PRE-COMMISSIONING OF A 250 BEDDED MULTISPECIALTY HOSPITAL OF PHASE I

Internship Training
at
Rukmani Birla Hospital, Jaipur

By
Kanika Kothyari

Under the guidance of
Dr. Nutan P. Jain

MBA Hospital & Health Management
2013–15

Institute of Health Management Research
Jaipur
2015

DISSERTATION

ON

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INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that **Ms Kanika Kothyari** student of MBA Hospital and Health Management from IIHMR University, Jaipur has undergone dissertation/internship training at Rukamani Birla Hospital, Jaipur from 1st February to 30th April.

The Candidate has successfully carried out the study designated to her during dissertation/internship training and her approach to the study has been sincere, scientific and analytical.

The dissertation/internship is in fulfillment of the course requirements.

I wish her all success in all his future endeavors.

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To whomsoever It May Concern

This is to certify that Ms. Kanika Kothyari has completed her dissertation on "Pre Commissioning of a 250 bedded multispeciality hospital of Phase 1" at Rukmani Birla Hospital from Feb 2015 to April 2015.

During the internship we found her very devoted and sincere person.

We wish her all the best.

Bhattacharya

Authorized Signatory

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "**Pre-commissioning of a 250 bedded multispecialty hospital in Jaipur "** submitted by **Kanika Kothyari** Enrollment **No. IIHMR-PGDHM/2013-15/1451** under the supervision of **Prof. Nutan P. Jain** for award of MBA Hospital and Health Management of the university carried out during the period from **1 February, 2015 to 30th April, 2015.** Embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Kanika

Signature

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I am also thankful to each and every staff at Rukmani Birla Hospital, Jaipur for sharing their experiences and knowledge and providing their precious time to add value to my knowledge. Without their cooperation, the dissertation and the project work would not have been possible.

Finally, I would like to extend my sincere regards to my mentor **Prof. Nutan P. Jain** (Professor, IIHMR Jaipur) for her support.

EXECUTIVE SUMMARY

Proper planning and design of the hospital is very important factor in determining the smooth operation of the hospital, when it is commissioned. Efficient planning results in smooth flow of patient and staff in hospitals.

The aim of the study was

- To learn the complexities involved in the planning, design and commissioning of a 250 bedded hospital in Jaipur.

Followed by the Objectives:

- To study the reviewing of planning g documents and prepare the defect list to be remedied before final handover of the building to the hospital.
- To assess the infrastructure requirement of the set up.
- To identify the reasons behind the delay, if any.

The process followed for achieving the mentioned objectives was:

- **Step 1**: Review the plan prepared for the commissioning of hospital.
- **Step 2**: Prepare check list and snag list to execute the things on monthly/ weekly basis.
- **Step 3**: Tracking of the commissioning phase for accessing the infrastructure requirements of the hospital using different methods like Gantt chart and project tracker.
- **Step 4**: Results of the findings and recommendations will be shared with the relevant authorities in the hospital.

Findings:

- Communication gap between client, architect and various medical consultants.
- Improper schedule for the procurement of long lead items (Projects equipment's, Medicals equipment's) which are for most essential for the project completion
- Proper follow up with the Vendors were missing.
- Deployment of scheduled labour as per master plan was not there.
- Liasoning of Various fields were still pending like Completion Certificate to building, power supply to building from JEB.

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1.0 OVERVIEW OF THE HSOPITAL

1.1 CK BIRLA HOSPITALS

CK Birla Hospitals is a stellar venture in the healthcare space by the CK Birla Group, a rapidly expanding conglomerate with an enduring history of value creation. The Group has interests in various sectors of national importance with healthcare being one of its primary focus areas.

The Calcutta Medical Research Institute

One of two world-class medical and research facilities run by the CK Birla Group for over 45 years, the Calcutta Medical Research Institute (CMRI) is a multi-specialty hospital established in 1969 in Kolkata. This ten-storey building has over 400 beds and is guided by a mission to offer the highest standards of medical treatment to all sections of society.

BM Birla Heart Research Centre (BMHRC)

The CK Birla Group has pioneered several firsts in India's healthcare industry. Founded in 1989 in Kolkata, the BM Birla Heart Research Centre is the first NABH-accredited hospital exclusively for treatment and research related to heart disease. With a capacity of 150 beds, it is India's first healthcare facility to be awarded ISO 9001, ISO 14001 and OSHAS 18001 certifications.

Rukmani Birla Hospital

CK Birla Hospitals is now bringing its experience and expertise into Western India with **Rukmani Birla Hospital** in Jaipur, Rajasthan. This 250 bed multi-speciality facility will soon ensure that the pink city of Jaipur stays in the pink of health. Located on Gopalpura Bypass Road, **RBH** enjoys the strategic advantage of approachability from all major connecting roads of Jaipur. Total built up area: 200,000 sq. ft. [Basement + Ground + 5 Floors], Hi-tech ultra modern facilities, well integrated, comprehensive information system, total health care solutions under one roof, 9 modular OTs, 128 slice CT (Wide Bore), 3 .0 Tesla MRI (Wide Bore), Fully Digital Mammography, Fully Digital X-Ray, Modular IVF

& Diagnostic Lab, State-of-the-art OPD, 10 Gig converged network, Best of breed Hospital Information System, Electronic medical record available across Enterprise, Integrated medical equipments for error free diagnosis, Digitized work flows for efficient CDSS (clinical decision support system), Sprawling 20 acres of conceptual landscaping, special zones include butterfly parks, wind chime plaza, reflexology pathway, birdbath plaza, aromatic and medicinal garden.

Over four decades of experience in Hospital Excellence. Combination of world-class infrastructure, cutting-edge technology & best consultants in the country. Use of Protocol and Care Pathway based treatment models to ensure the best outcomes for patients. Conveniently located in Jaipur, the Pink City of India, the hospital is in close proximity to the airport. Wide range of exclusive services for international patients. 10% free beds for BPL patients.

1.2 MISSION:

To be the leading Multi-specialty Health Care and Research Institute with world class standard of Quality Service

1.3 VISION:

To offer the Highest Standard of Medical Treatment with Utmost Care, Compassion and Commitment to all sections of the society at best Value-for-money costs

1.4 COMMITMENT:

To constantly upgrade our human and technological resources in order to keep pace with the best global developments in medical science.

1.5 CORE VALUES TO BE FOCUSSED:

- Care
- Quality
- Integrity

1.6 INFRASTRUCTURE LAYOUT

Sno.	Location	Type of Room/Ward	No of Bed	No of Room	Toilets /WC	Bathroom	Nurse Station
1	Basement floor	Day care	8	2	22	0	7
	"	Endoscopy holding beds	3	3			
	"	OPD		38			
	"	CT-Scan		1			
	"	MRI		1			
	"	X-ray		1			
2	Ground floor	Free beds	19	1	35	7	3
	"	Training room		1			
	"	Breakfast area		1			
	"	Physiotherapy beds	5	1			
	"	Dialysis holding beds	14	1			
	"	Emr. Observation beds	6	1			
	"	Triage	6	1			
	"	Physiotherapy		1			
	"	Kitchen		1			
	"	Pharmacy		1			
	"	Minor OT		1			
	"	Mortuary		1			
3	First Floor	ICU (SICU,GSICU,ICCU & MICU	43	4	25	9	5
	"	Day care	12	1			
	"	CSSD		1			
	"	Library & Doctor's Lounge		1			
	"	Training room		1			
	"	Recovery OT	5	1			
	"	Holding beds OT	5	1			
	"	Cath lab holding beds	2	1			
	"	OT	6	6			
	"	Cath lab		1			
	"	CSSD		1			
4	Second floor	HDU	9	1	12	0	2

	"	Blood donation beds	4	2			
	"	Lithotripsy hold	2	1			
5	Third floor	NICU	5	1	16	12	1
	"	Nursery	9	1			
	"	Single	3	1			
	"	Double bed	8	1			
	"	Four bed	8	2			
	"	Birthing suites	3	3			
	"	IVF Hold	1	1			
6	Fourth floor	Single bed	1	1	24	23	1
	"	Double bed	22	11			
	"	Four bed	24	6			
7	Fifth floor	Single bed	9	9	24	23	1
	"	Deluxe bed	1	1			
	"	Four bed	4	1			
	"	Suite	2	4			
	"	Double bed	16	8			
		Total	**265**	**132**	**158**	**74**	**20**

1.7 AREA AND SPECIALITY BREAKUP

Floor Description	Built up Area (Sqm)	Specialities		
Basement	**3987**	OPD	Endology	Radiology (CT, MRI, X-ray)
Ground	**4302**	OPD	Emergency	General ward, Dialysis, Kitchen
First floor	**4021**	ICU	OT	Cath lab, CSSD, day care (Service block)
Second floor	**2633**	Laboratories	HDU	Blood bank
Third floor	**1465**	Wards	IVF	Bariatric, labour delivery
Fourth floor	**1465**	Wards		
Fifth floor	**1465**	Wards		
Total	**19338**			

DISSERTATION

PRE-COMMISSIONING OF A 250 BEDDED MULTISPECIALTY HOSPITAL IN JAIPUR

2.1 INTRODUCTION

A Good Medical facility is the need of the hour at proposed districts of North western States .There is urgent need for moderate to excellent health care facilities in these places. Moderate size hospitals of 200 bed capacity can be set up at city / district head quarters, well connected with road and rail. These hospitals equipped with modern medical equipments offer excellent services for the patients suffering from various diseases.

Multispecialty hospital is an institution that has a highly organized medical and other paramedical staff, inpatient facilities, and it delivers tertiary care medical, nursing and related services 24 hrs a day, and 7 days a week.

Health is a natural human right and has been accorded due importance in our constitution, though its delivery to masses remain daunting despite more than 60yrs of independence. After various committees recommendations ever since, government has been trying to meet health needs of masses but factors like rising population and rapid urbanisation rendering health needs uncompensated.

Making healthcare affordable and accessible for all its citizens is one of the key focus areas of the health policies of the country today. Fruitful medical research and health facility planning is an emerging sector of health infrastructure development forming the pillars of achieving this difficult but double endeavour. As healthcare is improving in tier-1 cities, now the focus has been slowly shifting to tier-2 cities which are facing rapid population growth and unplanned expansion, there lies scope of tremendous improvement in healthcare. I would like to work further on the paradigm shift.

Hospital building is commissioned in multi-phases (different floors at a time, different wings/sections at a time) and with each commissioning phase one or more clinical services are brought online.

ALL hospital operations/services are initiated at the 1st phase and then expanded as new sections/floors are commissioned - i.e. ALL services with limited capacity is initiated and more capacity is added in each phase.

Commissioning is a strategic process used to turn new hospital facilities into dynamic, functioning organisations that provide a planned and improved service to the community.

The commissioning process structures the design to enhance quality outcomes. The successful realisation of the commissioning process will ensure a smooth and efficient transition to full operation so that the potential of the hospital can be achieved.

Commissioning of the health care delivery system can be described as the stage, which converts a non- functional hospital into a functional lively hospital throbbing with activity namely staffs, patients and equipments. Commissioning is the final stage in the planning phase. It is the stage between the building construction phase to operation phase. This phase is important as any discrepancy in this phase with jeopardize whole process. It involves activities which are aimed at integrating the various services, and the utility with the objective of delivering efficient patient care.

Commissioning of the hospital compromises the various components as listed below:

1) Review the planning documents.

- Generate the defect list in the physical structure
- Conduct pre-commissioning cleaning and sterilization of the premises.
- Review the action taken on the defect list provided.

2) Fulfilling the legal requirements

- Trade license from municipality
- No objection certificate from the state pollution control board.
- Registration in the state health authority.
- Permit from the state electricity board to setup the transformer.
- Insurance of the physical facilities from reinforced insurance company.

3) Equipment planning including placing tender, installation, trial runs, generate defect list, familiarization training for the staff.

4) Human Resource planning

- Job description
- Recruitment
- Selection
- Induction
- Selection of stationeries and uniforms.

5) Setting up the tariffs and concession policy

6) Computerization

7) Promotional activities

8) Formal inauguration.

2.2 REVIEW OF LITERATURE:

1) Commissioning - 'a proactive strategic role in planning, designing and implementing the range of services required'. The commissioner decides which services or health care interventions should be provided, who should provide them and how they should be paid for, including working with the provider to implement changes. (Woodin 2006).

2) A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the commissioning process.
   Commissioning is a comprehensive and systematic process to verify that the building systems perform as designed to meet the State's requirements. Commissioning during the construction and warranty phases is intended to achieve the specific objectives.

3) The ASHE(American Society for Healthcare Engineering) Health Facility Commissioning Guidelines (HFCx Guidelines) defines "commissioning" as a

process intended to assure that all building systems in a facility, including sustainable building technologies, are installed and perform in accordance with the design intent, that the design intent is consistent with the owner's project requirements, and that operations and maintenance staff are adequately prepared to operate and maintain the completed facility.

The American Society for Healthcare Engineering (ASHE) is convinced that commissioning is critical to the success of every health care facility project and thus developed the Health Facility Commissioning Guidelines to help health care organizations achieve the facilities they want.

4) The Commissioning Process is a quality-oriented process for achieving, verifying, and documenting that the performance of facilities, systems, and assemblies meets defined objectives and criteria.

2.3 AIM OF THE STUDY:

- To learn the complexities involved in the planning, design and commissioning of a 250 bedded hospital in Jaipur.

2.4 OBJECTIVES:

- To study the reviewing of planning g documents and prepare the defect list to be remedied before final handover of the building to the hospital.
- To assess the infrastructure requirement of the set up.
- To identify the reasons behind the delay, if any.

2.5 METHODOLOGY:

Step 1: Review the plan prepared for the commissioning of hospital.

Step 2: Prepare check list and snag list to execute the things on monthly/ weekly basis.

Step 3: Tracking of the commissioning phase for accessing the infrastructure requirements of the hospital using different methods like Gantt chart and project tracker.

Step 4: Results of the findings and recommendations will be shared with the relevant authorities in the hospital.

2.6 STUDY DURATION: 3 months (1st February to 1st May)

2.7 STUDY AREA: Rukmani Birla Hospital, Jaipur

3.1 DATA COLLECTION TOOL:

INTRODUCTION:

A Read-Do check list and snag list was prepared for the OPD chambers in basement for commissioning process..

SNAG LIST:

A snagging list is basically just a list of defects in a new build home or any new construction or renovation.

Snag list occurs in phases at the end of a building project and is essentially a ‘defects liability period’, where faults can be noted and subsequently put right or fixed by the builder. It is a necessary evil turned-to-good for the homeowner and a final closure for the builder that the job is finalised and accomplished.

Phases:

Snag lists are often done in phases: when the job is just complete, and also, six months down the road or even year, basically because ‘cracks’ and other faults can often occur after the drying out period. It is preferable to engage an architect to check for snags.

What are snagging defects?

Snagging defects are often things that will annoy you once you find them, but they might not be spotted by others. They include things like paint on light switches, scratched worktops, and poor plastering.

Importance of snag list:

It is very important to manage the whole process and keep meticulous records. Any verbal promises made by site staff should be confirmed in writing and ideally you should ensure there is a witness with you whenever has site meetings.

3.2 DATA INTERPRETATION:

1) BASED ON THE OPD CHAMBER OF THE BASEMENT FLOOR FOR COMMISSIONING 10 ELEMENTS AS FIXTURES WERE PREPARED:

(A) Door status

(B) Vinyl (fixation and skirting)

(c) Laminates

(D) Curtain rail (fixation and curtains)

(E) False ceiling (fixation)

(F) Wash-Basin (fixation, tap and floor trap)

(G) Doctors Table, chair and couch

(H) Electric points

(I) IT (points and installation)

(J) Paint on walls

Using the check list, the analysis is made of 3 months showing the progress of work in those months.

(A) Door status including polish, hinges, stopper, handle and locks (excluding door closer)

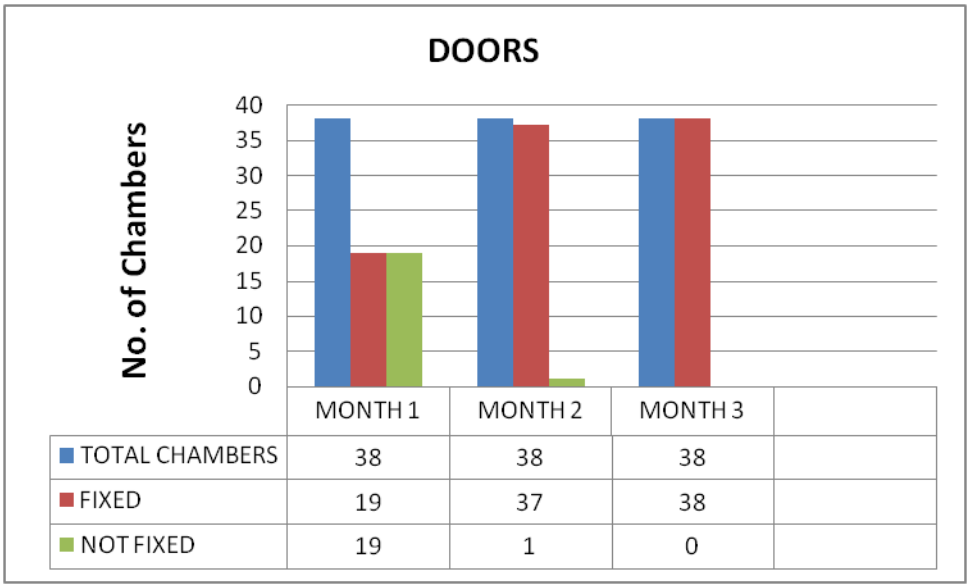


Fig 1.1 Door status of the 3 consecutive month showing work progress

Common problems were observed like:

a) Hinges were missing at the door

b) Door too tight while opening or it was not properly aligned.

c) Door stopper were not there in some rooms.

In the above graph it is shown that in the 1st month only 50% i.e. 19 out of 38 doors were fixed and still in 2nd month 1 door was remained to be fixed and the delay is because of the following reasons:

a) Delay from the vendor side in fitting the hinges at the door.

b) Door stopper were not ordered on time by the client side.

(B) Vinyl (fixation and skirting)

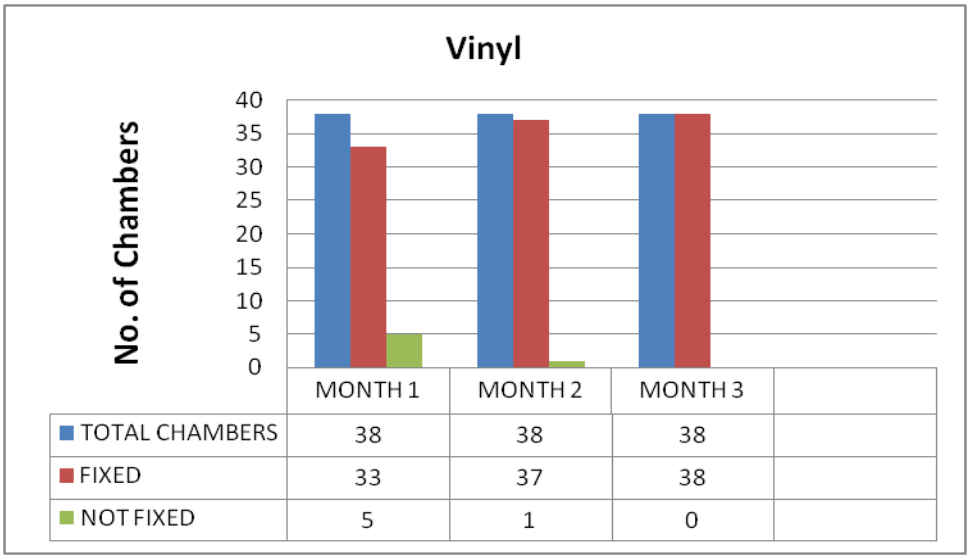


Fig 1.2 Vinyl status of the 3 consecutive month showing work progress

Common problems were observed like:

a) Vinyl was not properly fixed in the rooms

In the above graph it is shown that in the 1st month 33 out of 38 doors were fixed and in 2nd month vinyl work was still due in 1 chamber and the delay is because of the following reasons:

a) Delay from the construction team

b) Lack of proper monitoring.

(C) Laminates:

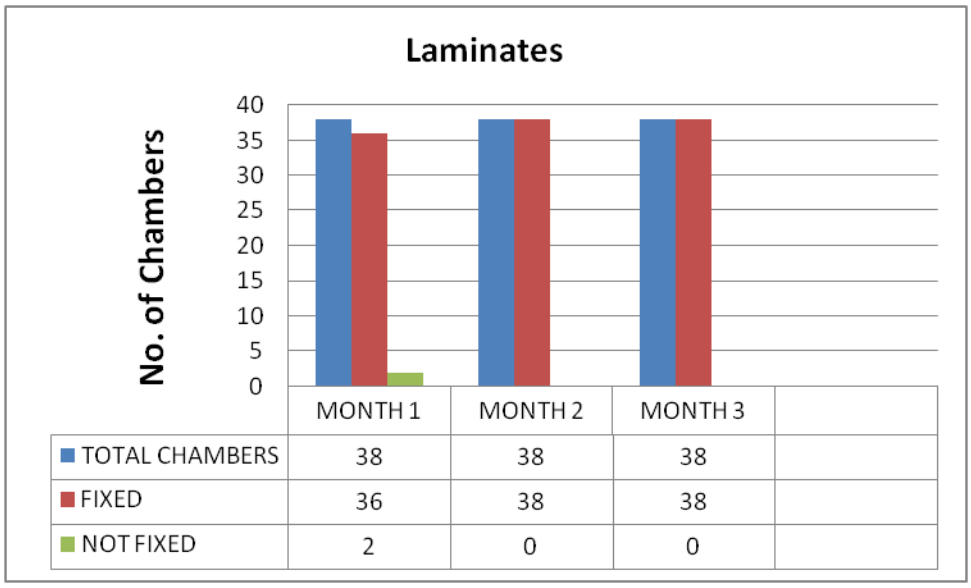


Fig 1.3 Laminate status of the 3 consecutive month showing work progress

Common problems were observed like:

a) Laminate was not properly fixed.

In the above graph it is shown that in the 1st month laminates were fixed in 36 out of 38 chambers and was got fixed in the second month and the delay is because of the following reasons:

a) Delay from the vendor side.

(D) Curtain rail (fixation and curtains)

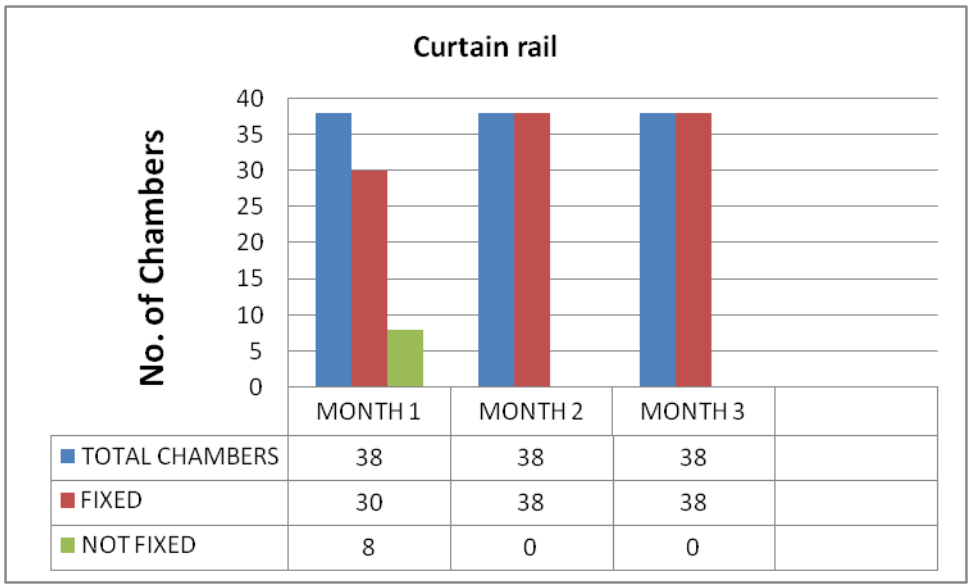


Fig 1.4 Curtain rail status of the 3 consecutive month showing work progress

(E) False ceiling (fixation, fire sprinklers, smoke detectors)

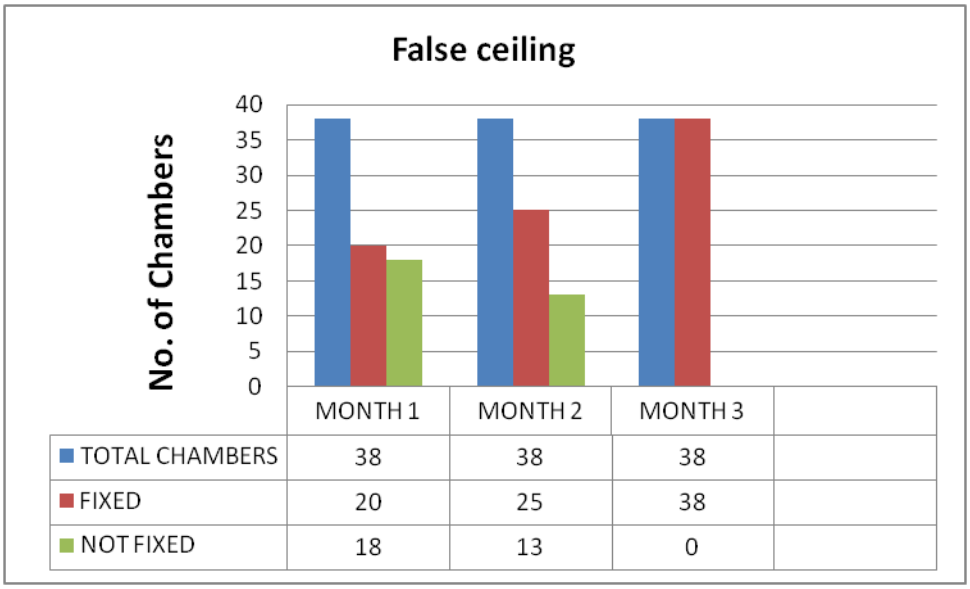


Fig 1.5 False ceiling status of the 3 consecutive month showing work progress.

Common problems were observed like:

a) Hand marks were there on the false ceiling.

b) Ceiling was not properly fixed.

c) Panel of grid ceiling were missing in some of the rooms.

In the above graph it is shown that in the 1st month false ceiling was fixed in 20 rooms out of 38 and still in 2nd month 13 chambers were left where false ceiling needs to be fixed and the delay is because of the following reasons:

a) Different paint is being used for the ceiling which was not ordered on time by the client.

b) Delay in approval of the purchase from the head office i.e. cmri, Kolkata.

(F) Lights

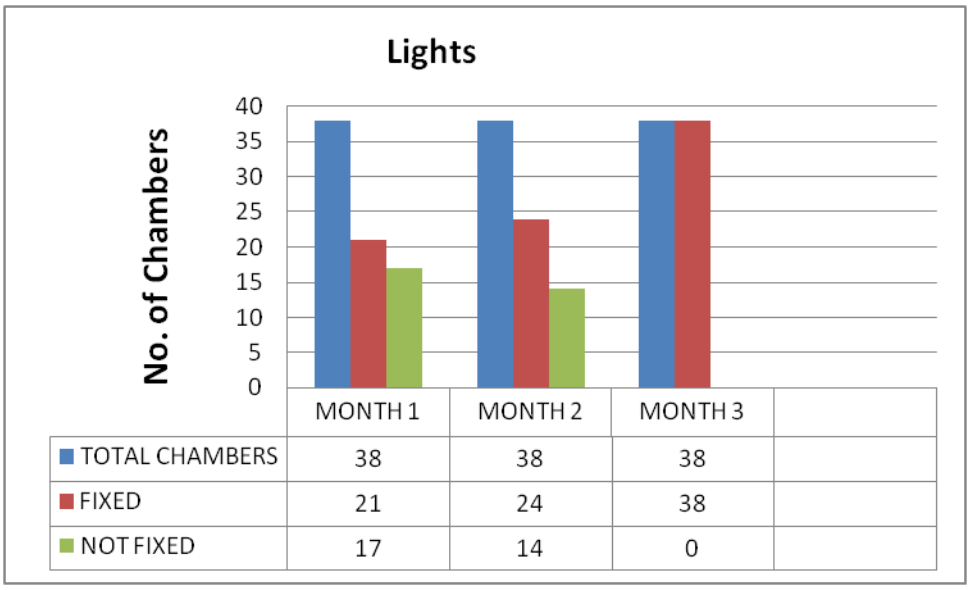


Fig 1.6 status of light of the 3 consecutive month showing work progress.

Common problems were observed like:

a) Light were not properly working in some chambers.

In the above graph it is shown that in the 1st month light was not fixed or was not working properly in17 chambers out of 38 and still in 2nd month 14 chambers were left where the work needs to be done regarding the light fixation and working and the delay is because of the following reasons:

a) Fluctuation of light choke was damaged, and reordering of choke was the cause of delay.

(G) wash-basin (fixation, tap and floor trap)

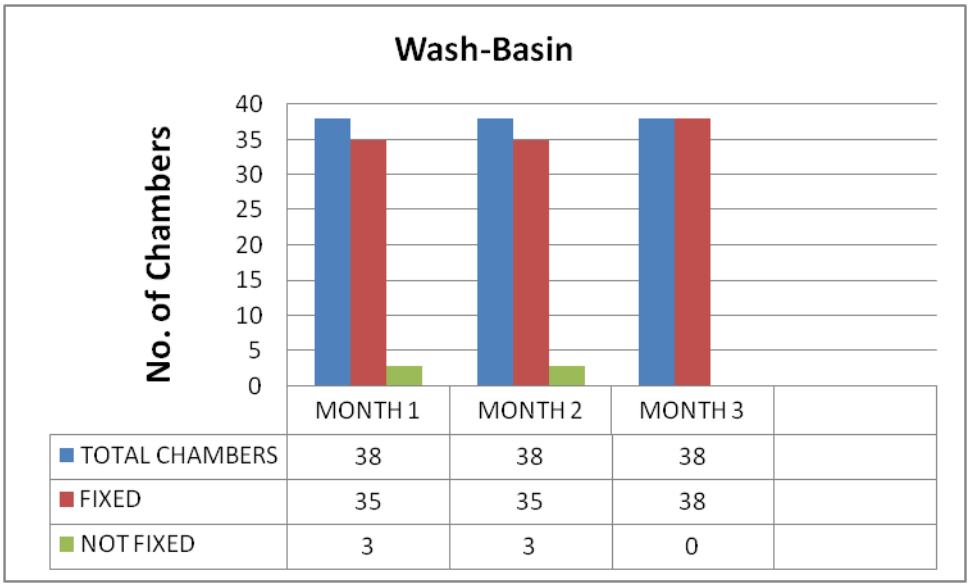


Fig 1.7 Wash basin status of the 3 consecutive month showing work progress

(H) Doctor's table, chair and couch

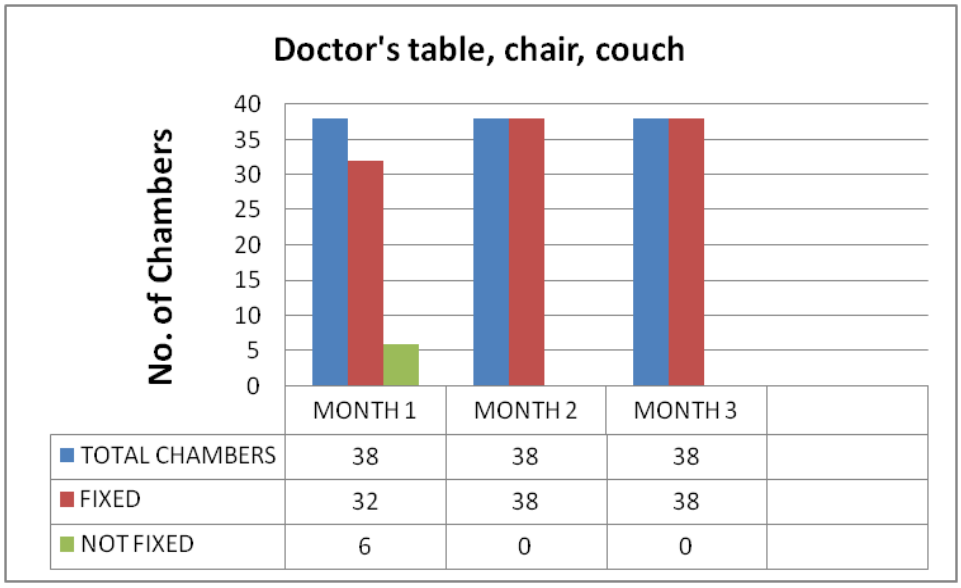


Fig 1.8 status of table, chair and couch the 3 consecutive month showing work Progress

(I) IT POINTS:

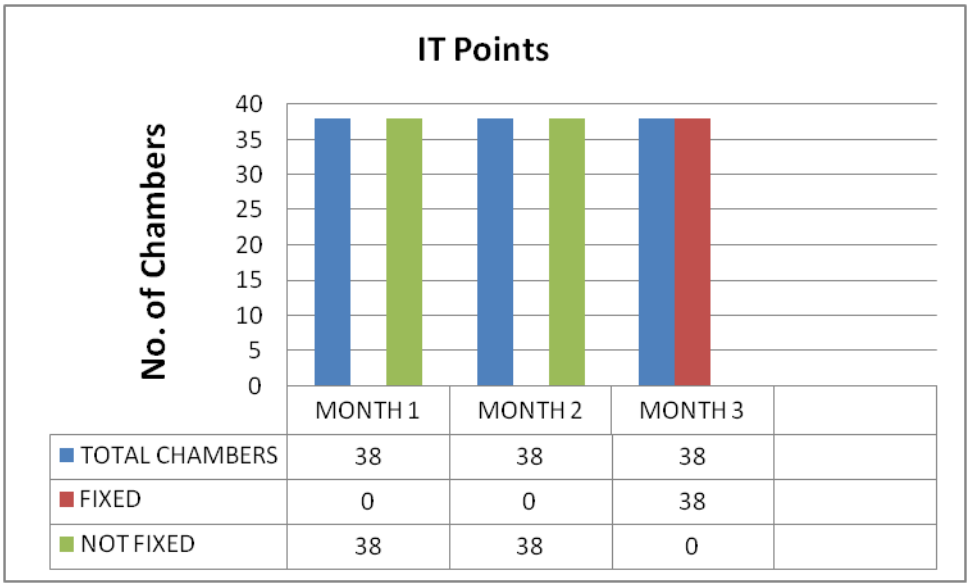


Fig 1.9 IT points status of the 3 consecutive month showing work progress

Common problems were observed like:

a) IT installation was not done.

In the above graph it is shown that in the 1st month and 2nd month IT installation was needed to be done in all the chambers and the delay is because of the following reasons:

a) Server is ready; once the hospital will get operational the proper installation will be done.

(J) PAINT ON WALLS:

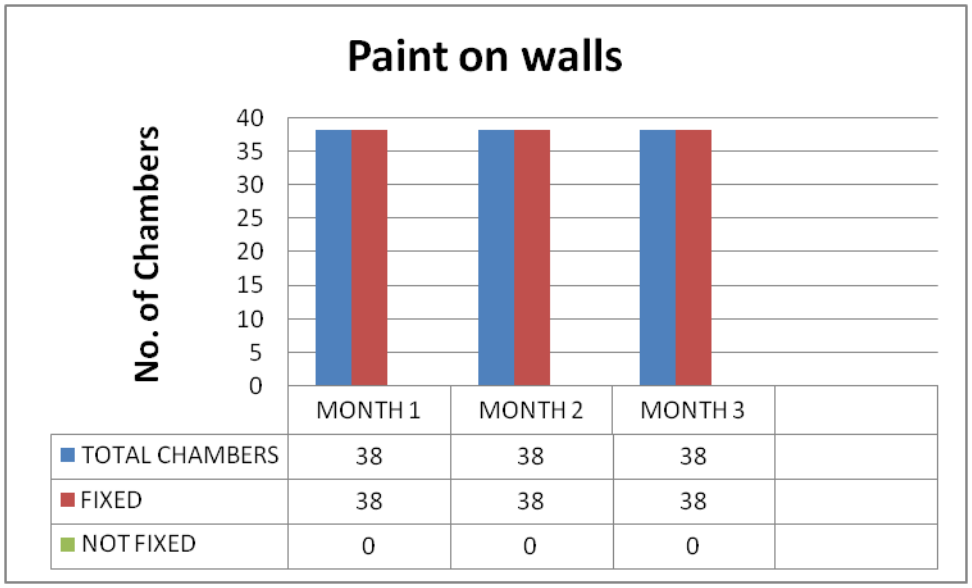


Fig 1.10 status of the paint on walls of the 3 consecutive month showing work progress

2) TRACKING AND MONITORING GANTT CHART:

I have prepared the tracking and monitoring sheet followed by the Gantt chart. I have taken the individual process involved in the pre commissioning of the hospital and even the process that has happened before that.

In the sheet, I have mentioned that what was the planned start and end date for the process by reviewing the documents and tracked that what was the actual start and end date for the process.

Using this tracking sheet I have prepared a Gantt chart which is showing the process in a sequential manner.

TRACKING AND MONITORING GANTT CHART

RBHRI Jaipur

Completion schedule for Rukmani Birla Hospital

			Planned		Actual	
		Duration	Start date	Finish date	Start date	Finish date
1	**completion of R.B.Hospital**	266 days	1-Feb-14	8-Dec-14	1-Feb-14	30-Jan-15
1	**Design & Drawing**	**45 days**	**1-Feb-14**	**25-Mar-14**	**1-Feb-14**	**26-May-14**
1	**Design & Drawing approval**	**30 days**	**19-Feb-14**	**25-Mar-14**	23-Aug-14	28-Aug-14
1	statutory approval	180 days	1-Feb-14	31-Jul-14	1-Feb-14	31-Jul-14
1	**Procurement of Material**	**90 days**	**27-Mar-14**	**9-Jul-14**	**15-Jun-14**	**23-Sep-14**
1	**Tendering & Negotiation & Agency Finalization**	**83 days**	**26-Mar-14**	**30-Jun-14**	23-Aug-14	7-Sep-14
1	**Special Agency**	**7 days**	**23-Jun-14**	**30-Jun-14**	**23-Jun-14**	**30-Jun-14**
2	Modular OT	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
3	modular critical care	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
4	Modular Emergency	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
5	Modular IVF	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
6	Modular Endoscopy	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
7	Modular Dialysis	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
8	Modular Kitchen	7 days	23-Jun-14	30-Jun-14	23-Jun-14	30-Jun-14
1	**Terrace services installation**	**30 days**	**21-May-14**	**24-Jun-14**	**1-Sep-14**	**1-Oct-14**
1	**Terrace water proofing work**	**45 days**	**1-Jul-14**	**21-Aug-14**	**23-Sep-14**	**3-Oct-14**
1	**Façade work**	**30 days**	**4-Nov-14**	**8-Dec-14**	**4-Nov-14**	**8-Dec-14**

Table 1: Tracking and monitoring sheet (1)

1	Services Installation	45 days	10-Jul-14	30-Aug-14	10-Jul-14	7-Nov-14
1	Services Testing & Commissioning	226 days	1-Feb-14	22-Oct-14	2-Aug-14	20-Jan-15
1	Basement	214 days	24-Feb-14	30-Oct-14	5-Jun-14	15-Apr-15
1	First fix(INSTALLATION)	35 days	11-Apr-14	21-May-14	8-Sep-14	20-Feb-15
2	Second fix(FIXTURE AND EQUIPMENT SET UP)	10 days	22-May-14	2-Jun-14	10-Feb-15	20-Feb-15
3	Final Fix (pre-commissioning)	10 days	4-Jun-14	14-Jun-14	10-Jan-15	15-Apr-15
1	Ground Floor	196 days	17-Mar-14	30-Oct-14	27-Jun-14	30-Apr-15
1	First fix(INSTALLATION)	20 days	9-Apr-14	25-Apr-14	31-Jan-15	20-Feb-15
2	Second fix(FIXTURE AND EQUIPMENT SET UP)	12 days	29-Apr-14	12-May-14	5-Feb-15	20-Feb-15
3	MEP Final Fix (pre-commissioning)	15 days	20-Jun-14	7-Jul-14	15-Apr-15	30-Apr-15

Table 2: Tracking and monitoring sheet (2)

3) GANTT CHART:

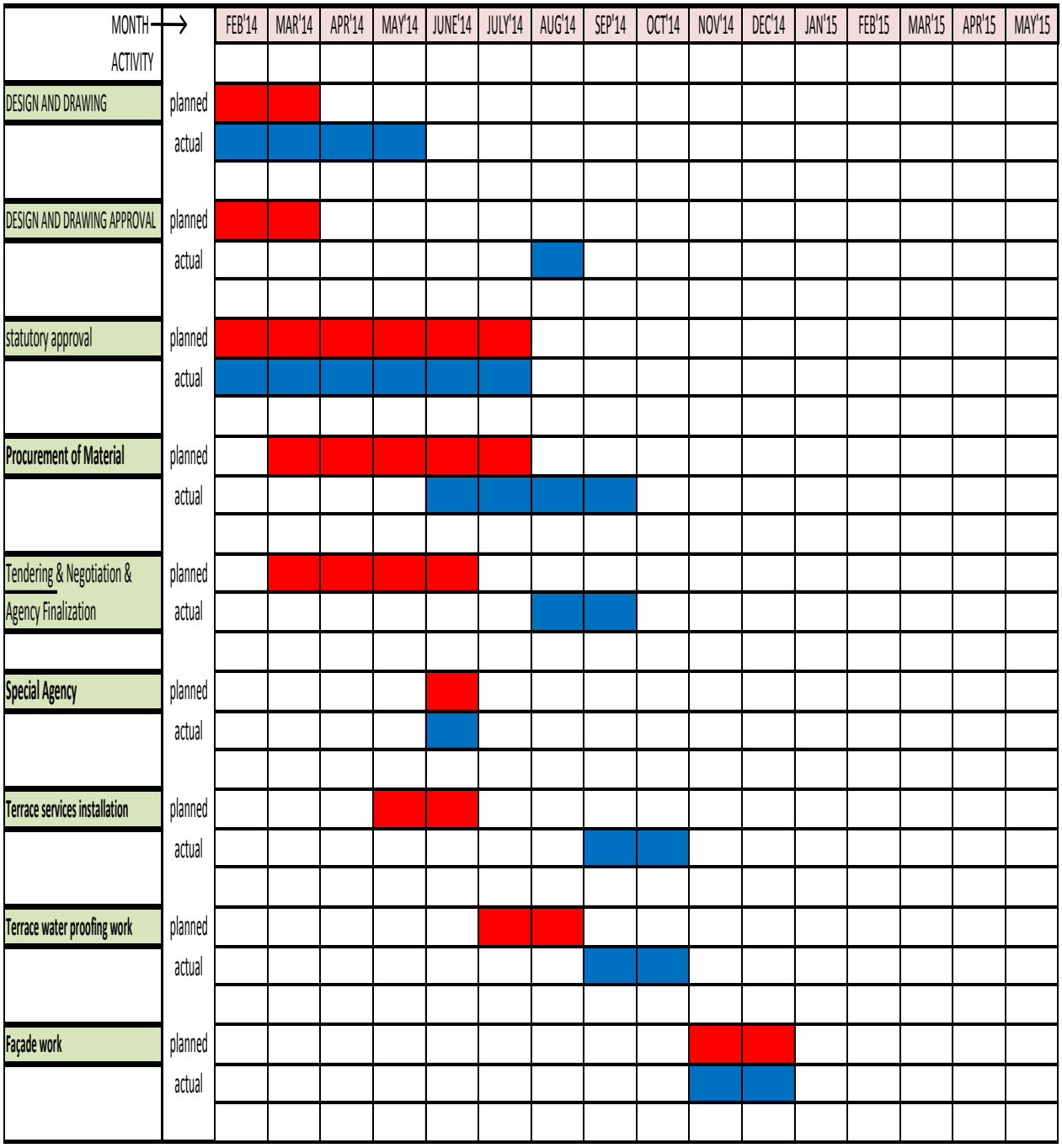


Fig 1.11 Gantt chart (Part 1)

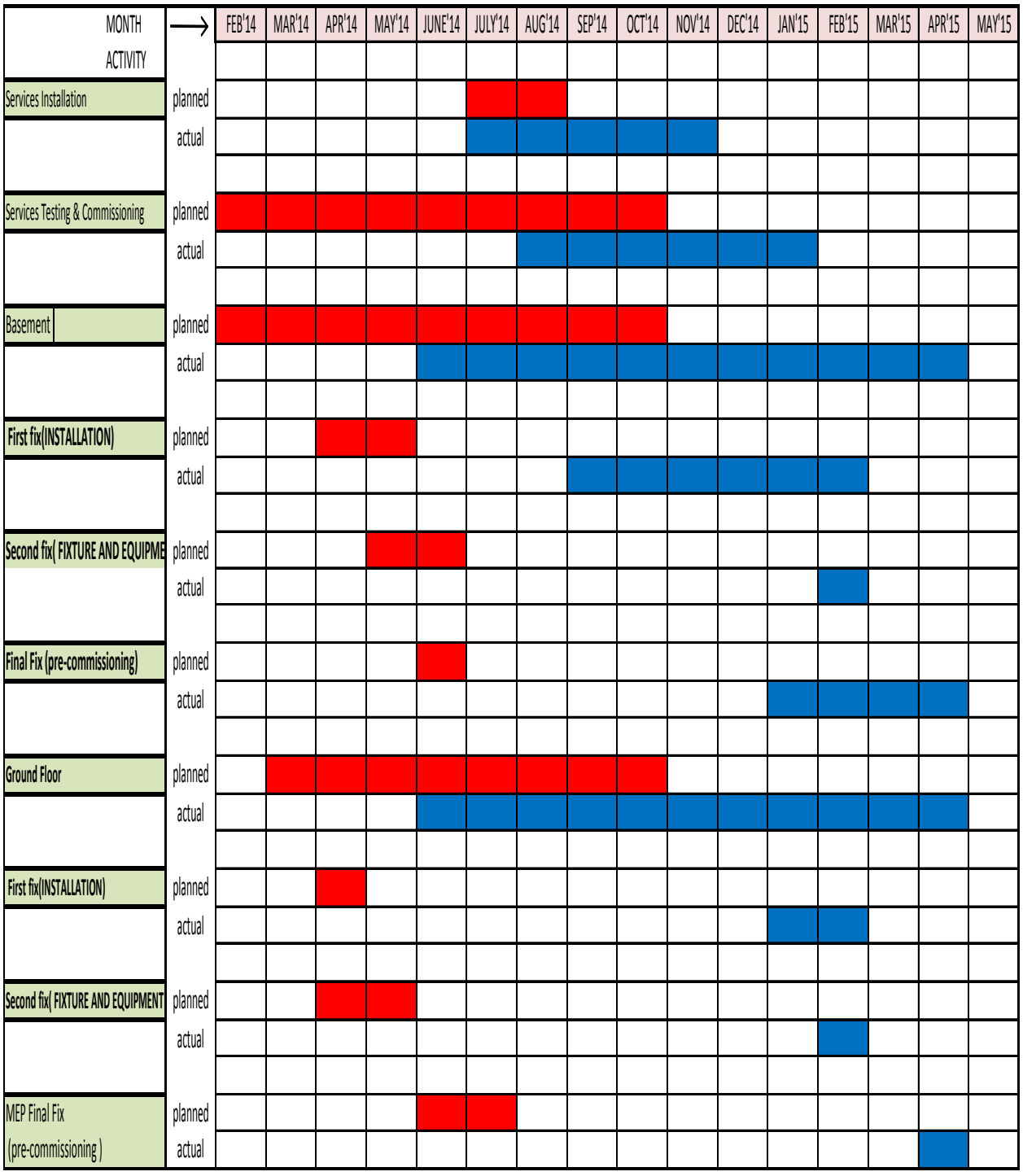


Fig 1.12 Gantt chart (Part2)

4) ROOM WISE ACTIVITY FOR SOFT LAUNCH

BASEMENT FLOOR

		civil work				Finishing Work												
Room No.	Room Name	Brick Work/ Partition	Plaster Work	IPS Flooring		Wall POP	Expansion Joint work	Tiling work	False Ceiling	Carpentary	Door Frame Fixing	Door Fixing	Self Levelling	Wooden Flooring	Vinyl Flooring	Painting	Miscellaneous Items Fixing(shelves etc.)	Furniture Placing
B-01	G.I SURGERY			C														
B-02	GASTRO			C														
B-03	ONCO			C														
B-04	General Surgery-1			C														
B-05	General Surgery-2			C														
B-06	Sample Collection			C														
B-07	Toilet			C														
B-08	Toilet(F)			C														
B-09	Toilet(M)			C														
B-09	Toilet(M)			C														
B-10	Dress/Procedure Room			C														
B-11	Neuro 3			C														
B-12	Neuro 2			C														
B-13	Neuro 1			C														
B-14	EEG			C														
B-15	EMG			C														
B-16	Neuro 4			C														
B-17	Nurse Room			C														
B-18	Nurse Room			C														
B-19	Ortho -1			C														
B-20	Ortho -2			C														
B-21	Procedure			C														
B-22	Physio			C														
B-23	Physiotherapy			C														
B-24	Ortho -3			C														
B-25	Nurse Room			C														
B-26	Gen. MED 1			C														
B-27	Psychiatry			C														
B-28	AHU			C														
B-29	Gen. MED 2			C														
B-30	ENT			C														
B-31	ENT Procedure			C														
B-32	Audiometry			C														
B-33	Consultancy Room			C														
B-34	Dental Procedure			C														
B-34	Dental Procedure			C														
B-35	Refraction Room			C														
B-36	OPT. - 1			C														
B-37	Nurse Room			C														
B-38	Plastic Surgery			C														
B-39	Derm - 1			C														
B-40	Minor O.T			C														
B-41	Laser			C														
B-42	Change Room			C														
B-42	Change Room			C														
B-43	PUVA			C														
B-43	PUVA			C														
B-44	Derm - 2			C														
B-45	Nurse Room			C														
B-46	Toilet(F)			C				C										
B-46	Toilet(F)			C				C										
B-47	Toilet			C				C										
B-48	Toilet(M)			C				C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-49	Waiting Area							C										
B-50	AHU																	
B-51	Toilet(F)							C										
B-52	Toilet(M)							C										
B-52	Toilet(M)							C										
B-53	AHU																	

Table 3: Room wise activity sheet (Basement floor)-1

		Electrical Work							Fire Fighting Work								drainage		
Room No.	Room Name	Conduting	Box Fixing	Wiring	Testing	Light Fixture	Switch Fixing		Sprinkler Piping	Hydrant Piping	Hydro testing	Upright Sprinkler fixing	Pendent Sprinkler fixing	Side wall sprinkler Fixing	Painting		Testing	Connection	Floor Trap/FCO/Floor drain fixi
B-01	G.I SURGERY													NA					
B-02	GASTRO													NA					
B-03	ONCO													NA					
B-04	General Surgery-1													NA					
B-05	General Surgery-2													NA					
B-06	Sample Collection													NA					
B-07	Toilet													NA					
B-08	Toilet(F)													NA					
B-09	Toilet(M)													NA					
B-09	Toilet(M)													NA					
B-10	Dress/Procedure Room													NA					
B-11	Neuro 3													NA					
B-12	Neuro 2													NA					
B-13	Neuro 1													NA					
B-14	EEG													NA					
B-15	EMG													NA					
B-16	Neuro 4													NA					
B-17	Nurse Room													NA					
B-18	Nurse Room													NA					
B-19	Ortho -1													NA					
B-20	Ortho -2													NA					
B-21	Procedure													NA					
B-22	Physio													NA					
B-23	Physiotherapy													NA					
B-24	Ortho -3													NA					
B-25	Nurse Room													NA					
B-26	Gen. MED 1													NA					
B-27	Psychiatry													NA					
B-28	AHU													NA					
B-29	Gen. MED 2													NA					
B-30	ENT													NA					
B-31	ENT Procedure													NA					
B-32	Audiometry													NA					
B-33	Consultancy Room													NA					
B-34	Dental Procedure													NA					
B-34	Dental Procedure													NA					
B-35	Refraction Room													NA					
B-36	OPT. - 1													NA					
B-37	Nurse Room													NA					
B-38	Plastic Surgery													NA					
B-39	Derm - 1													NA					
B-40	Minor O.T													NA					
B-41	Laser													NA					
B-42	Change Room													NA					
B-42	Change Room													NA					
B-43	PUVA													NA					
B-43	PUVA													NA					
B-44	Derm - 2													NA					
B-45	Nurse Room													NA					
B-46	Toilet(F)													NA					
B-46	Toilet(F)													NA					
B-47	Toilet													NA					
B-48	Toilet(M)													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-49	Waiting Area													NA					
B-50	AHU													NA					
B-51	Toilet(F)													NA					
B-52	Toilet(M)													NA					
B-52	Toilet(M)													NA					
B-53	AHU																		

Table 4: Room wise activity sheet (Basement floor)-2

		nursing				Medical Gas		
Room No.	Room Name	Box Fixing	Wiring	Testing		Piping	Gas area alarm unit	Testing
B-01	G.I SURGERY							
B-02	GASTRO							
B-03	ONCO							
B-04	General Surgery-1							
B-05	General Surgery-2							
B-06	Sample Collection							
B-07	Toilet							
B-08	Toilet(F)							
B-09	Toilet(M)							
B-09	Toilet(M)							
B-10	Dress/Procedure Room							
B-11	Neuro 3							
B-12	Neuro 2							
B-13	Neuro 1							
B-14	EEG							
B-15	EMG							
B-16	Neuro 4							
B-17	Nurse Room							
B-18	Nurse Room							
B-19	Ortho -1							
B-20	Ortho -2							
B-21	Procedure							
B-22	Physio							
B-23	Physiotherapy							
B-24	Ortho -3							
B-25	Nurse Room							
B-26	Gen. MED 1							
B-27	Psychiatry							
B-28	AHU							
B-29	Gen. MED 2							
B-30	ENT							
B-31	ENT Procedure							
B-32	Audiometry							
B-33	Consultancy Room							
B-34	Dental Procedure							
B-34	Dental Procedure							
B-35	Refraction Room							
B-36	OPT. - 1							
B-37	Nurse Room							
B-38	Plastic Surgery							
B-39	Derm - 1							
B-40	Minor O.T							
B-41	Laser							
B-42	Change Room							
B-42	Change Room							
B-43	PUVA							
B-43	PUVA							
B-44	Derm - 2							
B-45	Nurse Room							
B-46	Toilet(F)							
B-46	Toilet(F)							
B-47	Toilet							
B-48	Toilet(M)							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-49	Waiting Area							
B-50	AHU							
B-51	Toilet(F)							
B-52	Toilet(M)							
B-52	Toilet(M)							
B-53	AHU							

Table 5: Room wise activity sheet (Basement floor)-3

GROUND FLOOR

		civil work				Finishing Work											
Room No.	Room Name	Brick Work/ Partition	Plaster Work	IPS Flooring		Wall POP	Expansion Joint work	Tiling work	False Ceiling	Carpentary	Door Frame Fixing	Door Fixing	Self Levelling	Vinyl Flooring	Wooden Flooring	Painting	Miscellaneous Items Fixing(shelves etc.)	Furtniture Placing
G-01	Change Room(F)																	
G-01	Change Room(F)																	
G-02	AHU																	
G-03	Lounge																	
G-03	Lounge																	
G-04	Breakfast Area																	
G-05	Gynae Room																	
G-05	Gynae Room																	
G-07	Consultancy Room-1																	
G-08	Consultancy Room-2																	
G-09	Consultancy Room-3																	
G-10	Consultancy Room-4																	
G-11	Nurse & ECG																	
G-12	Change Room(M)																	
G-12	Change Room(M)																	
G-13	Reception																	
G-13.1	Office																	
G-14	Store																	
G-15	VIP Lounge																	
G-15	VIP Lounge																	
G-16	Ultrasound																	
G-16	Ultrasound																	
G-17	Blood Draw																	
G-18	X-Ray Room																	
G-19	PFT																	
G-20.2	Toilet(F)																	
G-20.3	Toilet(M)																	
G-21	ECHO																	
G-23	Pulmonology																	
G-24	Cardiology - 5																	
G-25	TMT/ECG																	
G-26	Change Room																	
G-27	AHU																	
G-28	Cardiology - 1																	
G-29	Cardiology - 2																	
G-30	Cardiology - 4																	
G-31	Cardiology - 3																	
G-32	Sample Collection Room																	
G-32	Sample Collection Room																	
G-34	Clean Utility																	
G-36	Doctor's Lounge																	
G-37	Toilet																	
G-39	Uroflowmetry																	
G-38	Toilet																	
G-40	Uroflowmetry																	
G-41	Urology - 2																	
G-42	Urology - 1																	
G-43	Nephrology - 2																	
G-44	Nephrology - 1																	
G-45	Lithotripsy Observation Rm																	
G-46	Lithotripsy Room																	
G-47	Change Room																	
G-48	Waiting Area																	
G-48	Waiting Area																	
G-48	Waiting Area																	
G-48	Waiting Area																	
G-48	Waiting Area																	
G-48	Waiting Area																	

Table 6: Room wise activity sheet (Ground floor)-1

		electrical work						Fire Fighting Work								drainage		
Room No.	Room Name	Box Fixing	Wiring	Testing	Light Fixture	Switch Fixing		Sprinkler Piping	Hydrant Piping	Hydro testing	Upright Sprinkler fixing	Pendent Sprinkler fixing	Side wall sprinkler Fixing	Painting		Jointing	Testing	Floor Trap/FCO/Floor drain fixing
G-01	Change Room(F)												NA					
G-01	Change Room(F)												NA					
G-02	AHU												NA					
G-03	Lounge												NA					
G-03	Lounge												NA					
G-04	Breakfast Area												NA					
G-05	Gynae Room												NA					
G-05	Gynae Room												NA					
G-07	Consultancy Room-1												NA					
G-08	Consultancy Room-2												NA					
G-09	Consultancy Room-3												NA					
G-10	Consultancy Room-4												NA					
G-11	Nurse & ECG												NA					
G-12	Change Room(M)												NA					
G-12	Change Room(M)												NA					
G-13	Reception												NA					
G-13.1	Office												NA					
G-14	Store												NA					
G-15	VIP Lounge												NA					
G-15	VIP Lounge												NA					
G-16	Ultrasound												NA					
G-16	Ultrasound												NA					
G-17	Blood Draw												NA					
G-18	X-Ray Room												NA					
G-19	PFT												NA					
G-20.2	Toilet(F)												NA					
G-20.3	Toilet(M)												NA					
G-21	ECHO												NA					
G-23	Pulmonology												NA					
G-24	Cardiology - 5												NA					
G-25	TMT/ECG												NA					
G-26	Change Room												NA					
G-27	AHU												NA					
G-28	Cardiology - 1												NA					
G-29	Cardiology - 2												NA					
G-30	Cardiology - 4												NA					
G-31	Cardiology - 3												NA					
G-32	Sample Collection Room												NA					
G-32	Sample Collection Room												NA					
G-34	Clean Utility												NA					
G-36	Doctor's Lounge												NA					
G-37	Toilet												NA					
G-39	Uroflowmetry												NA					
G-38	Toilet												NA					
G-40	Uroflowmetry												NA					
G-41	Urology - 2												NA					
G-42	Urology - 1												NA					
G-43	Nephrology - 2												NA					
G-44	Nephrology - 1												NA					
G-45	Lithotripsy Observation Rm												NA					
G-46	Lithotripsy Room												NA					
G-47	Change Room												NA					
G-48	Waiting Area												NA					
G-48	Waiting Area												NA					
G-48	Waiting Area												NA					
G-48	Waiting Area												NA					
G-48	Waiting Area												NA					
G-48	Waiting Area												NA					

Table 7: Room wise activity sheet (Ground floor)-2

		water supply				Sanitary Fixtures				BMS Work						
Room No.	Room Name	Flushing	RO water pipe laying	Testing		Concealed tank	Wash Basin fixing	Tap Fixing		Cabling	Smoke & Heat Detector (AFC)	Speaker Fixing	CCTV Camera Fixing	Access Control device Fixing	MCP , Hooter and tlephone jack fixing	Temp.,RH Sensor Fixing
G-01	Change Room(F)															
G-01	Change Room(F)															
G-02	AHU															
G-03	Lounge	NA														
G-03	Lounge	NA														
G-04	Breakfast Area	NA														
G-05	Gynae Room															
G-05	Gynae Room															
G-07	Consultancy Room-1															
G-08	Consultancy Room-2															
G-09	Consultancy Room-3															
G-10	Consultancy Room-4															
G-11	Nurse & ECG															
G-12	Change Room(M)															
G-12	Change Room(M)															
G-13	Reception															
G-13.1	Office															
G-14	Store															
G-15	VIP Lounge															
G-15	VIP Lounge															
G-16	Ultrasound															
G-16	Ultrasound															
G-17	Blood Draw															
G-18	X-Ray Room															
G-19	PFT															
G-20.2	Toilet(F)															
G-20.3	Toilet(M)															
G-21	ECHO															
G-23	Pulmonology															
G-24	Cardiology - 5															
G-25	TMT/ECG															
G-26	Change Room															
G-27	AHU															
G-28	Cardiology - 1															
G-29	Cardiology - 2															
G-30	Cardiology - 4															
G-31	Cardiology - 3															
G-32	Sample Collection Room															
G-32	Sample Collection Room															
G-34	Clean Utility															
G-36	Doctor's Lounge															
G-37	Toilet															
G-39	Uroflowmetry															
G-38	Toilet															
G-40	Uroflowmetry															
G-41	Urology - 2															
G-42	Urology - 1															
G-43	Nephrology - 2															
G-44	Nephrology - 1															
G-45	Lithotripsy Observation Rm															
G-46	Lithotripsy Room															
G-47	Change Room															
G-48	Waiting Area															
G-48	Waiting Area															
G-48	Waiting Area															
G-48	Waiting Area															
G-48	Waiting Area															
G-48	Waiting Area															

Table 8: Room wise activity sheet (Ground floor)-3

		nursing				Medical Gas		
Room No.	Room Name	Box Fixing	Wiring	Testing		Piping	Gas area alarm unit	Testing
G-01	Change Room(F)							
G-01	Change Room(F)							
G-02	AHU							
G-03	Lounge							
G-03	Lounge							
G-04	Breakfast Area							
G-05	Gynae Room							
G-05	Gynae Room							
G-07	Consultancy Room-1							
G-08	Consultancy Room-2							
G-09	Consultancy Room-3							
G-10	Consultancy Room-4							
G-11	Nurse & ECG							
G-12	Change Room(M)							
G-12	Change Room(M)							
G-13	Reception							
G-13.1	Office							
G-14	Store							
G-15	VIP Lounge							
G-15	VIP Lounge							
G-16	Ultrasound							
G-16	Ultrasound							
G-17	Blood Draw							
G-18	X-Ray Room							
G-19	PFT							
G-20.2	Toilet(F)							
G-20.3	Toilet(M)							
G-21	ECHO							
G-23	Pulmonology							
G-24	Cardiology - 5							
G-25	TMT/ECG							
G-26	Change Room							
G-27	AHU							
G-28	Cardiology - 1							
G-29	Cardiology - 2							
G-30	Cardiology - 4							
G-31	Cardiology - 3							
G-32	Sample Collection Room							
G-32	Sample Collection Room							
G-34	Clean Utility							
G-36	Doctor's Lounge							
G-37	Toilet							
G-39	Uroflowmetry							
G-38	Toilet							
G-40	Uroflowmetry							
G-41	Urology - 2							
G-42	Urology - 1							
G-43	Nephrology - 2							
G-44	Nephrology - 1							
G-45	Lithotripsy Observation Rm							
G-46	Lithotripsy Room							
G-47	Change Room							
G-48	Waiting Area							
G-48	Waiting Area							
G-48	Waiting Area							
G-48	Waiting Area							
G-48	Waiting Area							
G-48	Waiting Area							

Table 9: Room wise activity sheet (Ground floor)-4

5) PREPARED THE SNAG LIST FOR THE SWITCHES AND SOCKETS OF THE BASEMENT OPD AREA OF THE HOSPITAL:

In this process, we have checked each and every switch and socket of the basement including the corridors and the chambers

Sockets and switches of the area were being checked as if they are in working condition or working properly or not.

The snag list for the same is enclosed in the Annexure.

6) TO DESIGN AND FORMULATE COMMITTEES REGULATED IN A HOSPITAL:

We have prepared the guidelines for framing the committees of the hospital, including who all will be the members of the committees and their frequency according to which the meeting will be held.

PROCESS:

1) Google search
2) Review of NABH committees
3) Clinical research
4) Decided tentative frequency on trial basis (will be revised according to the need)
5) Created a rough draft
6) Sent for approval from the unit head

COMMITTEES:

1. PHARMACY AND THERAPEUTIC COMMITTEE:

Pharmacy and Therapeutics Committee (P&TC) refers to a committee responsible for managing drug-related issues for the hospital. P&TCs focuses on establishing and

maintaining a limited drug list or formulary "that meets the needs of physicians and their patients as well as those of the health care organization". It reviews new and existing medications and selects medications to be included in a health plan's formulary based on safety and how well the drugs work. The committee selects the most cost-effective drugs in each therapeutic class.

MEMBERS:

- **Chief Pharmacist**
- Microbiologist
- Anaesthetist
- Nursing superintendent
- Internal medicine
- Purchase officer
- Clinical administrator

ROLES AND RESPONSIBILITIES:

- To formulate and implement the policies and procedures relating to pharmacy services and medication usage.
- To oversee the effective and efficient operation of the formulary system.
- To communicate the defined policies and procedure among the doctors, nurses, pharmacist and other staff.
- To define and establish a frame work for reporting of adverse drug events.
- To analyse the adverse drug events and modify the policies when unacceptable trends occur.
- To design and implement methods for ensuring the safe prescribing distribution, administration and monitoring of medications.
- To ensure that the pharmacy services are complied with the applicable laws and regulations.
- To formulate antibiotics policies and implement the same.
- To evaluate the rate of antibiotic use and suggest suitable solutions for improving present status.
- To document the policies and procedures to guide the usage of narcotic drugs and psychotropic substances.
- To define policies and procedures including safe storage, preparation, handling, distribution and disposal of radioactive drugs.

- To participate in quality improvement activities and monitor various quality indicators for further improvement.

FREQUENCY:

Meeting will be held fortnightly.

2. INFECTION CONTROL COMMITTEE:

The infection control committee investigates hospital-acquired or nosocomial infections and seeks to prevent or control them. This committee is of the most important hospital committees which should be established in all hospitals. Hospital acquired infections are a common problem prevalence about 9%.

- **Infection Control—**The process by which health care facilities develop and implement specific policies and procedures to prevent the spread of infections among health care staff and patients
- **Nosocomial Infection—**An infection contracted by a patient or staff member while in a hospital or health care facility (and not present or incubating on admission)
- Most common sites for nosocomial infections
    - Surgical incisions
    - Urinary tract (i.e., catheter-related)
    - Lower respiratory tract
    - Bloodstream (i.e., catheter-related)

MEMBERS:

- Internal medicine
- Medical Superintendent
- Surgeon
- **Clinical microbiologist**
- Infection control nurse

- Representatives from other relevant departments
  - Laboratory
  - Facility manager (laundry and housekeeping)
  - Pharmacy and central supply
  - Administration
  - OT
  - ICU
  - CSSD
  - Building Maintenance

ROLES AND RESPONSIBILITIES:

- To develop and implement the infection control policies and procedures.
- Provide a basic manual of policies and procedures and ensure that local written guidelines based on these are in existence.
- To develop surveillance system for nosocomial infections.
- To develop a mechanism to supervise infection control measures in all phases of activities.
- Incase of any outbreak of HAI, infection control committee (ICC) shall indentify the root cause and take appropriate corrective and preventive action.
- To analyse, interpret and disseminate data rising out of surveillance and to recommend remedial measures and to ensure follow up action.
- To ensure the conduct of sterilisation and disinfection practices and to ensure the central sterile supply services, housekeeping, laundry, engineering maintenance, food sanitation and waste management are in conformity with the infection control policies.
- The necessary procedure to be evaluated and revised periodically.
- Obtaining and managing critical bacteriological data and information, including surveillance data.
- Educating and training health care workers, patients, and nonmedical care givers.
- Establish systems of surveillance of hospital infection in order to identify at risk patients and problem areas that need intervention. Methods for surveillance may include case findings by ward rounds and chart reviews, reviews of laboratory reports, and targeted prevalence of incidence surveys.

FREQUENCY:

The meeting will be held weekly.

OUTCOME:

Hospital acquired infections contribute to AMR (antimicrobial resistance)

- Overuse of antimicrobials (development)
- Poor infection control practices (spread)

Hospital-acquired infections increase the cost of health care. Effective IC programs are beneficial as they decrease spread of nosocomial infections, morbidity, mortality, and health care costs.

3. WASTE MANAGEMENT COMMITTEE:

A waste management committee assesses and develops programs, policies and goals that focus on waste management and minimization. The committee should include representatives from the numerous departments that impact waste management within the facility. The committee is responsible for determining the waste-related programs to implement within the facility and assumes accountability for attaining pre-defined goals.

MEMBERS:

- Medical Superintendent
- Head of Housekeeping
- Infection Control Nurse
- **Manager Administration**
- Hospital Engineer
- Senior Nursing Officer
- Chief Security Officer

ROLES AND RESPONSILBILITES:

- The Hospital Waste Management Committee will be responsible for the implementation of the program and activities on waste management.
- It shall establish proper recording of waste management activities and appropriate reports shall be developed and made available for authorities concerned.

- The committee will keep a check on housekeeping service to maintain cleanliness and orderliness of the hospital premises.
- The five major components of Hospital Waste Management, namely :
  - Handling – consists of categorization and segregation of waste
  - Collection using the color-coded bins or receptacles
  - Storage- collection point for bulk storage
  - Pre-treatment prior to disposal or transport
  - Disposal – frequent or regular collection schedule.

- There should be color coded receptacles or bins with cover and inner plastic color coded linings situated in every ward and all areas in the hospital premises.
- All personnel handling hospital waste must be provided with personnel protective equipments such as mask, gloves, cover all boots, hard hats, etc.
- All hospital personnel, patients, and watchers as well as the housekeeping services must be aware of the risk and hazards associated with improper handling and management of hospital waste.

- Color coding for various waste category is followed:

  a. Black – non-infectious dry waste
  b. Green – non-infectious wet waste
  c. Yellow – infectious and pathological waste
  d. Yellow with black band – chemical waste
  e. Red – sharps and pressurized containers.

- Develop concise waste segregation principles and promote practical guidelines for re-usable products.
- Introduce a continuing waste management education program for all staff to increase awareness of Occupational Health & Safety issues and waste minimisation principles. Adopt policies and procedures to minimise the environmental impact of waste treatment and disposal.

- **CERTAIN MEASURES TO BE UNDERTAKEN IN HANDLING WASTE:**

  1. Awareness of health hazard associated with contaminated or infectious waste
  2. Use of protective clothing such as gloves, overall, mask, etc.
  3. Provision of adequate supply of appropriately marked, or container of suitable strength and durability

4. A system of marking, coding, and identification should be understood by all staff of the hospital, especially, for personnel engaged in the collection of waste for disposal off-site for appropriate handling and disposal techniques.
5. Enforcement of codes of practice at both ends of the disposal system.

FREQUENCY:
Weekly

4. PURCHASE COMMITTEE:

A Purchase Committee is a group of designated staff established for independent review and evaluation of purchasing documentation whose main role is to recommend the most appropriate supplier or service provider based on price, quality, stock availability, references etc.

MEMBERS:

1) MEDICAL EQUIPMENT AND MACHINERIES:
   - CFO
   - **Purchase manager**
   - Store in charge
   - Biomedical engineer
   - End user/ intender

2) MAINTENANCE AND ELECTRICAL EQUIPMENTS AND MACHINERIES:
   - CFO
   - **Purchase manager**
   - Store in charge
   - Maintenance engineer

ROLES AND RESPONSIBILITIES:

- To analyse quotations provided by the logistics department, and provide recommendation for approval by the person who signed the SR or someone delegated by them.
- To ensure all documentation is accurately completed.

- To ensure that the supplies/services and quality quoted for comply with what was requested on the SR.
- Seek clarification from suppliers/service providers where necessary.
- To request technical input from relevant staff as required.
- The PC should also be assigned a role within the supplier pre-qualification process
- In certain contexts, it may be appropriate for some or all members of the PC to be directly involved in the collection of quotations
- Ensuring proportionality, transparency, accountability and fairness in the procurement process
- Ensuring all relevant documentation is prepared prior to PC meeting
- Involvement in the evaluation discussion
- Ensuring all necessary procurement procedures are properly followed including any relevant donor procedures.
- Ensuring samples are available for review if relevant and are returned to all unsuccessful bidders.
- While issuing the PO/ WO, all the terms and conditions related to the supply of material and mode of payment towards supply/ installation of the equipment/material should be properly followed.

FREQUENCY:

The meeting is held weekly.

5. MEDICAL AUDIT COMMITTEE:

AUDIT:

A systematic and critical appraisal of planning, delivery and evaluation of services in terms of efficiency, effectiveness and quality within given resources.

Audit in a wider sense is simply a tool to find out:

1) How you do now.

2) What you have done in the past.

3) What is wished to be done in the future for remedy.

Medical audit:

It is a planned review program which objectively monitors and evaluates the clinical performance of all practitioners, records by qualified professional personnel to identify, examine and verify the performance using established criteria.

MEMBERS:

A medical audit committee should be comprised of following professionals from the medical section.

- Director of Medical Services
- Heads of Medical Departments (Medicine, Surgery, Obstetrics & Gynaecology, Paediatrics)
- Head of Pathology
- Nursing Superintendent

The following from the administrative section:

- CEO/MD
- Administrator

ROLES AND RESPONSIBILITIES:

The functions and responsibilities of a better practice Audit Committee will generally be to provide independent assurance and advice in the following areas:

- risk management
- internal control
- financial statements
- compliance requirements
- internal audit
- external audit and
- Other relevant functions including review of an entity's governance arrangement performance framework; relevant parliamentary committee reports and recommendations; and portfolio responsibilities.

In total, these represent a broad set of functions and responsibilities. It is therefore important that each committee, in consultation with the Chief Executive/Board, decide those aspects of an entity's operations that the committee will give priority to and particularly focus on.

1) To plan future course of action, it is necessary to obtain baseline information through evaluation of achievements.
2) For comparison purpose with a view to improve the services.

3) To ensure full and effective utilization of staff and utilities available.
4) To assess the effectiveness and efficiency of health programs and services put into practice.
5) To describe and measure present performance.
6) To help developing explicit standards.
7) To suggest what needs to be changed.
8) To help mobilise resources for change.
9) To review the past and modify the present process.

FREQUENCY:

- Periodic/regular:
- Monthly audit of cases (this includes death cases collected over a month).This periodicity is subject to the patient turnover in the hospital.
- Surprise checks of medical records conducted fortnightly.

6. SAFETY COMMITTEE:

The Safety Committee is a multi-disciplinary group that is charged with the responsibility of driving improvement in the level of safety in their organization.

MEMBERS:

- Fire safety officer
- Security officer
- Nursing head
- IP head
- Medical superintendent
- Emergency Medical Officer
- Facility manager

ROLES AND RESPONSIBILITIES:

1) To identify the potential safety and security risk to patients, staff, patients and visitors in all phases of activities.

2) To conduct facility inspection rounds to ensure safety in patient care as well as non patient care area.

3) To conduct and exercise of hazard identification risk analysis (HIRA) associated with (but not limited to) the following:

a) Sharp bends in passages.

b) protruding or dangling elements in passage way
c) Sudden swing or swing doors.
d) ramps
e) Hazardous material management.
f) patient transport(internal and external)
g) Variations of floor heights which may cause fall/injury.
h) Electrical hazards in workplace (working with autoclaves, electrical cautery machine etc.)

4) To identify root cause(s), to take appropriate corrective/ preventive action for the gaps identified through facility inspection rounds.

5) To study process failure, sentinel events and near misses take appropriate actions.

6) To coordinate for development implementation and monitoring safety plan for policies and procedures.

7) To analyse, interpret and disseminate data rising out of internal quality audit/ inspection rounds and to recommend remedial measures and to ensure follow up action.

8) To monitor patient safety device management including identification, procurement, installation, utilization, updating and maintenance.

9) To ensure staff are educated on safety through training program and such training program are effective.

10) To submit recommendation to Director, if any.

FREQUENCY:

Safety Committee meetings should be held regularly on a specific day and time and at least on a quarterly basis.

7. DISASTER MANAGEMENT COMMITTEE:

The Term disaster implies unexpected and significantly large rush of casualties/emergencies clearly in excess of the normal, caused by a natural calamity or manmade disasters such as accidents/terrorist attacks/warfare or any other similar situation which cannot be dealt by the organization in a routine way.

TYPES OF DISASTERS:

a) It is not possible to enumerate all possible situations which may arise from time to time.

However commonly disaster is:-

1. Vehicular accidents, air crash emergencies.
2. Bullet and blast injuries.
3. Collapse of a building
4. Fire
5. Civil commotion like communal riots, violent agitation, terrorist attack etc.
6. Natural calamities like flood, earthquake and outbreak of epidemics.
7. Mass food poisoning or epidemics
8. Conventional, Nuclear, Biological or Chemical Warfare casualties.

DISASTER MANAGEMENT:

It is a committee formed to dealing with and avoiding both natural and man made calamities, to create preparedness before disaster, and to rebuild and support society after natural disasters.

Preparedness:
Activities prior to a disaster
Examples: preparedness plans, emergency exercises/training, warning systems.

Response:
Activities during a disaster
Examples: public warning systems, emergency operations, search and rescue.

Recovery:
Activities following a disaster
Examples: temporary housing, claims, processing and grants, long term medical care and counselling.

Mitigation:
Activities that reduce the effect of disasters
Examples: building costs nod zoning, vulnerability analysis, public education.

MEMBERS:

- Medical Superintendent
- Public Relation Officer, Member
- Officer In charge Medical Store, Member
- Nursing Superintendent, Member
- Chief Medical Officer In charge Casualty, Member Secretary
- Blood Bank Officer, Member
- Officer In charge Transport, Member
- Security In charge, Member
- CMO In charge Casualty
- General Surgeon
- Physician

- Asst. Estate Officer

ROLES AND RESPONSIBILITIES:

- By enhancing the capacities of admission and treatment
- By treating the patients based on the rules of individual management, despite there being a greater number of patients.
- By ensuring proper ongoing treatment for all patients who were already present in the hospital.
- By smooth handling of all additional tasks caused by such an incident.
- To provide medications, medical consultation, infusions, dressing material and any other necessary medical equipment.
- In case of incidents affecting the hospital itself the further goals of the plan would be:
- To protect life, environment and property inside the hospital from any further damage –
  - ✓ By putting into effect the preparedness measures.
  - ✓ By appropriate actions of the staff who have to know their tasks in such a situation.
  - ✓ By soliciting help from outside in an optimal way.
  - ✓ by re-establishing as quickly as possible an orderly situation in the hospital, enabling a return to normal work conditions.
- To establish and review the disaster management plan.
- To ensure adequate training of the staff on disaster management plan.
- To ensure availability of adequate resources for disaster management.
- To test the documented disasters management plan (mock drills) and take appropriate corrective / preventive action.

FREQUENCY:

The committee will meet at least **once in 3 months to review** the working of contingency plan, problem faced in recent disaster and amendment/modification to be adopted in future.

8. ETHICS COMMITTEE:

Ethics committee a group of individuals formed to protect the interests of patients and address moral issues.
An Ethics Committee in hospitals is an advisory group appointed by the Hospital Medical Executive Board. The multidisciplinary ethics committee represents the hospital and the community it serves. Health care institutions with three major functions: providing clinical ethics consultation, developing and/or revising policies pertaining to clinical ethics and

hospital policy

The underlying goals of traditional ethics committees are:

- To promote the rights of patients;
- To promote shared decision making between patients (or their surrogates if decisional incapacitated) and their clinicians;
- To promote fair policies and procedures that maximize the likelihood of achieving good, patient-centred outcomes; and
- To enhance the ethical environment for health care professionals in health care institutions.

MEMBERS:

- Medical superintendent
- Nursing
- Operation head
- Head pathology

ROLES AND RESPONSIBILITIES:

- The ethics committee reviews, on request, ethical or moral questions that may come up during a patient's care.
- To educate the staff and the community regarding moral principles and processes of ethical decision making when faced with diverse issues that arise in the care of the critically and terminally patients.
- Provide consultation to professional staff, patients and families.
- It will review research project as and when deemed necessary and will maintain a list of projects submitted, approved/ disapproved and their outcomes.

The Ethics Committee will:

- Provide hospital staff with a consultative resource for ethical reflection
- Enhance the skills and knowledge needed for ethical reflection within the Hospital staff and the Committee itself;
- Recommend policies that strengthen the capacity of the hospital to Provide care grounded in the values, mission and vision of the hospital
- Recommend guidelines for specific ethical issues that arise in patient Care
- Review research proposals to ensure that they comply with the hospital's Mission and values

FREQUENCY:

The Committee shall meet at least six (6) times each year, and at the call of the Committee

Chair.

9. GRIEVANCE COMMITTEE:

A "complaint" is defined as an expression of dissatisfaction brought to the attention of personnel. A complaint can be resolved by the appropriate department or with the assistance of Patient Relations. A complaint is not initially considered to be a grievance.

A complaint is considered a grievance when:

- It is received in writing (i.e., letter, email, fax, attachment to a patient survey)
- A patient or patient's representative requests that their complaint be handled as a formal complaint or grievance
- A patient or patient's representative requests a written response from the hospital
- A complaint is postponed for later resolution, referred to other staff for later resolution, requires investigation, and/or requires further actions for resolution.

All grievances will be received by/referred to Patient Relations for documentation in the patient feedback system, investigation and response to patient or the patient's representative.

"Grievance Committee" means a group of persons delegated (in writing) by the Hospital Governing Board to review and resolve the Grievances the Hospital receives in a manner that complies with the Medicare Cop grievance process requirements.

MEMBERS:

- Hr
- IP head
- Operation head
- Nursing
- Medical superintendent

ROLES AND RESPONSIBILITIES:

The Grievance Committee shall be responsible to ensure that grievances are dealt with effectively in accordance with the Grievance Procedures set out for the implementation of this Policy.

In doing so, the Committee shall adhere to the following principles

- Take grievances seriously taking on board why the employee feels aggrieved, unhappy or dissatisfied,
- Investigate the facts and surrounding circumstances, and showing the employees that this been done thoroughly and sensitively,
- Actively look for a solution that will satisfy the employee, where practical, without causing disproportionate difficulty for the organization or the Employee's colleagues,
- Provide feedback to the employee about what can, and cannot be done to resolve the grievance,
- Take necessary follow-up action

FREQUENCY:

a. The Grievance Committee will meet at least once a month. However, if necessary, it may meet more frequently at the instance of the Convener or at the request of the other members to discuss the various issues received.

b. At least three members of the Grievance Committee shall be present in a meeting.

c. If a member of the Grievance Committee is connected with the grievance of the aggrieved individual, the concerned member of the Grievance Committee shall not participate in the deliberations regarding that individual's case.

d. If the aggrieved person happens to be a member of the Grievance Committee, then he shall not participate in the deliberations as a member of the Committee when his/her representation is being considered.

10. CPR (CARDIO PULMONARY RESUCITATION) COMMITTEE:

CPR is a lifesaving technique useful in many emergencies including heart attack or near drowning, in which someone's breathing or heartbeat has stopped.

It is a technique of Basic Life Support (BLS) for oxygenating the brain and heart until appropriate, definitive medical treatment can restore normal heart and ventilator action.

MEMBERS:

- Senior cardiologist
- HOD Anaesthesia
- HOD critical care
- HOD Triage
- Nursing Supervisor
- Critical care nurse
- Medical Superintendent

ROLES AND RESPONSIBILITIES:

- Defining the role and composition of the resuscitation team.
- Ensuring resuscitation equipment for clinical use is available.
- Ensuring appropriate resuscitation drugs (including those for peri-arrest situations) are available.
- Planning adequate provision of training in resuscitation.
- Determining requirements for and choice of resuscitation training equipment.
- All policies relating to resuscitation and anaphylaxis
- Audit of resuscitation outcomes.
- Recording and reporting critical incidents in relation to resuscitation.

FREQUENCY:

Meetings should be held monthly.

11. MORTALITY REVIEW COMMITTEE:

Mortality Committee is a multidisciplinary team whose function is to analyze preventable causes of death in order to decrease the death rate, to contribute to the education of medical and paramedical staff and also to advise the hospital authorities in medical and

administrative decision-making. Patients' personal data, referral source, status on admission, principal disease, direct cause of death, and adequacy of laboratory test and other studies, clinical/pathological correlation and suggestions to improve medical care are discussed. The review is not investigative in nature. Rather, the purpose is to facilitate Continuous Quality Improvement by gathering information to identify systemic issues that may benefit from scrutiny and analysis in order to make system improvement and to provide opportunities for organizational learning.

MEMBERS:

- MRD
- Medical Superintendent
- Pathologist
- Clinical HODs
- Senior Physician

ROLES AND RESPONSIBILITIES:

- Identifying social, health and system strengths and weaknesses as they impact circumstances leading to death.
- Recommending changes in procedures, resources and service delivery systems that impact circumstances leading to death.
- Review all death review reports and participate in the decision to approve submission of the report, and
- Review aggregated data regarding deaths in order to identify patterns or trends.
- Review of anticipated and unanticipated deaths.
- Issues that arose near the time of the person's death.
- Understand and explain the legal responsibilities.

FREQUENCY:

The meeting should be held monthly.

12. RADIATION SAFETY COMMITTEE:

The Radiation Safety Committee is the governing body for all aspects of radiation protection within the hospital, including all affiliated research, clinical, instructional and service units utilizing radiation sources in facilities owned or controlled by the hospital and operating under the hospital's radioactive materials. The Committee will ensure that all possession, use and disposition of radiation sources by hospital personnel complies with pertinent federal and state regulations and with the specific conditions of licenses issued to the hospital.

MEMBERS:

- CRO
- Engineering Head
- Biomedical Head
- Radiology Incharge
- Operation Head
- Medical Superintendent
- OT Incharge
- Cath lab Incharge
- Quality Coordinator

ROLES AND RESPONSIBILITIES:

- Review all applications for the use of all radiation sources within the Hospital from the standpoint of radiological health safety and other factors which the Committee may wish to establish for medical use of these materials.
- Prescribe special conditions which may be necessary, such as physical examinations, additional training, designation of limited area or location of use, waste disposal methods, etc.
- Review records and receive reports from the Hospital Radiation Safety Officer or other individuals responsible for health safety practices.
- Recommend remedial action when a person fails to observe safety recommendations and rules.
- Keep a record of actions taken by the Committee.
- Review all permit applications on the basis of safety, training and experience standards required by licensing agencies and by institutional policies; approve or reject the application.

- Review the training and experience of radiation workers prior to allowing radionuclide use.
- Review all proposed methods and uses of radioactive materials within the research and clinical community. Authorize or reject such uses as appropriate.
- Prescribe special conditions that may be necessary for the safe handling of radionuclide's including: additional training, limitation of dosage to humans, the designation of restricted areas of use, proper disposal methods, individual bioassay requirements, special monitoring procedures, and proper handling of spills or other radiation accidents.

FREQUENCY:

The meeting should be held monthly.

3.3 FINDINGS:

On the project phase there are lot of delays:

- ☐ Communication gap between client, architect and various medical consultants.
- ☐ Improper schedule for the procurement of long lead items(Projects equipment's, Medicals equipment's) which are for most essential for the project completion
- ☐ Proper follow up with the Vendors were missing.
- ☐ Deployment of scheduled labour as per master plan was not there.
- ☐ Liasoning of Various fields were still pending like Completion Certificate to building, power supply to building from JEB.

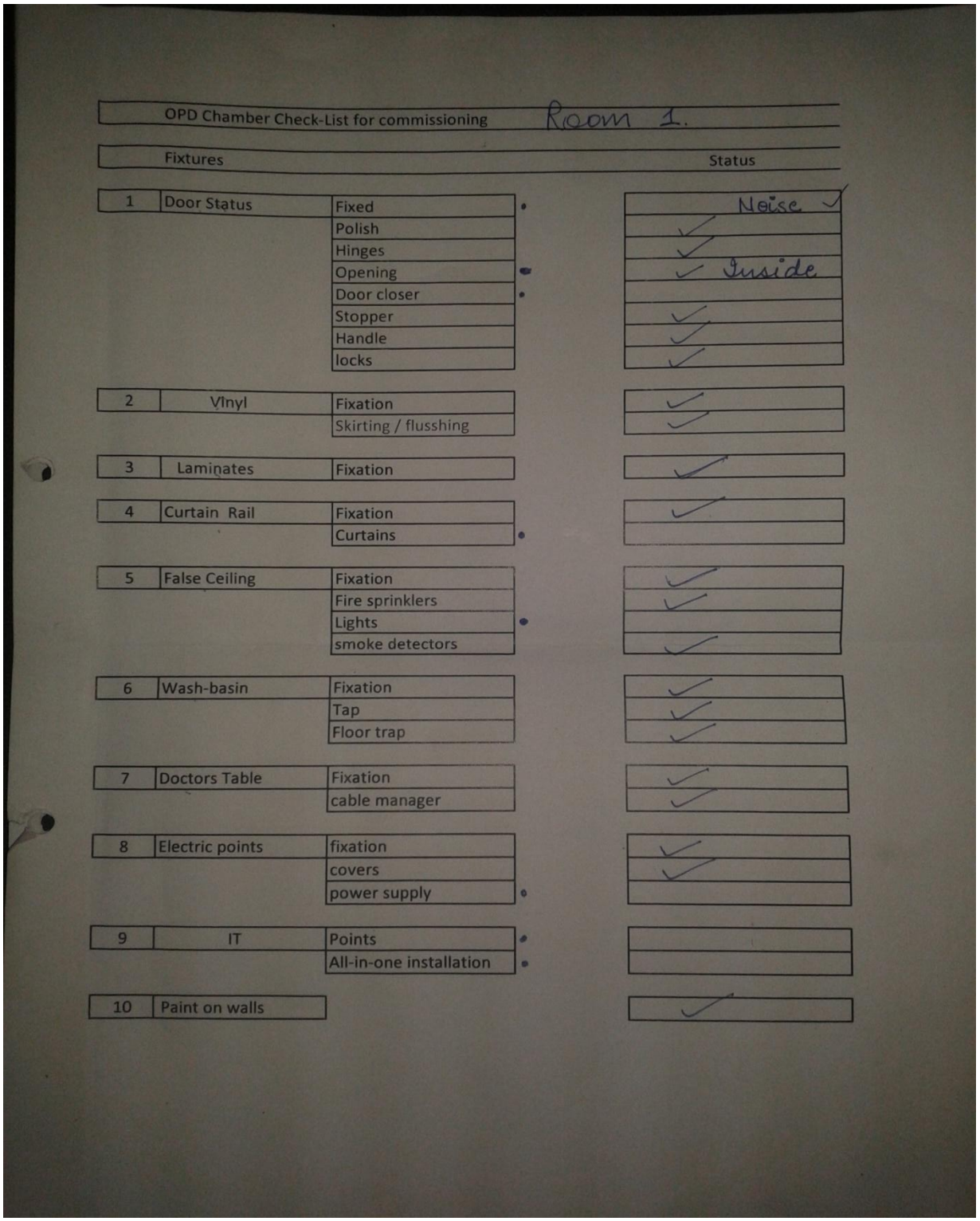
3.4RECOMMENDATIONS AND SUGGESTIONS:

After tracking the process and finding out the problems, the next step was providing some recommendations and suggestions for improving the process of the pre commissioning. Major Key holders who all were involved in the process for example vendors, consultants, and the project team members were interviewed and the process was observed keenly and the following suggestions were found out:

- ☐ There should a channelized communication between client, project team and consultant.
- ☐ Centralized system should be more flexible so that the procurement process gets smooth
- ☐ There should be a regular follow up, monitoring and evaluation of the project in every fortnight to complete the project on time.

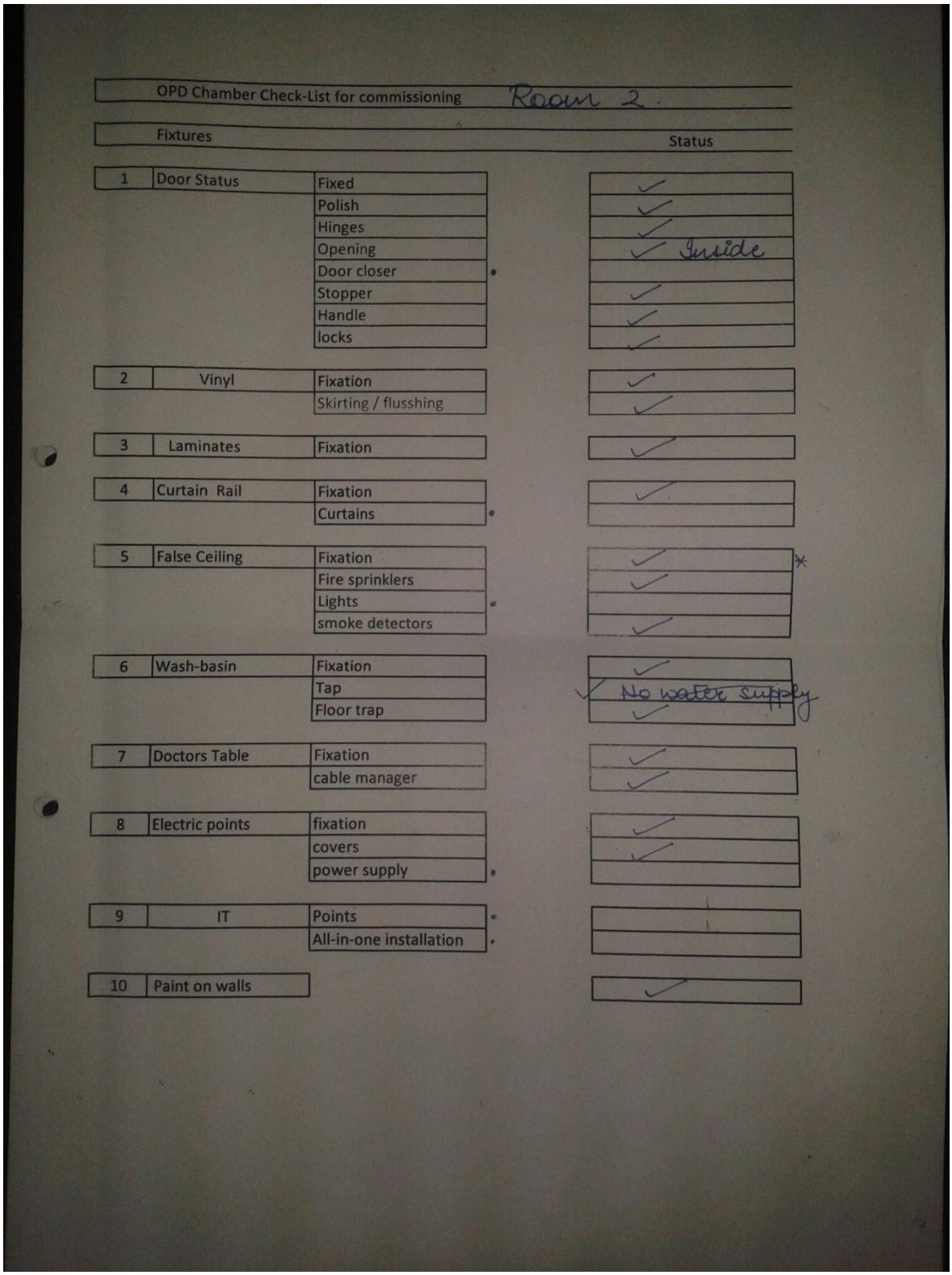
- ☐ A complete documentation should be done for every process.
- ☐ Proper deployment of manpower as per the master schedule for handling the project.
- ☐ The design phase shall be completed at the initial stage of the project.

4.1 ANNEXURE:



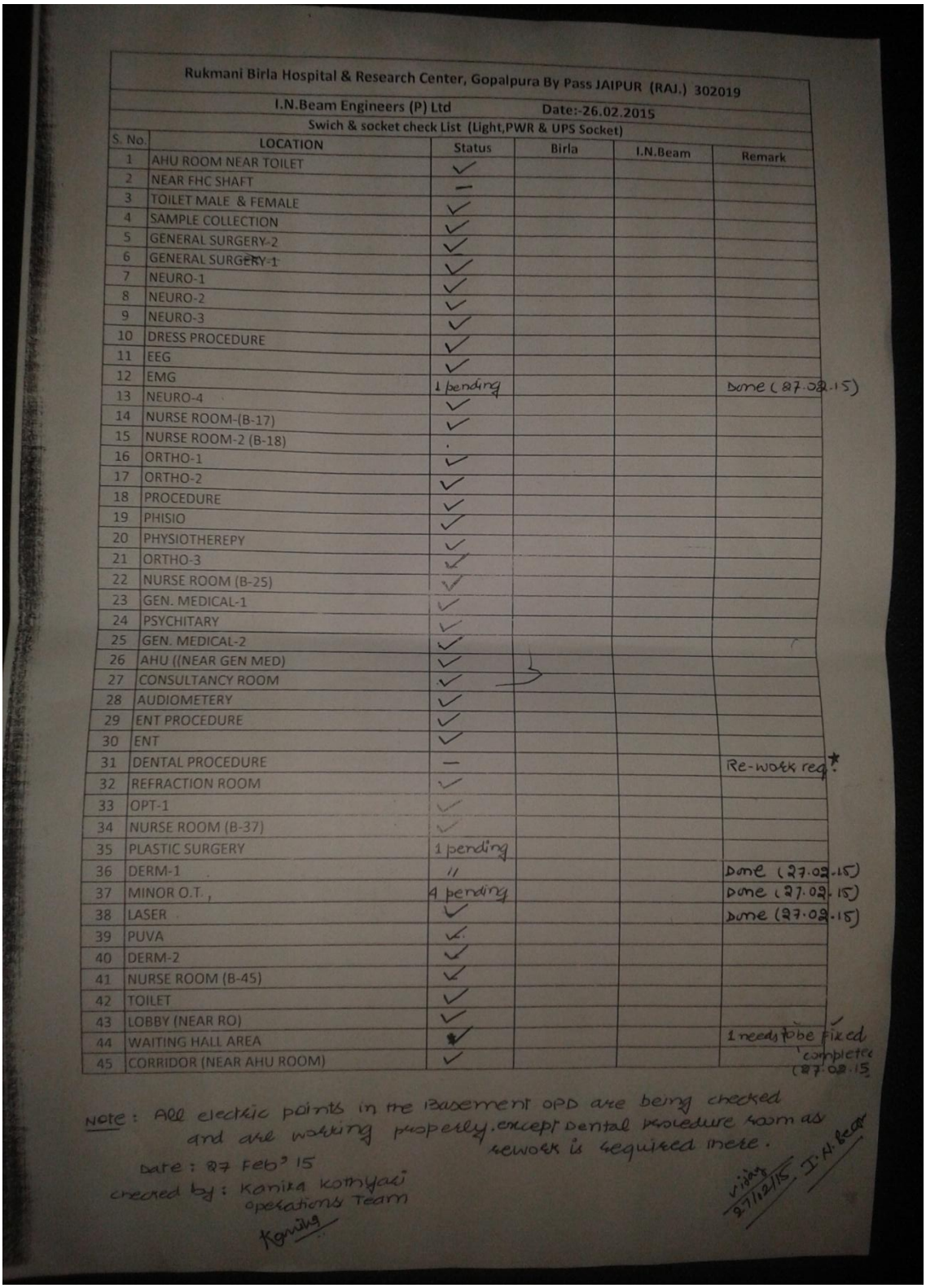
OPD Chamber Check-List for commissioning — Room 1.

	Fixtures		Status
1	Door Status	Fixed	Noise ✓
		Polish	✓
		Hinges	✓
		Opening	✓ Inside
		Door closer	
		Stopper	✓
		Handle	✓
		locks	✓
2	Vinyl	Fixation	✓
		Skirting / flusshing	✓
3	Laminates	Fixation	✓
4	Curtain Rail	Fixation	✓
		Curtains	
5	False Ceiling	Fixation	✓
		Fire sprinklers	✓
		Lights	
		smoke detectors	✓
6	Wash-basin	Fixation	✓
		Tap	✓
		Floor trap	✓
7	Doctors Table	Fixation	✓
		cable manager	✓
8	Electric points	fixation	✓
		covers	✓
		power supply	
9	IT	Points	
		All-in-one installation	
10	Paint on walls		✓



OPD Chamber Check-List for commissioning Room 2.

	Fixtures		Status
1	Door Status	Fixed	✓
		Polish	✓
		Hinges	✓
		Opening	✓ Inside
		Door closer	
		Stopper	✓
		Handle	✓
		locks	✓
2	Vinyl	Fixation	✓
		Skirting / flusshing	✓
3	Laminates	Fixation	✓
4	Curtain Rail	Fixation	✓
		Curtains	
5	False Ceiling	Fixation	✓ *
		Fire sprinklers	✓
		Lights	
		smoke detectors	✓
6	Wash-basin	Fixation	✓
		Tap	✓ No water supply
		Floor trap	✓
7	Doctors Table	Fixation	✓
		cable manager	✓
8	Electric points	fixation	✓
		covers	✓
		power supply	
9	IT	Points	
		All-in-one installation	
10	Paint on walls		✓



Rukmani Birla Hospital & Research Center, Gopalpura By Pass JAIPUR (RAJ.) 302019

I.N.Beam Engineers (P) Ltd Date:-26.02.2015

Swich & socket check List (Light,PWR & UPS Socket)

S. No.	LOCATION	Status	Birla	I.N.Beam	Remark
1	AHU ROOM NEAR TOILET	✓			
2	NEAR FHC SHAFT	—			
3	TOILET MALE & FEMALE	✓			
4	SAMPLE COLLECTION	✓			
5	GENERAL SURGERY-2	✓			
6	GENERAL SURGERY-1	✓			
7	NEURO-1	✓			
8	NEURO-2	✓			
9	NEURO-3	✓			
10	DRESS PROCEDURE	✓			
11	EEG	✓			
12	EMG	1 pending			Done (27.02.15)
13	NEURO-4	✓			
14	NURSE ROOM-(B-17)	✓			
15	NURSE ROOM-2 (B-18)	.			
16	ORTHO-1	✓			
17	ORTHO-2	✓			
18	PROCEDURE	✓			
19	PHISIO	✓			
20	PHYSIOTHEREPY	✓			
21	ORTHO-3	✓			
22	NURSE ROOM (B-25)	✓			
23	GEN. MEDICAL-1	✓			
24	PSYCHITARY	✓			
25	GEN. MEDICAL-2	✓			
26	AHU ((NEAR GEN MED)	✓			
27	CONSULTANCY ROOM	✓			
28	AUDIOMETERY	✓			
29	ENT PROCEDURE	✓			
30	ENT	✓			
31	DENTAL PROCEDURE	—			Re-work req*
32	REFRACTION ROOM	✓			
33	OPT-1	✓			
34	NURSE ROOM (B-37)	✓			
35	PLASTIC SURGERY	1 pending			
36	DERM-1	//			Done (27.02.15)
37	MINOR O.T.,	4 pending			Done (27.02.15)
38	LASER	✓			Done (27.02.15)
39	PUVA	✓			
40	DERM-2	✓			
41	NURSE ROOM (B-45)	✓			
42	TOILET	✓			
43	LOBBY (NEAR RO)	✓			
44	WAITING HALL AREA	✓			1 needs to be fixed ✓ completed (27.02.15)
45	CORRIDOR (NEAR AHU ROOM)	✓			

Note: All electric points in the Basement OPD are being checked and are working properly, except Dental Procedure room as rework is required there.

Date: 27 Feb' 15
Checked by: Kanika Kohyari
Operations Team

Visited 27/2/15 I.N.Beam

5.1 REFERENCE:

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