"Assessment of Patient Safety"

at

JEEVAN JYOTI HOSPITAL, ALLAHABAD U.P"

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

Post-Graduate Diploma in Health and Hospital Management

By

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ENROLLMENT NO: PG/11/119

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2011-13

Certificate of Internship Completion

Date:.....

TO WHOM IT MAY CONCERN

This is to certify that Mr./Ms./Dr. Prachi gupta has successfully completed his 3 months internship in our organization from January 2013 to April 2013. During this intern he has worked on Patient Care ....(task performed) under the guidance of me and my team at .....(organisation). .....(any positive/negative comment)

We wish him/her good luck for his/her future assignments

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Certificate of Approval

The following dissertation titled "**ASSESMENT OF PATIENT SAFETY**" is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of **Post- Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation

Name	Signature
DR. BRIJENDER SINGH DHILLON	4/5/13

Certificate from Dissertation Advisory Committee

This is to certify that PRACHI GUPTA, a graduate student of the Post- Graduate Diploma in Health and Hospital Management, has worked under our guidance and supervision. She is submitting this dissertation titled "Discharge process" in partial fulfillment of the requirements for the award of the Post- Graduate Diploma in Health and Hospital Management.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Faculty Mentor	Organizational Advisor
Designation	Designation M.S.
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FEEDBACK FORM

Name of the student :- Prachi gupta

Summer Training institution :- Jeevan Jyoti hospital, 162, Baika Bagh, Allahabad.

Area of Summer Internship :- Patient Care

Attendance :- 89%

Objective met :- Achieved Target.

Deliverables :- up to the mark.

Strengths :- hard working

Suggestion for improvement :- ——

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Signature of the officer-in charge(training)

Date:- 11-4-13

Place:-

ACKNOWLEDGEMENT

Hard work guidance & perseverance are the three requisite for achieving success. Support from an enlightening or the success full completion source helps us to tread on the path of it . I wish to thank first of all the almighty & parents that provided me energy for the successful completion of dessertation.

I am thankful & obliged to the DR A.K. BANSAL for his unconditional support & guidance which was indispensible for successful completion of my study.

I am thankful to Dr.A.K .BANSAL & all other department Staff (trainers) of JJH for their continuous support, guidance & perseverance during the course of my study.

It has been my good fortune to be benefited by their knowledge guidance & deep insight without which this study would not have found the exact shape. To them , I tender my heart felt regards.

I wish to extend my warmest thanks to my college mentor Mr. Pawan Kumar Taneja & for their constant support & guidance all through the project.

I am highly thankful to Dr. Rajesh Bhalla, Dean (Academic) for his personal guidance through out the project.

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List of Abbreviations

ITU	Intensive Thoracic Units
GE	General Electronics
ECG	Electro Cardiogram
OPD	Out-patient Department
IPD	In-patient Department
OT	Operation Theatre
CCU	Coronary Care Unit
USG	Ultra Sonography
COO	Chief Operating Officer
HSOPSC	Hospital survey on patient safety culture
CT	Computed Tomography
MRI	Magnetic Resonance Imaging
NABH	National Accreditation Board for Hospitals & Healthcare providers
AAC	Assess, access and care
MOM	Management of Medication
FMS	Facility Management and Safety
N/A	Not Applicable

INTERNSHIP REPORT

HOSPITAL PROFILE

Jeevan Jyoti Hospital Allahabad began its seemingly quixotic quest in 1988 October –From 20 beds in 1988 to 500 beds of 2008 having almost all facilities under one roof, with an advanced multispeciality hospital, diagnostic centre, IVF centre and a research centre along with paramedical & Nursing School with different charitable ventures, training centre for various government projects and dream to set up a Medical University very soon.

- JJH has engaged in charitable endeavors across Uttar Pradesh regularly and frequently, through free medical camps, free distribution of medicines in rural areas, training of birth attendants in different blocks and reaching out to those who find it difficult to reach us.

- The assisted reproduction unit at Jeevan Jyoti Hospital, namely Arpit Test Tube Baby Centre (ATTBC), consists of highly skilled and experienced reproductive specialists. The team provides international standard services in IVF/Andrology/Endocrinology making every effort to let the infertile couples conceive and fulfill their dream of having their own baby. It offers a complete range of facilities for investigation of male and female infertility. Treatment is coordinated with the best scientific and medical practice with the highest level of care and consideration for each couple.

- It service capability is universally acknowledged as the most effective in the medical profession in Global scenario, especially in surgeries and test tube baby centers. It has also started Nursing and Paramedical education in our centre. The combination of research and education distinguishes Jeevan Jyoti Hospital .

- JJH is planning to make health care hub to create a global talent pool of medical professionals and start a new era in health care at ALLAHABAD -UP - INDIA.

- **INFRASTRUCTURE**

- **Reception:**
- The reception is managed by trained staff with full of hospitality, who are keen to facilitate the patient visit to various services of the hospital round the clock.

- **OPD Services:**
- The hospital has modern and spacious OPD with senior consultants available from 8 am to 8 pm for consultation. This ensures minimal waiting period and increased choice to the patients. There is separate cafeteria, public utility services, PCO and waiting area for the
  Patients & attendants.

Kitchen pantry:

- Kitchen pantry is also available for the convenience of patients and meals are provided to indoor patients free of cost. This service is run under able supervision of the consultant of department of dietetics.

Dressing Room:

- There are fully equipped dressing rooms on the OPD floor for minor dressings and small procedures that can be done under local anesthesia.

Operation Theatre Complex:

- JJH a sophisticated ultramodern operation theatre complex with latest state of art technology, including one laminar OT, equipment and instruments. Depending on the work load, it has up to 6 operations theatres functional at one time. Each theatre has a team of nursing and technical staff trained in sub specialities.

Power Back Up:

- The hospital has two sets of stand by generator for use in case of power failure.

Lifts:

The hospital has 3 functioning lift round the clock for the patient's way

Wards:

- 1. The rooms are well ventilated with proper light, full care of hygienic, centraloxygensupply.
  2.Equipped with telephone operating system and extensions have been providedtherooms.
  3.Each room is equipped with separate toilet,bath & cupboard.

4. Almost the entire hospital is air condition except the general ward which are connected to central cooling system,

Room/Ward Categories:

1. **General ward**
2. **Economy ward**
3. **Private ward**
4. **Deluxe ward**
5. **Suites**
6. **Pediatric ward**
7. **Neonatal ward**
8. **Emergency ward**
9. **Intensive care wards**
10. **Surgical ICU**
11. **Pre- labour ward**
12. **Trauma unit**
13. **Burn unit**

Additionally it has facilities for:

- 1. Telemedicine Networking
- 2. Education & Research

DEPARTMENTAL OVERVIEW

Inpatient" means that the procedure requires the patient to be admitted to the hospital, primarily so that he or she can be closely monitored during the procedure and afterwards, during recovery. An **inpatient** is "admitted" to the hospital and stays overnight or for an indeterminate time, usually several days or weeks (though some cases, like coma patients, have been in hospitals for years). All the patient occupancy areas are well light and ventilated, and equipped with Pipe Line Oxygen, Central Suction etc. to minimize patient discomfort and for the immediate availability of the life saving systems. A quality service from the nurses is available round the clock.

Basic services including breakfast, lunch, evening tea and dinner are provided. Provision of special diet for patients like diabetic, cardiac, pregnant etc is available.

- An attendant is allowed to stay only with private room patients, but in general wards the attendants are discouraged to stay except in case of pediatric ,geriatric patients.
- There is a visiting hour to in patient department. Every patient is given one attendant pass.
- Children below the age of 12 are not allowed to visit the patients.
- Visitors are allowed only at the notified Visiting Hours

- 01/ April to 30/ September (summers):
- 17:00 hrs - 19:00 hrs
- 01/ October to 31/ March (winters):
- 16:00 hrs – 18:00 hrs

Professional care is provided to the patients round the clock by the team of doctors, dedicated nursing staff and other supporting staff.

Patient Care Coordination (PCC) Department:

PCC addresses integration issues that cross providers, patient problems or time, with general clinical care aspects including document exchange, order processing, and coordination with other specialty domains.

- PCC addresses workflows that are common to multiple specialty areas and the integration needs of specialty areas that do not have a separate domain.
- PCC is focused on clinical content and workflows
- PCC profiles are championed by clinicians to support clinical integration

PROJECT REPORT

Dissertation

On

"Assessment of Patient Safety ''
At
Jeevan Jyoti Hospital''

CHAPTER-1

Introduction

1.1 Introduction of Dissertation:

In Healthcare, every point in the process of care-giving contains a certain degree of inherent unsafe practice. The operation of a healthcare organization depends upon a complex interaction between the patient, the environment in which care is provided and the people, equipment and facilities that deliver the care.Lapse in patient care may result from problems in any of these [2].Hence, patient safety improvements demand a complex system-wide effort, involving a wide range of actions in performance improvement, environmental safety and risk management, including infection control, safe use of medicines, equipment safety, safe clinical practice and safe environment of care. Thus, patient safety can only be achieved by the establishment of operational systems and processes that minimize the likelihood of errors and maximize the likelihood of intercepting them when they occur[3].Literature on patient safety identifies various factors responsible for safe patient care[3]. This study report has identified and enlisted three main factors whose intersection is crucial to ensure highest degree of patient safety. **(Fig1)**

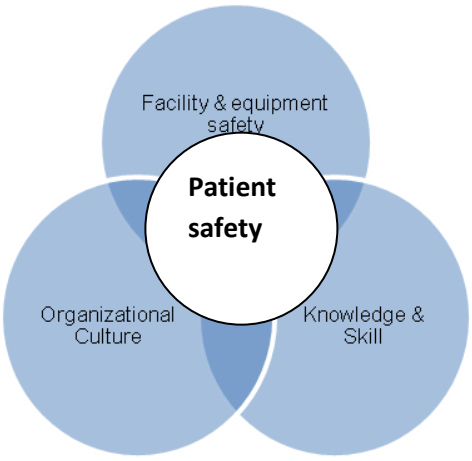


Figure.1 FACTORS RESPONSIBLE FOR SAFE PATIENT CARE

The safety culture of an organization is the product of values, attitudes, perceptions, competencies and patterns of behavior of individuals and groups that determine the "Patient Safety" style and proficiency of an organization. Organizations with a positive safety culture are characterized by communications based upon mutual trust and shared perceptions of safety and by the efficacy of preventive measures. It is a well known fact that the desired improvements in patient safety require a change in the culture within healthcare organization.

Certain elements are a key to a strong Patient Safety Culture. Singer and colleagues (2003) identified the following seven patient safety culture elements[4]:

- Leadership commitment to safety
- Organizational resources for patient safety
- Priority of safety versus production
- Effectiveness and openness of communication
- Openness about problems and errors
- Organizational learning
- Frequency of unsafe acts

- Safe facility means a better facility design, and its good management and control. Same stands true for equipment management in a health organization. The patients' and families' perception of safe patient care is directly related to the facility design, appearance and maintenance. For example: a non functional lift, poor lighting send a strong message of poor maintenance, which can turn out to be a reason for an adverse event in a healthcare organization.

Knowledge and skills of doctors, nurses, paramedics as well as the managers and technicians can lead to the collapse of the entire healthcare system when the employees perform their duty irresponsibly. A lack of knowledge about the policies and procedures cannot be a defense for any employee whose negligence compromises patient safety norms and leads a patient into a state of ill health or death.

Ensuring the safety of everyone that comes into contact with health services is one of the most important challenges facing healthcare today, globally. Indian Healthcare is no different when we talk about Patient Safety. The issue of patient safety is of crucial concern to any healthcare organization and should be reflected in the length and breadth of the patients who are catered to. If statistics are to be believed then 1 in every 10 patients admitted in a US hospital suffer an adverse event. 80% of these events are easily preventable with 1 in every 20 adverse event sufferer dies as a consequence[5]. In India, the picture is more distressing as we do not even have the statistics that can give us an insight into the number of lives we lose every year to adverse/ sentinel events occurring as a result of severe medication errors, wrong site wrong procedures, poor communication, equipment breakdown or a disaster situation.

In such instances, harm is not only to the patient but also to the family, relatives and friends whose anguish causes distress to the staff, already dealing with adverse events. The financial implications, add tremendously to the pressure on hospital, limiting its ability to cater to more patients as well as provide higher quality services. The increase in length of hospital stay, monetary claims by affected patients costs in

lacs of rupees to a hospital. How much more good could be done to hospitals with the huge sum of money that is otherwise spent in settling claims arising due to adverse events.

Jeevan jyoti hospital is known for providing high quality but low cost healthcare services has to address the issue of Patient Safety to maintain an edge in the healthcare market as a chain of Patient friendly Hospitals or Safe Hospitals. This vision can only be achieved by creating an organizational culture of patient safety, holding all the stakeholders, not only doctors or nurses, equally responsible for providing quality care and safe care to patients. The preparation for National Accreditation Board for Hospitals & Healthcare providers (NABH) accreditation by the organization will help it to assess the quality and safety of care being rendered by the organization. In this research study we will assess the patient safety jeevan jyoti Hospital,allahabad to get a 360 degree view of its existing state of patient safety.

CHAPTER-2

1.2 Review of Literature:

Patient safety has received increased attention in recent years, but mostly with a focus on the epidemiology of errors and adverse events, rather than on practices that reduce such events. In a number of high hazard organizations, where the risk of error involves dire consequences, leaders manage for safe, reliable performance. As a result, the term *High Reliability Organization* has been coined to describe organizations with exemplary track records of safety such as aviation, chemical manufacturing, shipping, nuclear power production, and the defense forces. The concept is rooted in the analyses of errors that reveal organizational failures, along with technical failures (related to system performance) and human limitations (related to human behavior) **[6]**. The application of safety promotion theories utilized to positive effect in other high hazard organizations are being considered for health care, where "accidents" tend to occur one person at a time instead of in sweeping disasters.

The aspect of organizational safety culture that may be visible or measurable is sometimes referred to as the safety "climate," which includes management systems, safety systems, and individual attitudes and perceptions. Health care organizations are now adapting safety culture and climate surveys from other industries to benchmark and identify potential deficiencies in their unique safety culture. While an exact definition of a safety culture does not exist, a recurring theme in the literature is that organizations with effective safety cultures share a constant commitment to safety as a top-level priority, which permeates the entire organization . More concretely, noted components include: 1) acknowledgment of the high risk, error-prone nature of an organization's activities, 2) blame-free environment where individuals are able to report errors or close calls without punishment, 3) expectation of collaboration across ranks to seek solutions to vulnerabilities, and 4) willingness on the part of the organization to direct resources to address safety concerns.

Developing a patient safety culture was one of the recommendations made by the Institute of Medicine at USA to assist hospitals in improving patient safety[7] . One of its study entitled "The Current State of Patient Safety Culture: a study at baseline" assessing the culture of safety in Lebanese hospitals was carried out by El-Jardali et al. (2010) in Lebanon. The study adopted a cross-sectional research design and utilized the hospital survey on patient safety culture (HSOPSC). The dimensions with the highest positive ratings were teamwork within units, hospital management support for patient safety, and organizational learning and continuous improvement, while those with lowest ratings included staffing and non-punitive response to error.

In a review of the literature by Henriksen and colleagues , the following design elements were identified as critical in ensuring patient safety and quality care, based on the six quality aims of the Institute of Medicine's report, Crossing the Quality Chasm: A New Health System for the 21st Century . In all, most of the safety features of a built environment involve a reordering of functions in most "traditionally" designed facilities, minimally affecting capital costs, to improve the quality of care and patient outcomes.

Book by Dr S K Joshi also enlists a huge number of potential risks that a patient may face in a hospital such as child abduction, rape, murder, theft, homicide, suicide, fire, earthquakes, floods, radiation exposure, building collapse, hospital acquired infection, medication errors, equipment failure, and many more. The ways of dealing with clinical and non clinical potential risks to patients have also been enumerated such as streamlining of processes by quality certification by accreditation bodies like International Standards Organization, National Accreditation Board for Hospitals and healthcare providers and Joint Commission International .

1.3 Problem statement:

Patient safety requires that all members of the health care service delivery team be "patient-safety minded." It also depends on both hands-on patient safety practices and leadership within every discipline in health care. As a quintessentially collaborative activity, patient safety needs leaders in each area of clinical administration and in each clinical discipline—including doctors, nurses, pharmacists, and others—in addition to information management, equipment and facility management, and other areas. Patient safety practitioners truly include everyone in health care and thus they should be aware of how organizational culture can have a bearing on the health of a patient.

Hence the assessment of current state of patient safety will help the top management to create strategies for improving the status in future. This study will help to identify issues related to patient safety management at Jeevan Jyoti Hospital, Allahabad & their relationship with patient safety culture, facility management and policies of the hospital.

1.4. Background to the problem: Genesis, Consequents, Current practices

There are numerous reasons for a patient to feel satisfactory or unsatisfactory as well as safe or unsafe; during and after experiencing the healthcare services in a healthcare organization. It can be turn-around time for investigations or service

time of consultation for an Out-patient, can be Hospital acquired infection or mortality in case of an In-patient.

If we analyze some of these situations, we will find out that the Turn-around time for lab investigations may be more than the expected limit due to lack of manpower or poor infrastructure on one hand and poor inter/intra departmental communication or coordination on the other.

During the dissertation, it was brought to my notice certain incidents, that had an impact of quality of patient care and thus on patient safety at Jeevan Jyoti Hospital,Allahabad

Few have been mentioned as follows:

1. Case of an out-patient: A 33 year old male patient who came for a second review to cross check his previous blood reports which showed ESR levels at 24 was shocked to see ESR value at 4 in Jeevan Jyoti Hospital lab reports. He requested for a repeat ESR and to his surprise the repeat ESR report showed a value of 21.

2. Case of an in-patient: A 49 year old female patient who came to the hospital for a valve replacement had a history of taking medication for heart trouble as well as renal stones. After admission her required lab investigations were done. The lab reports showed serum creatinine levels within normal limits and then she was advised for a CT Angio. Post investigation, her urine output decreased to nil per day. On further investigations her serum creatinine levels were found to be 6 indicating a problem with her kidneys. No root cause analysis was performed to determine the cause of kidney failure. Having known that incidents like as mentioned in case 1 were prevalent in the hospital the follow-up would have thrown light on the actual cause be it incorrect medication, or adverse drug effect, or a probable wrong lab report etc.

None of the above events were reported. Neither a root-cause analysis to find out the reason for the problem nor preventive or corrective action was taken to prevent such events in the future was done. This is a snap shot of patient safety existing at the hospital. But these one or two incidents do not give us a clear picture of the current state of patient safety at the hospital. Hence, to find out the existing status, we are required to conduct an assessment of patient safety Jeevan Jyoti hospital,Allahabad.

1.5 Rationale and Scope of Study:

The purpose of this report is to identify the main organizational and human factors existing in the hospital that have relevance for patient safety. The focus is on the healthcare staff working environment and its effect on the performance of the departments considered and hence patient safety outcomes. The sample population for this survey on patient safety culture made up of Nurses, Pharmacists, Laboratory and Imaging Technicians. The study conducted will help the management of the hospital to have an overview about the current patient safety management practices in the hospital and to update its policies and procedures to obtain NABH accreditation successfully.

1.6 Objectives:

General Objective:

Identification of current state of patient safety practices existing in the hospital and provide recommendations for improving the quality of the same.

Specific Objectives:

- To study the patient safety culture in the clinical departments of the hospital.
- Develop a facility safety checklist .

CHAPTER-3

Data and Methods

2.1 Study area:

The study area was Jeevan Jyoti Hospital, Allahabad with primary focus on the clinical departments to assess the existing status of patient safety in the hospital as these areas have a primary responsibility to work together and bring the best results for patients.

2.2 Study tools:

Both qualitative (checklists) and quantitative (close–ended questionnaire) tools were utilized. Three main areas of investigation under this study have been identified to provide a comprehensive assessment of the patient safety at the hospital:

1. Organizational patient safety culture through quantitative approach.
2. Risk assessment of the Facility through qualitative approach.

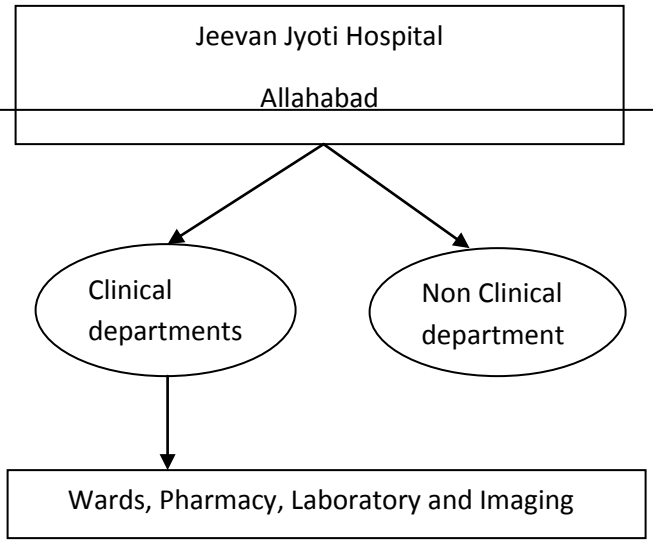
2.3 Sampling and Data Collection:

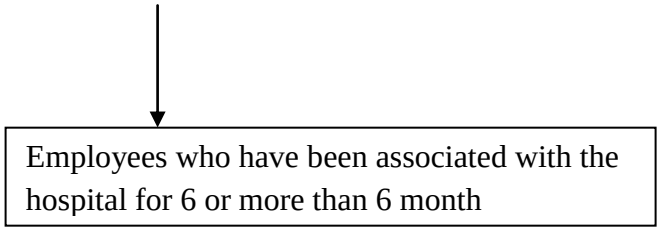
2.3.1 Organizational patient safety culture:

Primary data was collected through a structured questionnaire.In the questionnaire various components were included to assess the patient safety culture amongst the staff directly providing patient care i.e. nurses, pharmacists, laboratory technicians, radiology technicians. The questionnaire was pretested on a sample of 10 staff.

A sampling method was used. Sample variable was selected from Department of Nursing, Pharmacy, Laboratory and Radiology. The survey population was 245 (total of Nurses and paramedic). Selected sample size was 178 which consist of all the staff under the study area which has an association of 6 months or more with the organisation. 6 months time has been considered based on the existing human profile.

Figure2: Pictorial representation of sampling and data collection for survey on Organizational patient safety culture





1. All the hospital departments were divided into clinical and non clinical departments.
2. Hospital departments involved in direct patient care were the ones which made a direct contribution or impact in the quality of care he/she received in the hospital as out-patient or in-patient.
3. After going through a couple of brainstorming sessions with the mentor the following departments were enlisted to become a part of the study. They are: Pharmacy, Laboratory, Radiology and all the in-patient wards An eligibility criterion was set to include the staff in respective areas to become part of the survey sample i.e. employees who have been associated with the hospital for more than 6 month on the day of survey were included in the sample.
4. Therefore the sample size for the survey was the staff from the hospital Pharmacy, Laboratory, Radiology and all the in-patient wards who have been associated with the hospital for more than or equal to 6 months on the day of survey.
5. Questionnaire on Patient Safety Culture was used to conduct a survey across the above mentioned departments.
6. The survey population was 245 (total of Nurses and paramedic). Selected sample size was 178 which consist of all the staff under the study area which has an association of 6 months or more with the organisation. 6 months time has been considered based on the existing human profile. The breakdown is as follows:

Table 1: Selected population for survey on patient safety culture

S.No.	Department	Selected Population
1.	Pharmacy (in-patient & out-patient)	**8**
2	Laboratory(hematology, biochemistry, microbiology)	**8**
3	Radiology (X Ray, CT, MRI, ECG, TMT, ECHO,USG)	**10**
5	All the in-patient wards (nursing staff)	**152**
	Total sample size	**178**

7. Total 178 questionnaires were finalized after scrutinizing the filled questionnaires.

2.3.2 Risk assessment of the Facility:

Primary data collected by using a facility safety checklist which was based on the threat based risk assessment of the areas of interest. Under the following sub sections a spot inspection (non participatory observations done during facility rounds) of the facility was conducted:

1. General Safety
2. Fire & Electric Safety
3. Housekeeping Safety
4. Maintenance

The components of the above sub sections on facility safety that were spot inspected were as follows:

- Lifts
- Stairway
- Entry and exits
- Fire alarms
- Fire extinguishers
- Cleanliness
- Waste management
- The entire hospital areas were covered under risk assessment of facility. .
-

2.3.3 Implementation of Data collection:

Initial permission was obtained from the Chief Operating Officer of the hospital, following which the study was conducted over three phases:

Phase 1: Questionnaire on Patient Safety Culture was distributed amongst the Nurses and Paramedics before their shift commenced during class room sessions conducted in view of data collection. The aim and scope of the study was explained to all the staff and then questionnaires were distributed and duly filled questionnaires were collected during the same session. Confidentiality was assured and the same has been maintained throughout the study.

Phase 2: Facility risk assessment was done through direct observations, records and personal interviews with the concerned people i.e. the Managers of Maintenance, Housekeeping and Security Department during Facility Management Rounds.

2.3.5 Tool used for analysis:

The statistical analysis of data was done by generating bar graphs and pie charts. The graphs were generated using Microsoft excel.

2.4 Limitations of the study:

Very short period of time i.e 3 month

Chapter -4

Results and Findings

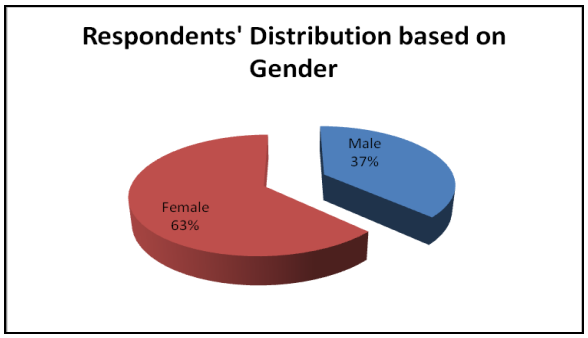
3.1 Survey on patient safety culture:

Patient safety culture in any organization is built by all the employees of the organization, irrespective of the years of experience they hold or gender or their department or designation. The patients should feel equally valued by each employee of the hospital. Hence, in this study analysis of patient safety culture has been based on the following factors:

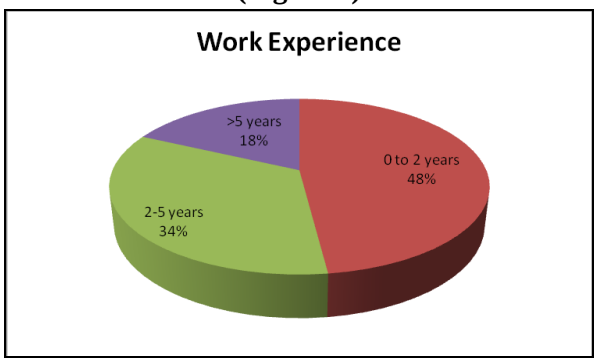
- Availability of human resource to handle given workload
- Team Work
- Leadership
- Learning environment
- Reporting of events

- Communication and coordination

The respondents include Pharmacists, Laboratory Technicians, Imaging Technicians and Nursing staff who have been working with the hospital for ≥ 6 months. Figure 1 and 2, show the distribution of respondents on the basis of their gender and work experience. 63% of the respondents are females and 37% are male whereas on based on work experience, majority of the respondents i.e. 48% have less than 2 years of experience whereas, 34% of them have 2 to 5 years of work experience.



(Figure 1)



(Figure 2)

On analysis of the questionnaire, it was found that though the opinion about sufficient number of staff to handle workload varied among the respondents but almost 54% of them feel that their work units do not have sufficient number of staff to handle the workload effectively (**figure3**).

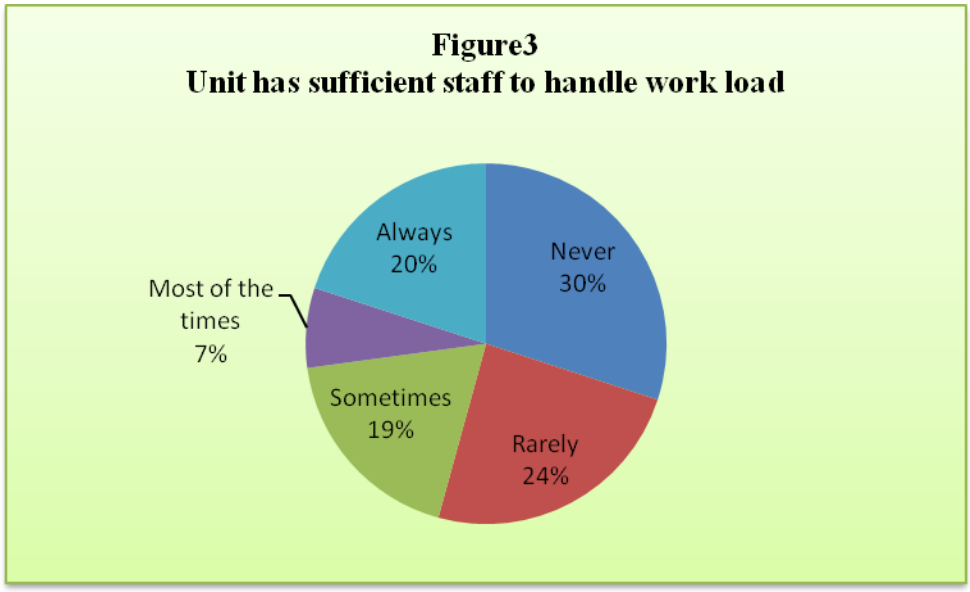


Figure 4, shows that almost 57% respondents feel that their unit is very supportive and works as a team when required. They also have a respectful attitude towards each other. Except a few, in view of the majority (57%), all the employees in a unit come forward and share responsibilities during peak work hour, hence they know the importance of working together and thus keep no boundaries when it comes to serving patients.

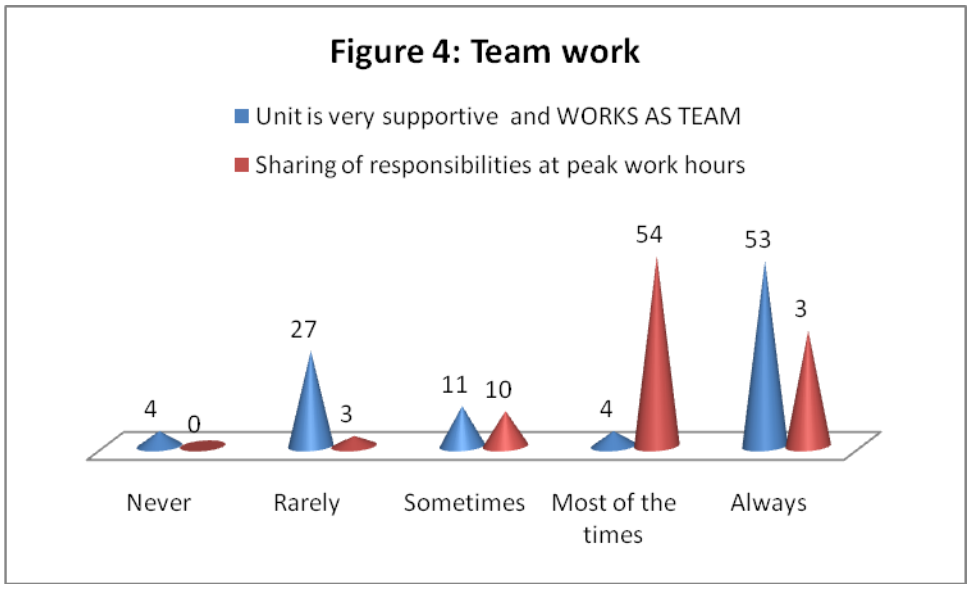
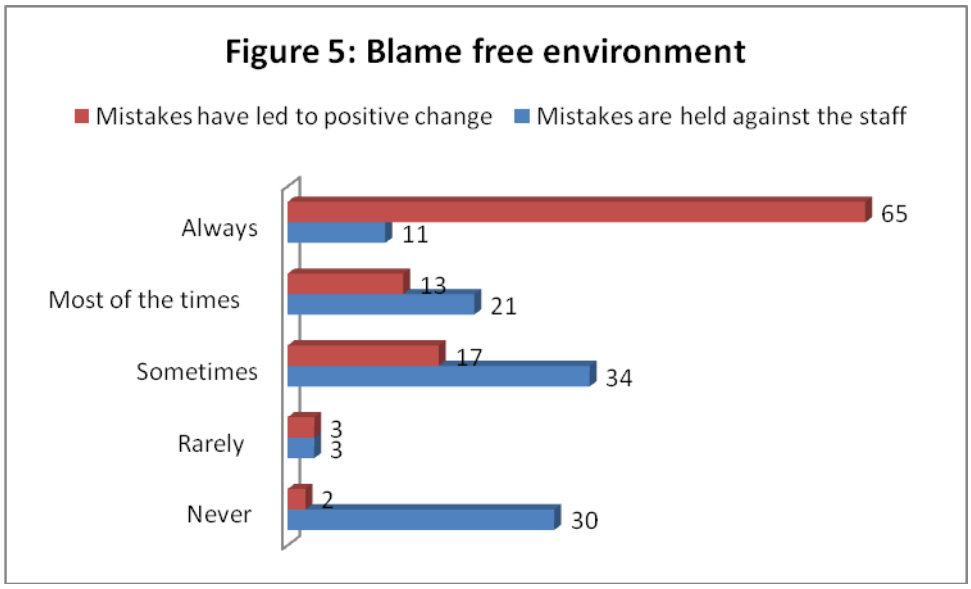


Figure 5, clearly depicts that the work units do not have a totally blame free environment as almost 34% of the respondents have brought to notice that sometimes mistakes are held against the staff but at the same time 78% of them have accepted that mistakes have always led to a positive change amongst the unit staff. This may be due to the strictness of the unit in-charges or management. Hence, this show a lack of encouragement for the staff to come out and share their mistakes openly, therefore decreasing the opportunity to learn from own and others mistakes.

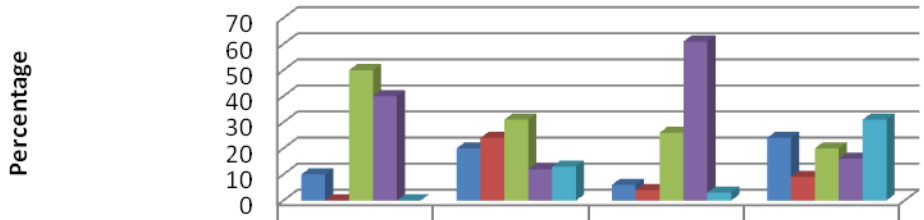


The analysis of questions related to the unit/ work area supervisors or managers (Figure 6) revealed that the supervisors encourage their staff when they work as per, the patient safety protocols that they are trained in but they are not very welcoming to suggestions on patient safety from the staff, only 31% of the staff feels that sometimes their suggestions are welcomed whereas, 44% of the staff feels that their suggestions are valued either rarely or never.

It is surprising but approximately 64% of the respondents agree that in high pressure situations their supervisors ask them to work fast even if it means a compromise on patient safety. Also the patient safety related problems that happen again and again in the department are (47%) ignored.

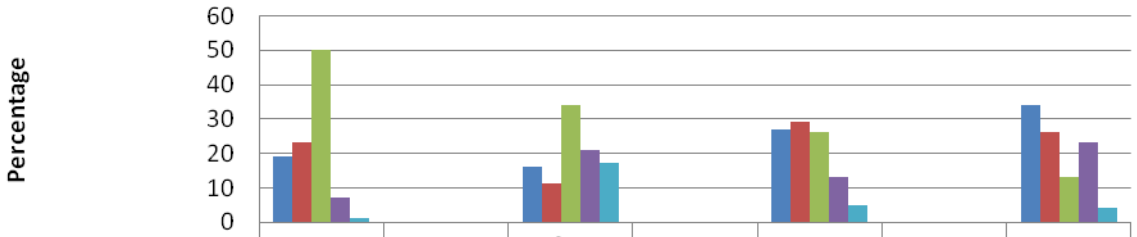
Hence, the departmental in charge do not make an effort to improve patient safety in their respective work areas though the staff is willing to take initiatives and suggest changes needed to improve over all patient safety of their units.

Figure 6: About supervisor/manager



	Appreciation from supervisor	Considers staff suggestions	Take shortcuts, when pressure mounts	Repeated patient safety problems are ignored
Never	10	20	6	24
Rarely	0	24	4	9
Sometimes	50	31	26	20
Most of the times	40	12	61	16
Always	0	13	3	31

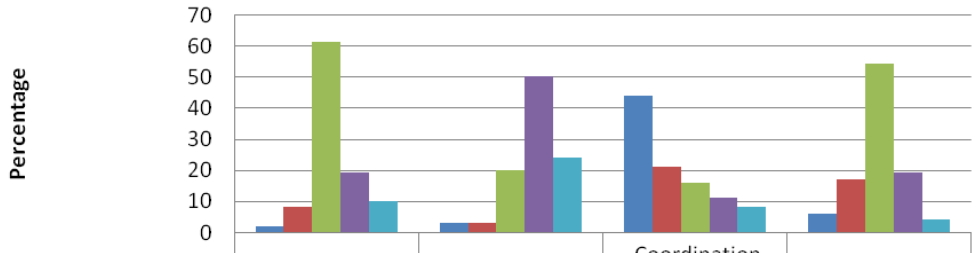
Figure 7:Intradepartmental Communication



	Feedback on changes provided		Communication of errors happening in unit		Freedom to question authority		Fear of questioning
Never	19		16		27		34
Rarely	23		11		29		26
Sometimes	50		34		26		13
Most of the times	7		21		13		23
Always	1		17		5		4

The above figure 7 shows that 50% of the respondents say that feedback regarding any kind of changes related to incident reporting are provided only sometimes and hence many a time such changes are not communicated to all though they are (38%) communicated about errors happening in their units. Almost 55-60% of the respondents feel, they lack the freedom to question decisions of the authority. But when it comes to asking questions, when something does not seem right in context of patient, the staff is not fearful (60%).

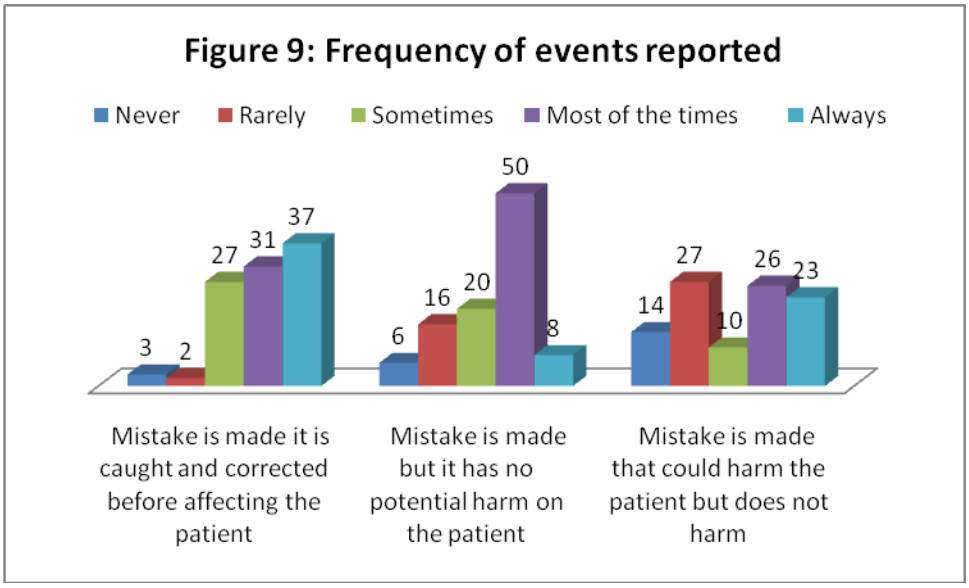
Figure 8: Efforts of management towards patient safety



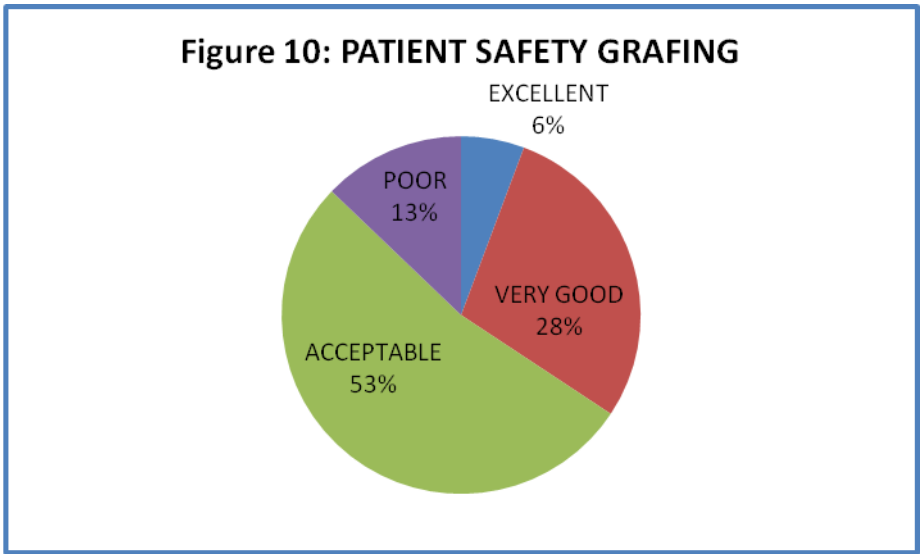
	Training provided on patient safety	Good interunit coordination	Coordination and communication problems while transferring patients	Management takes strict action if patient safety compromised
Never	2	3	44	6
Rarely	8	3	21	17
Sometimes	61	20	16	54
Most of the times	19	50	11	19
Always	10	24	8	4

Patient safety related training is provided sometimes (61%) to the staff and there is no regular ongoing training provided. 74% of the respondents felt that interdepartmental coordination is good. Almost 61% of the respondents negate any coordination and communication problems, while transferring patients from one unit to another. Hence the interdepartmental communication is good and the staff is aware of their responsibilities as they are helpful and supportive.

When patient safety is compromised then management takes strict action but only sometimes (54%) depending upon the error or mistake that takes place. Management has a very important role in the way it reacts to mistakes that take place in the clinical departments because it is not necessary that all the errors happen by intention as that is a rare case. Mostly mistakes occur due to fatigue or in hurry due to work pressure. (Figure 8)



On comparison between the response of the above three questions related to frequency of reporting, it was found that the mistakes which are caught are always reported (68%) and mistakes which are made but cause no harm to the patient are reported (58%) but mistakes made but that did not do any harm are rarely reported (49%). This is an indication that the organizational culture has yet not developed to a level where the stakeholders take it as a responsibility to report their mistakes irrespective of the fact that they are a potential threat to patient or not (figure 9).



In the opinion of almost 53% of the respondents their units/work areas have only an acceptable level of patient safety hence showing a huge scope of improvement. 28% of respondents have graded their work area very good where as 6% as excellent. But in the opinion of 13% of these people their work area should grade poor, which is alarming indicating a negative state of patient safety culture (figure 10).

3.2 Facility Risk Assessment:

Table 3.1: FMS CHECKLISTS

FACILITY SAFETY CONCERNS FOR PATIENTS				
S.no.	1. General Safety	Yes	No	N/A
1	Does the hospital have a designated lift for patient use only?			
2	Is regular preventive maintainence done for lifts			
3	Is patient furniture in good and safe condition?			
4	Are work areas free of tripping hazards? Example: cords/wires, free standing electrical fixtures?			
S.NO.	2. Fire & Electrical Safety	Yes	No	N/A
1	Is an adequate number of portable fire extinguishers provided so that they are readily accessible in the case of an emergency?			
2	Are portable fire extinguishers mounted, located and easily identifiable?			
3	Are portable fire extinguishers visually inspected each month? (inspection cards)			
4	Are annual maintenance checks of portable fire extinguishers completed and does inspection tag on each extinguisher reflect the date completed? Date of most recent check: 7th Feb'2013			

5	Are all fire alarms functioning properly and tested annually? Date of most recent test: Jan '2013			
6	Are planned and unplanned fire drills conducted at regular intervals? Date of most recent drills: march'2013			
7	Are electrical outlets adequate in number (are any extension cords used)			
8	Are electrical panels labelled properly and free of defects?			
9	Are stairways well lighted, stairways & handrails in good condition?			

- Out of the total 82 portable fire extinguishers in the hospital only 42 have been mounted. During facility round 4 fire extinguishers were identified which were kept on the floor.
- As per the hospital policy, fire extinguishers are checked on annual basis.
- Annual maintenance check for fire extinguishers is pending by 2 months
- The fire alarms are tested once in every 2 months. Pending by over 1 month
- Emergency and exit routes are not identified for emergency escape.

S.NO.	3. Housekeeping Safety	Yes	No	N/A
1	Are all floors clean and, slip resistant and good repair?			
2	Are warning signs provided when floor is wet?			
3	Are restroom facilities clean and sanitary?			
4	Are restroom facilities adequately stocked with the necessary supplies?			
5	Are drinking water supplies and outlets cleaned regularly?			
6	Are waste receptacles emptied regularly? Frequency is _____			

- Warning signs are not used by housekeeping when the floor is wet.

S.No.	4. Maintenance	Yes	No	N/A

1	Are windows unbroken and free from any type of damage?			
2	Do all the windows have grills?			
3	Are doors & locks in good working condition?			
4	Do patient toilets have grab bars?			
5	Do all the wheelchairs and stretchers have safety belts?			
6	Does the hospital have a separate toilet for Handicapped patients?			

- Toilets for patients do not have grab bars throughout the hospital.

Chapter 5

Discussion

Objective 1: To study the patient safety culture in the clinical departments of the hospital.

Patient safety culture depends on the personal interest, attention and engagement of each staff member involved in delivering health services, so efforts to promote a patient safety culture must continue targeting individual staff members.

Though in the opinion of majority of the respondents, the units never have sufficient staff to handle the existing workload but with high team spirit and respect for each other, the staff shares responsibilities during peak hours by sharing work and since they are dedicated to their job, they even work beyond shift timings if needed. The staff is internally motivated to deliver highest quality patient care. All the units in the hospital work well together to their highest capability for best patient care. The interdepartmental as well as intradepartmental relations are cordial and the staff is always willing to work with individuals from other departments without any inhibitions. It is insured that information is kept safe while patient transfer. At times the staff faces some communication and coordination problem but it is manageable but should be further improved upon. During the survey it was identified that feedback is provided by the seniors and top management only when very serious mistakes occur thus limiting the opportunity to learn from own and others mistakes. Restricted feedback or lack of it constricts the opportunity of the employee to learn. This leads to increase in patient unsafe practices being followed. The department supervisors should insure to keep communication loop complete with a feedback provided for every positive as well as negative outcome. This will help reduce harm caused by mistakes as people will be able to quickly recognize the adverse event and take timely actions. This will help maintain interest and involvement of the frontline staff who is dealing with the patients, directly.

Staff is shy of sharing if mistakes are done which lead to no harm due the fear of being written off. Mistakes are not reported until it is caught or which has no potential harm on the patient. Though the laboratory does have a record book for incident reporting, correct complete records are not entered. In the wards proper records were maintained but on brief discussion with some of the supervisors it

was discovered that the incidents are reported only when a mistake is brought to notice. Departments like pharmacy and imaging do not have an incident reporting form or record book. Overall, due to the fact that the hospital does not ensure proper maintenance of incident reporting registers or forms in various departments, it could not be ascertained whether there were no medical errors or mistakes though majority of the staff had not reported any event in the past one year. Also there are no clear guidelines as to the action to be taken once an error occurs.

Leadership though good, lacks an open communication to some extent. The top management should make slight changes in its leadership style. Due to the authoritarian style of management, majority of the respondents are fearful when it comes to questioning the decisions of the authority. The encouragement for the frontline staff to share ideas related to patient safety and other quality measures, and hence raise the patient safety bar for their respective units is lacking. The supervisors need to perform their duty to develop the staff under their supervision by providing continuous training sessions on various issues related to the work area which is an integral part of the departmental processes. Also they need to be a part of the communication route to educate the unit staff to learn from the past events so that awareness levels of staff increases about the possible medical errors that can take place and then work out the ways by which it can be avoided in the future.

Sexton, et al. [1], has previously indicated that there probably are hospital-specific patient safety cultures. As this work pertains to one hospital only (jeevan jyoti hospitalHospital), empirically the amount of clustering of safety attitudes at the hospital level could not be checked.

Objective 2: Develop a checklist for future use

The facility design of the hospital, with its equipment and technology, has not been investigated extensively while studying the quality and safety of patients especially in Indian context. Organizational/system factors that can potentially create the

conditions conducive for errors are called latent conditions. Specific examples of a latent condition effecting patient safety would be the impact of low lighting levels in the medication dispensing areas, absence of fire exit routes especially in inpatient wards etc. By targeting human factors through facility design and its management, this study aims to ensure that latent conditions that lead to adverse event are minimized to improve patient safety in the hospital.

In the footsteps of the Institute of Medicine's report highlighted in literature review [1] gap analysis was carried out on facility management. It has been observed that there is a lack of sufficient space to accommodate family members of the in-patients and absence of clearly marked signs to navigate the hospital. This indicates lack of Patient-centeredness, in the hospital facility. In terms of safety, there are problems associated both with lift management and fire safety maintenance. Out of three lifts available in the hospital, one is earmarked as "only for patient's use". But, the housekeeping staff working as general duty assistants in helping patients' to move from the wards to radiological investigations, utilize the lift ear marked for waste management for transferring the patients. This exposes the patient to a greater risk of hospital acquired infections. A clear communication should be made to all the concerned departments and staff that an in-patient whether in CCU or General ward, critical or stable should always be moved in the patients' lift.

The preventive maintenance of fire and electrical safety are pending over by 1-2 months, when asked the reason for the same the department in charge explained that due to lack of staff, the department is unable to fulfill its commitments of timely maintenance. The maintenance department should have an annual maintenance contract in place as soon as possible so that a proper preventive maintenance plan can be made and strictly monitored once implemented. Also, fire safety training should be conducted on regular basis, once in 6 months and mock drills should be conducted. The hospital needs to develop a disaster management committee and plan to effectively tackle disastrous situations.

Warning signs "floor is wet" should be put up when mopping the floor so that patients who are ambulatory can be careful while walking. The floors which are sharp or damaged should be listed and communicated to maintenance department so that proper grounding or repair work can be done to avoid patient and provider injuries. Grab bars should be installed in each patient toilet and a separate toilet should be built for handicapped patients especially in the out-patient department to avoid patient falls and improve safety. For this, even an existing toilet can be converted into a handicapped toilet if the facility design does not allow building a new toilet due to space scarcity. Facilitating hand washing with the availability of sinks and alcohol hand rubs in sufficient numbers at appropriate locations (bedside) is another aspect of safety that is less than required minimal standards. It was visually observed that the other 4 qualities viz., effectiveness, efficiency with respect to room layout of equipments, timeliness in ensuring rapid response to patient needs and equity are maintained to a level. A detailed analysis of the same has not been carried out due the shortage of time during the study.

Chapter 6
Conclusion

Jeevan jyoti Hospital, allahabad, a multi super specialty hospital & infertility research centre.

This report will help to bring management's attention to certain important issues related to patient safety. With dedicated efforts, management will be able to raise its patient safety bar. The current status of patient safety at the hospital is acceptable and requires further continuous quality improvement.

Some of the most critical causes that have presently compromised patient safety in Jeevan Jyoti Hospital,Allahabad are as follows:

1. Lack of Training
2. Improper information sharing

3. Lack of feedback mechanism
4. Lack of strict monitoring of facility safety.
5. Absence of standardization in processes across departments of Pharmacy, Laboratory and Imaging.
6. Lack of implementation of Patient safety management program.

Strategies for improving patient safety should be tailored for work areas and disciplines not only at organizational unit level but also at individual employee level, with respect to the individual department workflows. The same has been suggested in the recommendation section of this work.

Chapter 7

Recommendations

Some of the important areas of focus are listed below:

1. **Human Resource Management:**

   a) An induction and orientation programme should be conducted for all the new employees who join hospital to help them get oriented to the mission and vision of the organization.

   b) Recruitment should be done in quality department of the hospital so that work related to NABH pre assessment can be fastened.

c) A feedback mechanism should be developed so that the communication flow is maintained. (i) A grievance box should be put up on each floor so that complaints of the staff can be handled, if any.

2. Quality Department:

a) All the policies should be designed as per NABH standards. The policies should be approved by respective committees and before implementation should be communicated to the staff of concerned departments.

b) **A patient safety management program** should be developed for the hospital and also a **patient safety management committee** constituted. A **patient safety manual** should be developed by the patient safety committee. This will help to identify potential hazards in the hospital and implement effective measures to eliminate the hazards. Also periodic regular reviews should be conducted by internal and external agencies.

c) A continuous training program for the staff of department of pharmacy, laboratory, imaging and nursing should be conducted on example: training on biomedical waste handling for nurses, lab and imaging technicians,; Medication errors, rate of adverse events in healthcare, theoretical models of human error, how to learn from errors, teamwork and safety leadership. Regular sensitization about the possible errors in the area of patient safety will help develop a culture at the individual and departmental level.

3) Maintenance department: .

a) Annual maintenance contract should be signed with a reliable agency which can ensure timely preventive maintenance of equipments.

b) A schedule should be prepared for daily/ weekly/ monthly/ quarterly/ half yearly/ annual maintenance depending upon the nature (criticality) of the equipment.

c) Grab bars should be installed in the patient toilets and a separate toilet for handicapped patients should be designed.

4) Top Management:

a) A participative management approach and open communication should be encouraged by the management. This will encourage frontline staff to share their experiences and challenges of their respective work areas.

b) The aim for continuous quality improvement should be communicated by the top management to all the employees down the chain of command. This will help develop a strong organizational culture and thus develop staff that is "patient safety minded."

CHAPER-8

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ANNEUREXS

Annexure 1

SURVEY ON PATIENT SAFETY CULTURE

i) Respondent's Name/Employee code: ……
ii) Gender: ……
iii) Work Experience: ……
iii) Department: …….

Please indicate your agreement or disagreement with the following statements about your unit by tick marking one of the following:

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

(a) Work area:

1. Unit has enough staff to handle the workload

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

2. We work together as a team, my unit is very supportive and treat each other with respect

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

3. During peak work hours, we share responsibilities to work effectively

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

4. Staff in this unit works beyond their shift timings to provide highest quality patient care

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

5. Staff feels that their mistakes are held against them

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

6. Mistakes have led to positive changes here because we take up all mistakes seriously and try to prevent it to happen again

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

7. We try to prevent errors from happening

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

(b) Supervisor/manager:

1. When I work according to patient safety standards, my supervisor says a good word to me

( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

2. My supervisor seriously considers staff suggestions for improving patient safety
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

3. Whenever pressure increases, my supervisor wants us to work faster, even if it means taking shortcuts
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

4. My supervisor overlooks patient safety problems that happen over and over again
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

(c) Communication and coordination:

1. We are given feedback on changes made based on event reporting
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

2. Staff has the freedom to report any activity that may negatively affect patient care
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

3. We are informed about errors that happen in our unit
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

4. Staff feels free to question the decision or actions of those with more authority
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

5. In this unit, we discuss ways to prevent errors from happening regularly
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

6. Staff is afraid to ask questions, when something does not seem right
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

(d) Frequency of events reported (how often are mistakes reported)

1. Mistake is made it is caught and corrected before affecting the patient. How often is this reported?
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

2. Mistake is made but it has no potential harm on the patient. How often is this reported?
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

3. Mistake is made that could harm the patient but does not harm. How often is this reported?
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

(e) Patient safety grade – what is your overall grading of your unit on patient safety?

( ) Excellent ( ) Very good ( ) Acceptable ( ) Poor ( ) Failing

(f) About your facility – at jeevan jyoti hospital

1. We are provided regular training on patient safety
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

2. Units in this facility coordinate well with each other
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

3. There is always coordination and communication problems, when transferring patients from one unit to another
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

4. Units which need to work together have good cooperation amongst each other
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

5. During patient transfer, patient care information is lost
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

6. It is pleasant to work with staff from other units
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

7. If patient safety is compromised, then management takes strict action
( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

8. Shift changes are problematic for patients
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

9. Shift changes are problematic for the staff
   ( ) Never ( ) rarely ( ) sometimes ( ) most of the times ( ) always

Annexure 2
Facility Safety Checklist

Facility Safety Checklist				
Safety Concerns				
	Yes	No	N/A	Unable to Determine
1. General Safety				
Does the hospital have a designated lift for patient use only?				
s regular preventive maintainenace done for lifts				
s patient furniture in good and safe condition?				
Are work areas free of tripping hazards? Example: cords/wires, ree standing electrical fixtures?				
2. Fire & Electrical Safety	Yes	No	N/A	Unable to Determine
s an adequate number of portable fire extinguishers provided so hat they are readily accessible in the case of an emergency?				
Are portable fire extinguishers mounted, located and easily dentifible?				
Are portable fire extinguishers visually inspected each month? inspection cards)				
Are annual maintenance checks of portable fire extinguishers ompleted and do inspection tags on each extinguisher reflect				

he date completed?				
Are all fire alarms functioning properly and tested annually? Date of most recent test_____				
Are planned and unplanned fire drills conducted at regular intervals? Date of most recent drills_____				
Are electrical outlets adequate in number (are any extension cords used)				
Are stairways well lighted, stairways & handrails in good condition?				
3. Housekeeping Safety				
Are all floors clean and, slip resistant and good repair?				
Are warning signs provided when floor is wet?				
Are restroom facility clean and sanitary?				
Are restroom facilities adequately stocled with the necessary supplies?	Yes	No	N/A	Unable to Determine
Are drinking watre supplies and outlets cleaned regularly?				
Are waste receptacles emptied regularly? Frequency s_____				
4. Maintenance				
Are windows unbroken and free from any type of damage?				
Do all the windows have grills?				
Are doors & locks in good working condition?				
Do patient toilets have grab bars?	Yes	No	N/A	Unable to Determine
Do all the wheelchairs and strechers have safety belts?				
Does the hospital have a separate toilet for Handicapped patients?				