Process of Accreditation: A Quality improvement process and its affect on general hospital performance

A dissertation submitted in partial fulfillment of the requirements for the award of

Post-Graduate Diploma in Health and Hospital Management

by

MEGHA SHARMA

International Institute of Health Management Research

New Delhi -110075

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Abstract

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Megha Sharma

"The Hospital Accreditation" approach is a concept and practice that yields beneficial results to patients, customers, hospital personnel, the hospital, the Faculty of Medicine, the society and the country as a whole. In 1917, the American College of Surgeons established a set of minimum standards for hospitals and in 1951, the American College of Surgeons joined with several other professional associations to form the Joint Commission on Accreditation of Hospitals. Thirty years later, this voluntary accrediting body changed its name to the Joint Commission on Accreditation of Healthcare Organizations to more accurately reflect its scope of health services evaluation. The Indian Scenario being NABH is a constituent board of Quality Council of India (QCI), set up to establish and operate accreditation programme for healthcare organizations. NABH is an Institutional Member as well as a member of the Accreditation Council of the International Society for Quality in HealthCare (ISQua). NABH is the founder member of proposed Asian Society for Quality in Healthcare (ASQua) being registered in Malaysia.

The aim of study was to see the affect of accreditation on four key areas: Patient Satisfaction, Employee Satisfaction, Day to Day Operations and Financial aspect.

The tools used:

1. NABH Tool Kit, Analysis of Patient Satisfaction Feedback forms (Sample Size= 100 per month, Random Sampling) was done for the last 6 months. (October 2010- March 2011)
2. Trend Analysis of Key Performance Indicators using histograms and line charts was done for the last 6 months (October 2010- March 2011).
3. Root Cause Analysis of non compliances was done and corrective and preventive action (CAPA) was taken.
4. Exhaustive Internal Audit Checklist was made for various departments and internal audit schedule was made.

5. The study was Observational but evidence based in nature. Quantitative data collected was arranged and analysed used Excel sheet tools to study the trend.

The major findings were as follows:-

1. To see the affect of accreditation on Patient satisfaction, feedback forms were analysed for last 4 months and interpretation was drawn. Due to streamlining of processes during preparation of NABH Pre assessment patient satisfaction has continuously improved.
2. Further to study the affect of accreditation on day to day operations, Indicator Analysis was done for the last 6 months and following observations were made:-

    2.1 Benchmarked average initial time to be taken by optometrist for new patient, follow up, post op patient for Anterior and Posterior Segment.
    2.2 Cases of Adverse Events have fallen down in months of December, January, February and March.
    2.3 Trend of rescheduling surgeries was going haywire so Root Cause Analysis (RCA) was done and CAPA was suggested and implemented.
    2.4 Performance of indicators pertaining to Medical Records has dramatically improved after doing RCA and CAPA.
    2.5 Cases of Endophthalmitis reported have also decreased after RCA and CAPA.
    2.6 Increase in OPD Utilization after doing RCA and CAPA.
    2.7 And patient satisfaction being directly proportional to streamlining of processes has constantly increased.

3. NABH Tool kit was used to streamline the day to day operations and therefore list of Non compliances was made and Action Plan was drafted.

Conducting the study to evaluate the affect of accreditation on general hospital performance proved beneficial as many loop holes were identified and worked upon.

ACKNOWLEDGEMENT

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List of Abbreviations

CFS	Centre for Sight
ISO	International Organization for Standards
QCI	Quality Council of India
NABH	National Accreditation Body for Hospitals and Healthcare Providers
ISQua	
ASQua	
JCI	Joint Commission International
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
CCHSA	Canadian Council on Health Service Accreditation
ACHS	Australian Council on Healthcare Standards
HQS	Health Quality Services
COHSASA	Council on Health Services Accreditation for South Africa
KZN	KwaZulu-Natal
HAI	Healthcare-Associated Infections
CPR	Cardio-Pulmonary Resuscitation
NICU	Neonatal Intensive Care Unit
WHO	World Health Organization
CAPA	Corrective and Preventive Action
AAC	Access, Assessment And Continuity Of Care
COP	Care Of Patients
MOM	Management Of Medication
PRE	Patient Rights And Education
HIC	Hospital Infection Control
CQI	Continuous Quality Improvement
ROM	Responsibilities Of Management
FMS	Facility Management And Safety
HRM	Human Resource Management
IMS	Information Management System
M.S.	Medical Superintendent
RCA	Root Cause Analysis
PCR	Posterior Capsular Rupture
OPD	Out Patient Department

OT	Operation Theatre
QMS	Quality Management System
FIFO	First In First Out
ABC	Always Better Control
VED	Vital Essential Desirable
EOQ	Economic Order Quantity
FSN	Fast moving, Slow Moving, Non moving
AC	Air Conditioner
BLS	Basic Life Support
ALS	Advanced Life Support
PPE	Personal Protective Equipment
BMW	Bio Medical Waste
HEPA	High Efficiency Particulate Air Filters
PAC	Pre Anesthetic Check Up
FMS	Facility Management System
SOP	Standard Operative Procedures
HAZMAT	Hazardous Material
CGHS	Central Government Health Scheme

PART – I

INTERNSHIP REPORT

I. INTRODUCTION

Objective of the internship

The main objective of internship is to gain exposure and hands on experience to work related to the field of managing a health care organization. The internship period is necessary to gather working knowledge of a hospital setup and undergo on-the-job training to know about the various departments in a hospital in detail.

As a part of my training in centre for sight I was given an induction schedule whereby I had gone through all the departments and their work processes in detail. The induction programme was for 15 days and it helped significantly in gaining knowledge about hospital operations. This included a visit to all the peripheral centers.

The area of hospital operations allotted to me was Quality. As the hospital was going for NABH Accreditation I got the opportunity to work for the same in close coordination with consultants. In addition to NABH, I was also actively involved in ISO ISO 9001:2000 Audit that took place on 14th March, 2011. Throughout the dissertation I was involved in conducting and organizing Internal Audits, training for employees and working on Non Compliances.

II. ORGANIZATION PROFILE

The centre was setup in 1996 by Dr Mahipal S. Sachdev, former Associate Professor, Ophthalmology from the prestigious Dr R.P. centre, AIIMS, New Delhi, with the vision - ***"To establish the most preferred brand of super specialized eye care centres in North India"*** *and with a motto* ***"Because every eye deserves the best"****.*

Centre for Sight is an ISO 9001:2000 Certified organization. Today it is possibly one of the largest eye care providers in the private sector in north India. It is a preferred tertiary referral centre for Glaucoma, squint opthalmoplastic and advanced vitreo – retinal surgeries. Centre for sight is a pioneer in the treatment of age related macular degeneration.

Mission: Centre for Sight is committed to deliver best quality care with personalized touch and cutting edge technology, to enhance patient satisfaction and provide continual improvement in its services.

Vision: To establish the most preferred brand of super specialized world class eye care facilities in and around India by2020.

Objectives:

- To provide quality of care that exceeds patients' expectations
- To adhere to operational protocols of the institute in order to reduce errors and enhance patient safety
- To comply with all statutory and regulatory requirements
- To promote on the job training in order to improve skills and competence of the staff.
- To ensure health and safety of the staff members.

Centre For Sight, since its inception in 1996 has always strived to offer the very best to the ophthalmic patients and has been in the forefront of delivering specialized eye care services for various disorders of the eye.

Within a short span, Centre For Sight has become an icon of dynamic progress in the field of ophthalmology. With NINE Centres running across NCR and beyond, be it South Delhi, East Delhi, North-West Delhi, Faridabad, Gurgaon or Agra, CFS is well on course to be the largest eye care service provider across North India.

Safety, Expertise and Technology. These are the three words that describe what you can expect from Centre For Sight.

Centre For Sight is recognized by the **Central Govt. Health Scheme (CGHS), Delhi Govt. Health Scheme (DGHS)** and registered by the **Directorate of Health Services,** National Capital Region, New Delhi. It is on the panel of reputed public sector undertakings like **GAIL (India) Pvt. Ltd ,Oil India,DERC, UGC, CPCB, Mother Dairy, ECHS, Indian Airlines, Seema Suraksha Bal, Punjab & Sind Bank, MTNL,** etc. It is also empanelled with Multinational Corporates like **Escorts JCB, Jet Airways,Taj Palace, Oberoi, Global Healthline 98.4 , Hero Honda, Hindustan Lever Ltd, Bennett, Coleman & Co. Ltd.** etc, reputed **Insurance Companies** and a majority of the **TPAs.**

It is the **Dedication, Professionalism and Perseverance** that make Centre for Sight a preferred destination for Quality Eye care not only for Indian Citizens but also for foreign internationals. Infact Centre for Sight is emerging in a big way in the field of Medical Tourism.

Centre For Sight uses the cutting edge technique of **Phacoemulsification** with a foldable lens implant for cataract surgeries. We use the latest generation Phaco machine – **Signature and Millenieum by AMO** and **Stellaris by B&L**. In most cases it is a 'no injection – no stitch – no pad' surgery leading to very quick visual recovery and rehabilitation resulting in 'walk in – walkout' cataract surgery.

The main centre is located at Safdarjung, New Delhi. There are few satellite centers across Delhi; others are in Faridabad, Gurgaon and Agra. It is coming up with a few more centers in north India. The main satellite centres are:

- Centre for sight, Preet vihar
- Centre for sight, Gurgaon
- Centre for sight, Rohini
- Centre for sight, Escorts Heart Institute, Okhla
- Centre for sight, Sun flag hospital, Faridabad
- Centre for sight, Agra
- Centre for sight, Rajouri Garden
- Centre for sight, Roop Nagar
- Centre for sight, Meerut

Centre for Sight is primarily a Super-specialty Ophthalmic hospital i.e. it caters to only eye care. It provides the following Medical and ancillary services:

Medical Services

- Complete refractive solutions
- Cataract
- Glaucoma
- Vitreo – Retinal diseases
- Uvea
- Cornea
- Squint
- Pediatric ophthalmology
- Neuro – ophthalmology
- Occuloplasty and tumours
- Opticals and low vision aids
- Contact lenses
- Comprehensive eye check up

Ancillary Services

- Pharmacy
- Pathlogy lab for tests
- ECG

Facilities and Equipments

The centre has all the latest facilities and state of the art technology to cater to the needs of patients seeking eye care.

- Intralase Femto second Lasik Laser (Blade-Free Lasik)
- Visx Lasik Laser
- Bausch & Lomb Zyoptix 100 LASIK Laser
- Xp- Microkeratome & Hansatome
- Allergan-Sovereign Phacoemulsification system
- Gemini Phaco & Vitrectomy system
- Millenium –Advanced Cataract and Vitrectomy System
- Glautec Excimer Laser for Glaucoma
- Zeiss YAG Laser
- Zeiss PDT Laser
- Optical Coherence Topography (OCT)
- Zeiss Digital Fundus camera
- Humphrey & Medmont Fields Analyzers
- Kowa fundus camera
- Oculus pentacam
- Topcon Fundus cameraz
- YAG Laser YC 1800
- OPD Scan

- AMO –Signature Phacoemulsification system
- AMO- Compact with ICE Phacoemulsification System
- Applanation Tonometers
- Vitrectomy machine

III. DEPARTMENT WISE WORK PROCESS

1) Reception

It is the first point of interaction between the patient and the hospital. The flow of activities at the reception is as follows –

- In case of New Patients, basic details are taken and new ID is generated. In case of an old patient, upon the arrival of the patient, his profile is accessed.
- New case incident is generated.(Unique Hospital Identification Number)
- After registration blue slips are issued. The time of patients entry into the system, doctors name and consultation charges are mentioned in these slips. They are sent along with the files to the OPD directly. These files are color coded. Blue files are for patients with appointment and Pink files are used to indicate walk-in patients.
- Appointment for next visit may be taken at the reception. However, appointments on phone are given only at the EPBAX cell.
- The "Appointment" module of I-Care (Hospital HMIS) is used at the reception.

Different color codes are given to manage patient flow, i.e.

- Blue New Appointment

- Yellow Follow up
- Purple One day post operative
- Light purple One week post operative
- Dark pink Three weeks post operative
- Brown colour Check in
- Green colour For Lasik Work up
- Orange For surgery
- Red Any information and blocks in OPD

Charges for consultation are collected at the reception itself and daily reconciliation is done.

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2) EPBAX

The electronic private automatic branch exchange is equipment that has made day to day working in the offices much simpler, especially in the area of communication.

It is located in the basement reception and serves both the external and internal communication needs of the organization. Main features are call transferring; call forwarding, auto conferencing and automatic redialing of numbers found engaged in the first trial.

EPBAX staff is responsible for giving appointments to patients on phone.

3) Counseling

Upon his visit to the doctor at the OPD, a patient may be advised a specific procedure/surgery. Obviously, the patient would need some counseling to understand various options that are available to him.

The counseling department basically acts upon the advice of the doctor and explains the relevant facts of the procedure/surgery to the patient.

It includes discussion about the exact procedure, choice of lens, cost and investigations required.

Once investigations are done, patient reports to at the reception with his investigation results. They are put in a yellow folder and sent to the doctor. If the patient is fit for surgery, he again goes to the counseling room and a date is assigned to him for his surgery.

A pre and post operative instruction card is given to the patient, which contains all necessary details regarding precautions and medicines.

For CGHS patients, counseling procedure primarily remains the same. Again, they may fall in two categories:-

a) Serving – Permission letter and copy of ID card.

b) Pensioner – Only permission letter.

Patient is informed about any extra amount that they might have to pay from their pocket in case they opt for an expensive lens. Discharge summary of CGHS patients is also prepared at the counseling room.

For TPA patients, counselors tell them about the cashless procedure in brief, get the TPA guidelines and pre authorization forms of their respective TPA'S signed and submit them to the TPA cell.

In Addition to these, they inform all the patients about the timing of their surgery and give them preoperative instructions one day prior to their appointment.

4) Pharmacy

With the increasing demand, the pharmacy at, Centre for Sight was established in February 2007, which just in few months of its establishment has now grown in its size as well as contents. The pharmacy functions during the regular hospital hours of 9.00 AM to 6.00 PM.

The facilities include:

- All commonly used drugs are available to meet the demand.
- Fully computerized transactions, generation of bills etc.
- Appropriate drug pricing.
- Computerized inventory control system that gives information about drug expiry date, reorder status for a particular drug, pricing etc.
- Good vendor relations and a little lead time in the receipt of order placed.

5) OPD

Each and every stage of an Eye examination is very crucial & important. Thus, the initial & foremost phase of examination (i.e. Outpatient Services) at Centre for Sight are designed in such a way that it provides consistent monitoring to our patient by the staff with extreme comfort level of waiting areas, OPD working hours till the hospital functions hence ensuring enhanced treatment facility with flexibility for our patients.

The facilities include:

- Spacious OPD located at both the Ground and First Floor with the Premium OPD located at Third Floor.

- More than 20 Consultant chambers
- Equipped with the latest technology equipments to examine and diagnose patients
- Access to more than 14 renowned consultants with the faculty of AIIMS.
- Professionally Skilled and Trained staff.

6) Optical and contact lenses

The optical shop at Centre for Sight has an extensive selection of frames for every preference – traditional and designer for all ages in wide range of prices.

The facilities include:

- Skilled staff to help select the right frame and lens
- Patients can choose from a variety of non branded and major branded frames including Tommy Hilfiger, Versus, Gucci, Police, Guess, Versace, D&G, Hugo Boss, Carrera etc.
- High standard of craftsmanship are set.
- Quality of dispensing, using latest technology.
- High Accuracy.
- Time taken for making the spectacles is very less.
- Even the most difficult and complicated prescription can be made with ease.
- Other facilities like free adjustments, nose pads and repairs on any eye wear purchased at the optical are also provided
- Wide range of contact lenses i.e. soft, semi soft, hard and bandaged contact lenses are available all the time. Colored lenses for cosmetic purposes can be made available in 24 hours time.

7) Billing and Accounts

The main billing section of the hospital is located in the ground floor near OPD. All the cash billing for empanelled, TPA and general patients is done here. Credit billing for empanelled patients is done in the basement office. Salient features are:

- Entry in the department is for authorized personnel only. No one can enter until the security code is activated.
- Daily reconciliation of receivables is done. Cash generated in other centers is also analyzed routinely in the main centre.
- Reconciliation of accounts is done.
- All the credit bills generated in a month are submitted within the first week of next month.

8) Medical records department

This department in located in the basement along with the stores section. Approximately 40 inpatient records are generated each day. All the records are filled and sent to the store for filing. Here, all the records are supposed to be checked for deficiencies in the basic details, need to set them in order of hospital numbers and then to be filed in box files. Observations Are:

- These files are arranged vertically in racks made for storing the records.
- A register is maintained in which the entry of all received records is done.
- No set pattern is followed for filing and the storage space is insufficient.
- Files of all the TPA/Insurance patients are also kept in the same department.
- Most of the older files are having incomplete data about patient's treatment, but the same information can be generated from the hospital information software.
- This department is centralized where records for both OPD and IPD patients are maintained.

9) Stores

Hospital stores have the main responsibility of arrangement of lenses for surgery according to the patient's requirement. All details regarding this are taken from counseling 1-2 days prior to surgery so that right lens could be arranged for cataract patients. All other inventory is also maintained and checked routinely. Store is centralized and requirement of all other centers is fulfilled on a monthly basis depending on the requisitions generated by them. Inventory mainly consists of:

- Consumables used in the surgery
- OT drugs
- Stationary and misc items
- Lenses
- Linen for OT
- All the material required for camps
- General purpose consumables like tea/coffee, cleaning agents etc.

10) IT department

- Main responsibility of this department is to see that all hospital systems and the server are working properly.
- The department gives assistance in case there is any problem related to hardware or software.
- Maintenance of hospital information software as well as incorporation of changes and its updation is done.

11) Operation Theatre

2^{nd} Floor – 3 OTs – Cataract, Retinal, Glaucoma and other surgeries are performed in these OTs.

One pre –operatine room and post operative lounges are also there

3rd Floor – Refractive Surgeries are done

12) Work-up room – For refractive surgeries. Location: 3rd Floor.

Before a surgery, some work up is required to be performed on the patient. This includes: -

- Refraction
- Wave Scan – counter-checking of refraction.
- Ob Scan - To check cornea's curvature
- Aberometery – To know the final status of the eye.

This information is stored in a memory disk, which is used during the refractive procedure

13) TPA

- Hospital is empanelled with 31 TPA's. the list includes all major and some minor TPA's approved by IRDA.
- Department carries out all the processes required for cashless hospitalization and further settlement of claims.
- Maintains the database of all the cases processesed till date in files and folders,
- The hard copies of all the claim documents are kept in in box files stored in the MRD.
- All recent and old outstanding cases are kept separately for reference.

- The department gives assistance and guidance to patients regarding cashless hospitalization, and also help them in filing for reimbursements
- Empanelment with New TPA's and renewal of the same is one of the most important task that has to be carried out in coordination with the marketing department.
- Tracking of TPA receivables is done on a routine basis and received payments are checked for deductions, TDS, short payments etc. these deductions if not appropriate, are informed to TPA's and reason is sought.
- Co –ordination with billing and accounts department for financial status reconciliation
- Presenting the current status of TPA financial recovery to the management routinely or as reqired by them

14) Hospital Website

- Centre for sight is having a very informative and interactive website

- Wide range of information about the eye, all kinds of eye ailments, signs and symptoms of various eye diseases and treatment options is available for the reference

- Host of information about the hospital, services, departments, doctors, facilities etc is also shown on the website.
- There is a provision to register online and take appointments.
- Location map and contact details are available for easy accessibility.
- Website is kept updated about all recent activities and changes

15) Administration and HR department

- The main role of hospital administration is to oversee day to day operationsof all departments.
- Makes sure that the hospital is working efficiently and providing adequate medical care to patients without causing them any discomfort
- Acts as a liaison between governing board, medical staff, and department leaders and integrate all the activities so that they function as a whole.
- Project management, Budget planning, CFS expansion related activities and making key decisions are some of the important activities in which administration plays a important role.
- Human resource department is concerned with:

    - Recruitment, training and induction of new members.
    - Daily attendance of staff
    - Leave record for the current year
    - Making policies related to code of conduct
    - Performance appraisal of staff

16) Hospital marketing team

- All the marketing activities for the main centre are carried out from the corporate office in Green Park.
- All other centres have their own team of marketing executives and they report to centre managers and in the head office at green park.

- Major activities include:

  - Arranging for camps, live shows, talks and continuing medical education(CME's) programmes
  - Keeping the hospital website current and updated
  - Designing logos, charts, pamphlets, and brochures necessary for staff and patients education.
  - Empanelment with PSU's, TPA, and other agencies for enhancing business.
  - Tie up with hospitals and doctors (small nursing homes) for referral and diagnostics.
  - Maintenance of public relations and networking inside and outside the hospital

DATE	TASKS DONE
17th January- 28th January 2011	INDUCTION in the following departments: • Reception, EPBAX Centre, MRD, Billing, Pharmacy, OPD, TPA, OT, Counseling, HR, Marketing and Branding, Stores, MRD.
29th January 2011	• Understanding Key Performance Indicators of CFS • Prepared a check list for MRD Files and verify every file before sending for filing for completion of documents.
31st Jan 2011	• Collection of data for KPI's for January • Prepared a Checklist for OT
1st Feb 2011	• Prepared a presentation for Monthly consultant meeting • Calculated OT Utilization rate • Checked MRD files.
2nd Feb 2011	• Involved in FMS Audit and preparing checklist for it • Organized training for Front office staff on NABH Guidelines.
3rd Feb 2011	• Analysed data for Invasive procedure KPI's and Trend

	Analysis for the same • Involved in OT Audit • Went through NABH Standards
4th Feb 2011	• Studies the SOP Manuals of OPD, ADMISSION • Worked upon formats for OT Documentation • Collected legal documents as per NABH guidelines
5th Feb 2011	• Made training schedule for February and Internal audit schedule • Made checklist for audit in Admission department • Attended lecture on Cataract and I Lasik by Dr. Jagdeep Singh
7th- 12th Feb 2011	• Checked MRD Files • Organized training for OT Staff on Hospital Infection control practices • Cross checked Crash Cart of OT as per SOP • Made format for FFA register and MRD register • Compile the Non conformances from the audits conducted • Delegated authorities and deadlines for corrective action • Started Working upon NC's • Involved in MRD Audit • Started collecting data for KPI's for OPD, HR. • Worked upon NC's • Involved in meeting on NABH pre assessment with NABH Consultants and MS • Attended training on CODE RED by Consultants and organized a Mock drill on Fire Safety for the staff. • Made SOP for CODE RED-delegating responsibilities • Attended training on Hospital Infection control organized by BIOSHIELD • Compared the existing standards of CFS with NABH (AAC) • Made checklist for Pharmacy audit • Conducted Pharmacy audit • Segregated LASA medicines in Pharmacy • Organized training for Housekeeping staff on BMW, HAZMAT policy and SOP of Housekeeping. • Prepared checklist for Housekeeping • Conducted Housekeeping Audit • Organized training of OPD Staff on Safety Manual • Compiled all KPI's and submitted report to MS. • Submitted a report on Vaccination status of employees of CFS to HR.
14th- 19th Feb	• Did Fish Bone analysis for Incidence of Endophthalmitis,

2011	Reason for incomplete MRD files • Suggested CAPA's for the same • Organized training for all staff on HR manual • Compiled and analysed data on OPD for calculation of OPD Utilzation • Did Fish Bone Analysis for High Waiting time and Rescheduled surgeries • Suggested CAPA's on meeting with MS • Edited the presentation of CFS for presentation to NABH consultants • Arranged indicators in sequential order and classified them under different categories. • Segregated Minutes of Meetings for the past 6 months • Segregated Training records for the past 6 month • Filed all the departmental Internal Audits as per NABH guidelines • Made test paper for Optom's in co-ordination with consultants • Worked on NC's • Attended CPR training • Checked MRD Files
21st- 28th Feb 2011	• Cross checked IC Performa and coordinated with ICN to complete it • Studied the HMIS in detail, started identifying gaps in the system • Made Clinical Audit report • Prepared Checklist for Bio Medical Waste Audit • Conducted Audit for BMW • Went through pre assessment NC's of two leading hospitals • Took feedback from Front Office Staff and Optom's for drawbacks in HMIS • Analysed data for BME Audit and submitted report to MS. • Worked on NC's • Organized training for Staff of Stores on SOP of Stores

DATE	**TASKS DONE**
1st March	• Observed EPBAX (Call Centre) working on I-care. • Drew a Process flow map of the same • Discussed with EPBAX Staff about the shortcomings of the software. • Highlighted the GAPS and suggested SRS for the same.
2nd March	• Observed the Front Office Staff registering patients on I-

	care. • Discussed the shortcomings of the software with Front Office Staff. • Had informal discussions with patients about their issues with Appointments and Registration. • Drew a Process Flow Map of the same and highlighted the GAPS, suggested the SRS for the same.
3rd March	• Discussed the process flows for Appointment and Registration with VP Operations and Sr. VP IT in detail. (Shared feedback from all concerned staff, Gaps analyzed and suggested SRS) • Incorporated their inputs on Gaps and SRS on the same. • Checked the MRD files for proper documentation.
4th March	• Designed Questionnaire for Role of current HMIS and need for new HMIS. • Worked on the CAPA's for preventing sentinel events.
5th March	• Started preparation for ISO Audit to be conducted on 14th March-Designed a format for Infection Control Performa • Designed a matrix for filling the status of OT Culture reports and Validation reports. • Organized and involved in BMW internal audit.
7th March	• Observed the OPD Process flow and their working on I-Care. • Had informal discussions with OPD Staff about the shortcomings of the software. • Drew a Process Flow map of the same. • Attended a Quality meeting chaired by the M.S.
8th March	• Discussed with the Optometrists the fields entered by them in I-care and the changes they demand. • Had a meeting with the Consultants, briefing them about the new software and incorporated their inputs for fields required in the OPD. • Listed the gaps and framed the SRS for the new OPD module.
9th March	• Prepared a Master list of Records and Documentation at CFS. • Physically verified the records and documentation at each department. • Assigned codes to all records and registers maintained. • Prepared a list of Manuals to be present at all the departments.
10th March	• Designed a new format for BME Calibration Report. • Prepared a presentation for Monthly Consultant's Meeting.

	• Compilation of data from all departments for Indicator Analysis for the month of February.
11th March	• Made a checklist of the Statutory and Legal Requirements of CFS. • Compiled all the legal documents for ISO and NABH audit. • Attended a meeting on what CAPA's are to be taken to prevent Sentinel events.
12th March	• Analyzed Patient Feedback forms and formed a report on the same. • Organized Infection Control Training in the OT. • Checked the MRD files for proper documentation.
14th March	• Arranged the drugs according to checklist in emergency trays and Crash Cart on each floor • Designed a format for recording the events of Mock Drills. • Incorporated changes in the Quality Manual of CFS pertaining to new facilities added in the past 1 year.
15th March	• ISO Audit conducted at CFS • Active member of the ISO Audittee team. • Participated in the Audit of Stores, Medical Record Department, Billing and Quality Department.
16th March	• Observed the working of the Counselors on I-Care. • Drew a Process Map of the same illustrating the fields captured. • Identified the GAPS and incorporated feedback from the M.S. on the same. • Suggested SRS for the Counseling module.
17th March	• Observed the Process flow of TPA Department. (TPA was not yet in the HMIS of CFS) • Had informal discussions with the TPA executives to incorporate their requirements. • Made a list of the fields to be captured for the designing the module for TPA. • Identified the SRS for the same.
18th March	• Observed the Process flow of the Billing Department in I-care. • Observed various fields captured for General, Empanelled and In patients. • Identified the Gaps in the software. • Suggested the SRS for the new module to be designed.
19th March	• Worked on analyzing the Indicators for the month of February, prepared a report for the same. • Checked the MRD files for documentation.

	• Involved in the Pharmacy Audit. • Prepared a summary of the Clinical Audit.
21st March	• Observed the Process flow of OT (not yet in the I Care). • Made a list of the fields to be captured. • Identified the SRS for designing the new module.
22nd March	• Observed the working and process flow of Pharmacy. (currently not on Icare) • Made a list of the fields to be captured for the new module. • Identified the SRS for designing the new module. • Checked the MRD Files for proper documentation. • Attended training on Hospital Services.
23rd March	• Observed the working of the Opticals Department. • Prepared a Process flow map for the same. • Listing the fields to be captured and suggesting SRS for designing the new module.
24th March	• Worked on the Non Conformances found in the ISO Audit. • Prepared a list of CAPA's to be sent to the ISO after approval by the M.S. • Studied the NABH toolkit for internal assessment.
25th March	Used Microsoft Visio software to map the process flows according to Actors Responsible in each department.
26th March	Used Microsoft Visio software to map the process flows according to Actors Responsible in each department
28th March	• Had a meeting with the Sr. VP IT to discuss the various process flows mapped on Microsoft Visio. • Incorporated various inputs from him in the SRS Report and GAP analysis Report department wise.
29th March	• Studied the list of Non Conformances from NABH Pre Assessment of other Hospitals and compared with CFS. • Drafted a list of NC's for CFS accordingly, comparing them with the manuals and documentations.
30th March	• Scoring of all objectives was done in the NABH Self Assessment toolkit • Checked the MRD Files for proper documentation
31st March	• Conducted Stores Audit • Attended Orientation Program given by Shristhi Software Company for new HMIS.

REFLECTIVE LEARNING:

The exposure in Centre for Sight helped me personally learn a lot of things which I had read in theory in IIHMR. Practical implementation of Standard Operating Procedures, Manuals was the first point of learning, understanding the process flows of various departments, understanding the gaps while doing HMIS Project helped me develop an analytical point of view. I learnt about minute details about different departments by using NABH Tool kit and improving the Non Compliances of the same. Conducting trainings and developing exhaustive checklist for all the departments further strengthen the understanding and foundation of learning. As the ISO Audit took place deeper meaning of external audit and its implication was visible.

I personally got the opportunity to work in close association with Medical Superintendent who has extensive work experience and great knowledge in hospital industry; working with her helped me broaden my horizon and made me see things from a managerial point of view. Interaction with Consultants also highlighted great learning points and taught me how to work in a dynamic environment.

Overall working in CFS was an enriching experience which laid strong foundation and re emphasized the theory learnt in IIHMR.

PART II

DISSERTATION REPORT

Dissertation on: "**Process of Accreditation: A quality improvement process and its affect on general hospital performance"**

Introduction:

Centre for Sight is an ISO 9001:2000 Certified organization. Today it is possibly one of the largest eye care providers in the private sector in north India. It is a preferred tertiary

referral centre for Glaucoma, squint opthalmoplastic and advanced vitreo – retinal surgeries. One of the Quality Objectives being "To provide quality of care that exceeds patients' expectations"; Centre for Sight decided to apply to National Accreditation Board for Hospitals and Health care Providers (NABH) and get itself accredited. I got the opportunity to work closely for the same in Quality Department, learn and apply different tools of Quality and understand the working and functioning of different departments.

Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (USA) defines quality of health services as "the degree to which health services for individuals and populations increase the likelihood of the desired health outcomes and are consistent with the current professional knowledge."

According to World Health Organization (**WHO)**:- Quality of care is the level of attainment of health systems" intrinsic goals for health improvement and responsiveness to legitimate expectations of the population.

According to **ISO**9000:-

Quality is defined as „the degree to which a set of inherent characteristics fulfills requirements". It is both objective and subjective in nature.

The Quality policy at Centre for Sight (CFS) is "Centre for Sight is committed to deliver best quality care with cutting edge technology and personalized care to enhance patient satisfaction and provide continual improvement."

Worldwide, the Standardization of Healthcare Delivery System has become the focus. In India health care delivery system has remained largely fragmented and uncontrolled. The focus of accreditation is on continuous improvement in the organizational and clinical

performance of health services, not just the achievement of a certificate or award or merely assuring compliance with minimum acceptable standards.

Accreditation can be defined as “A self-assessment and external peer assessment process used by health care organizations to accurately assess their level of performance in relation to established standard and then to implement ways to continuously improve it”.

The major bodies all over world providing accreditation are as follows:-

1. National Accreditation Board for Hospitals and Healthcare Providers.
2. Joint Commission International (JCI)
3. The Joint Commission on Accreditation of Health Care Organizations (JCAHO), USA.
4. The Canadian Council on Health Service Accreditation (CCHSA), Canada.
5. The Australian Council on Healthcare Standards (ACHS), Australia.
6. Health Quality Services (HQS). The King's Fund Centre, England.
7. Council on Health Services Accreditation for South Africa (COHSASA).
8. The Malcolm Baldrige National Quality Award, USA. (Including the Swedish and European versions and the version modified for health care evaluation, USA).

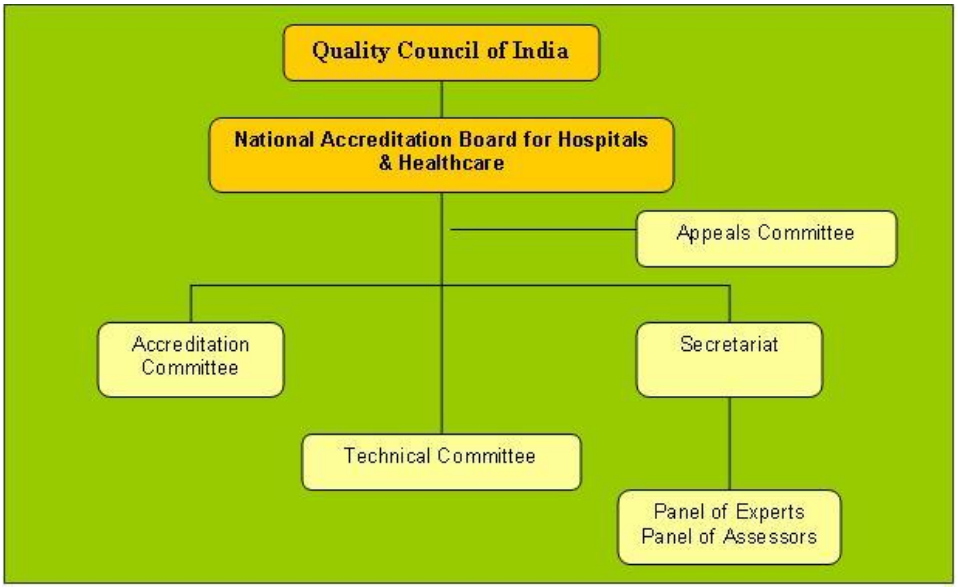
Accreditation Body in India:

National Accreditation Board for Hospitals & Healthcare Providers (NABH)

National Accreditation Board for Hospitals & Healthcare Providers (NABH) comes under the purview of board of Quality Council of India, set up to establish and operate accreditation programme for healthcare organizations. The board is structured to cater to

much desired needs of the consumers and to set benchmarks for progress of health industry. The board is functionally autonomous in its operation. Currently it accredits Hospitals & Nursing homes, and is expected to accreditate Blood Banks, Diagnostic Centers (Imaging), Dental Centers and Ayurvedic Hospitals/ Clinics in future.

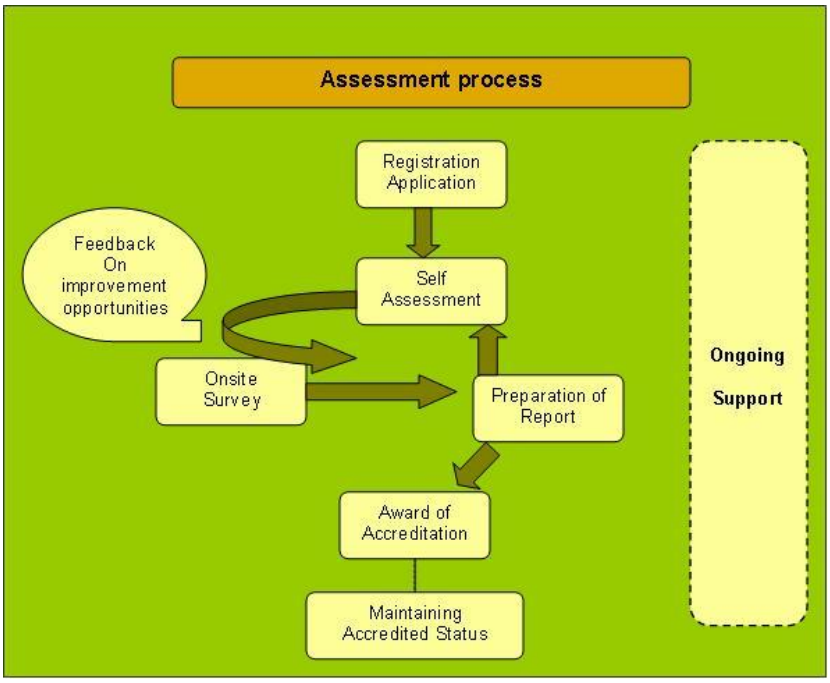
Fig 1.1- QCI: Organization structure



Assessment Process in general:-

Accreditation is a voluntary process. Its standards are usually regarded as optimal and achievable. It provides a visible commitment by an organization to improve the quality of patient care, to ensure a safe environment and to continually work to reduce risks to patients and staff. Accreditation has gained worldwide attention as an effective quality evaluation and management tool.

Figure 1.2- Assessment Process of NABH



Benefits of Accreditation:

Benefits for Patients:

Patients are the biggest beneficiary among all the stakeholders. Accreditation results in high quality of care and patient safety. The patients are serviced by credential medical staff. Rights of patients are respected and protected. Patient's satisfaction is regularly evaluated.

Benefits for Hospitals:

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.

Benefits for Hospital Staff:

The staff in an accredited hospital is 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 Para Medical Staff and

provides leadership for quality improvement with medicine and nursing.

Benefits to paying and regulatory bodies:

Finally, 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.

Problem Statement:

As the hospital was going for NABH Accreditation it was evident that all departments, processes and documentation would get a makeover as per NABH Guidelines. The major affect of accreditation would be seen on 4 key areas:-

1. Patient Satisfaction and Safety
2. Employee Satisfaction
3. Day to Day Operations
4. Financial Revenue of hospital

So as a topic of study I wanted to see the affect of accreditation on above 4 key areas. Generalize with an open mind whether accreditation is a quality tool or not or just a benchmark; also to see the implications negative or positive in the general functioning of hospital.

Review of Literature:

The following Articles illustrate the credibility for the need of Quality Accreditation:

- Heuer AJ.[(1)] ; Departments of Cardiopulmonary Science and Interdisciplinary Studies, University of Medicine and Dentistry of New Jersey, USA. , conducted a study on testing the relationship between ***Hospital accreditation and patient satisfaction*.**

This study involved a retrospective review and comparison of summative and selected categorical hospital accreditation scores from the JCAHO and independently measured patient satisfaction ratings. A total of 41 acute care, 200-plus bed, not-for-profit hospitals in New Jersey and Eastern Pennsylvania were included. Correlation and multiple-regression statistical methods were employed. The results revealed a direct relationship between these quality indicators on summative level and meaningful pattern categorical relationships.

- Salmon JW Heavens J et al[(2)] ; Quality Assurance Project/URC conducted a study on ***The impact of accreditation on the quality of hospital care: KwaZulu-Natal province, Republic of South Africa.***

The purpose of this study was to conduct such a trial in a developing country setting and to air its implications. The idea was to study the impact of the COHSASA accreditation program on KZN hospitals. The KZN province agreed that 20 randomly selected public hospitals, stratified by size, could be part of the study. The study prospectively measured the effects of the COHSASA hospital accreditation program on various indicators of hospital care.

The study used survey data from the COHSASA accreditation program measuring hospital structures and processes, along with eight indicators of hospital quality of care collected by an independent research team. The indicators were: *nurse perceptions of quality, client satisfaction, client medication education, accessibility and completeness of medical records, quality of peri-operative notes, hospital sanitation, and labeling of ward stocks.*The investigators compared the performance of the ten hospitals participating in the accreditation program (intervention hospitals) with the ten not yet participating (control hospitals).

About two years after accreditation began, the study found that intervention hospitals significantly improved their average compliance with COHSASA accreditation standards from 38 percent to 76 percent, while no appreciable increase was observed in the control hospitals (from 37 percent to 38 percent). This improvement of the intervention hospitals relative to the controls was statistically significant and seems likely to have been due to the accreditation program. The practical implications of the results of this study are: (1) the COHSASA-facilitated accreditation program was successful in increasing public hospitals' compliance with COHSASA standards, and (2) additional work is needed to determine if improvements in COHSASA structure and process standards result in improved outcomes.

- B. Al Awa, A. De Wever et al[3]; conducted a study on **The Impact of Accreditation on Patient Safety and Quality of Care Indicators** at King Abdulaziz University Hospital in Saudi Arabia Abstract: This study aimed to determine if the accreditation process has a positive impact on patient safety and quality of care. A 4 year retrospective and prospective study design was used. A total of 119 performance indicators were collected through various processes and were lately transformed into 81 patient safety and quality indicators. The numbers and rates of hospital mortality, Healthcare-Associated Infections (HAI), medication errors, cardiopulmonary resucutation codes, surgeries and invasive procedures, blood transfusion reaction and adverse events were the main outcome measures.

The following areas had the corresponding number of indicators that were found to be sensitive to Canadian accreditation and that significantly improved post-accreditation: Four indicators of peri operative mortality and rates of neonatal mortality per 100 NICU admissions. Healthcare-associated Infections. Blood utilization: total number of blood transfusion reactions. Surgeries and invasive procedure total number of unplanned returns to surgery within 48 h and rate of unplanned returns to surgery per 100 operations, total number of patients who survived after the first CPR and rate of survival after first CPR per 100 coded patients. It was concluded that accreditation has a positive impact on patient safety and quality of care indicators.

Objective of Study:-

General Objective: To determine how well the Accreditation process works as a quality improvement tool and therefore to study its affect on general hospital performance.

Specific Objectives: To study the above mentioned general objective, the following specific objectives are used:-

1. To assess the impact of accreditation on patient satisfaction in last 6 months.
2. To assess the impact of accreditation on Performance Indicators of all departments.
3. To assess the improvement in status of Non Compliances as per the NABH Self Assessment Tool Kit.
4. To estimate affect on financial revenue and day to day operations of hospitals.

DATA AND METHODS:-

To work on the general and specific objectives data was collected using the following **tools**:-

6. NABH Tool Kit (Annexure 1) was used to give score to different objectives as required by NABH as Non Compliance (0), Partial Compliance (5) and Full Compliance (10).
7. Analysis of Patient Satisfaction Feedback forms (Sample Size= 100 per month, Random Sampling) was done for the last 6 months. (October 2010- March 2011)
8. Trend Analysis of Key Performance Indicators using histograms and line charts was done for the last 6 months (October 2010- March 2011).
9. Root Cause Analysis of non compliances was done and corrective and preventive action (CAPA) was taken.
10. Exhaustive Internal Audit Checklist was made for various departments and internal audit schedule was made.
11. The study was Observational but evidence based in nature. Quantitative data collected was arranged and analysed used Excel sheet tools to study the trend.

3. RESULT AND FINDINGS:-

1. Scoring of each and every objective was done using NABH Tool Kit on 29th January 2011. The average score of every element corresponding to its chapter is as follows:-

Table 3.1- NABH Tool Kit

NABH STANDARDS	Scores Initially (0/ 5/ 10)	Scores after Quality Improvement Measures
Chapter 1: ACCESS, ASSESSMENT AND CONTINUITY OF CARE (AAC)		
AAC.1: The organization defines and displays the services that it can provide.	**5**	
AAC.2: The organization has a documented registration, admission and transfer process.	**5**	
AAC.3 Patients cared for by the organization undergo an established initial assessment.	**5**	
AAC.4 Patient care is continuous and all patients cared for by the organization undergo a regular reassessment.	**5**	
AAC.5 Laboratory services are provided as per the scope of the hospital's services and adhering to best practices.	**NA**	
AAC.6 Imaging services are provided as per the scope of the hospital's services and adhering to best practices.	**NA**	
AAC.7 The organization has a defined discharge process.	**5**	
Chapter 2: CARE OF PATIENTS (COP)		
COP.1: Care of patients is uniform and is guided by the laws and regulations.	**5**	
COP.2: Emergency services including ambulance are guided by documented procedures and applicable laws and regulations.	**5**	
COP.3: Documented procedures guide the care of patients requiring cardio-pulmonary resuscitation.	**5**	
COP.4: Documented procedures define rational use of blood and blood products.	**NA**	
COP.5: Documented procedures guide the care of patients in the Intensive care and high dependency units.	**NA**	
COP.6: Documented procedures guide the care of obstetrical patients.	**NA**	
COP.7: Documented procedures guide the care of pediatric patients.	**NA**	
COP.8: Documented procedures guide the care of patients undergoing parenteral sedation.	**7**	
COP.9: Documented procedures guide the administration of anesthesia.	**5**	
COP.10: Documented procedure guide the care of patients undergoing surgical procedures.	**6**	

Chapter 3: MANAGEMENT OF MEDICATION (MOM)		
MOM.1: Documented procedures guide the organization of pharmacy services and usage of medication.	**5**	
MOM.2: Documented procedure guide the prescription of medications.	**6**	
MOM.3: Documented procedure guide the safe dispensing of medications.	**5**	
MOM.4: There are defined procedures for medication administration.	**5**	
MOM.5: Patients are monitored for adverse drug events after medication administration.	**3**	
MOM.6: Documented procedures guide the use of medical gases.	**5**	
Chapter 4: PATIENT RIGHTS AND EDUCATION (PRE)		
PRE.1: The organization protects patient and family rights during care and informs them about their responsibilities.	**5**	
PRE.2: Patient rights support individual beliefs, values and involve the patient and family in decision making processes.	**5**	
PRE.3: A documented policy for obtaining patient and/ or families consent exists for informed decision making about their care.	**5**	
PRE.4: Patient and families have a right to information and education about their healthcare needs.	**5**	
PRE.5: Patient and families have a right to information on expected costs.	**4**	
Chapter 5: HOSPITAL INFECTION CONTROL (HIC)		
HIC.1: The organization has a well-designed, comprehensive and coordinated Hospital Infection Control (HIC) programme aimed at reducing/ eliminating risks to patients, visitors and providers of care.	**5**	
HIC.2: The hospital has an infection control manual, which is periodically updated and conducts surveillance activities.	**5**	
HIC.3: The hospital takes actions to prevent or reduce the risks of Hospital Associated Infections (HAI) in patients and employees.	**6**	
HIC.4: There are documented procedures for sterilisation activities in the hospital.	**5**	
HIC.5: Statutory provisions with regard to Bio-Medical Waste (BMW) management are complied with.	**5**	
HIC.6: The infection control programme is supported by hospital management and includes training of staff and employee health.	**5**	
Chapter 6: CONTINUOUS QUALITY IMPROVEMENT (CQI)		
CQI.1: There is a structured quality improvement and continuous monitoring programme in the organization.	**5**	
CQI.2: The organization identifies key indicators to monitor the structures, processes and outcomes which are used as tools for continual improvement.	**5**	
CQI.3: The quality improvement programme is supported by the management.	**5**	

CQI.4: There is an established system for clinical audits.	**5**	
CQI.5: Sentinel events are intensively analyzed.	**5**	
Chapter 7: RESPONSIBILITIES OF MANAGEMENT (ROM)		
ROM.1: The responsibilities of the management are defined.	**5**	
ROM.2: The organization is managed by the leaders in an ethical manner.	**5**	
ROM.3: Leaders ensure that patient safety aspects and risk management issues are an integral part of patient care and hospital management.	**5**	
Chapter 8: FACILITY MANAGEMENT AND SAFETY (FMS)		
FMS.1: The organization is aware of and complies with the relevant rules and regulations, laws and byelaws and requisite facility inspection requirements.	**5**	
FMS.2: The organization's environment and facilities operate to ensure safety of patients, their families, staff and visitors.	**5**	
FMS.3: The organization has a program for clinical and support service equipment management.	**5**	
FMS.4: The organization has provisions for safe water, electricity, medical gas and vacuum systems.	**5**	
FMS.5: The organization has plans for fire and non-fire emergencies within the facilities.	**5**	
Chapter 9: HUMAN RESOURCE MANAGEMENT (HRM)		
HRM.1: The organization has a documented system of human resource planning.	**5**	
HRM.2: The staff joining the organization is socialized and oriented to the hospital environment.	**5**	
HRM.3: There is an ongoing programme for professional training and development of the staff.	**5**	
HRM.4: An appraisal system for evaluating the performance of an employee exists as an integral part of the human resource management process.	**5**	
HRM.5: The organization has a well-documented disciplinary and grievance handling procedure.	**5**	
HRM.6: The organization addresses the health needs of the employees.	**5**	
HRM.7: There is documented personal record for each staff member.	**5**	
HRM.8: There is a process for authorising all medical professionals to admit and treat patients and provide other clinical services commensurate with their qualifications.	**5**	
HRM.9: There is a process to identify job responsibilities and make clinical work assignments to all nursing staff members commensurate with their qualifications and any other regulatory requirements.	**5**	
Chapter 10: INFORMATION MANAGEMENT SYSTEM (IMS)		

IMS.1: Documented procedures exist to meet the information needs of the care providers, management of the organization as well as external agencies that require data and information from the organization.	**5**	
IMS.2: The organization has processes in place for effective management of data.	**5**	
IMS.3: The organization has a complete and accurate medical record for every patient .	**5**	
IMS.4: The medical record reflects continuity of care.	**5**	
IMS.5: Documented procedures are in place for maintaining confidentiality, integrity and security of information.	**5**	
IMS.6: Documented procedures exist for retention time of records, data and information.	**5**	
IMS.7: The organization regularly carries out medical records audit	**5**	

List of Non Compliances as per NABH TOOL KIT on 29th January 2011:-

(Table 3.2)

NON COMPLIANCE	CORRESPONDING NABH CHAPTER	ACTION TO BE TAKEN	PERSON RESPONSIBLE	DEADLINE
Services needs to be displayed in Hindi at main reception.	(AAC.1.b)	In Hindi the services needs to be written and given for lamination and framing. 1 copy required.	Ms. Neha Pathak (Assistant Manager-Operations), Shivshankar (Maintenance Incharge)	15th February 2011
Training of staff on Hospital Services required.	(AAC.1.c)	Training schedule to be made for every 14 days and approved by M.S	Ms Ritika (Assistant Manager-Operations), Megha Sharma	31st January 2011
Referral Form for transferring of patients not there.	(AAC.2.d)	The same needs to be made and discussed in consultants meeting.	Medical Superintendent.	4th February 2011
The organization need to define initial time frame within which initial assessment will be completed.	(AAC.3.D)	In Monthly Indicators minimum time within which initial assessment is to be completed has to be documented.	Megha Sharma	30th January 2011

Manuals and SOP's from Outsourced Lab need to be made available in hospital also for display and reference.	(AAC.5)	NABL Accreditation to be displayed, other manuals and SOP's to be made available in Lab too.	Ms Neha Pathak (Assistant Manager-Operations)	15th February 2011
Lab staff also to be included in Safety Manual training.	(AAC.5.f)	Training schedule to be made.	Megha Sharma	31st January 2011
Death Register to be made available to OT. Coordinator.	(AAC.7.f)	Format for death register to be made and implemented.	Medical Superintendent.	7th February 2011
Checklist of documents to be placed in Yellow Files to be cross checked on a daily basis and signed.	(AAC.7)	A separate register to be made and all files to be crosschecked on a weekly basis. Weekly report sent to M.S.	Megha Sharma	31st January 2011
Training of staff required on handling of patient during emergency care and on various Safety Codes.	(COP)	To be added in training roaster and Reporting Formats for recording the events in Mock Drills to be made.	M.S, Megha	5th February 2011
Printed format for OT Notes for cataract to be made.		To be made and implemented for yellow files.	M.S, Dr. Charu (Senior Consultant)	7th February 2011
Look Alike and Sound Alike Medicines to be stored separately.	(MOM.1.d)	Immediately 2 extreme rows in Pharmacy to be vacated and LASA Medicines to be separated.	Pharmacy Head	5th February 2011
CAPA for cases of Adverse Events to be done and documented.	(MOM.5.c)	Root Cause Analysis to be done and CAPA to be documented in Indicators.	M.S, Megha	5th February 2011

Tariff List to be made available for patients at main reception.	(PRE.5.b)	Updated list to be approved by CEO and given at Reception.	VP Operations (Ms. Kawaljit)	3rd February 2011
Infection Control to be made a part of monthly Indictors which have to be communicated in Consultants meeting every month.	(HIC.2.j)	Cases of Endophthalmitis to be reported and made a part of monthly Indicators.	Dr. Hemlata (Senior Consultant), M.S, Megha	7th February 2011
Surgical Hand washing steps to be displayed in OT area.	(HIC. 3 b)	To be done with urgency and training of same required.	M.S	5th February 2011
HAZMAT Kit to made available in OT and Housekeeping area.	(HIC.3d)	HAZMAT Kit to be made as per international guidelines and training of staff to be done on its use.	M.S, Neha Pathak (Assistant Manger-Operations.)	7th February 2011
Proper documentation on validation tests required.	(HIC.4.b)	Reporting format for documentation to be made and implemented.	M.S	10th February 2011
Employee satisfaction survey to be conducted.	(HRM)	Questionnaire to be formed and analysis to be done.	VP –HR	15th February 2011
Credentialing and Privileging of Clinical Staff to be done.	(HRM.8.c)	To be done for all clinical staff and attached in Personal Files.	VP- HR	15th February 2011
In HMIS of organization; Author of Entry is not specified.	(IMS.3.d)	To be taken care of when new HMIS is procured.	M.S, VP-Operations	In process

2. ***Indicator Analysis:-***

For the preparation of NABH; ***Indicator Analysis Report*** was prepared every month which comprised clinical and nonclinical indicators from all the departments. Analysis of each and every indicator was done and monthly report was sent to Medical Superintendent.

Based on the Indicator analysis Root Cause Analysis was done and Corrective and Preventive Actions were taken. Following is the Trend Analysis for the last 6 months (October 2010- March 2011):-

1. CLINICAL INDICATORS:

1.1 Adverse events in surgery

1.1.1 Re-exploration rate residual lens matter

1.1.2 Percentage of cases with Posterior Capsular Rupture

1.1.3 Percentage of detachment of desemets membrane

1.2 Percentage of rescheduling/cancellation of surgical procedures

1.3 Percentage of adverse anaesthesia events

1.4 Incidence of post operative visual acuity of 6/9 within 3 weeks following cataract in a patient without a co morbid condition

1.5 Percentage of Redo Surgeries.

2. Key Performance Indicators suitable to Adverse Drug Events:

2.1 Incidence of adverse drug reaction

2.2 Percentage of medication chart with illegible writing

2.3 Percentage of contrast related reactions

3. Key Performance Indicators suitable to availability and Content of Medical Records:

3.1 Percentage of Medical Records not having Discharge summary

3.2 Percentage of medical records having incomplete and/or improper consent.

3.3 Percentage of cases wherein care plan is not documented and counter signed by the clinician.

3.4 Percentage of medical records not having initial assessment and plan of care.

4. Key Performance indicators suitable to infection control activities:

4.1 Incidence of Endophthalmitis**.**

5. Key Performance indicator suitable to utilization of space, manpower and equipment:

5.1 OPD utilization.

5.2 OT utilization

5.3 Equipment downtime.

5.4 Ratio of patient: doctor

5.5 Ration of patient: Optometrist

6. Key Performance indicator suitable to Risk Management:

6.1 Incidence of fall within hospital premises due to slippery tiles, broken stairs or absence of side rails on the staircase.
6.2 No of employees provided with pre exposure prophylaxis.
6.3 Number of variations observed in Mock Drills.

7. Key Performance Indicators suitable to reporting of activities as required by laws and regulations:

7.1 No. of Deaths
7.2 No. of notifiable diseases
7.3 Submission of report/data pertaining to biomedical waste

8. Key Performance indicator suitable to procurement of medication essential to meet patient needs:

8.1 Percentage of stock outs including emergency drugs.

9. **Key Performance indicator suitable to patient satisfaction:**

9.1 Patient satisfaction Index

9.2 Waiting time for OPD services.

1.1 Adverse Events in Surgery

Table 3.3- Cases of adverse Events

MONTH	ADVERSE EVENTS	TOTAL PROCEDURES	PERCENTAGE
JULY	3	500	0.6
AUGUST	2	503	0.4
SEPTEMBER	2	522	0.38
OCTOBER	6	634	0.94
NOVEMBER	9	587	1.53
DECEMBER	9	926	0.97
JANUARY	3	668	0.44
FEBRUARY	4	696	0.57
MARCH	5	953	0.52

Fig 3.1- Percentage of adverse events

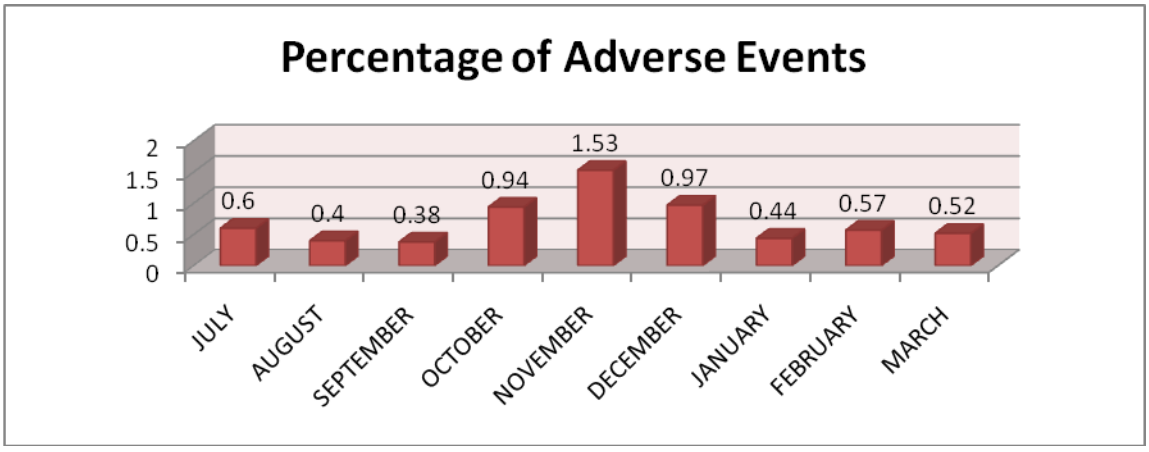
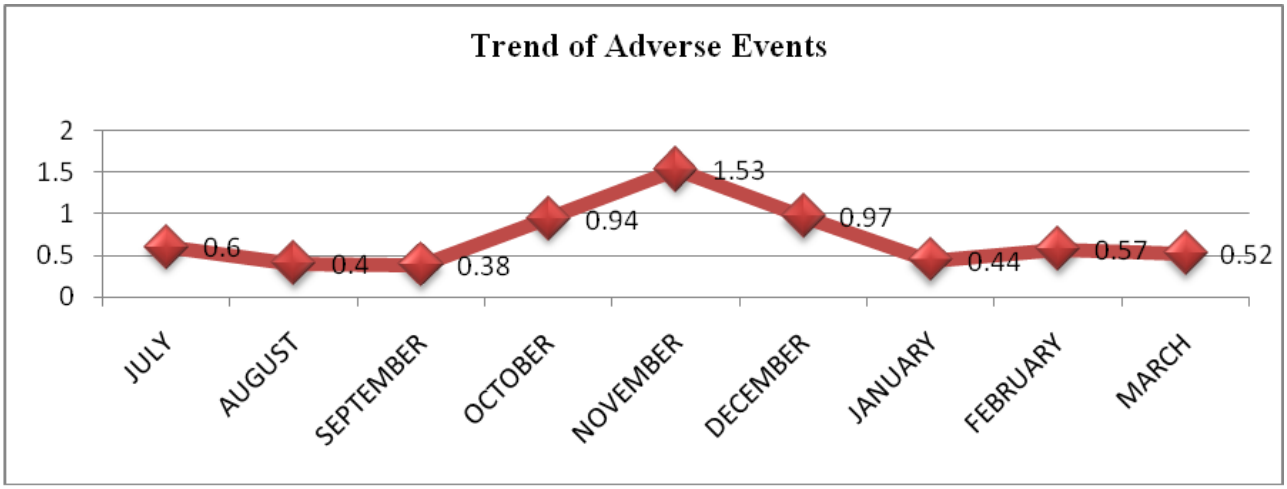


Fig 3.2- Trend of Adverse Events



1.2 Percentage of rescheduling/cancellation of surgical procedures

Table 3.4- Cases of cancelled surgeries

Months	Cancelled / Rescheduled	Total Surgeries	%
August	60	503	11.93
September	51	522	9.77
October	102	634	16.08
November	112	587	19.08
December	148	926	15.98
January	87	668	13.02
February	115	696	16.52
March	147	953	

Fig 3.3- Percentage of cancelled surgeries

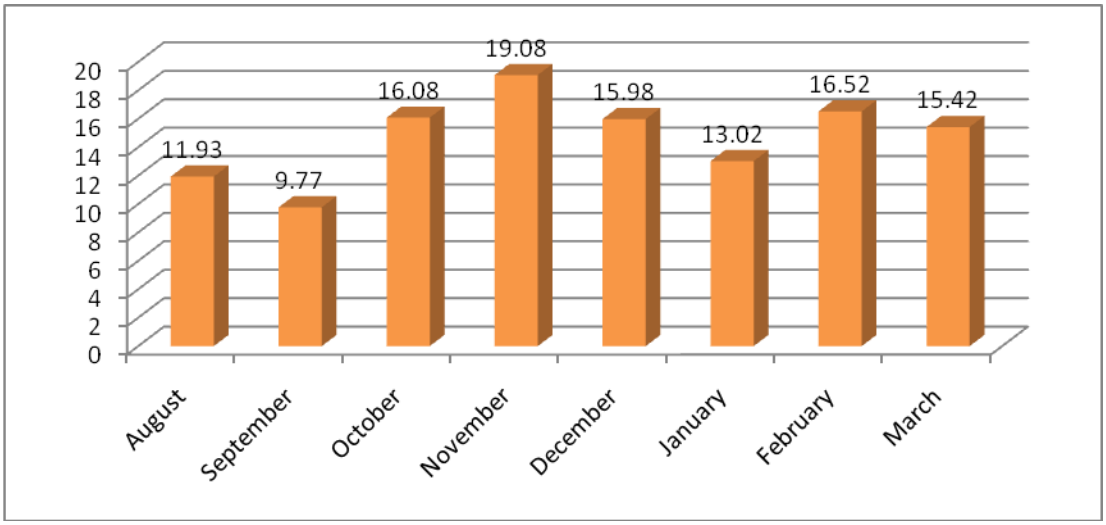
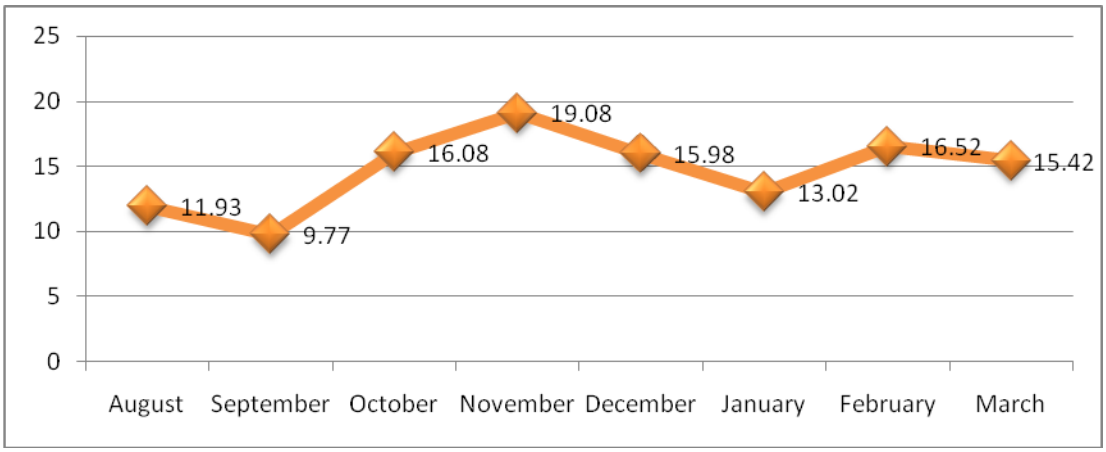


Fig 3.4- Trend of cancelled surgeries



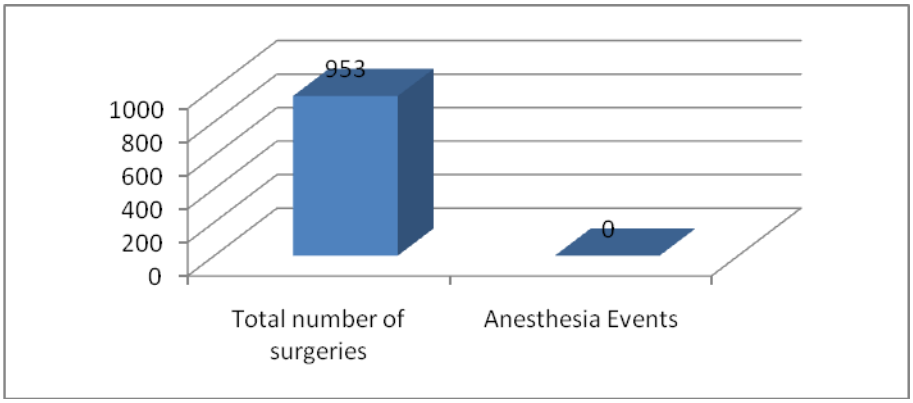
1.3 ***Percentage of adverse anaesthesia events***:

Tab 3.5- Cases of Adverse Anaesthesia Events

Months	**Total Surgeries**	**Adverse Anaesthesia Events**
Aug-10	503	0
Sep-10	522	0

Oct-10	634	0
Nov-10	587	0
Dec-10	926	0
Jan-11	668	0
Feb- 11	696	0
March- 11	953	0

Fig 3.5- Cases of Anesthesia Events



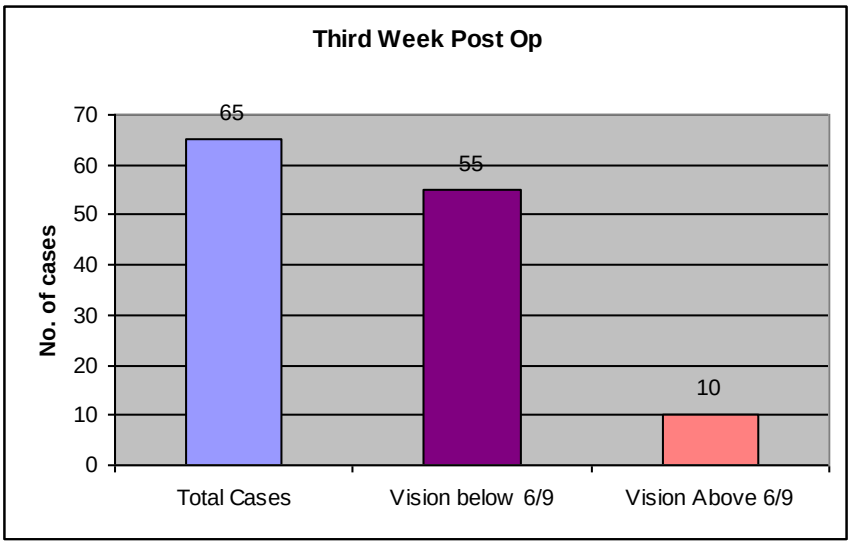
1.4 Incidence of post operative visual acuity of 6/9 within 3 weeks following cataract in a patient without a co morbid condition.

Third Week Post Op:

Tab 3.6- Incidence of post operative visual acuity

Total Cases	**65**
Vision below 6/9	**55**
Vision Above 6/9	**10**

Fig 3.6- Graphical Representation of 3rd week post op



1.5 Percentage of Redo Surgeries:

Table 3.7- Cases of Redo Surgeries

MONTHS	No. of Redo Procedures	Total Surgeries	Percentage
July	5	500	1
August	3	503	0.6
September	3	522	0.38
October	8	634	1.12
November	5	587	0.85
December	9	926	0.97
January	5	668	0.74
February	6	696	0.86
March	9	953	0.94

Figure 3.7- Percentage of Redo Surgeries

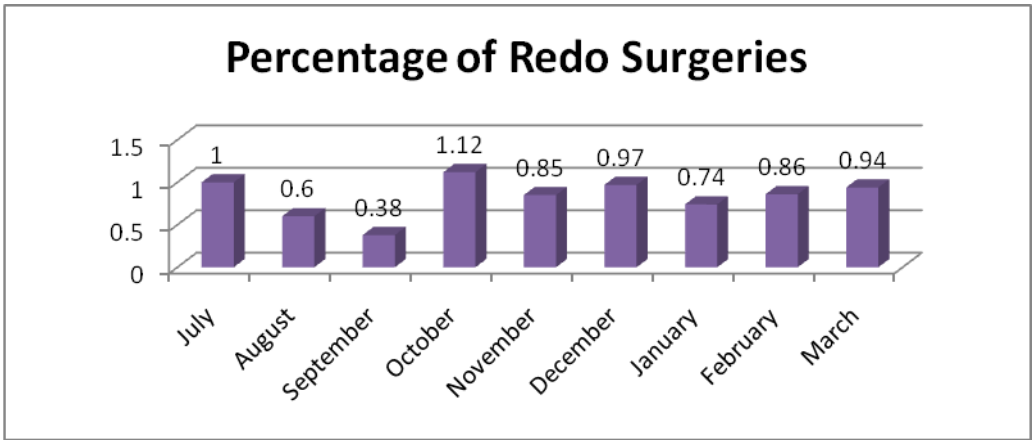
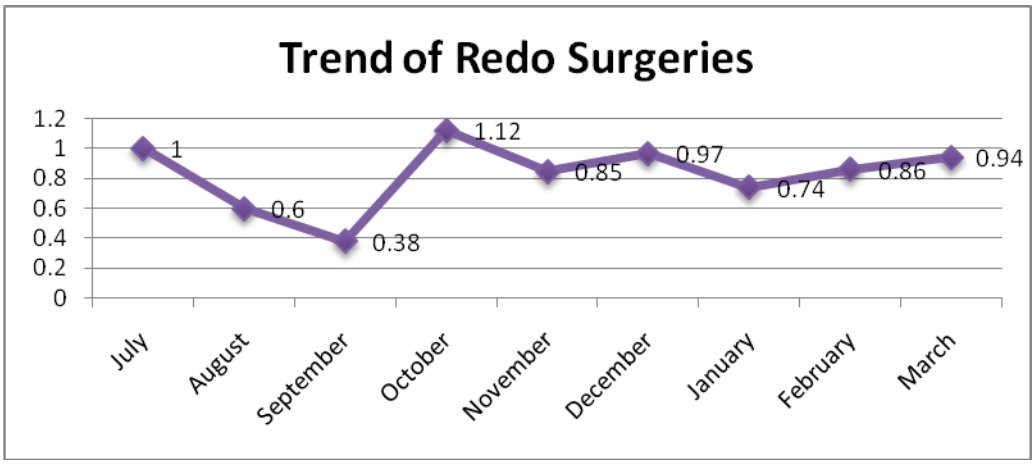


Fig 3.8- Trend of Redo Surgeries



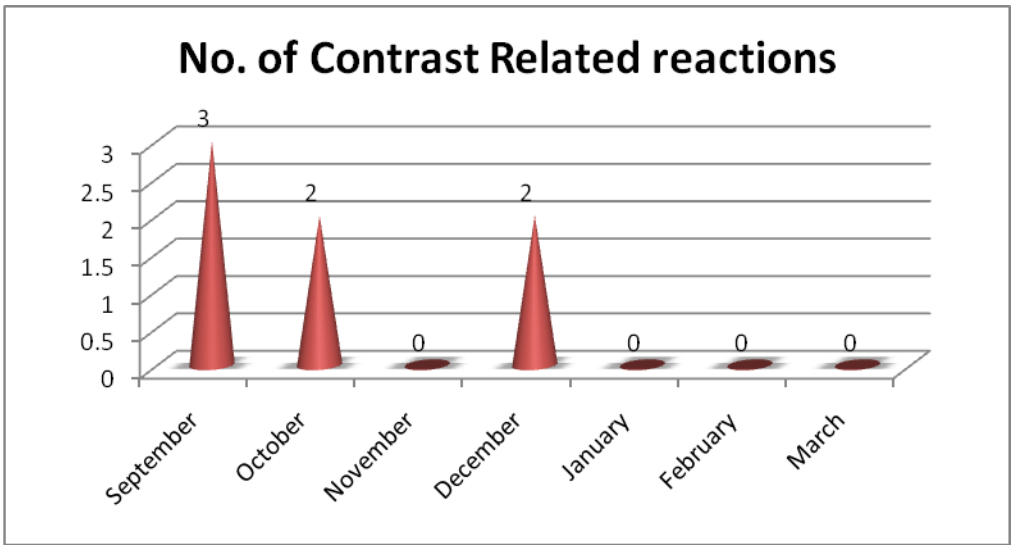
2. Key Performance Indicators suitable to Adverse Drug Events

2.1 *Incidence of adverse drug reaction-* ***Nil***

2.2 Percentage of medication chart with illegible writing- ***Nil as the prescriptions are in printed format.***

2.3 Percentage of contrast related reactions:

Fig 3.9- Number of contrast related reaction



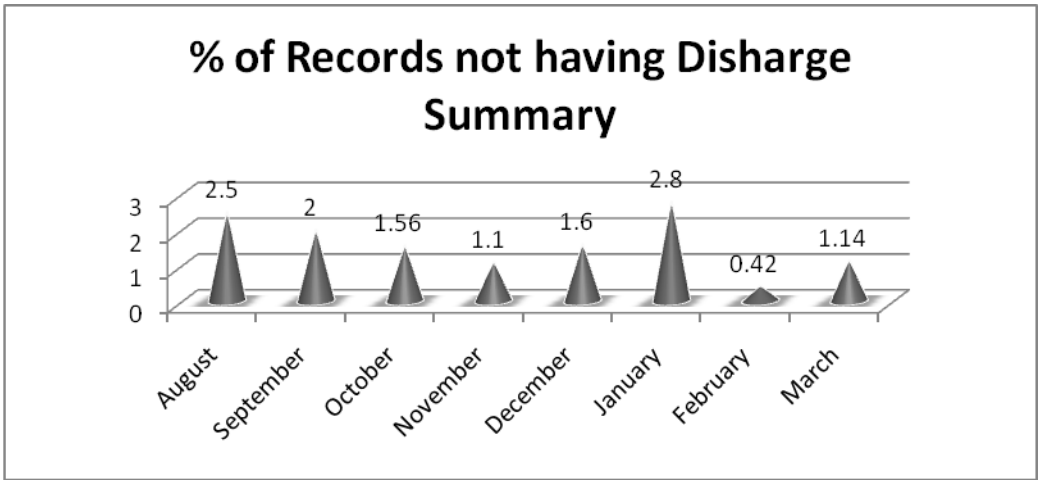
3. **Key Performance Indicators suitable to availability and Content of Medical Records:**

3.1 Percentage of Medical Records not having Discharge summary

Table 3.8

Month	Documents without discharge	Total documents	Percentage
August	10	400	2.5
September	8	400	2
October	7	450	1.56
November	5	420	1.1
December	8	500	1.6
January	12	427	2.8
February	2	473	0.42
March	6	525	1.14

Fig 3.10- Percentage of records not having discharge summary

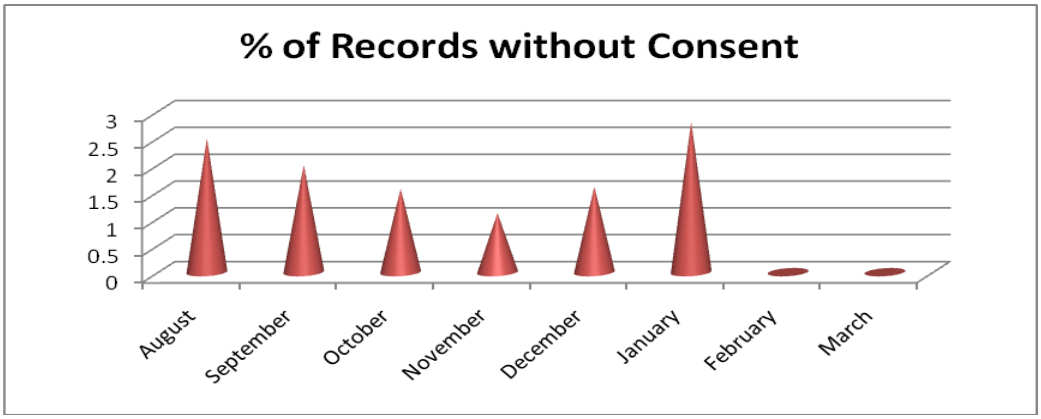


3.2 *Percentage of medical records having incomplete and/or improper consent*.

(Tab 3.9)

Month	Documents without proper consent	Total documents	Percentage
August	10	400	2.5
September	8	400	2
October	7	450	1.56
November	5	420	1.1
December	8	500	1.6
January	12	427	2.8
February	0	473	0
March	0	525	0

Fig 3.11- Percentage of records without consent

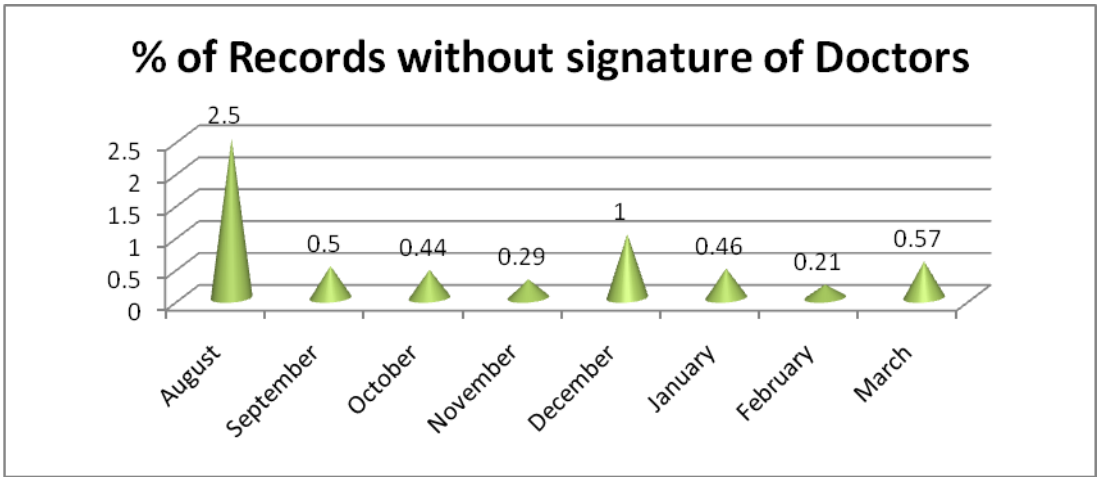


3.3 *Percentage of cases wherein care plan is not documented and counter signed by the clinician*.

Tab 3.10

Month	Prescriptions without signature of doctor	Total documents	Percentage
August	10	400	2.5
September	2	400	0.5
October	2	450	0.44
November	1	420	0.29
December	5	500	1
January	2	427	0.46
February	1	473	0.21
March	3	525	0.57

(Fig 3.12)

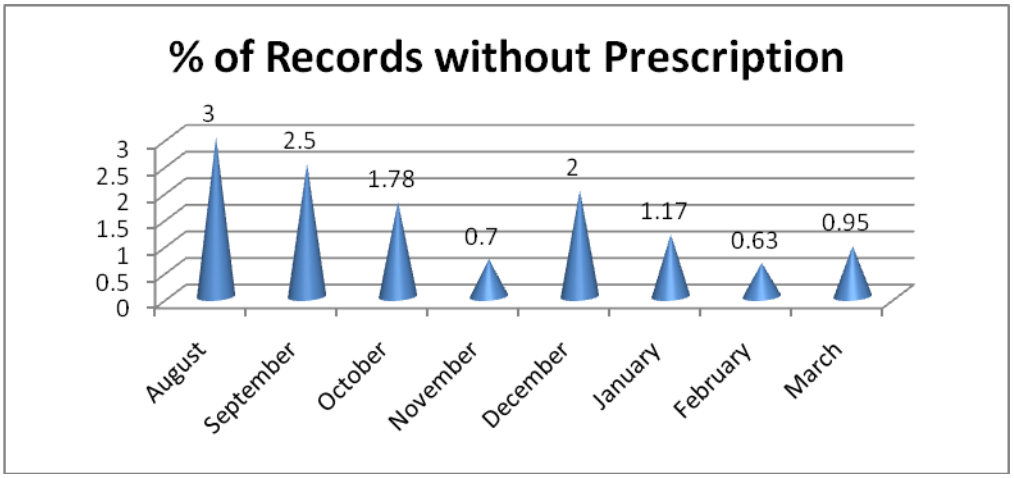


3.4 Percentage of medical records not having initial assessment and plan of care.

(Tab 3.11)

Month	Documents without prescription/ Documented plan of action	Total	Percentage
August	12	400	3
September	10	400	2.5
October	8	450	1.78
November	3	420	0.7
December	10	500	2
January	5	427	1.17
February	3	473	0.63
March	5	525	0.95

(Fig 3.13)



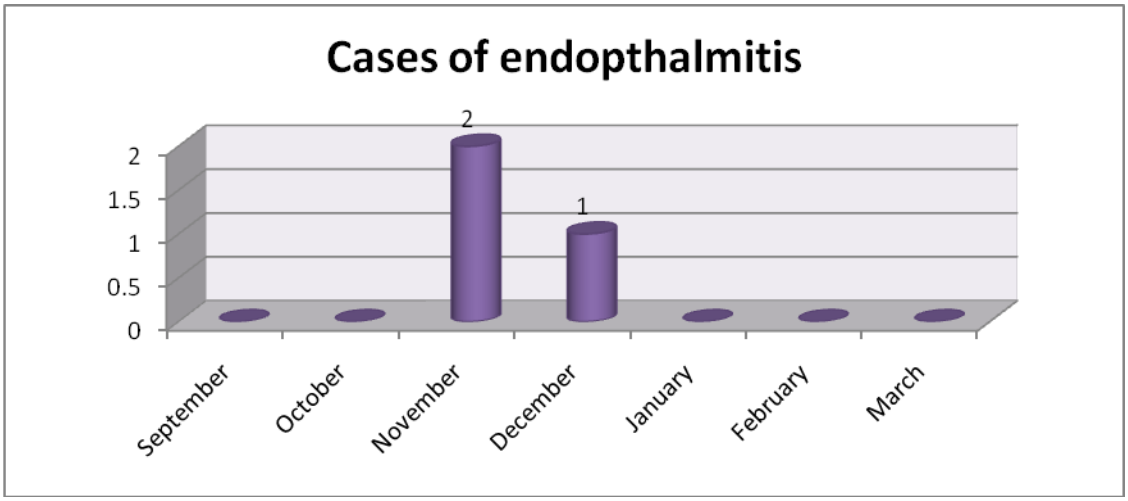
4. Key Performance indicators suitable to infection control activities:

4.1 Incidence of Endophthalmitis:

(Table 3.12)- Cases of Endopthalmitis

Months	Cases of Endopthalmitis
September	0
October	0
November	2
December	1
January	0
February	0
March	0

(Figure 3.14)



5. Key Performance indicator suitable to utilization of space, manpower and equipment:

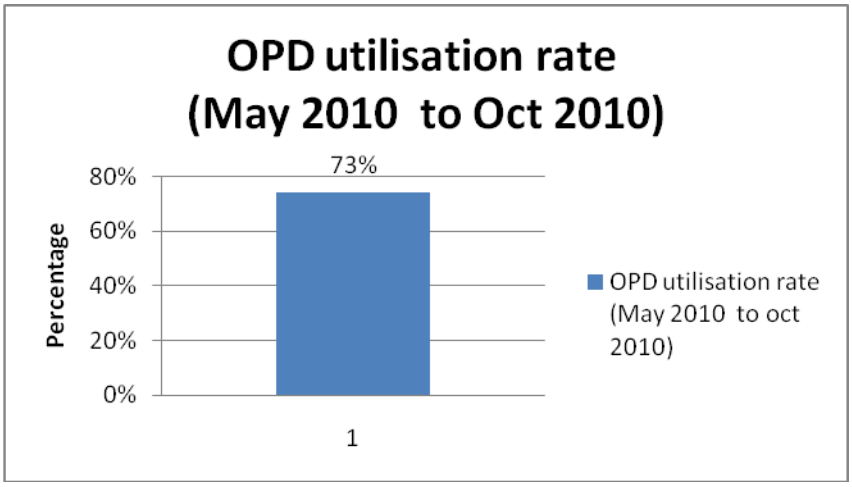
5.1 OPD Utilization

(Tab 3.13)

OPD UTILISATION	FOR 3 MONTHS (NOV 2010 TO JAN2011)	FOR 6 MONTHS (MAY 2010 TO OCT 2010)
Number of chambers	10	10
Working hours per full day	8	8
Working hours per half day	4	4
Total working hours for all chambers per full day	80	80
Total working hours for all chambers per half day	40	40
Number of full working days in last 3 months(Nov 2010-Jan 2011)	78	155
Number of half working days in last 3 months (Nov 2010 - Jan 2011)	13	25
Total working hours in last 3 months	**6760**	**13400**
Average time per patient consultation	15	15
Average throught put per hour	4	4
Total expected throughtput	**27040**	**53600**
Actual patients in last 3 months	**20732**	**39128**
	76.67159763	73
OPD utilization rate	**77%**	**73%**

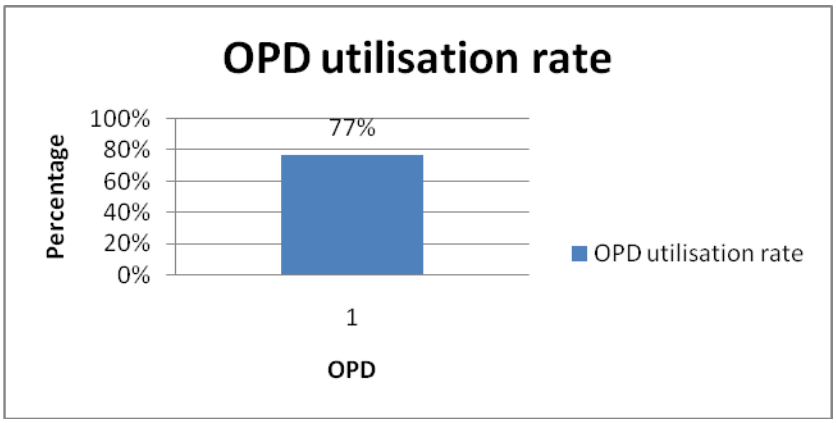
- OPD Utilization Rate for 6 months (May 2010 to October 2010) is **73 %**

(Fig 3.15)



- OPD utilization fir 3 months (Nov 2010 to Jan 2011) is **77%**

Fig 3.16



5.2 OT Utilization Rate

- Operating room utilization is a measure of the use of an operating room that is properly staffed with people needed to successfully deliver a surgical procedure to a patient.

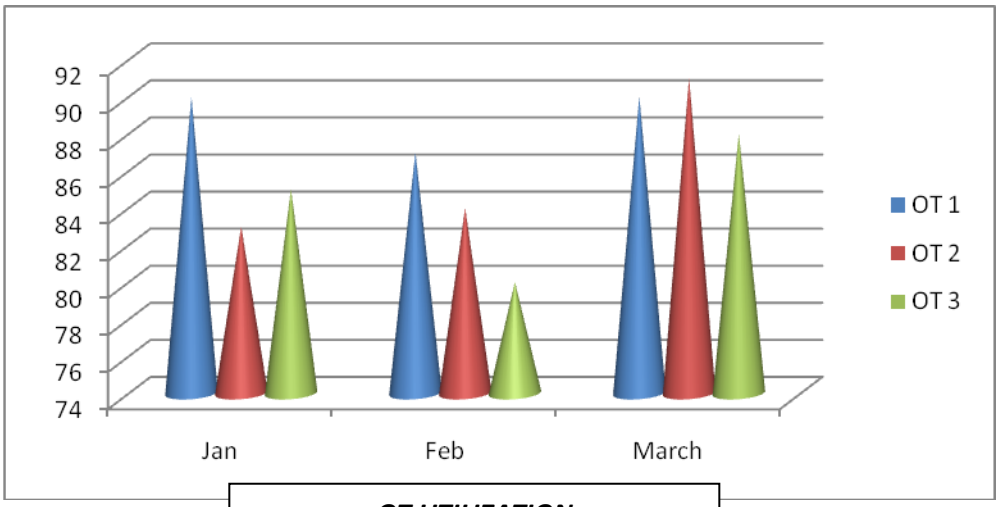
- Adjusted Utilization = $\frac{\text{Total hours of cases + Credit time}}{\text{Total Hours of OR time allocated}}$

Credit time: turnover time necessary to set up and clean up OT rooms between cases.

Tab 3.14- OT Utilization

Month/OT	OT 1	OT 2	OT 3
Nov	85	80	60
Dec	85	85	65
Jan	90	83	85
Feb	87	84	80
March	90	91	88

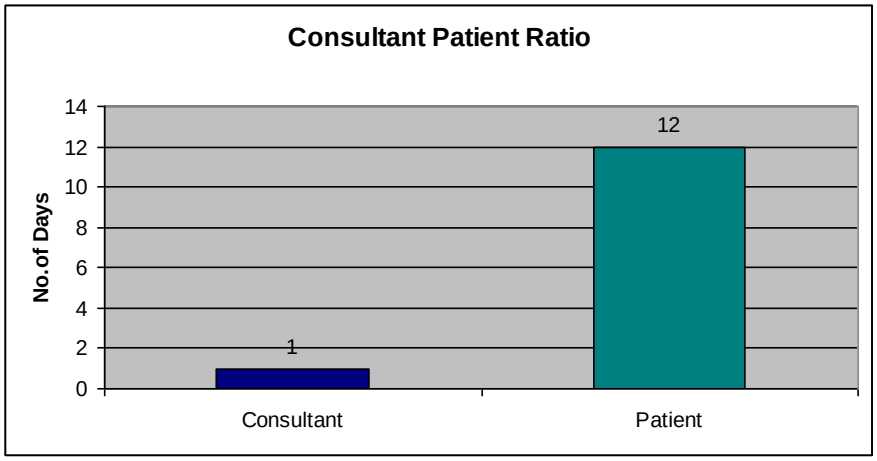
(Fig 3.17- Graphical representation of OT Utilization)



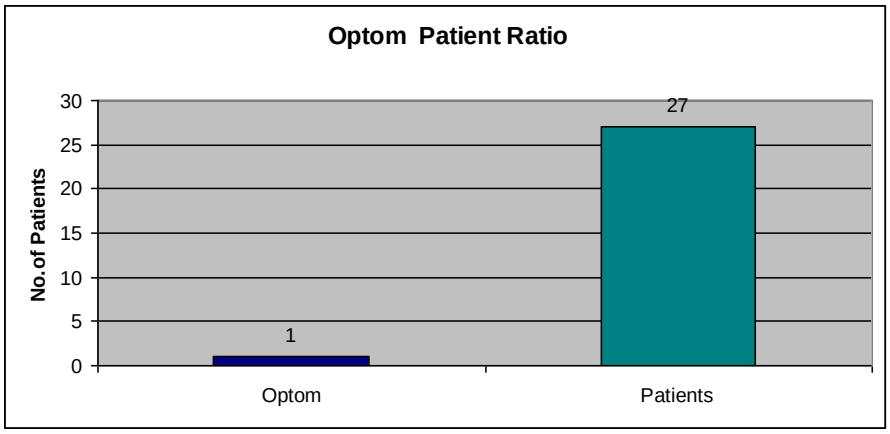
5.3 Equipment downtime.

5.4 Ratio of Patient: Doctor

(Fig 3.18)



5.5. Ratio of Patient: Optometrist



(Fig 3.19)

6. Key Performance indicator suitable to Risk Management:

6.1 Incidence of fall within hospital premises due to slippery tiles, broken stairs or absence of side rails on the staircase- Nil

6.2 No of employees provided with pre exposure prophylaxis- In Process

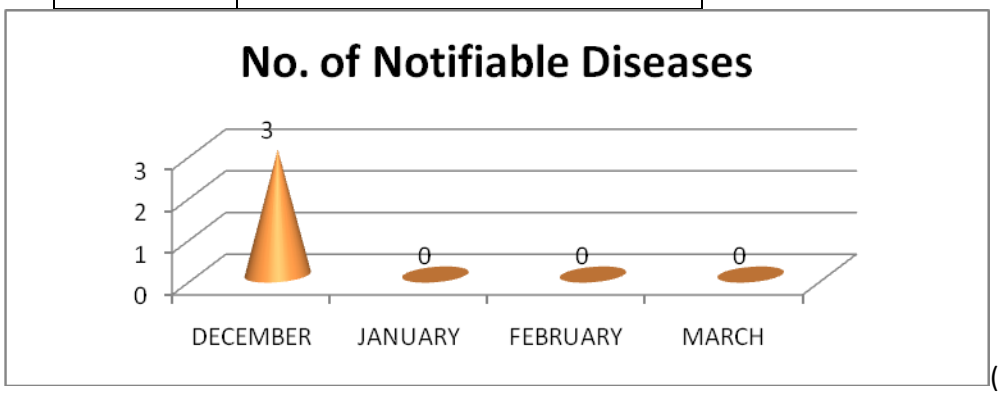
7 . Key Performance Indicators suitable to reporting of activities as required by laws and regulations:

7.1 No. of Deaths- Nil

7.2 Number of Notifiable diseases

(Tab 3.15)

Months	No. of surgeries
DECEMBER	3
JANUARY	0
FEBRUARY	0
MARCH	0

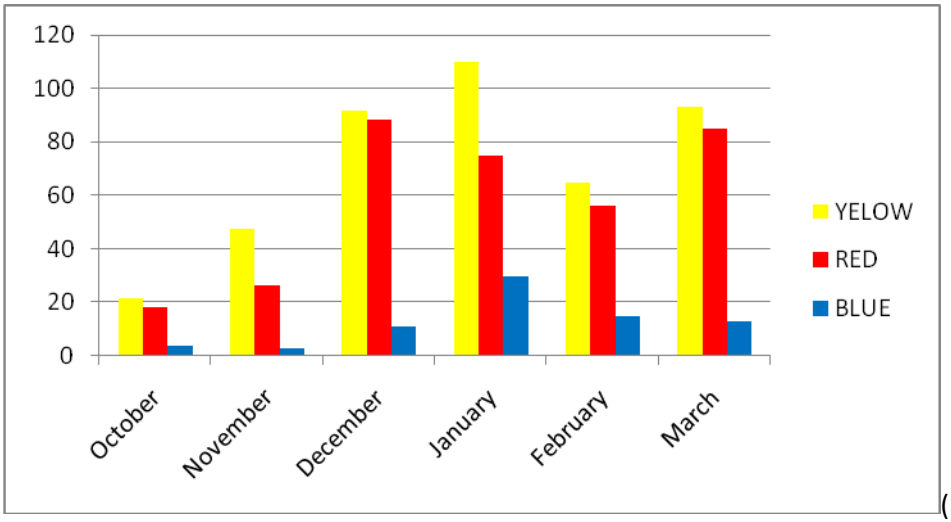


(Fig 3.20)

7.3 Submission of report/data pertaining to biomedical waste.

(Tab 3.16)- Data analysis of BMW

MONTH	YELOW	RED	BLUE
October	21.6	18.4	4
November	47.7	26.5	3
December	91.5	88.5	11
January	110	75	30
February	65	56	15
March	93	85	13



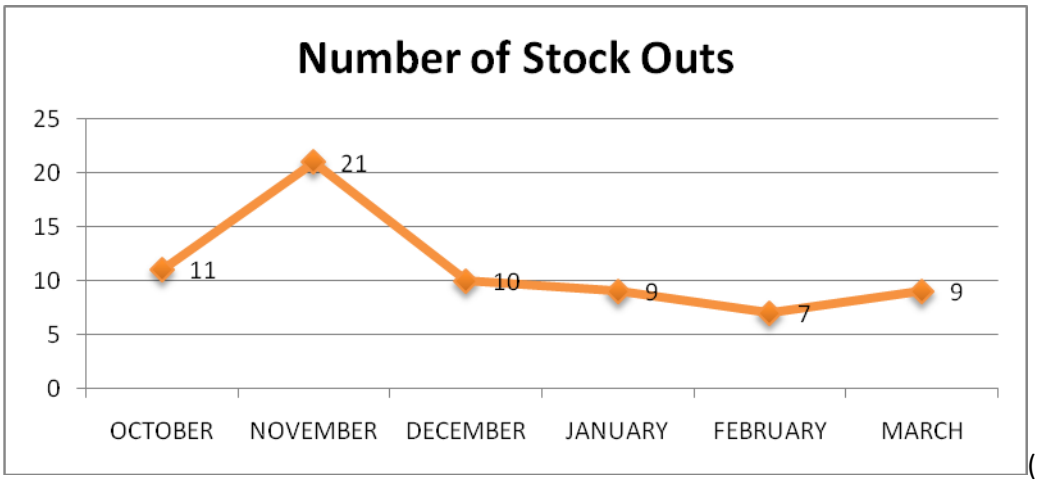
(Fig 3.21)

8. Key Performance indicator suitable to procurement of medication essential to meet patient needs:

Percentage of stock outs including emergency drugs.

Tab 3.17- Cases of stock outs

MONTH	Number of Stock Outs
OCTOBER	11
NOVEMBER	21
DECEMBER	10
JANUARY	9
FEBRUARY	7
MARCH	9



(Fig 3.22)

9. Key Performance indicator suitable to patient satisfaction:

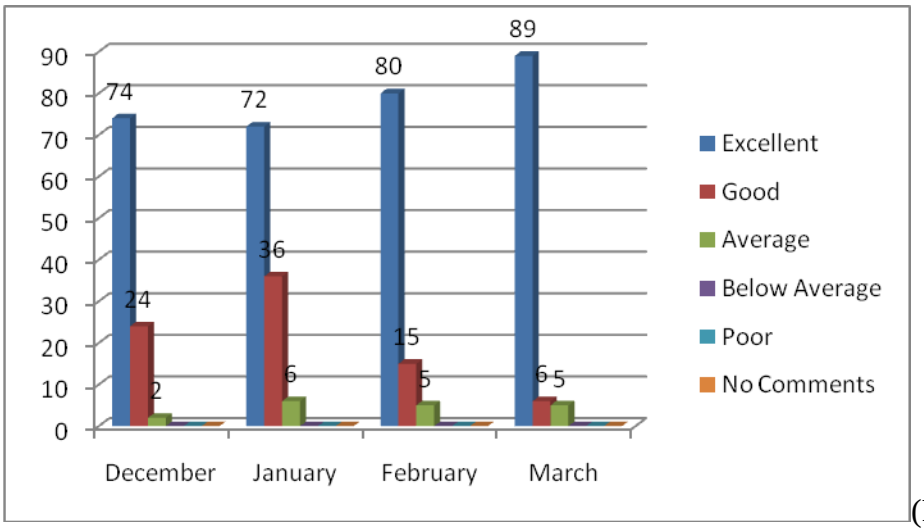
9.1 Patient satisfaction Index

- Every month patient satisfaction forms were filled and analyzed to see the affect on following parameters:-

    1. Helpfulness of Doctor
    2. Treatment Provided
    3. Helpfulness of staff
    4. Cleanliness and hygiene
    5. Services and facility

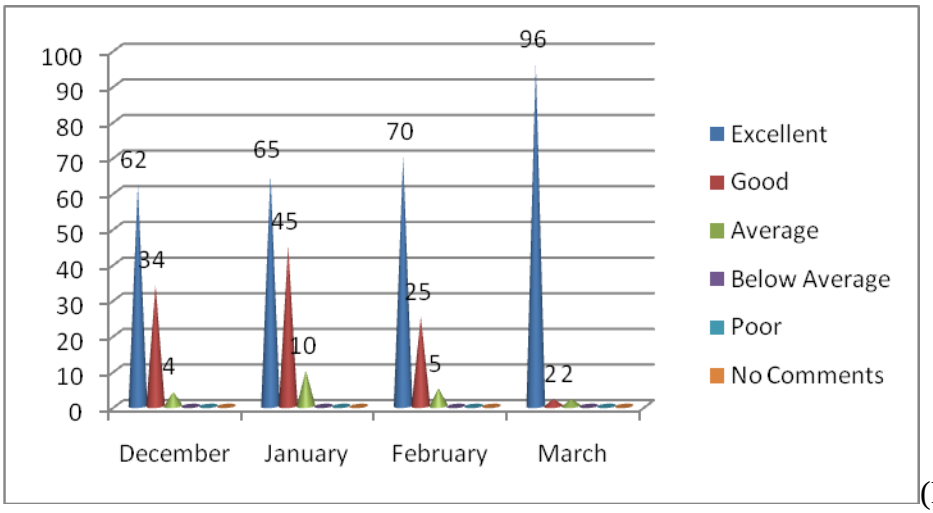
Percentage is calculated and following results are obtained for the month of December (2010) – March (2011):-

1. Helpfulness of Doctor:



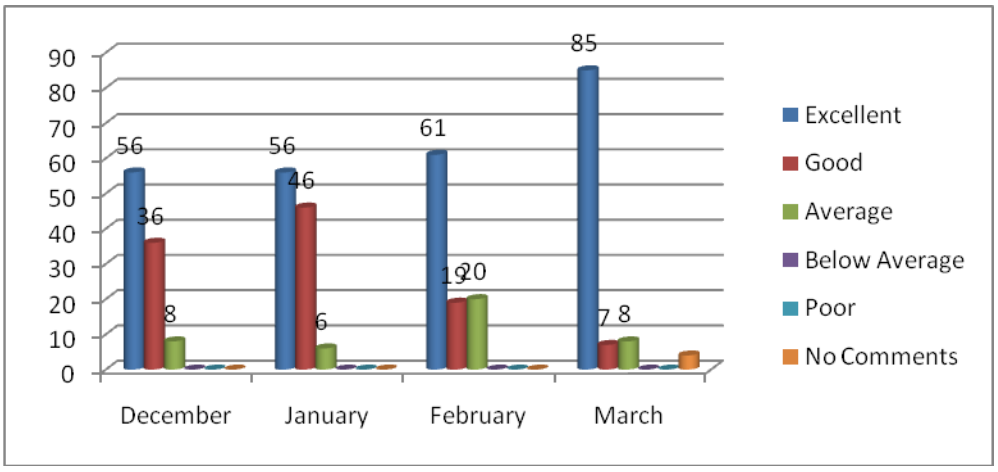
(Fig 3.23)

2. Treatment Provided



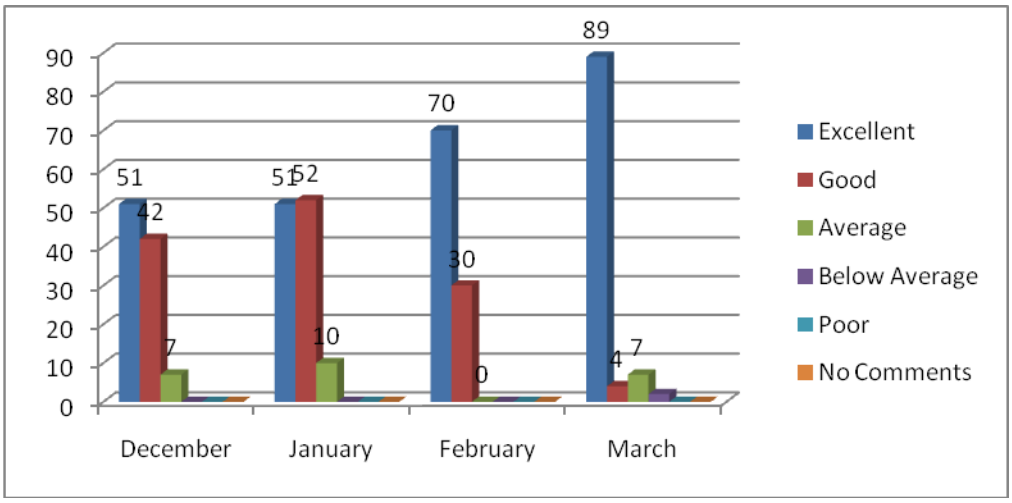
(Fig 3.24)

3. Helpfulness of staff



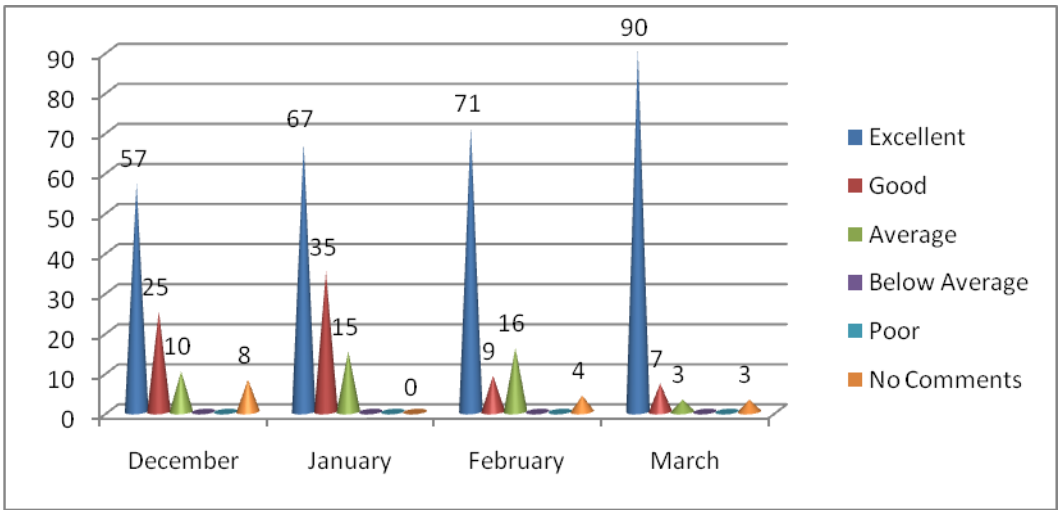
(Fig 3.25)

4. Cleanliness and hygiene



(Fig 3.26)

5. Service and Facility



(Fig 3.27)

Waiting time for OPD services

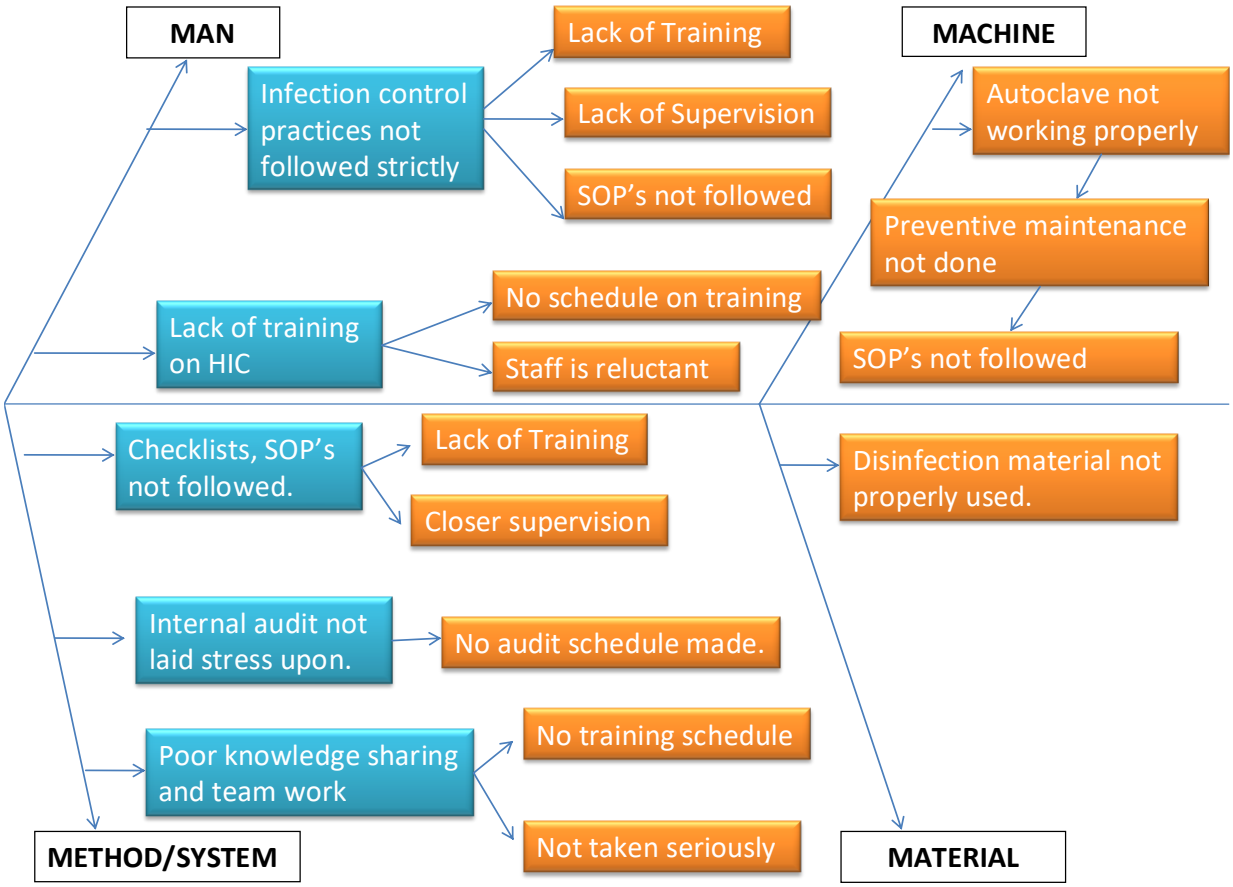
Time Motion analysis for month of March

Time Motion Analysis – March 2011		**Anterior Segment**			
(Tab 3.18)					
Time Period	***Average waiting time for initial examination***	***Average time for instilling Dilatation drops***	***Average Dilatation Time***	***Average time for consultation***	***Total Time***
	New				
Jan-11	**43 Min**	**8 min**	**53 min**	**12 min**	**116 min**
	Follow Up				
Jan-11	**41 Min**	**10 Min**	**49 min**	**12 min**	**172 min**
	Post op				
Jan-11	**0 min**	**0 Min**	**0 min**	**15 min**	**15 min**

Time Motion Analysis - March 2011		Posterior segment			
Time Period	***Average waiting time for initial examination***	***Average time for instilling Dilatation drops***	***Average Dilatation Time***	***Average time for consultation***	***Total Time***
	New				
Jan-11	**34 MIN**	**6 min**	**47 min**	**12 min**	**102 min**
	Follow Up				
Jan -11	**33 Min**	**5 Min**	**43 min**	**11 min**	**92 min**
	Post op				
Jan-11	**35 min**	**5 Min**	**40 min**	**13 min**	**93 min**

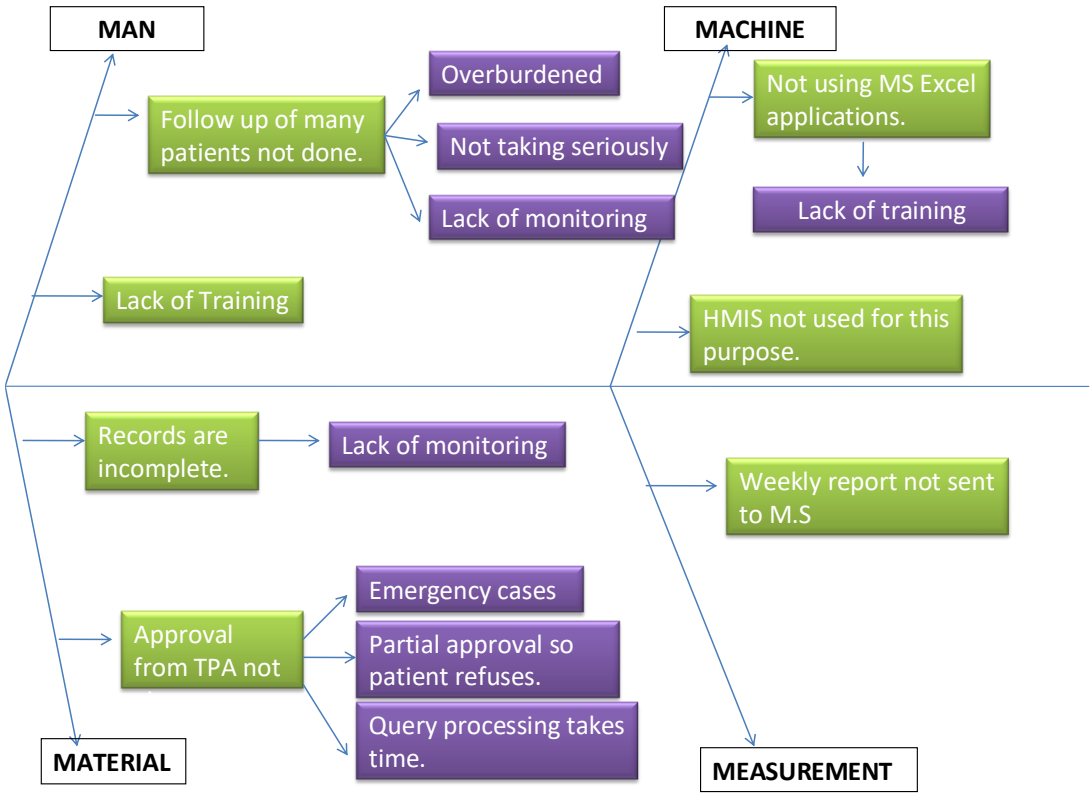
2. <u>Root Cause Analysis</u>:-

(Fig 3.28- RCA of Endophthalmitis)



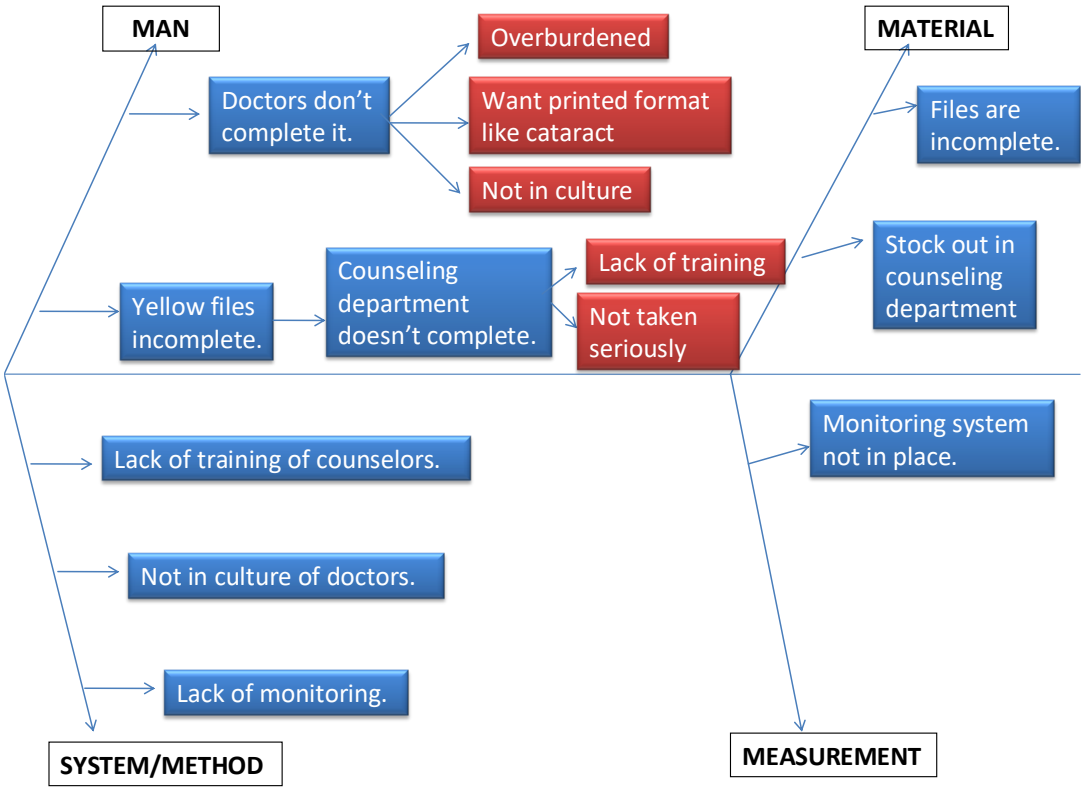
2.1 Root Cause Analysis for incomplete medical records:-

(Fig 3.29- RCA of Incomplete Medical Records)



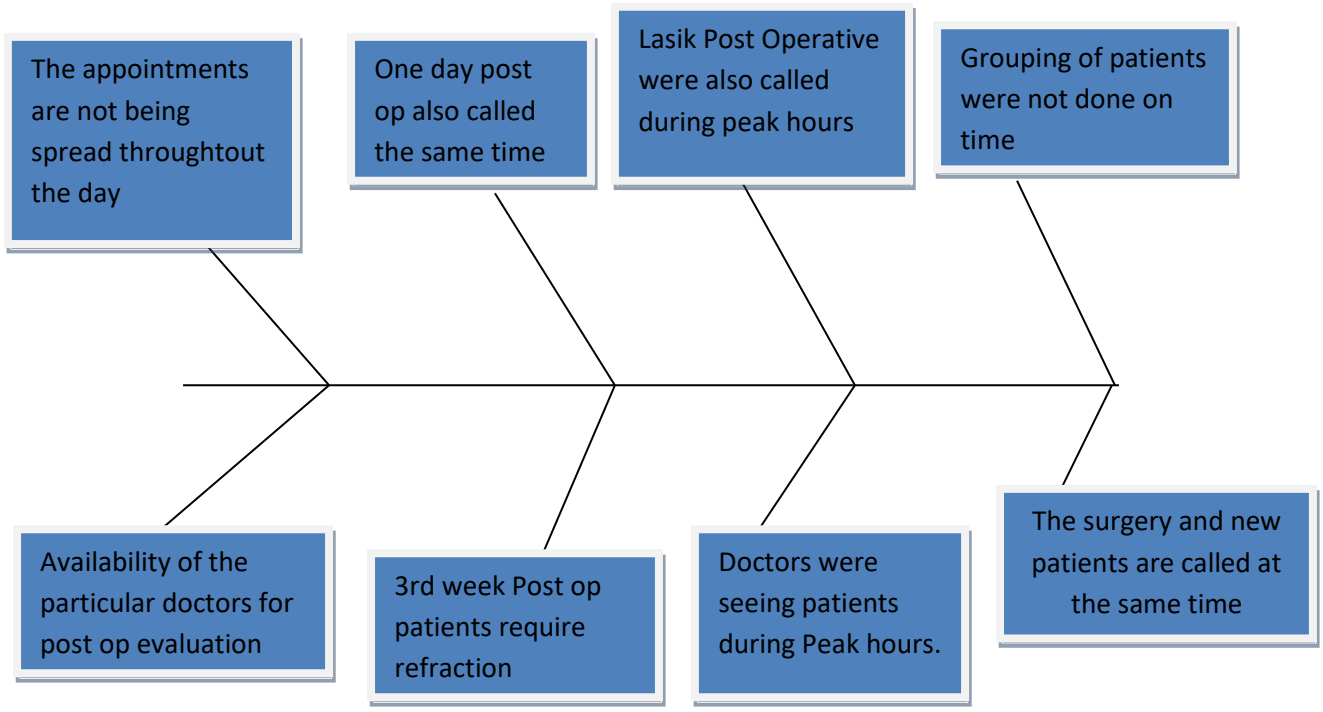
2.2 Root cause analysis for **Cancellation/ Rescheduling Surgeries**:-

(Fig 3.30- RCA of Cancellation Surgeries)



2.3 Root Cause Analysis for low OPD Utilization:-

(Fig3.31- RCA of Low OPD utilization)



3. ***Internal Audit:-***

Internal Audit is a requirement of ISO 9001-2000(Clause 8) as well as NABH Accreditation. It is an in house audit of the effectiveness and adequacy of the QMS implemented. It is a systematic, impartial review by a team of trained officials aimed at assessing whether the system implemented is fulfilling the intended purpose and producing desired results or not.

Following checklist was made for different departments and Internal Audit schedule (Annexure -2) was decided.

Emphasis was also laid on Internal Training of employees on various topics like NABH Guidelines, patient safety, BMW Management, Safety codes, Hand washing steps etc. The training schedule is attached in Annexure -3.

Check list for Pharmacy

1. Temperature Charting for refrigerator. (temperature record for refrigerator and room temperature record is to be recorded, It is important to keep room temperature between 15–25®C)
2. Drugs with shorter expiry dates to be placed in front of those with later expiry dates (FIFO first in –first out)
3. Interaction of the pharmacist with the patient regarding dosage, side effect and adverse reaction in use of their medication.
4. Monitoring of ABC, VED, and EOQ analysis in the Pharmacy.
5. Availability of list of look-a-like and sound-a-like medication and separate storage of these medications, to avoid the risk of mix-up.
6. Display of List of high risk medication.
7. Status of NABH training.
8. Availability of Department policy procedure
9. Availability of drug formulary.
10. Storage of Sound a-like and look a-like medications (to be stored separately.)
11. Food drug interaction to be displayed.
12. Pest control register.
13. AC duct cleaning register.
14. Any loose wire hanging.
15. Availability of well labeled list of documentation.
16. General maintenance and cleanliness.
17. List of infections/ hazardous material not available.
18. Housekeeping checklist to be maintained.

BILLING

1. Monitoring of turnaround time done or not.
2. Backup for computers to be checked.
3. Records of billing error maintained or not.

LIFT ROOM

1. Display of Lift license and safety instructions inside the lift.
2. Signage inside the service lift mentioning the precaution and how to respond when one is trapped in the lift.
3. Communication system from inside the lift to be checked.
4. There is a effective control to prevent patient and attendants from using the service lift which is an unmanned lift.
5. Preventive and breakdown records of the lift are available to be checked.

GENERAL STORE

1. Availability of Standard operating procedure in the department.
2. Safety checks point's loose wiring, hanging plug points.
3. Evaluation of vendors.
4. Evidence of Re – evaluation of vendor
5. Labeling of the storage racks.
6. Storage of Items as per designated racks
7. Availability of List of fast, slow & non – moving items (FSN)
8. Availability of Stock turnover details on monthly basis,
9. FIFO implementation.
10. Implementation of ABC analysis.
11. List of items along with their expiry date.
12. List of hazardous material.
13. Are the Reorder level needs defined?
14. List of documentation labeled numbered.
15. List of items with their expiry date.
16. List of hazardous material.
17. All items to have
    Date of manufacturing /expiry
    Price
    Batch number

Equipment Management

1. Equipment In and out register to be checked for Updation.
2. Check whether daily morning round checklist available, to be maintained and documented.

Front office/OPD

1. NABH training.
2. Availability of standard operating policies and procedure.
3. Dress code and I card.
4. Display of mission vision and quality policy.
5. Display of hospital services
6. Tariff display
7. Patient's rights and responsibilities display and training.
8. Training on special needs for vulnerable patients.
9. Safety code training.
10. List of documentation.
11. Proper formats for all the register like (information register and voice mail register)
12. No Crash cart available in patient area.

Human Resource

1. Check for the process for collecting, verifying and evaluating the credentials and privileging of medical professionals, nursing staff and technicians.(The education, registration, training and experience of the identified medical professionals, nursing staff and technicians is documented and updated periodically)

2. Delhi medical council registration for all doctors practicing in Delhi available or not in Personal Files.

3. Check for records of Induction training .Take test and check effectiveness for all position such as optometrist, nursing technician. (Proper induction training programme for all employees to be created.)

4. Sexual harassment policy documented or not.

5. Health status needs introduce of blood group check.
6. Job description attached in personal files or not.
7. Employee satisfaction and employee feedback availability.

UTILITIES

1. Sop for utilities such as generator, AC, plant, lift, electrical panel AC panel and water tank.
2. Lift service report to be documented similarly report for other utilities.
3. The centre has many branches, trained biomedical engineer is mandatory. This eventually will improve our maintenance/engineering part.
4. Floor wise utilities report & facility report required.
5. All equipment to be listed floor wise.
6. Similarly all clinical areas to be evaluated using a checklist.
7. Service contractor reports to be maintained for service records.

OPERATION THEATRE

1. Preoperative surgical safety checklist
2. BLS/ALS training
3. Training for vulnerable patients
4. Recovery parameter records .
5. Training on quality assurance program for surveillance of operation theatre environment like quality of air, rate of exchange, cleaning PPE protocol disinfections etc.
6. Ac duct cleaning record.
7. Daily fumigation register signed.

8. Temperature and humidity records on daily basis
9. Refrigerator record of temp
10. Training on color coding of gas pipeline.
11. Training on HIC protocol, hand hygiene, PPE, sterilization, BMW management spillage management.
12. Availability of spillage kit.
13. Fumigation records.
14. BMW disposal in covered trolleys.
15. Calibration of equipment.
16. List of documentation.
17. Safety measures like broken switches.

18. Review required for:

- HEPA filter
- Autoclave
- Biomedical waste
- Layout
- Zoning

Hospital Infection Control

1. Training for pre/post prophylaxis required.
2. Autoclaving required:

- Leak test

- Bowie dick test
- Validation

3. Yearly budget to be prepared for hospital infection control.
4. Criss cross to be entered.
5. Need to have a policy/checklist for all high risk areas.
6. Engineering control:
    - No. of air changes
    - Duct cleaning procedures

7. Monitoring of outsourced laundry required at least once in a three months.
8. Monitoring of hand washing to be done.
9. PAC procedure inplimentation.
10. Column for consultant signature is not present in consent of surgery.

FMS

1. Weather the centre has clearance form regulatory authority for clearance for following:
    - Fire
    - Floor wise occupancy certificate
2. Facilities inspection round to ensure safety practices
3. Safety education program for all staff.
4. Water quality check needs to be checked and records to be maintained.
5. Alternate source for failure of utilities.(Records to be maintained)
6. Proper records of :
    - Medical gases
    - Vacuum system
7. The organization should have plans and provisions for early detection, abatement and containment of fire and non-fire emergences.
8. Fire training to be strengthened.

9. Mock drills to be monitored at least twice in a year.
10. Rubber mates in front of the electric penal.
11. Complain register for each utility.
12. List of electric equipments to be made available.
13. Departmental policies and procedures.
14. Proper documentation of daily preventive maintenance.
15. Training records for maintenance.

HOUSEKEEPING

1. Management of housekeeping area.
2. Training on Steps of hand wash
3. Training on biomedical waste
4. Proper uniform and I card
5. Availability of SOP for housekeeping
6. Training on hazmat
7. Use of Sodium Hypo chloride solution
8. Availability of HAZMAT kit

DISCUSSION:-

4. To see the affect of accreditation on Patient satisfaction, feedback forms were analysed for last 4 months and interpretation was drawn. Due to streamlining of processes during preparation of NABH Pre assessment patient satisfaction has continuously improved.

5. Further to study the affect of accreditation on day to day operations, Indicator Analysis was done for the last 6 months and following observations were made:-

   5.1 Benchmarked average initial time to be taken by optometrist for new patient, follow up, post op patient for Anterior and Posterior Segment.
   5.2 Cases of Adverse Events have fallen down in months of December, January, February and March.
   5.3 Trend of rescheduling surgeries was going haywire so Root Cause Analysis (RCA) was done and CAPA was suggested and implemented.
   5.4 Performance of indicators pertaining to Medical Records has dramatically improved after doing RCA and CAPA.
   5.5 Cases of Endophthalmitis reported have also decreased after RCA and CAPA.
   5.6 Increase in OPD Utilization after doing RCA and CAPA.
   5.7 And patient satisfaction being directly proportional to streamlining of processes has constantly increased.

6. NABH Tool kit was used to streamline the day to day operations and therefore list of Non compliances was made and Action Plan was drafted.

FINANCIAL IMPLICATIONS:-

The financial implication of NABH Accreditation is seen in following aspects:

- Central Government Health Scheme (CGHS) offers two different rate slabs (Annexure No.....) for NABH Accredited and non NABH Accredited hospitals. The rates are greater (20-25%) for NABH Accredited hospitals.

- In Centre for Sight on a monthly basis around 450 CGHS Retired patients and around 1800 CGHS Service patients come so the impact on revenue would be huge.

7. CONCLUSION AND RECOMMENDATIONS:-

Accreditation ensures a quality index for Health Consumers. A growing number of hospitals in India are turning to accreditation agencies worldwide to both standardize their protocols and project their international quality of health care delivery.
It is 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.

Conducting the study to evaluate the affect of accreditation on general hospital performance proved beneficial as many loop holes were identified and therefore RCA and following CAPA's were suggested:-

CORRECTIVE ACTION FOR ENDOPHTHALMITIS

- Strict adherence to standard precautions.
- Protocols displayed in user area.
- Decongestion of OT store was carried out.
- Cardboard cartons were removed.
- Slabs were put in Autoclave room.
- Strict adherence to validation of Autoclave.
- Training was given on Standard Protocols.
- Infection Control Team strengthened.
- Strengthened Infection Control Nurse.
- Internal Audit was carried out
- Proper technique used for taking culture
- Time for autoclaving increased to 22 minutes at 121 degree Celsius.

CORRECTIVE ACTION FOR RESCHDULED SURGERIES:

- More manpower has been recruited for counseling department.
- Training has been given to staff on hospital services.
- Monitoring is being done more periodically, registers are monitored closely and monthly report in the form of Indicators is sent to M.S.

CORRECTIVE ACTION FOR INCOMPLETE MEDICAL RECORDS:

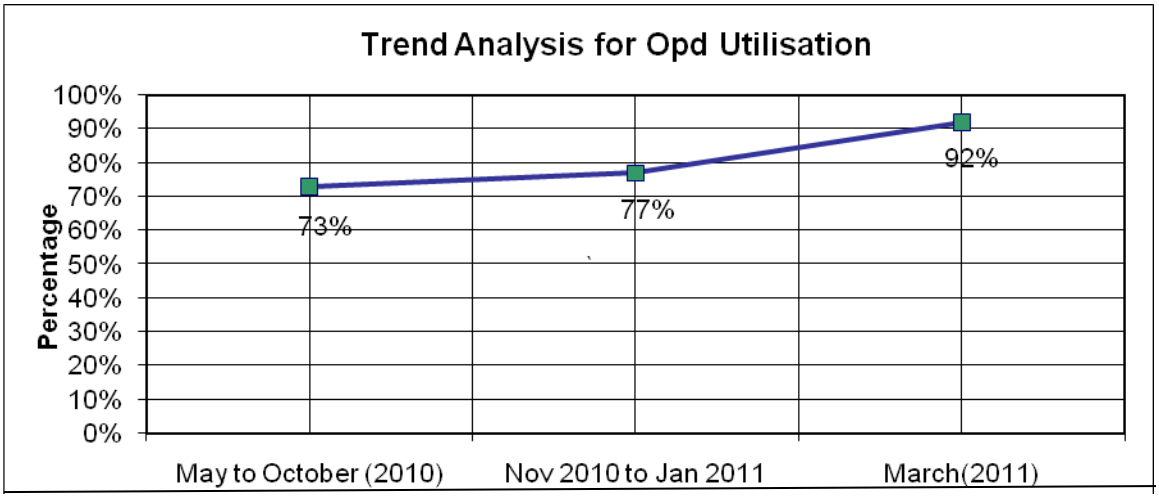
- More manpower has been recruited for the same.
- Redistribution of work has been done to increase accountability.
- Training of staff has been done on importance of Medical Records and SOP.

CORRECTIVE ACTION FOR LOW OPD UTILIZATION:

The root cause analysis for the decreased OPD utilization was done and a corrective Action was taken against it which mainly included the following measures

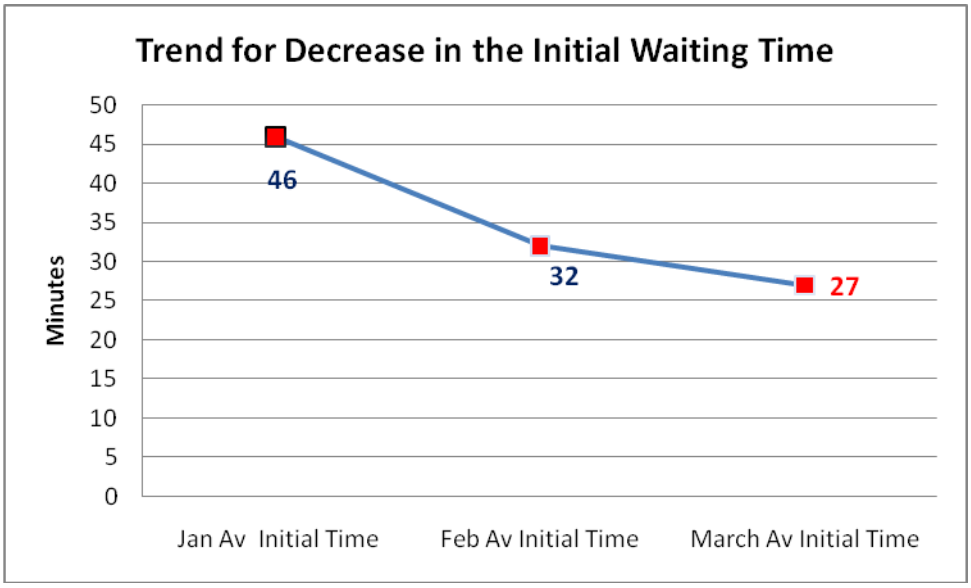
1. Groups for the patients were made that helped in spreading of the appointments the entire day
2. The Lasik post operative cases were given appointments during 12:00 pm.
3. The Post operatives both 1day and 2 week were given appointments in the between 8:00 to 9:00 am in the morning
4. The 3 week Post operative patients were given appointments in the evening
5. The PMT were called during the evening that is after 3 p.m
6. The doctors were given appointments the entire day depending upon their shift timings.
7. It was seen that the major patients during the peak hours were of Dr Mahipal Sachdev so we blocked the OPD for the other consultants during this time.
8. While planning for the doctor's duty roster it was seen that the doctors for the specialty were present especially during the peak hours.
9. After analyzing the appointment system and implementing it was seen that the time motion analysis for the waiting time of the patients also reduced.

(Fig 5.1)



The graph shown above can help us to conclude that after implementation of the corrective measures the OPD utilization rate has increased from 77 % to 92%.

(Fig 5.2)



The above graph shows the decline in the average initial waiting time for the patient from 46 minutes to 27 minutes .

- ❖ Apart from this status report was made for all the Non Compliances and necessary action was taken.
- ❖ Analysing the data following conclusions are drawn:-

- Patient satisfaction has continuously increased since the accreditation programme focuses on patient safety and patient satisfaction.
- Using key performance indicators day to day operations have shown improvement.
- The possible financial benefits have been explored and show that NABH Accreditation would prove positive from the revenue point of view too.

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