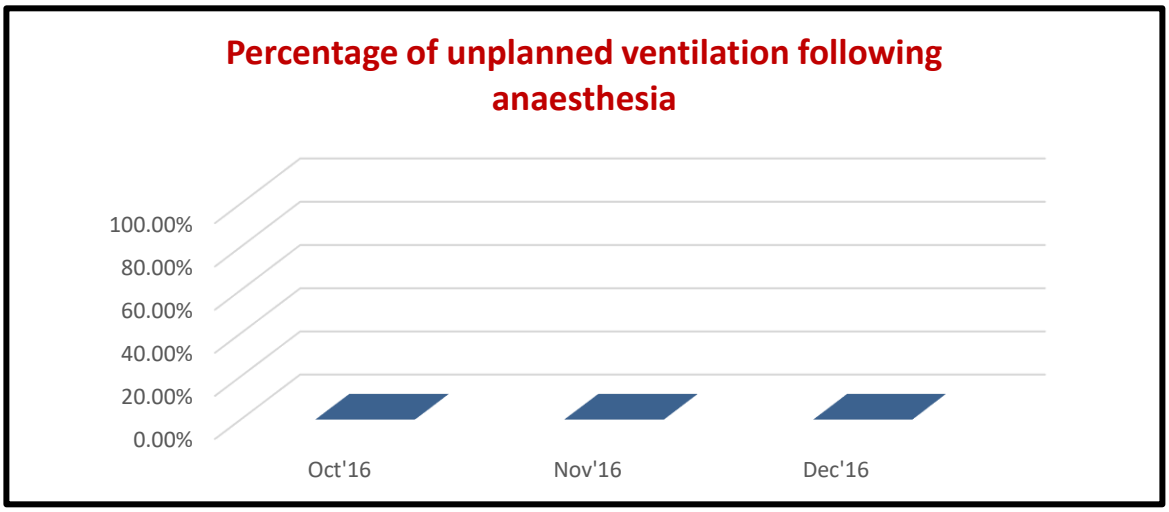
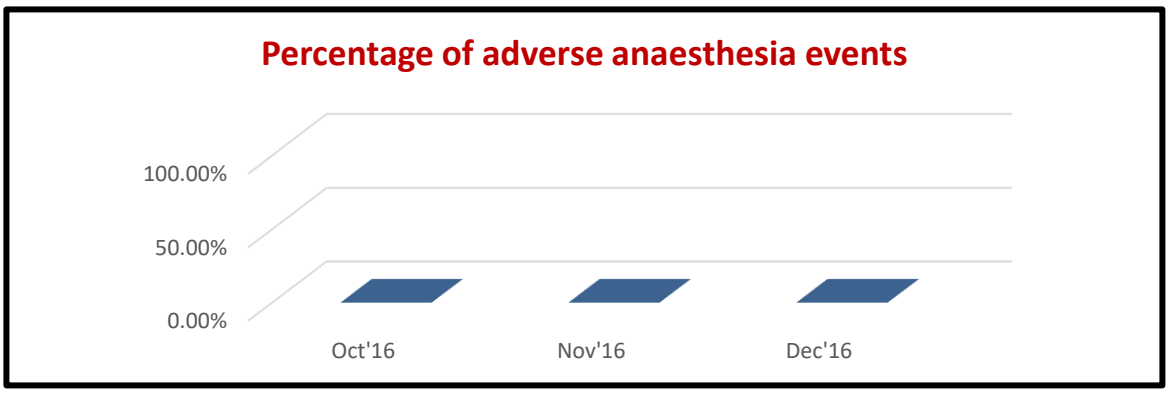


Figure 34:- Percentage of unplanned ventilation following anesthesia

Figure 35:- Percentage of adverse anesthesia events



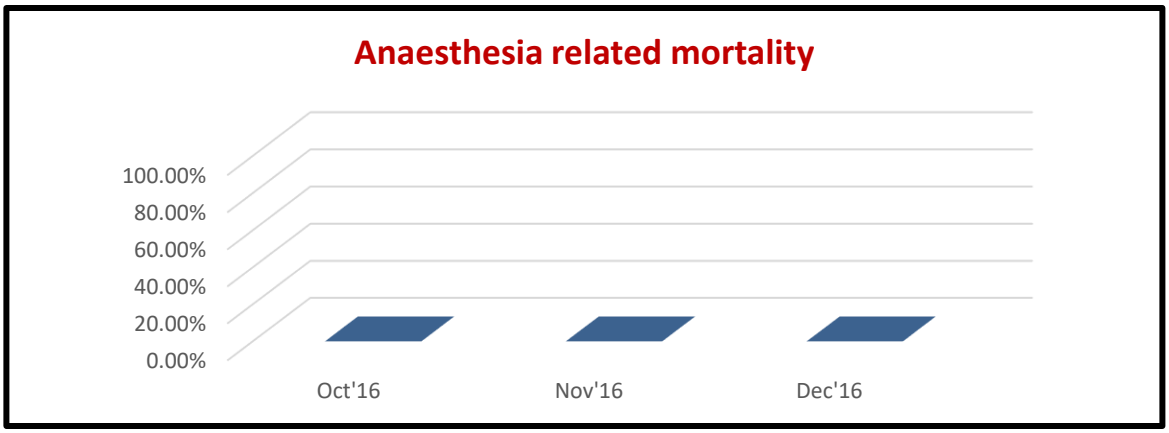


Figure 36:- Anesthesia related mortality

Table 18 :- Surgical Monitoring.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 3e	Percentage of unplanned ventilation following anaesthesia		Number of unplanned return to OT / Number of patients operated / X 100	0.00%	0.00%	0.00%
	Percentage of re-scheduling of surgeries	Re-scheduling of patients includes cancellation and postponement (beyond 4 hours) of the surgery.	Number of cases re-scheduled / Number of surgeries performed / X 100	7.89%	3.70%	3.13%
	Percentage of cases where the organisation's procedure to prevent adverse events like wrong site, wrong patient and wrong surgery have been adhered to		Number of cases where the procedure was not followed / Number of surgeries performed / X 100	100%	100%	100%
	Percentage of cases who received appropriate prophylactic antibiotics within the specified time frame(within 1 hr)		Number of patients who did not receive prophylactic antibiotic (s) / Number of surgeries performed / X 100	76.92%	90.90%	85.71%

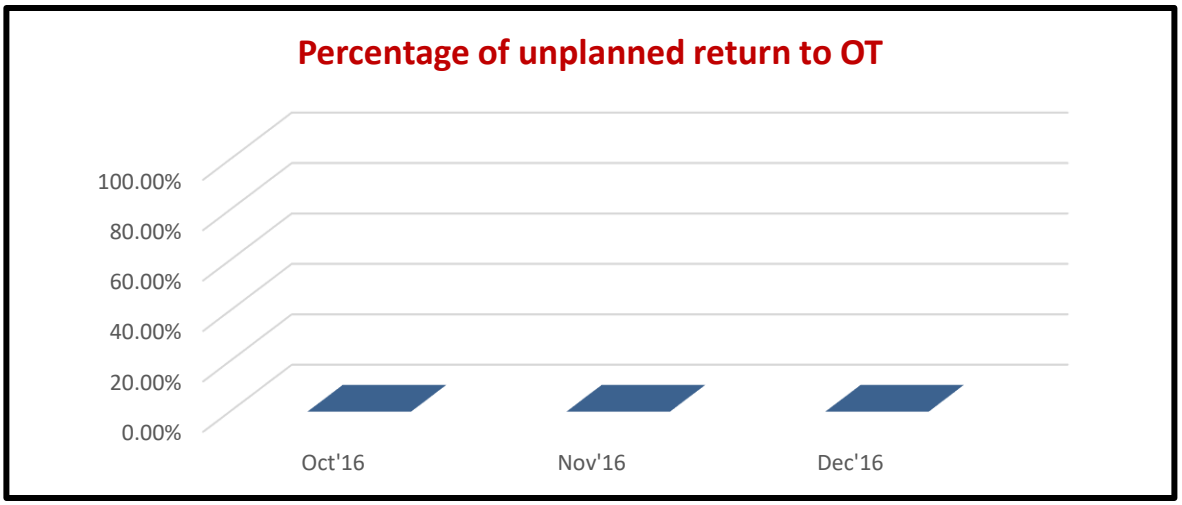


Figure 37:- Percentage of unplanned return to OT

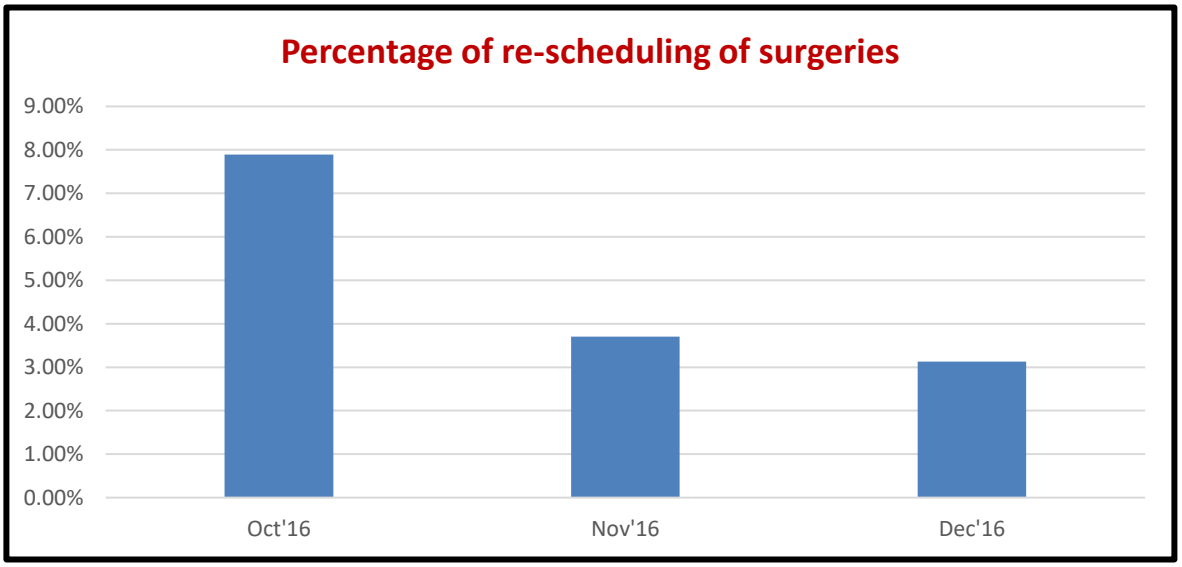
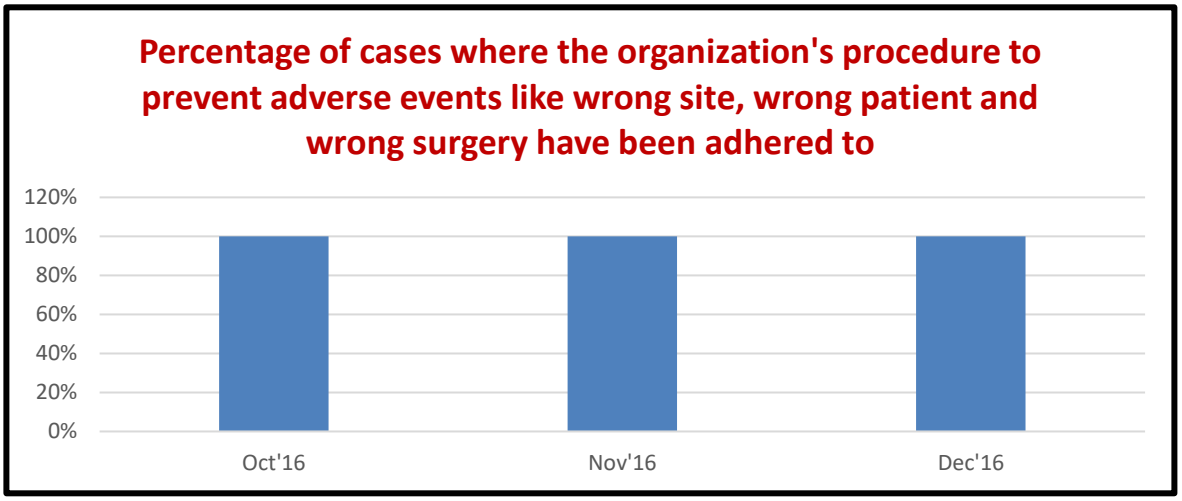


Figure 38:- Percentage of re-scheduling of surgeries

Figure 39:- Percentage of cases where the organization's procedure to prevent adverse events



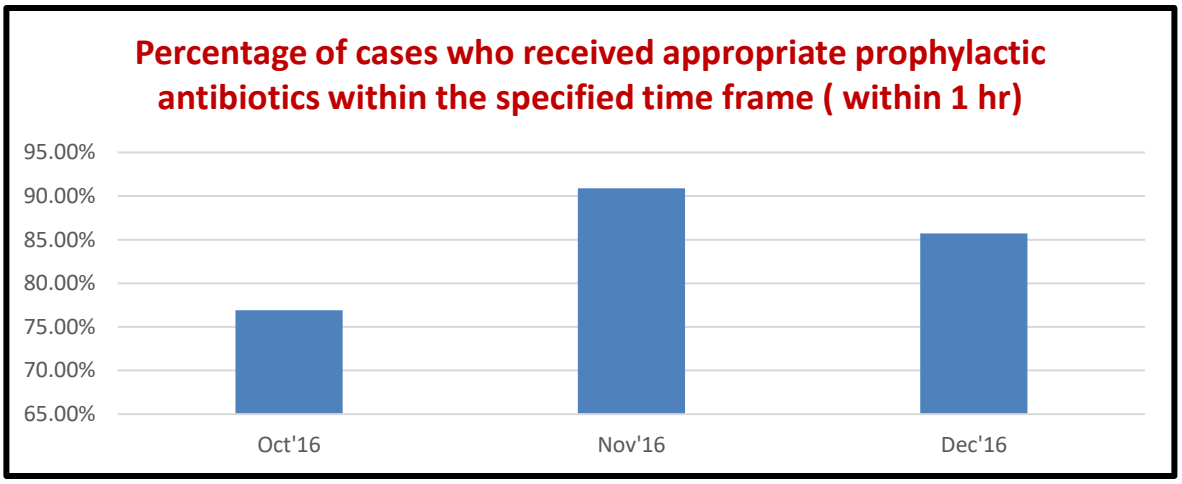
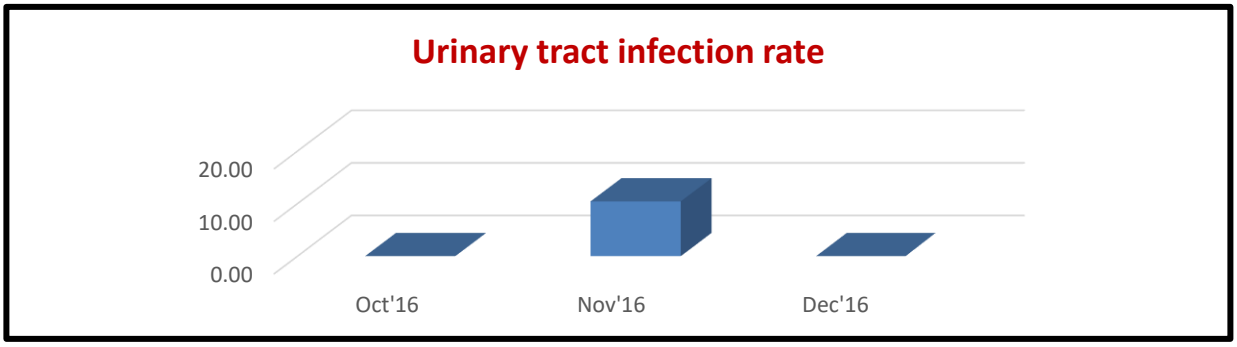


Figure 40:- Percentage of cases where the organization's procedure to prevent adverse events

Table 19 :- Infection Control.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 3g	Urinary tract infection rate	As per the latest CDC/NHSN definition	Number of urinary catheter associated UTIs in a month / Number of urinary catheter associated month X 1000	0.00%	10.42%	0.00%
	Pneumonia rate	As per the latest CDC/NHSN definition	Number of "Ventilator Associated Pneumonias" in a month / Number of ventilator days in that month X 1000	27.78%	0.00%	0.00%
	Bloodstream infection rate	As per the latest CDC/NHSN definition	Number of central line associated blood stream infections in a month / Number of central line days in that month X 1000	0.00%	0.00%	0.00%
	Surgical site Infection rate		Number of surgical site infections in a given month / Number of surgeries performed in that month	0.00%	0.00%	0.00%

Figure 41:- Urinary tract infection rate



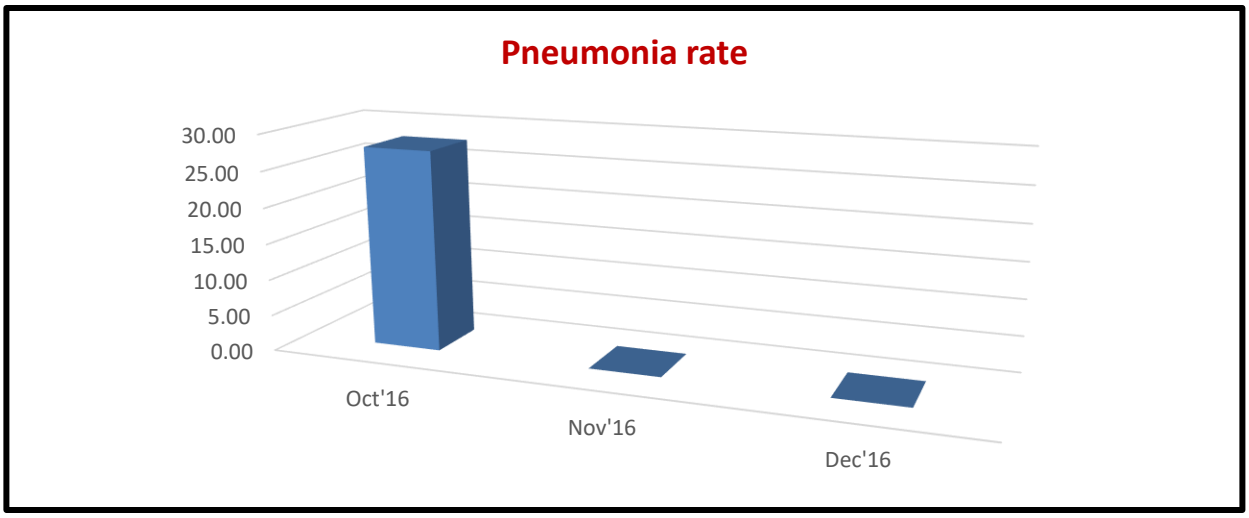


Figure 42:- Pneumonia rate

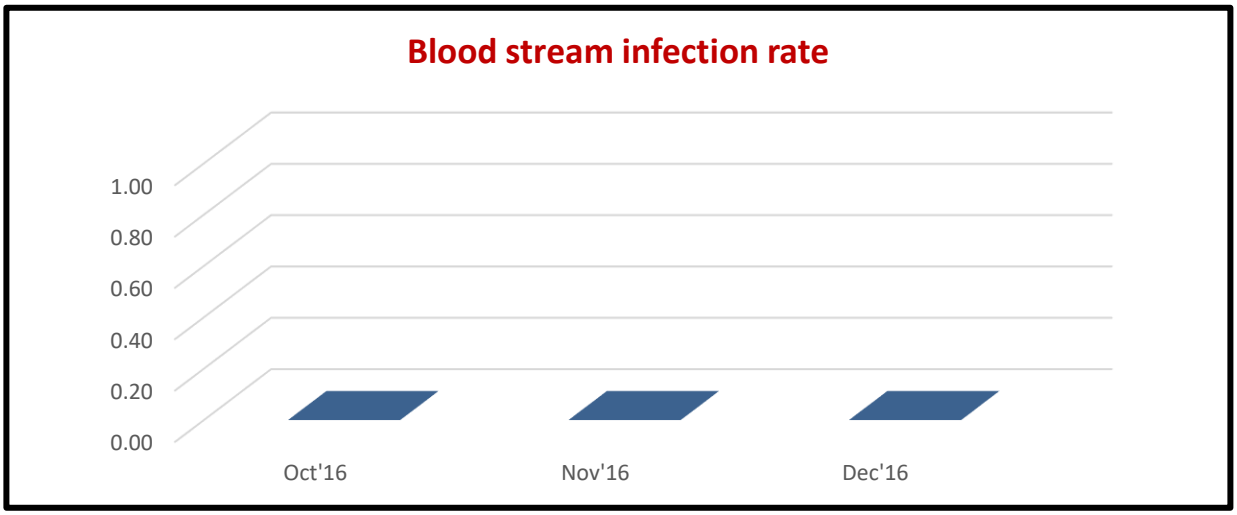


Figure 43:- Blood stream infection rate

Figure 44:- Surgical site Infection rate

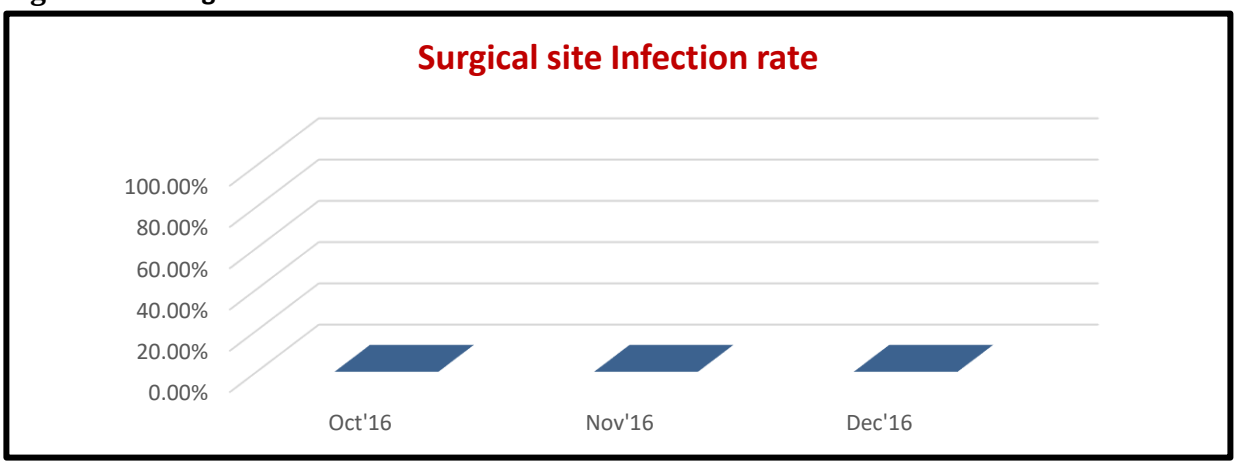


Table 20 :- Mortality, Morbidity.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 3h	Mortality rate		Number of deaths / Number of discharges and deaths X 100	0.47%	2.33%	1.33%
	Return to ICU within 48 hours		Number of returns to ICU within 48 hours / Number of discharges/transfers and deaths in the ICU X 100	1.11%	1.33%	0.00%

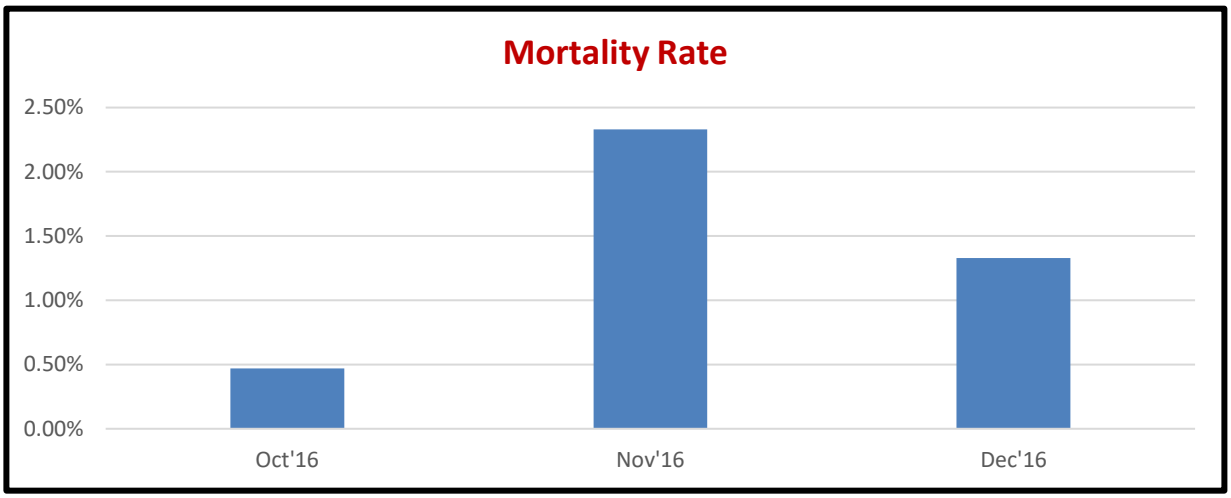


Figure 45:- Mortality Rate

Figure46:- Return to ICU within 48 hrs.

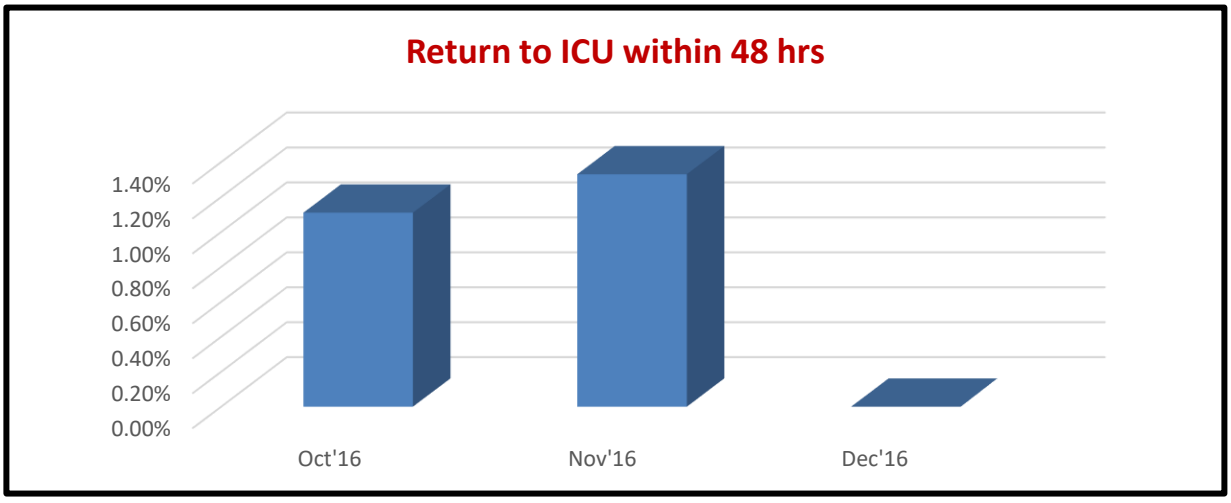


Table 21 :- Medication Procurement.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 4a	Percentage of drugs and consumables procured by local purchase	These include drugs and consumables which are not included in the hospital formulary at the time of prescription, but are then arranged by the hospital pharmacy itself for the within a short time.	Number of items purchased by local purchase / Number of drugs listed in hospital formulary and hospital consumables list X 100	0.13%	0.66%	0.31%

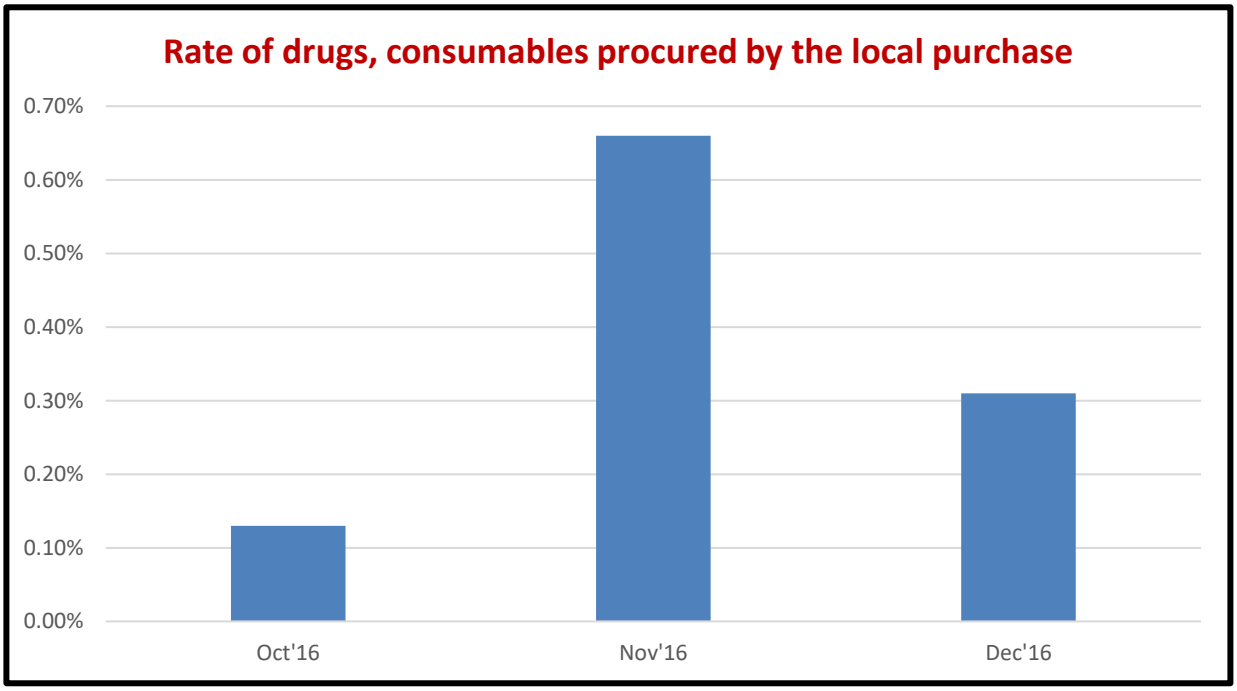


Figure 47:- Rate of drugs, consumables procured by the local purchase

Table 22 :- Utilization Rates.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 4c	Bed occupancy rate	The bed occupancy rate is the percentage of official beds occupied by hospital inpatients for a given period of time. –(Basic statistics for health information management technology By Carol E. Osborn) The occupancy rate is a calculation used to show the actual utilisation of an inpatient health facility for a given time period.	Number of inpatient days in a given month / Number of available Number of available bed days in that month X 100	60.5%	56.4%	44.2%
	average length of stay	Length of stay (LOS)is a term used to measure the duration of a single episode of hospitalization. Inpatient days are calculated by subtracting day of admission from day of subtracting day of discharge. However, persons entering and leaving a hospital on the same day have a length of stay of one	Number of inpatient days in a given month / Number of discharges and deaths in that month	4.78%	4.68%	4.59%
	OT utilisation rate	OT utilisation is defined as the quotient of hours of OT time actually used during elective resource hours and the total number of elective resource hours available for use. The degree of utilisation depicts the average utilisation of beds in per cent. The actual bed occupancy is set in relation to the maximum bed occupancy. The maximum bed of the product of capacity is the result occupies one bed per inpatient day in the facility	OT utilisation rate = OT utilisation time in hours / Resource hours X 100	12.5%	7.50%	10.5%
	Critical equipment down time	The term downtime issued to refer to system is unavailable. Downtime or outage duration refers to a period of time that a system fails to provide or perform its primary function	Sum of down time for all critical equipment in hours	2:12:00 AM	3:14:00 AM	1:15:00 AM

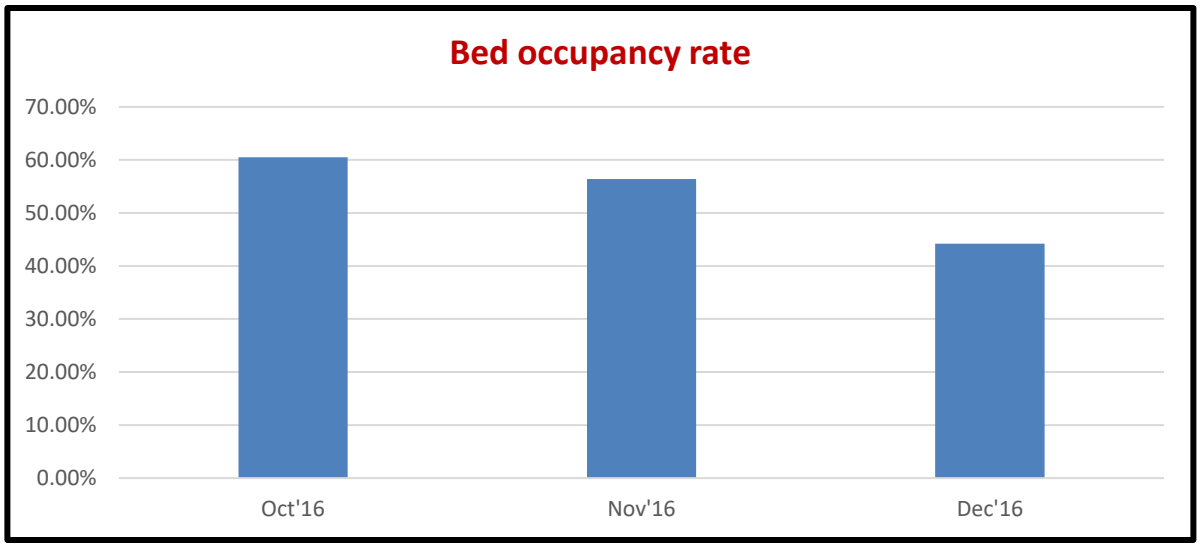
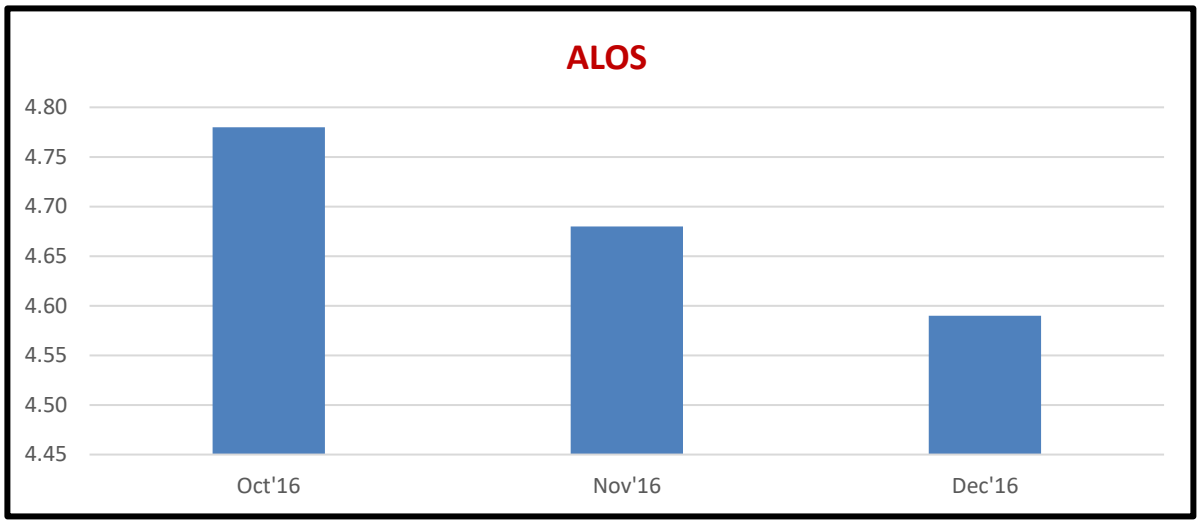


Figure 48:- Bed occupancy rate

Figure 49:- ALOS



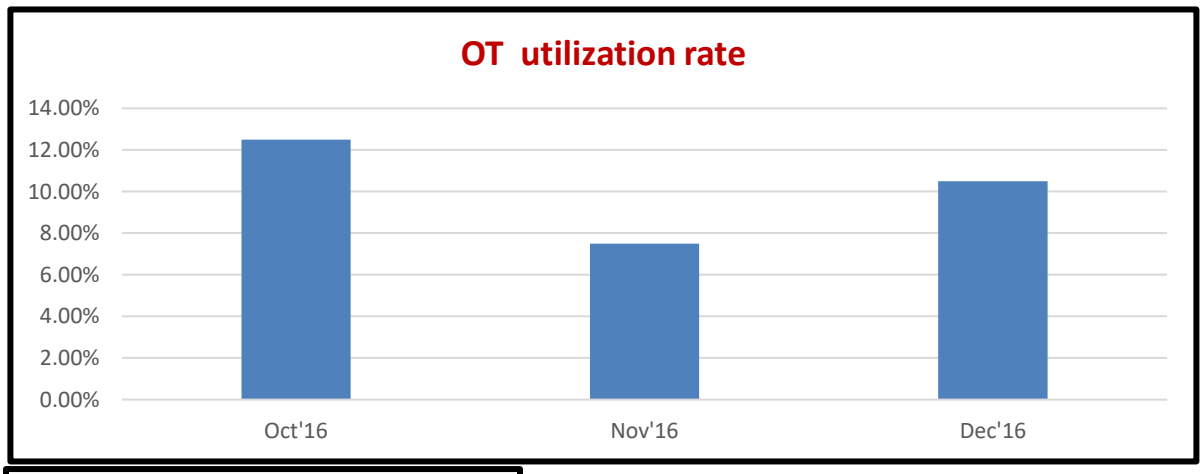


Figure 50:- OT utilization rate

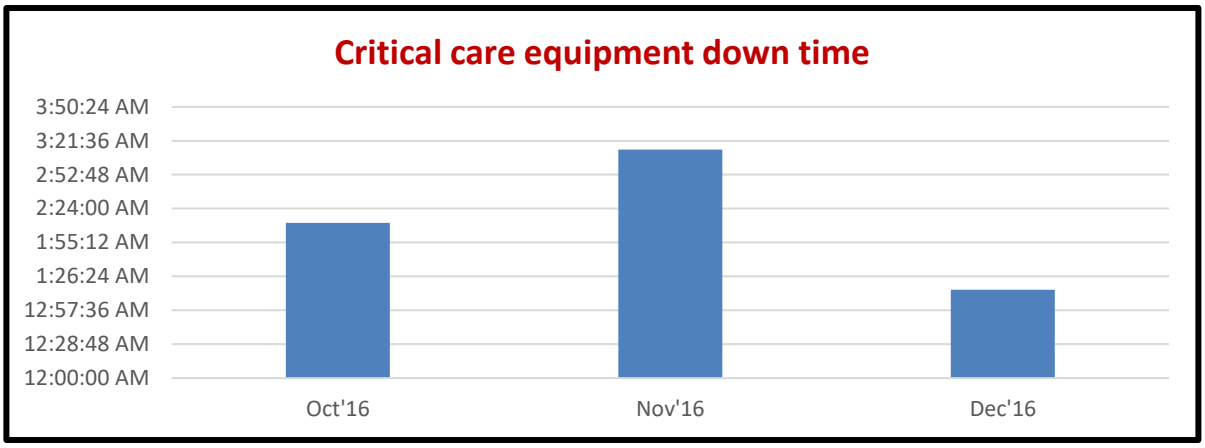
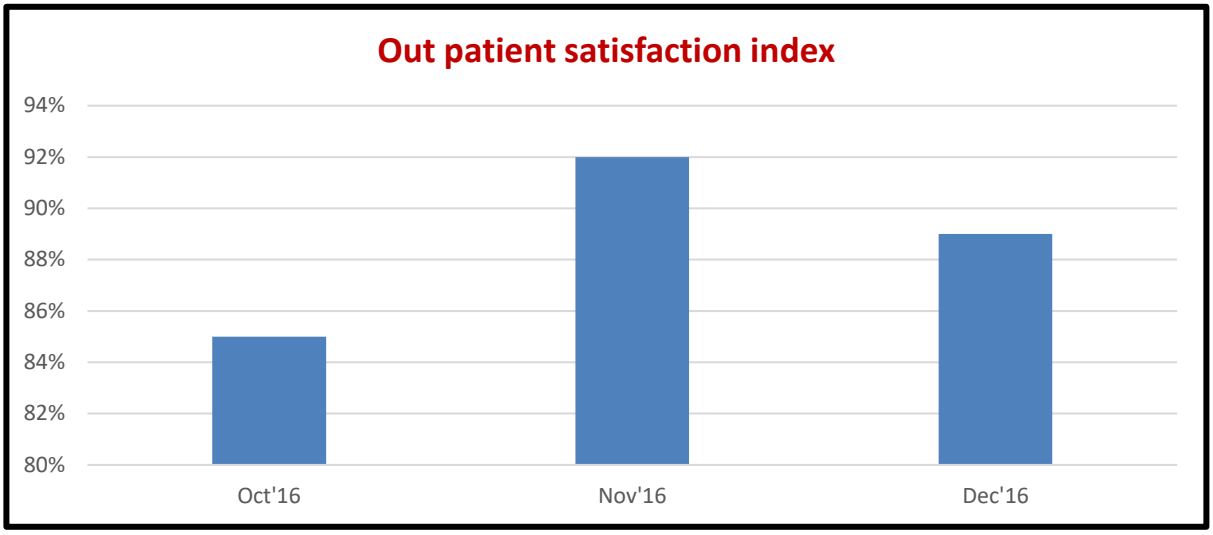


Figure 51:- Critical care equipment down time

Table 23 :- Patient Satisfaction.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 4d	Out patient satisfaction index	Patient Satisfaction is defined in terms of the degree to which the patient's expectations are fulfilled. It is an expression of the gap between the expected and perceived characteristics of a service (Lochoro,2004).	Score achieved / Maximum possible score X 100	85%	92%	89%
	In patient satisfaction index		Score achieved / Maximum possible score X 100	79%	81%	85%
	Waiting time for services including diagnostics and out-patient consultation	A waiting time is a length of time which one must wait in order for a specific action to occur, after that action is requested or mandated. Waiting time for diagnostics is the time from which the patient has come to the diagnostic service(requisition form has been presented to the counter) till the time that the test is initiated. Waiting time for out-patient consultation is the time from which the patient has come to the concerned out-patient department (it may or may not be the same time as registration) till the time that the concerned consultant (not the junior doctor/resident) begins the assessment.	Sum (Patient-in Time for Consultation/ Procedure – Patient Reporting Time in OPD/ Diagnostics) / Number of patients reported in OPD/ Diagnostics	16min	15min	17min
	Time taken for discharge	Discharge is the process by which a patient is shifted out from the hospital with all concerned medical summaries after ensuring stability. The discharge process is deemed to have started when the consultant formally approves discharge and ends with the patient leaving the clinical unit.	Sum of time taken for discharge / Number of patients discharged	2 Hrs	3Hrs	3Hrs

Figure 52:- Out patient satisfaction index



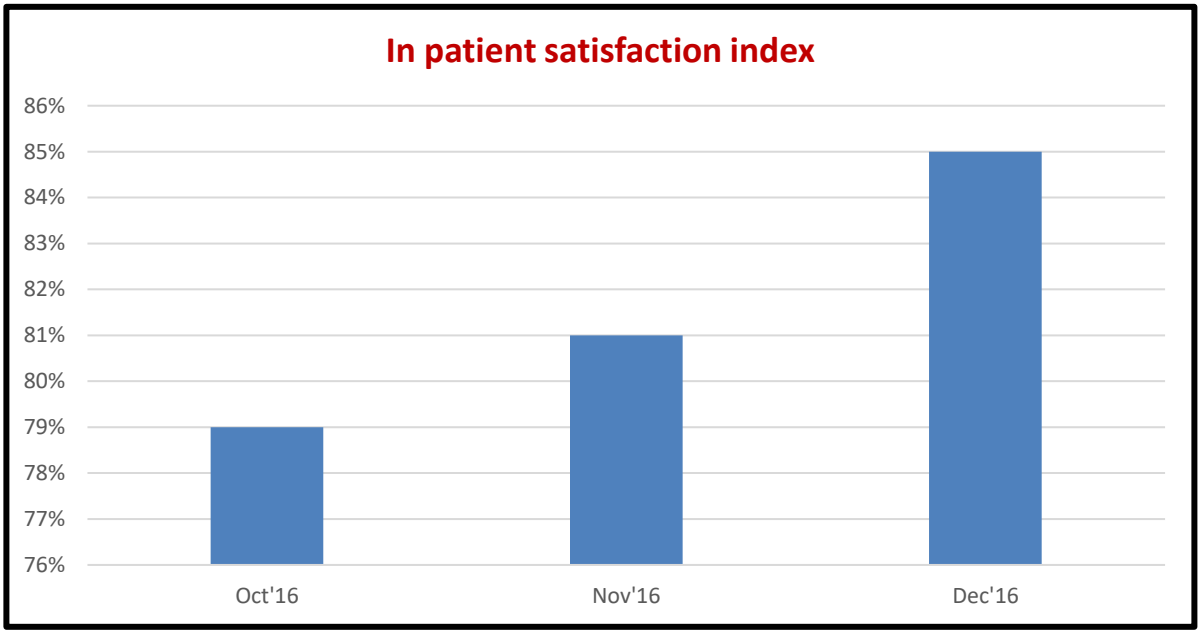


Figure 53:- In patient satisfaction index

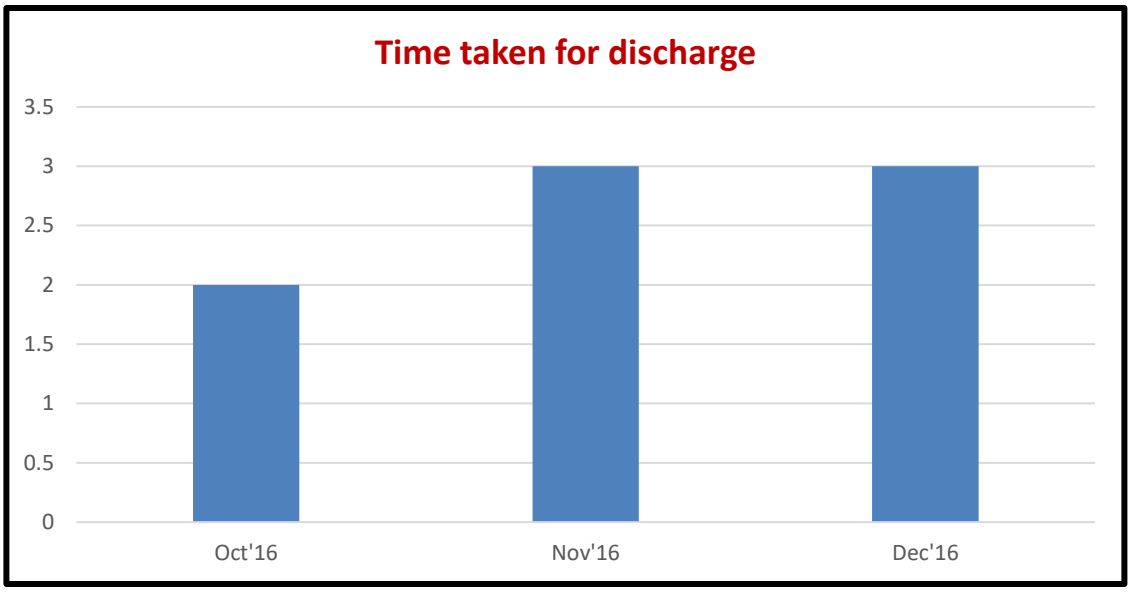


Figure 54:- Time taken for discharge

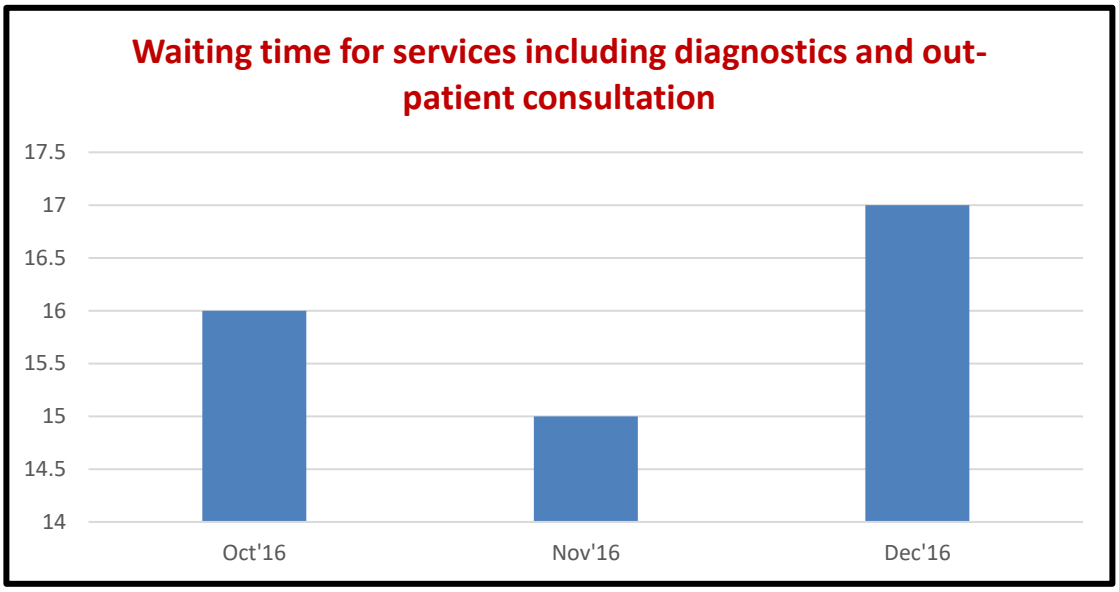


Figure 55:- Waiting time for services including diagnostics and out-patient consultation

Table 24 :- Medical Records.

Standard	Indicator	Definition	Formula	Oct'16	Nov'16	Dec'16
CQI 4g	Percentage of medical records not having discharge summary	A discharge summary is the part of a patient record that summarizes the reasons for admission, significant clinical findings, procedures performed, treatment rendered, patient's condition on discharge and any specific instructions given to the patient or family . It is a summary of the patient's stay in hospital written by the attending doctor.	Number of medical records not having discharge summary / Number of discharges and deaths X 100	0.00%	0.00%	0.00%
	Percentage of medical records not having codification as per International Classification of Diseases (ICD)	The ICD is the international standard diagnostic classification for all general epidemiological, many health management purposes and clinical use. These include the analysis of the general health situation of population groups and monitoring of the incidence and prevalence of diseases and other health problems in relation to other variables such as the characteristics and circumstances of the individuals affected, reimbursement, resource allocation, quality and guidelines.	Number of medical records not having codification as per (ICD) / Number of discharges and deaths X 100	0.00%	0.00%	0.00%
	Percentage of medical records having incomplete and/or improper consent	Consent is the willingness of a patient to undergo examination/ procedure/ treatment by a health care provider. Informed consent is a type of consent in which the health care provider has a duty to inform his/her patient about the procedure, its potential risk and benefits, alternative procedure with their risk and benefits so as to enable the patient to take an informed decision of informed decision of his/her health care. If any of the essential element/requirement of consent is missing it shall be considered as incomplete. If any consent obtained is invalid/void (consent obtained from obtained by wrong person etc.) it is considered as improper. Wrong person/consent	Number of medical records having incomplete and/ or improper consent / Number of discharges and deaths X 100	99.07%	99.09%	99.11%
	Percentage of missing records	A medical record is considered as missing when the record could not be found out from the MRD after the72nd hour of the record request.	Number of missing record / Number of records X 100	0.00%	0.00%	0.00%

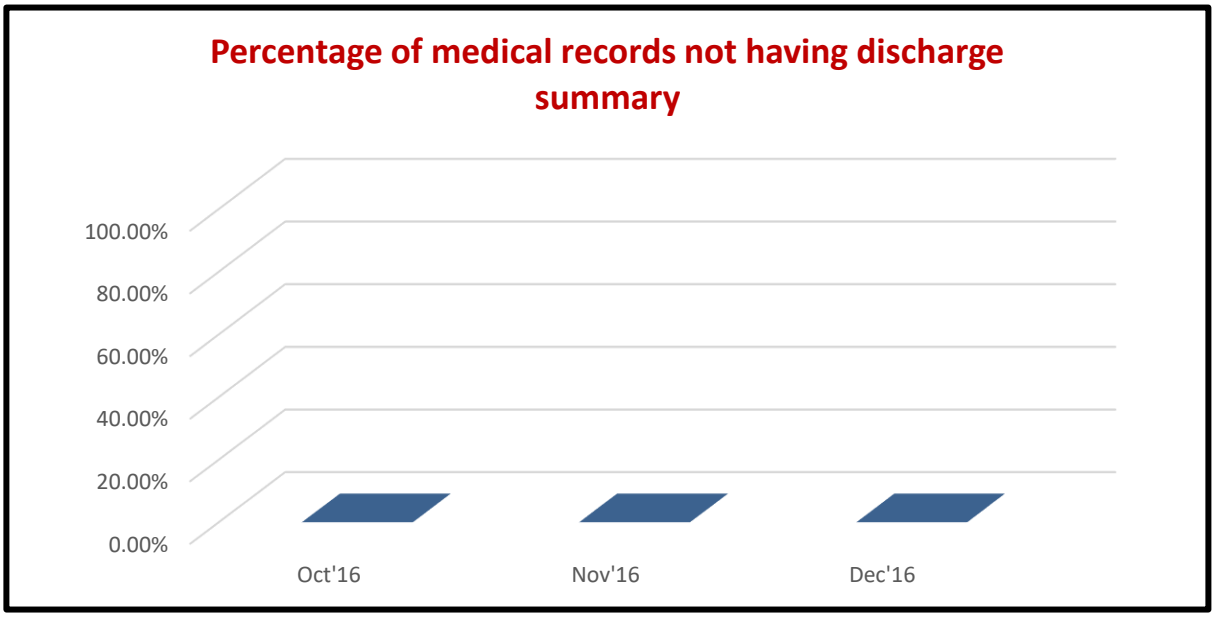


Figure 56:- Percentage of medical records not having discharge summary

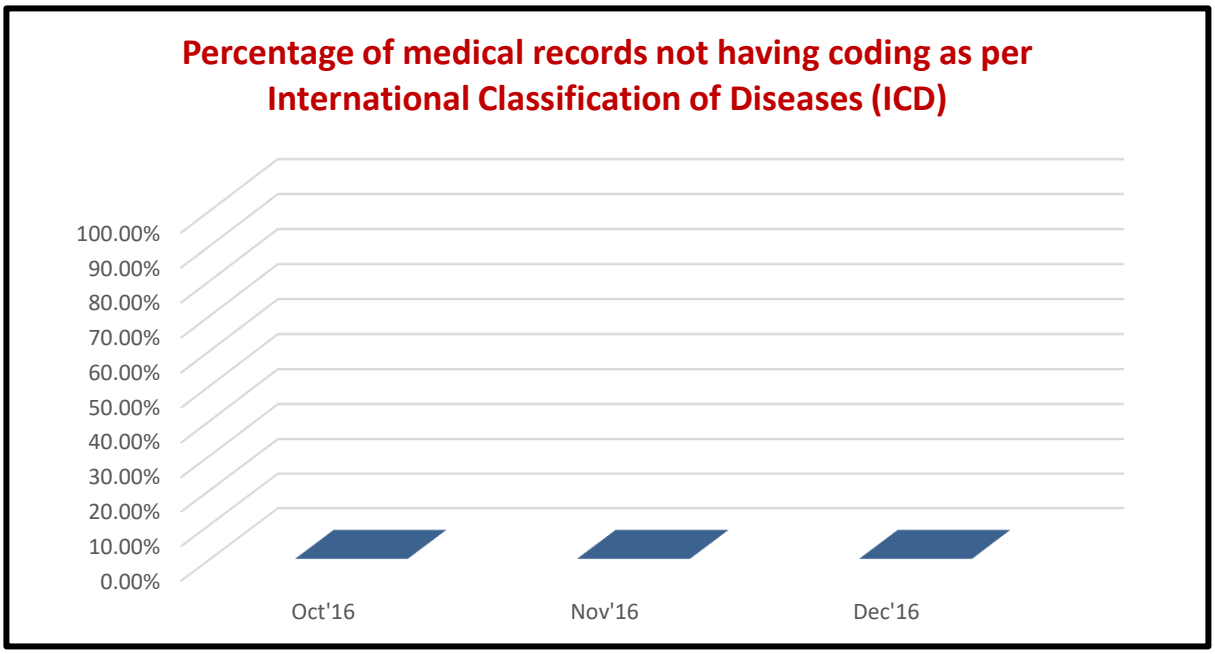


Figure 57:- Percentage of medical records not having coding as per ICD.

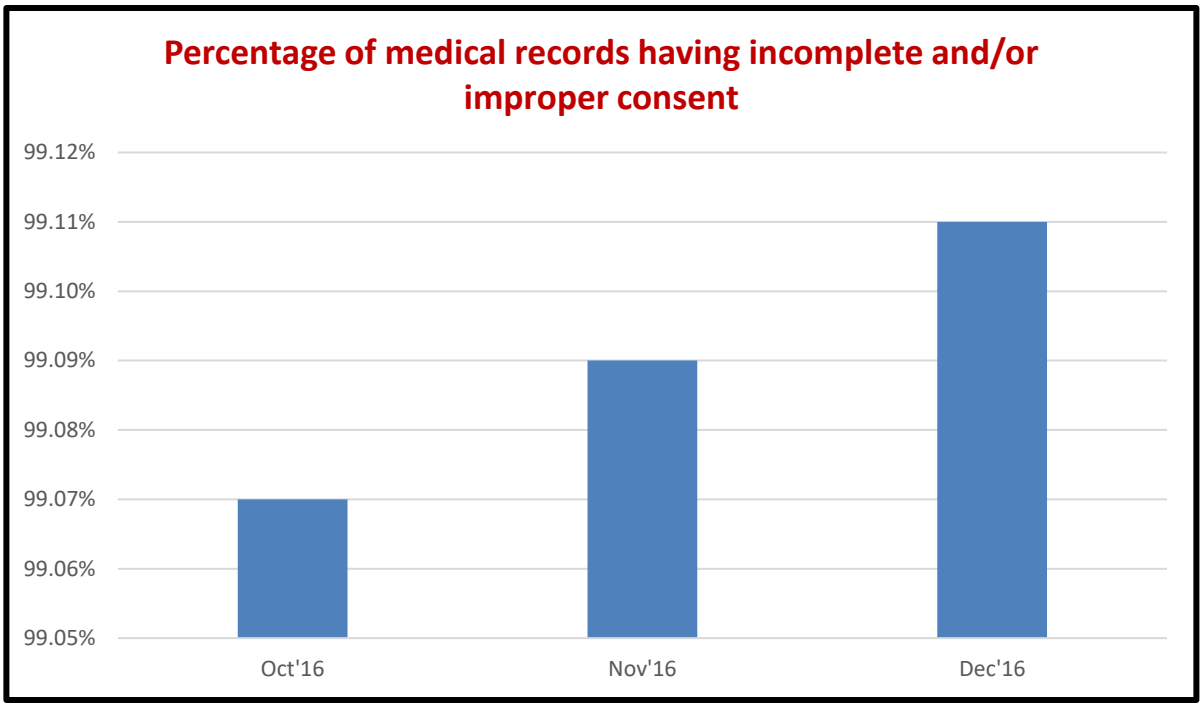


Figure 58:- Percentage of medical records having incomplete and/or improper consent

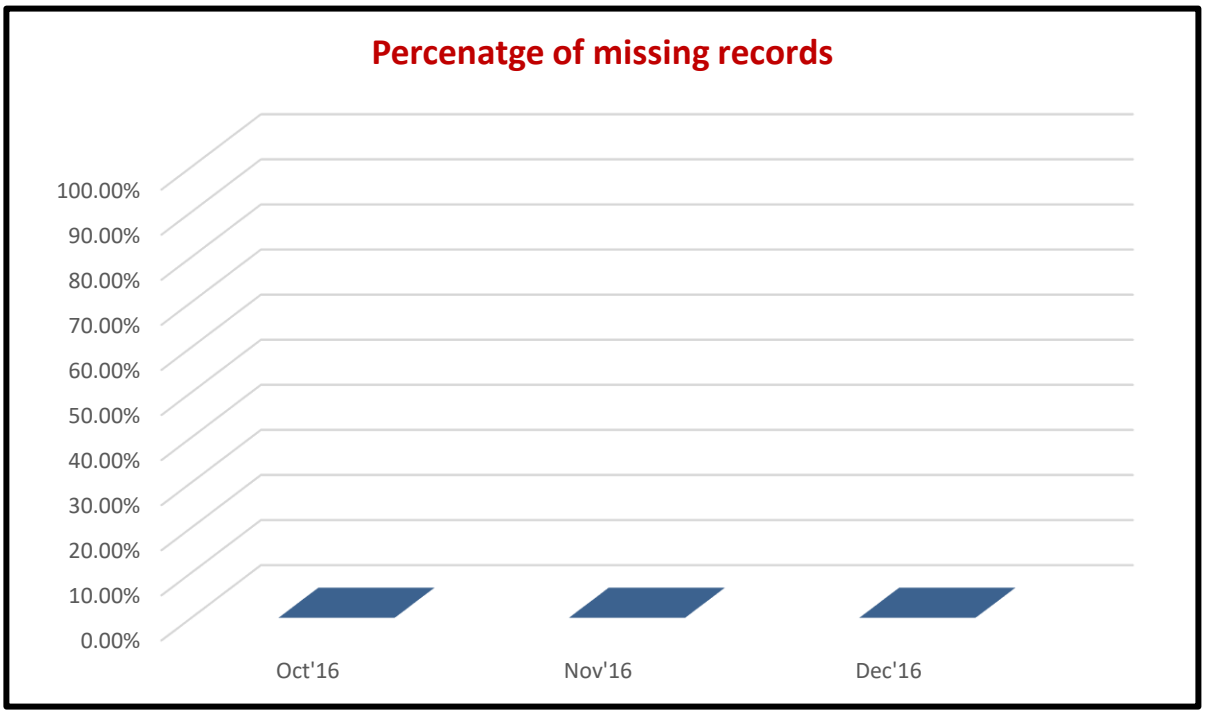


Figure 59:- Percentage of missing records

RECOMENDATION

Operation Theatre

1. The changing room for male and female are separate but the allocation of cupboards and hooks to hand unsterile clothes are very limited and the bucket to keep the soiled linen is also very small in comparison to the manpower at O.T for a particular procedure/surgery.
2. The O.T is efficient with the quality assurance of AHU and HEPA filters. Further working is also recommended to have an independent duct to extract the foul odour produced at the time of undergoing procedures especially LSCS and Orthopaedic Surgeries.
3. The site/side marking is being done by the respective clinicians but they are not exactly following the document policy of putting the "√" at the site/side to be operated and marking the "X" at the other site/side, however the clinicians are only marking the site/side to be operated.
4. There is no wash room present in the O.T, hence the staff has to change and go outside the O.T causing the inconvenience. An area in the O.T is in process of demarcation to provide such convenience.
5. The Pre-Operative Anaesthetic evaluation is undergone for all the patients. As per Hospital policy, all assessment needs to be documented in HIS however few have been seen documented manually resulting in the partial compliance of documentation as per hospital policy.

Imaging: X Ray / USG / Mammography / DEXA Scan / CT Scan / MRI

1. The department reports all the quality Indicators. In the redo quality indicator, the movement of the patient at the time of exposure is recurring in nature. The quality department is working towards the prevention of such occurrence by educating the radiology staff to orient patient about preventing such movements.
2. The TLD batches are regularly sent to the Ultra Tech. Labs for the radiation hazard identification; however, few staff are not aware of their quarterly radiation exposure.
3. The senior staffs at the department were observed of not wearing their aprons hence their identification among the department is inexpedient.
4. The waiting area at radiology has very few sitting causing inconvenience to the patients and their attendants to wait for their turns.

Laboratory: Haematology/ Biochemistry/ Pathology/ Microbiology

1. The department needs to work on the zoning of sample collection area and the dispatch area. At present the area is very compact and the movement is also very restricted.
2. As observed the Lab has positive air flow but the breakdown of its designated AHU is recurring in nature which sometimes causes foul air to strike at department causing occupation hazard.
3. The phlebotomy section has 1 chairs for sample collection which are sometimes utilized for the sitting of general medicine patients due to sitting space constraint.
4. The TAT of Reporting for Haematology and Biochemistry is system generated and the preventive action taken for deviation in TAT from the set benchmark is yet to be streamlined.

Hospital Infection Control (HIC)

1. It has been seen that the ICN is efficient in maintaining the records of pre-exposure prophylaxis records of Hep B vaccination, but the staff is not active to get them vaccinated. The ICN has to call the staff multiple times for their own vaccination.
2. The ICN takes training of supportive staff on regular basis for the usage of PPE's but the staff in night duty is quite lenient in using PPE's due to limited supervision.
3. The ICN takes regular bacteriological cultures of O.T and the results are negative. As discussed with quality team and ICN, they are planning to take random cultures of O.T after regular cleaning to detect any form of Virus or bacteria as an act to be more vigilant.

Medication Management: Pharmacy and Pharmacy Store

1. The stock outs of identified item reoccur when the flow of the patient increases. It's because the stock is received from the centralized store at Gurgaon unit.
2. The organization adheres to no cut strip policy but in response to it the patients and attendants are creating kiosk in frequent intervals.
3. The high-risk medications are labelled with Red Dot stickers. In some medicines the staff forgot to label the bottle/container with the same dots.
4. The Look Alike and Sound Alike Drugs are being identified in the department but the newly joined staff at pharmacy was not aware of it.

Quality Management

1. The department is being manned by only one staff, however the workload is substantial.
2. The administrative operations including Legal and Statutory compliance are also coordinated by the quality department.

Medical Record Department (MRD)

1. The Patient information sheet is partially signed by the patient/attendants however when asked from the patients, they were oriented for the same at the time of admission.
2. The MRD is yet to start capturing the adherence of restraint consent and its monitoring form.
3. The Blood Transfusion Notes are being partially documented in HIS, rather clinicians prefer to document it manually. The quality team is in discussion with the clinicians to streamline the process of its documentation source.
4. During the non-availability of Medical Superintendent in the hospital, there is no alternative authority to authorize the file/documentation movement from the MRD.
5. The MRD has space constraint in keeping the old Medical Records. As discussed with the M.S the provision is proposed for scanning/microfilming.

Front office: Registration, Admission and Billing counters

1. The general consents are being filled by the patients but the F.O staff is lacking in explaining the checkpoints of general consent.
2. The Estimate forms are being filled and documented in the records. At the time of tracking the records the same is being searched by the name/date of the patient and its date of estimate given. The estimate form pads are yet to be serial numbered by the hospital.
3. The department is lacking with the process of updating the patients/attendants for their regular bill updating.

Biomedical Equipment Management

1. The department has only one engineer and in case of odd hours there is no backup support. In case of urgency due to breakdown of critical equipment the same engineer must attend the breakdown.
2. The maintenance of wheel chairs and stretchers is under BME, which is once in 6 months. The department is being suggested to change the frequency to 3 months for efficient patient handling.
3. The department is full-fledged efficiently functional but the room of the department is temporary in nature which causes water leakage during rainy season.

Facility Management: Engineering and Maintenance

1. The department is maintaining work order and job card, as per its analysis most complaint arises from the floors. The Preventive action of such rectifications needs to be overlooked by the quality Team.
2. To conserve electricity, the air handling units are being made switched off for the OPD area and the cafeteria area. But it has been observed that the attendants coming from far places are lying down at those areas and are not comfortable with the air quality.

Housekeeping

1. Some of the Housekeeping staff was seen working without any safety equipment's. They are to be provided with heavier elbow level gloves, Aprons and Boots. They also need greater Motivation to use them regularly as some of them do not have the desired motivation to use them and give precedence to convenience over safety.
2. A room readiness checklist should be prepared by H.K supervisor so that delivery of services could be made better.
3. The preventive action for partial filling of checklists at wash rooms and patient rooms need to be taken rigorously as it is recurring in nature.
4. The newly joined staff is being trained on regular intervals but their training efficacy needs to be assessed.

Laundry and Linen

1. The hospital has a place for sluicing the linen but the area needs to restructure to keep the chemicals in much organized manner.
2. The torn linen is being left to be assessed by the hospital staff and the third party service provider which creates lack of ownership to repair the linen.

Kitchen/Canteen

1. The food is checked by the F&B in charge but the food prepared on holidays is not checked by the MOD of the Hospital.
2. The raw materials are checked regularly by the F&B staff at the time of receiving them but there is no fixed or allocated area for checking the items in the premises.
3. The wheels/coasters of the food trolley are creating annoyed sounds for nonaligned bearings.
4. The cold storage area needs to be re-organized as per the policy.
5. The dietician at a moment forgets to wear head caps while entering the kitchen.
6. In the absence of dietician, the detailed nutritional assessment is not being done for the patients.

CSSD

1. The department is following the quality assurance but the internal hospital staff very occasionally fails to comply for their restricted movement in the department.

CONCLUSION

1. This study shows that there are good processes being followed in the Hospital and maintains adequate quality standards. It also reveals that enough precautions are being taken for proper maintenance and upkeep of equipment and training of staff in the Hospital. The staff, nurses and Technicians have undergone all types of training to achieve the quality standards. The doctors, nurses and WCHs have positive attitude and good practice towards patient safety due to frequent training. Constant supervision and implementation at each level of quality management should be supervised regularly. Doctors need frequent updating in their knowledge. However, there are some observations in the hospital as per NABH norms in the implementation of some of the standards in various department. Since the hospital is already accredited by NABH it is important to always maintain and upgrade the practices to achieve the desired standards and it must be prepared according to the evaluation criteria for assessment. As of now the hospital fulfils the required criteria. In totality Hospital has high potential for renewal of accreditation. Thus, the hospital is presently prepared for assessment and requires great effort and focus on the weak points to cover the observation and be prepared for getting renewal of NABH accreditation.

2. The hospital has provided a framework for quality assurance and quality improvement, while focusing on patient safety and quality of care. These include a strong culture of safety that has been inculcated, a decrease in the incidence of adverse events, and constant monitoring of quality within the system. The aim is to ensure that the hospital follows all the standards and guidelines in accordance to NABH.

3. Patient satisfaction has become increasingly popular, as a critical component in the measurement of quality of care. Nursing service is one of the most important components of hospital service. Understanding how things are looking through the patient's eye should be central part of quality improvement. The level of patient satisfaction with nursing care is an important indicator of quality of care provided in hospitals.

4. Continuous monitoring, setting benchmarks, Sharing results and improvements, Setting department indicators, Management dashboard of the indicators, Continuous review of manuals, Review of protocols & Updating of forms.

REFERENCES

1. Joshi SK, "Quality management in Hospital". JAYPEE BROTHER MEDICAL PUBLISHERS (P) LTD. First edition.
2. Quality management in public health facilities- traversing gaps. Dr. J.N.Sahai Advisor, public health (Quality improvement, NHSRC) Ms Riddhima Dutta; programme associate, Ms Nidhi Jain; programme associate.
3. Dr. Santosh Kumar, Brig. (Dr.) Swadesh puri, Dr. S.D. Gupta 2009, study of Gap Analysis Report for rehabilitation, Book library.
4. Dr. Santosh Kumar, Brig. (Dr.) Swadesh puri, Dr. S.D. Gupta 2009, study of Gap Analysis Report for Ishtakal Hospital
5. Dr. Bidhan Das, (2007). A Guide book for Hospital Administration.
6. Standards for Hospital National Accreditation Board for Hospitals and Healthcare Providers Quality Council of India 2005.
7. Health Care Quality Assessment by Michael A. Counte, Ph.D.School of Public Health, Saint Louis University November 2007 prepared as part of an education project of the Global Health education Consortium and collaborating partners.
8. A study to assess patient's satisfaction with quality of nursing care Project report Submitted in the partial fulfilment of the requirements For the Diploma in neuro nursing submitted by Rajeshwari T.
9. Accreditation for Hospitals and Retaining the Quality Advantage Post Accreditation by Lallu Joseph Quality Manager, Christian Medical College Vellore.
10. WHO Performance Assessment Tool for Quality Improvement in Hospitals Publications by WHO Regional Office for Europe.
11. Guide Book to Accreditation Standards for Hospitals (4th edition) December 2015 by National Accreditation Board for Hospitals and Healthcare Providers (NABH).