

**A STUDY OF PATIENT SAFETY EVENT REPORTING AT KD HOSPITAL,  
AHMEDABAD**

Dissertation submitted to



**The IIHMR University, Jaipur**

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

by

Roshni Patel

Under the Supervision and Guidance of

Dr. Shiv K Tripathi

Professor, Dean- Training, IIHMR, Jaipur

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## DECLARATION BY THE STUDENT

I hereby declare that this dissertation titled, “**A study of patient safety event reporting at KD hospital, Ahmedabad**”, is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)

Roshni Patel

Date: 21<sup>st</sup> June, 2021

**CERTIFICATE OF COMPLETION****KD Academic Centre****KD Hospital**

કુસુમ ધીરજલાલ હોસ્પિટલ

Ref. No./KD/HR/Trainee/Certi./0047-2021

Date:-20.06.2021

**To Whomsoever it may Concern**

This is to certify that **Ms. Roshni Patel** in partial fulfillment of the requirements for the award of the degree of **MBA (Hospital and Health management)** from the IIHMR University, Jaipur has successfully completed her Internship in the department of **Quality** from **March 22, 2021 to June 19, 2021.**

During her tenure of training she was committed, responsible and hardworking. She had exhibited good interpersonal skills and had a high level of acceptance among the employees at various levels.

We wish her all the best in her future endeavors.

KD Academic Centre

With best wishes,  
For, Kusum Dhirajlal Hospital

**Dr. Anuja Desai**  
Director- Academics



**Ms. Nisha Joshy**  
Assistant General manager  
Quality assurance

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**CERTIFICATE FROM FACULTY GUIDE**

This is to certify that dissertation titled “A study of patient safety event reporting at KD hospital, Ahmedabad” is a record of the research work undertaken by Roshni Patel in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide

IIHMR University, Jaipur

Date:

School Dean

IIHMR University, Jaipur

Date:

## **ABSTRACT**

**Background:** Learning from mistakes is the key to maintaining and improving the quality of care in the hospital. Therefore, incident reporting is a crucial aspect of improving patient safety and quality. Analysing those incidents can help to identify the underlying issues that put patients at risk and prevent similar incidents from happening again in the future by taking appropriate corrective and preventive action. Hence, this study aimed to examine the culture of incident reporting among clinical as well as non-clinical staff at KD Hospital, and the factors that affect it while eliminating those factors by providing training to enhance incident reporting culture.

**Methodology:** An action based exploratory study by forming an incident reporting survey questionnaire and conducting an anonymous survey of 125 staff (clinical and non-clinical) with a response rate of 83%. Based on survey analysis, training was chosen as an intervention strategy to enhance incident reporting. To assess training efficiency, 32 samples were included and a training assessment tool was developed in form of test paper.

**Results:** The study reveals some major findings pertaining to incident reporting culture. The number of incidents reported is significantly less. Despite knowing the importance of incident reporting and the hospital's incident reporting system, reporting is far too limited. Major barriers were identified such as lack of knowledge of incidents, language barrier to fill incident form, not considering the incident important enough to report, to avoid work interruption and lack of administrative support. Training proved to be an effective intervention in terms of enhancing knowledge regarding incidents and incident reporting system of the hospital.

**Conclusion:** To err is human, but errors can be prevented. Continuous training and encouraging staff by ensuring a blame free culture can enhance incident reporting.

**Key words:** Incident Reporting System, Patient safety event reporting, adverse events, near miss events, sentinel events, patient safety, quality care, Hospital.

## **ACKNOWLEDGEMENTS**

It has been my privilege to have had this opportunity to complete my dissertation from a reputed organisation such as KD Hospital, Ahmedabad, Gujarat. I could gain understanding of various processes and concepts related to hospital quality. The internship gave me a better understanding on the workings of Quality Department.

I would like to sincerely thank my organization mentor, Mrs. Nisha Joshy, Assistant General Manager- Quality Assurance, for her invaluable inputs, guidance, enthusiasm, and constructive discussion as a mentor. It was her expertise that helped me to have a better grasp of the entire project. Her constant counselling and support during the entire phase of the dissertation got this project where it is now. She has not only helped me with the dissertation process but also has judiciously provided me with opportunities in other projects undertaken by the organization.

My special thanks to my colleagues and the entire hospital staff of KD Hospital for their cooperation and support.

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## **LIST OF ABBREVIATIONS:**

|       |                                                 |
|-------|-------------------------------------------------|
| CAPA  | Corrective Action, Preventive Action            |
| e-IRS | Electronic Incident Reporting System            |
| IRS   | Incident Reporting System                       |
| IRCQ  | Incident Reporting Culture Questionnaire        |
| ICPS  | International Classification for Patient Safety |
| RCA   | Root Cause Analysis                             |
| SPSS  | Statistical Package for the Social Sciences     |
| WHO   | World Health Organization                       |

## **CHAPTER 1: INTRODUCTION**

### **1.1 Background of the Study:**

Patient safety is a health-care culture that evolved in reaction to the growing complexity of health-care systems and the resulting rise in nosocomial patient harm. Its purpose is to minimize and reduce patient risks, errors, and injury when providing medical care. Continuous progress based on learning from mistakes and unfavorable experiences is a cornerstone of the profession. Patient safety incidents are a well-known health-care difficulty, and are described as an event or scenario that may have caused, or did cause, avoidable injury to a patient. According to the literature, incidents in the healthcare delivery system are inescapable, multifarious, and never-ending threats to patient safety, resulting from a complex interaction between human behavior, socio-cultural factors, system technological aspects, and numerous system flaws.

An incident can be –

1. **Near miss event:** An occurrence that was unnoticed by the sufferer (21)
2. **No harm incident event:** An occurrence that occurred near the patient but did not cause any harm to the patient. (21)
3. **Adverse event:** An event that causes a patient to suffer injury. (21)
4. **Sentinel event:** An unforeseen event that causes the patient's death or severe physical or psychological harm. (21)

Hence, under these types, the incident can be both clinical and non-clinical, involving clinical administration, documentation, blood and blood products, equipment, behavior, process/ procedure, infrastructure, and so on.

In a healthcare environment, an incident report is an electronic or paper document that offers a complete, written description of the chain of events leading up to and following an unexpected circumstance. System-wide incident-reporting systems (IRSs) facilitate organizational improvement by identifying errors, spotting system failures, and improving the system. Incident reporting and learning from incident analysis are two of the most widely employed patient safety improvement tactics in healthcare, both inside individual organizations and across entire healthcare systems. A reporting culture refers to the creation of an environment in which hospital employees can report patient safety problems in a fair and blame-free manner. The major goal is to reflect on what the incident reveals about the flaws and weaknesses in our healthcare system. IRS are becoming more

widely used in healthcare, and they are frequently thought to have a beneficial impact on safety culture by raising awareness of patient safety issues in the front lines. Incidents give organisations with "free lessons" on latent failures, allowing prospective safety hazards to be identified before an incident happens.

Incident reporting can reveal a wealth of information regarding latent errors that lead to active errors and negative outcomes. In order to increase patient safety, it is possible to analyse the data and take preventive measures.

To improve patient safety, it is crucial to create an environment that encourages the organization to identify errors, evaluate causes and take appropriate actions to improve performance in the future.

Hence it is critical to report an incident for a variety of reasons, including:

- By expanding opportunities to learn from mistakes and where things could go wrong, reporting an incident can help safeguard patients from avoidable harm.
- To take proper corrective action in the aftermath of the incident.
- Limit similar incidents by identifying the root cause of the event and taking adequate preventive measures.

## **1.2 Statement of the Research Problem:**

The different studies proposed that incidents are underreported. Error! Reference source not found.,Error! Reference source not found.,Error! Reference source not found.,Error! Reference source not found.

Underreporting is a major IRS concern. Many factors could play a part in underreporting an incident, such as a lack of staff awareness about the incident reporting system, a lack of knowledge about reportable incidents, fear of disciplinary actions, not considering an incident important enough to report, too busy to report an incident, lack of administrative support, fear of blame, lack of maintaining the confidentiality of the one reporting an incident, isolation by fellow members, concern about their reputation, etc. Error! Reference source not found. Despite the importance, there are not many studies reported in Indian hospital contexts and, therefore, there is need for study to understand the barriers to underreporting of incidents.

## **1.3 Objectives:**

- 1) To understand the current incident reporting system and culture at KD Hospital.

- 2) To identify the factors that influence reporting of incidents.
- 3) To explore the factors that would motivate the staff to report an incident.
- 4) To assess the impact of training to enhance patient safety event reporting.

#### **1.4 Significance of the study**

Incident reporting is a crucial aspect of improving patient safety and quality. Analyzing those incidents can help to identify the underlying issues that put patients at risk and prevent similar incidents from happening again in the future by taking appropriate corrective and preventive action.

At the moment, incidents are underreported, although the reason for this is unknown. The reluctance of employees to report an incident, whether witnessed or committed, is apparent. The majority of the studies on this topic focus on clinical professionals such as nurses and doctors' reluctance to report incidents, yet incident reporting is everyone's obligation, from ground level staff to administrative staff.

Hence, this study aimed to examine the culture of incident reporting among clinical as well as non-clinical staff at KD Hospital, and the factors that affect it while eliminating those factors by providing training to enhance incident reporting culture.

#### **1.5 Research Questions:**

- a. What is the current incident reporting practice at KD Hospital, Ahmedabad?
- b. What are the factors that affect the incident reporting behaviour among the staff?
- c. What is the impact of intervention taken to enhance patient safety event reporting culture?

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Definition of the key terms:**

**Incident:** Errors, preventable adverse events, and hazards are all examples of deviations from standard medical care that either cause injury to the patient or constitute a risk of harm. (21)

**Incident characteristics:** selected characteristics of an incident. (21)

**Incident type:** a descriptor for a grouping of incidents of a similar nature that have been grouped together due to shared, agreed-upon characteristics. (21)

**Mitigating factor:** an activity or circumstance that stops or slows the advancement of an incident toward the injuring of a patient. (21)

**Error:** inability to carry out a planned action as anticipated or improper implementation of a plan. (21)

**Event:** something that takes place in or around a patient. (21)

**Root cause analysis:** a methodical, literative approach for identifying the components that lead to an occurrence by reconstructing the sequence of events and asking why? until the basic causes of the problem are identified. (21)

### **2.2: Theoretical Review:**

A patient safety event reporting policy by Health Augusta University suggests that incident reporting can improve the quality and safety of patient care through Identifying and evaluating errors, near misses, or hazard/unsafe circumstances that could harm patients or threaten their safety; Improving processes and systems; To promote a safety culture and encourage learning within the organization by focusing on patient safety at all levels. The patient safety culture facilitates the continuous reporting of events, near misses, and hazardous conditions so that processes can be changed and systems can be improved as a result. An evaluation of errors is crucial to identifying root causes and trends, which in turn lead to improving processes, which are essential to reducing risk and preventing patient harm. (20)

As per WHO guidelines for patient safety incident reporting, patient safety is hampered by: Data overload in terms of volume; The reporting criteria are not clearly defined;

Incomplete and selective data collection; Reporting was given more attention than analysis. (15)

### **2.3 Summary of the Empirical Literature Review:**

| <b>Sr. No</b> | <b>Author(s)</b>                                                                                                                                                                | <b>Title &amp; Year</b>                                                                                                                                     | <b>Study location</b> | <b>Methodology</b>                                                                                                                                                                                                                                                                | <b>Overview</b>                                                                                                                                                                                                                                                                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | Aline, Fabiana Rossi Varallo Patricia de Carvalho Mastroianni <sup>22</sup> , Cristina Passos, Tales Rubens de Nadai                                                            | <b>Title:</b> Incident reporting: barriers and strategies to promote safety culture<br><b>Year:</b> 2017                                                    | Brazil                | 354 healthcare professionals participated in a focus group discussion about the hurdles to incident reporting and what motivates them to do so. <sup>Error!</sup> Reference source not found.                                                                                     | Anxiety of a litigation, indifference, ignorance, apathy toward reporting, and a lack of accountability were all mentioned as obstacles. While understanding the significance of event reporting has been mentioned as a motivator. (22)                                                                                                                                |
| 2             | Masahiro Hirose, Scott E Regenbogen, Stuart Lipsitz, Yuichi Imanaka, Tatsuro Ishizaki, Miho Sekimoto, Eun-Hwan Oh, Atul A Gawande <sup>Error!</sup> Reference source not found. | <b>Title:</b> Lag time in an incident reporting system at a university hospital in Japan <sup>Error!</sup> Reference source not found.<br><b>Year:</b> 2006 | Japan                 | The researchers looked at 6880 event reports filed by doctors and nurses over the course of three years. Years ago, I worked at a national university hospital in Japan, evaluating the period between every occurrence. <sup>Error!</sup> Reference source not found.            | Nurses reported more instances than physicians, according to the survey. Physicians' lag time was also shown to be longer. (23)                                                                                                                                                                                                                                         |
| 3             | Lei Hua, Dr. Yang Gong <sup>Error!</sup> Reference source not found.                                                                                                            | <b>Title:</b> A User-centered Design of Patient Safety Event Reporting Systems<br><b>Year:</b> 2014                                                         | Missouri              | Two text prediction models were presented and evaluated for event documentation on structured and unstructured data entries. To assess the impact of the functions on the three usability characteristics, a two-group randomised experiment with 52 participants was undertaken. | A research model for increasing the service's usability. Second, the text prediction system was put to the test by using it to report on a nurse's clinical record. Third, the project's use of innovative tools and methods is informative for academics evaluating the usability of health information technology. (24) <sup>Error!</sup> Reference source not found. |

|   |                                                                                                                                                                                                              |                                                                                                                                                                                |                                                                                                                      |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                              |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Lisa H. Lubomski, Peter J. Pronovost, David A. Thompson, Christine G. Holzmüller, Todd Dorman, Laura L. Morlock, Fern Dickman, Maureen Fahey, and Albert W. Wu <sup>Error! Reference source not found.</sup> | <b>Title:</b> Building a Better Incident Reporting System: Perspectives from a Multisite Project <sup>Error! Reference source not found.</sup><br><b>Year:</b> 2004            | USA                                                                                                                  | The Critical Care Unit Safety Reporting System project created and implemented a Web-based reporting form in 23 intensive care units. <sup>Error! Reference source not found.</sup>                                                                    | In a set of ICUs, a private, anonymous, and nonpunitive event reporting system is being developed, with professionals forming inside each ICU to guarantee that the reporting system is connected with any current reporting tools.(25)                                                                                                                      |
| 5 | Anne Viflad, Bjoerg O. Simonsen, Stian Lydersen, Per G. Farup <sup>Error! Reference source not found.</sup>                                                                                                  | <b>Title:</b> The Culture of Incident Reporting and Feedback: A Cross-Sectional Study in a Hospital Setting <sup>Error! Reference source not found.</sup><br><b>Year:</b> 2015 | Six somatic hospitals spread over a wide geographic location of Norway <sup>Error! Reference source not found.</sup> | Within a Norwegian Hospital Trust, a cross-sectional survey was conducted to identify areas for improvement. We used anonymous self-reporting surveys, with some units responding via email and others filling out a paper version.                    | A positive incident culture was defined by open communication in which health-care workers felt comfortable sharing incident experiences, management that prioritised patient safety, a learning organisation that used incident experiences and knowledge to improve practise, and cooperation among hospital units to provide the best possible care. (10) |
| 6 | <u>Hui-Ying Chiang, Ya-Chu Hsiao, Shu-Yuan Lin, Huan-Fang Lee</u>                                                                                                                                            | <b>Title:</b> Incident reporting culture: scale development with validation and assessment of hospital nurses in Taiwan<br><b>Year:</b> 2011                                   | Ten teaching hospitals in Taiwan                                                                                     | A cross sectional survey was conducted using Incident reporting culture questionnaire developed with psychometric examination. It included with 1064 participants having an average response rate of 83% <sup>Error! Reference source not found.</sup> | In addition to its reliability and validity, the IRCQ is an invaluable tool. The nursing profession has been underreporting due to concerns in settings such as co-worker interactions, nurse-professional teamwork, and punitive environments. (12)                                                                                                         |
| 7 | <u>S M Evans, J G Berry, B J Smith, A Esterman, P Selim, J O'Shaughnessy, and M DeWit</u> <sup>Error! Reference source not found.</sup>                                                                      | <b>Title:</b> Attitudes and barriers to incident reporting: a collaborative hospital study<br><b>Year:</b> 2006                                                                | Six South Australian hospitals, Australia                                                                            | In three main referral hospitals, one major referral hospital, and two major rural base hospitals, 186 doctors and 587 nurses participated in a cross-sectional survey utilising a modified questionnaire                                              | According to the survey, doctors and nurses agreed to report the majority of events, however nurses do so more frequently than doctors. To increase incident reporting, especially among doctors, it is critical to explain which incidents should be reported, simplify the process, and provide feedback on reports.(-11)                                  |

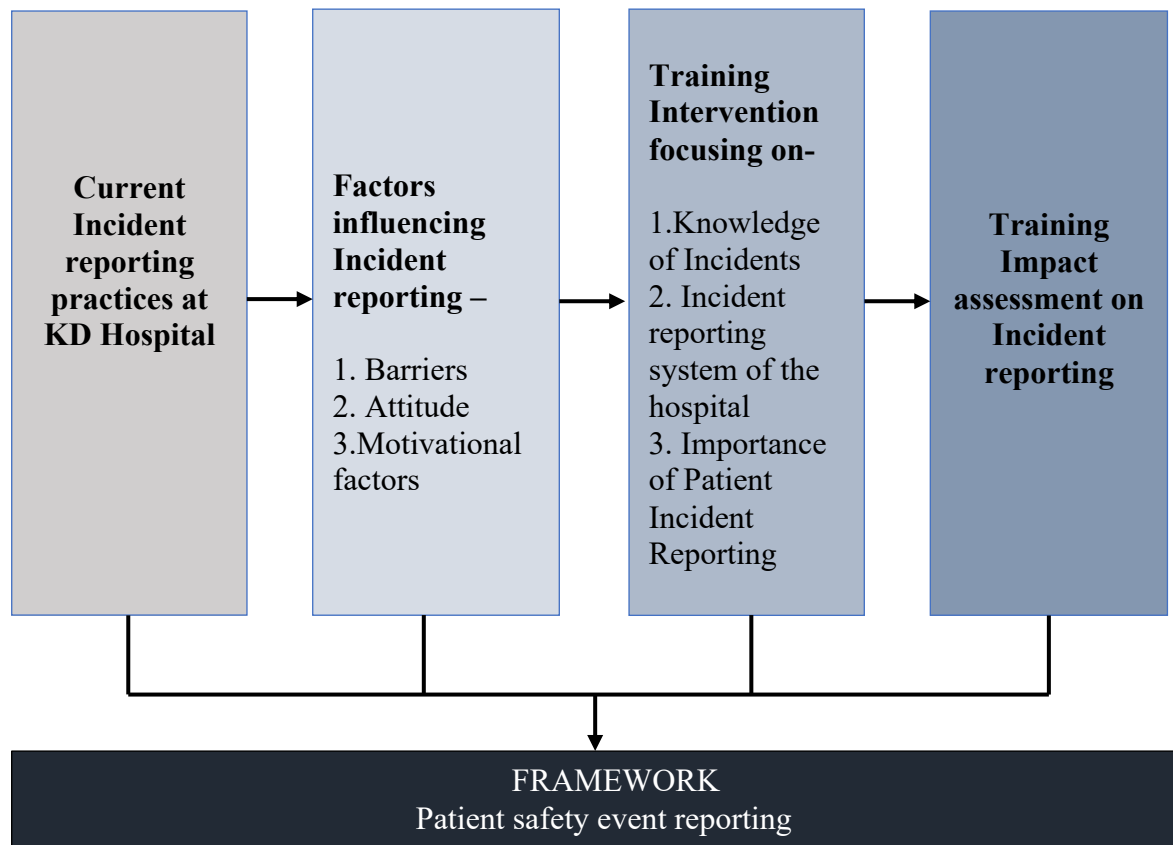
|    |                                                                                                  |                                                                                                                                                                                        |                                                                                               |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                             |
|----|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | Kenji Itoh, Toshiko Abe and Henning Boje Andersen                                                | <b>Title:</b> A Survey of Safety Culture in Hospitals Including Staff Attitudes about Incident Reporting<br><b>Year:</b> 2002                                                          | Five hospitals located in different areas in Japan. <b>Error!</b> Reference source not found. | With a mean response rate of 90.7 percent across the three groups, a cross sectional survey was conducted with 66 doctors, 486 nurses, and 43 pharmacists using a questionnaire adapted from Helmreich's "Operating Team Resource Management Survey." <b>Error!</b> Reference source not found.                          | The acceptance of error and the power distance between employees are all factors that influence incident reporting rates. The authors show how reporting behaviours can be developed and how they can increase patient safety by retaining a minimum power distance while properly recognising human errors. (26) <b>Error!</b> Reference source not found. |
| 9  | Charitini Stavropoulou, Carole Doherty, and Paul Tosey <b>Error!</b> Reference source not found. | <b>Title:</b> How Effective Are Incident-Reporting Systems for Improving Patient Safety? A Systematic Literature Review <b>Error!</b> Reference source not found.<br><b>Year:</b> 2015 | England                                                                                       | There were two types of research found: those that compared the effectiveness of IRSs to other incident reporting techniques and those that examined the impact of IRSs on patient safety settings, structures, and outcomes. To compare the effectiveness of IRSs and other approaches, a theme analysis was performed. | IRSs would be more successful if clear criteria for what constituted an incident were defined, they were owned and controlled by clinical teams rather than centralised hospital departments, and they were embedded inside companies as part of wider safety programs. (27)                                                                                |
| 10 | R Lawton, D Parker                                                                               | <b>Title:</b> Barriers to incident reporting in a healthcare system<br><b>Year:</b> 2002                                                                                               | NHS trust, England                                                                            | 315 healthcare employees from English NHS trusts were given a structured questionnaire with nine brief scenarios portraying the behaviour of a nurse, doctor, or midwife in a specific context.                                                                                                                          | - Poor occurrences seem to be reported with trepidation by health care providers. Doctors are less likely than nurses and midwives to report unfavourable occurrences to a senior staff member. When there has been a departure from protocol that has had a negative impact on the patient, this is the most likely occurrence to be recorded. (9)         |

|    |                                                                                                                      |                                                                                                                                                                                                                    |                                                          |                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                               |
|----|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11 | The Joint Commission                                                                                                 | <b>Title:</b> Sentinel event alert- <sup>Error!</sup><br>Reference source not found.<br><b>Year:</b> 2018                                                                                                          | USA                                                      | NA                                                                                                                                                                                                                             | Trust must be built in order to enhance reporting.<br>- To eradicate the fear of punishment, a just society must be adopted.<br>- Near misses reveal more than you would realise; better reporting is needed. Effective reporting is facilitated by engaged leadership. (7)                                                                                                                   |
| 12 | World Health Organisation <sup>Error!</sup><br>Reference source not found.                                           | <b>Title:</b> Conceptual Framework for the International Classification for Patient Safety<br><b>Year:</b> 2009                                                                                                    | USA                                                      | NA                                                                                                                                                                                                                             | There are 10 high-level classes in the ICPS conceptual framework:<br>- Outcomes for Patients<br>- Incident Type - Patient Characteristics - Incident Characteristics - Hazards and Contributing Factors<br>- Organizational Outcomes - Detection<br>- Factors that can be avoided - Improvement Efforts<br>- Risk Reduction Initiatives (15) <sup>Error!</sup><br>Reference source not found. |
| 13 | Ramírez, Elena, Martín, Alberto, Villán, Yuri, Lorente, et al                                                        | <b>Title:</b> Effectiveness and limitations of an incident-reporting system analyzed by local clinical safety leaders in a tertiary hospital <sup>Error!</sup><br>Reference source not found.<br><b>Year:</b> 2018 | University Hospital La Paz-Cantoblanco-Carlos III, Spain | Local clinical safety leaders analysed patient safety incidents, near misses, and adverse events that were reported to the IRS and suggested implementation based on that data.                                                | Improvement measures have come from the implementation of a hospital IRS, as well as the systematisation of the approach and analysis of IRSs by local Clinical safety directors.<br>According to the data, 63.15 percent of the modifications made reduced near-miss or unfavourable occurrences by a statistically significant amount.(5) <sup>Error!</sup><br>Reference source not found.  |
| 14 | Inge Dhamanti, Sandra Leggat, Simon Barraclough, and Benny Tjahjono <sup>Error!</sup><br>Reference source not found. | <b>Title:</b> Patient Safety Incident Reporting In Indonesia: An Analysis Using World Health Organization Characteristics For Successful Reporting<br><b>Year:</b> 2019                                            | Indonesia                                                | At the national, provincial, district, and local levels, officials from 16 Indonesian organisations were questioned. In Indonesia, a variety of event reporting standards, guidelines, and regulations were reviewed to see if | System-orientation and responsiveness, as well as a non-punitive system, confidentiality, expert analysis, and quick reporting, were all in high demand. The present norms, guidelines, and legislation in Indonesia do not fulfil all of the                                                                                                                                                 |

|    |                                                                                                                               |                                                                                                                                                                                                                    |                                                         |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                             |
|----|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                                               |                                                                                                                                                                                                                    |                                                         | they addressed the WHO characteristics. The findings were organised using thematic analysis.                                                                                                                                                                                                                             | WHO's incident reporting criteria to a large extent. Furthermore, officials at all levels lacked knowledge and understanding of the reporting system.(4)                                                    |
| 15 | Turyahabwe Naome, Mwesigwa James, Atuhairwe Christine, and Taremwa Ivan Mugisha <sup>Error! Reference source not found.</sup> | Title: Practice, perceived barriers and motivating factors to medical-incident reporting: a cross-section survey of health care providers at Mbarara regional referral hospital, southwestern Uganda<br>Year: 2020 | Mbarara regional referral hospital, southwestern Uganda | At Mbarara Regional Referral Hospital (MRRH) in Western Uganda, 158 health practitioners were evaluated in a cross-sectional descriptive study. A systematic questionnaire was used to gather data, which was subsequently analysed using SPSS. The chi-square test was used at MRRH to discover variables linked to MIR | The Medical Incident Reporting at MRRH was not up to standard. The establishment of an incident management team and routine MIR training for healthcare employees will therefore improve patient safety(28) |
| 16 | Kelsey Flott, Darren Nelson et al.                                                                                            | <b>Title:</b> Enhancing Safety Culture Through Improved Incident Reporting: A Case Study In Translational Research <sup>Error! Reference source not found.</sup><br><br>Year: 2018                                 | NHS Trust, United Kingdoms                              | An evidence-based response to the practical requirement of a healthcare provider setting is known as a translational approach <sup>Error! Reference source not found.</sup>                                                                                                                                              | A translational strategy is an evidence-based solution to a practical demand of a healthcare provider environment.(8)                                                                                       |

## **2.4 Conceptual Framework of the Study:**

A study conducted to understand incident reporting practices at KD Hospital in order to enhance patient safety and quality care by using incident reporting as a mechanism. Various factors were taken under consideration such as awareness regarding IRS, barriers to reporting, perception towards e-IRS and motivational factors. Training was used as an interventional method to improve IRS, and the results were evaluated. The results of the pre- and post-assessment tests were utilised to determine the impact of the training. The null hypothesis was formed by comparing pre- and post-assessment test results. As a result, the null hypothesis for the training impact was that there was no difference in pre and post assessment test results.



*Figure 1: Conceptual framework*

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Study Design:**

An exploratory study was chosen as the design for conducting this research. The term exploratory research refers to research that investigates a problem that has not been clearly defined. A researcher conducts exploratory research for a research problem when there is no previous data or only a few studies to refer to. The approach is often referred to as grounded theory or interpretive research because it uses the concept of what, why and how to answer questions. An action-research intervention strategy was used to assess the impact of intervention taken based on problem understood using exploratory study. As a basic principle of action research design, it is characterized by an exploratory approach in which an understanding of the problem is developed and strategies for intervention are developed. Following this, the intervention is taken and pertinent observations are gathered in various ways.(19)

As a result, an exploratory study using an action research technique is used in this study to identify the factors impacting incident reporting culture at KD Hospital in Ahmedabad, as well as to suggest an intervention plan to improve incident reporting. The personnel was polled in a cross-sectional survey to see if they were aware of the incident reporting system.

### **3.2 Study-site:**

This study was led among the clinical and non-clinical staff working in KD Hospital, Ahmedabad which is a super-speciality with state-of-the-art technology spread over a 6-acre complex with 300+ beds and over 45 super-specialties all under one roof.

### **3.3 Sample size:**

a. Sample size for exploratory research: For cross-sectional survey to evaluate patient safety event reporting culture in the hospital, 150 samples were included. The sample population comprise of nurses, medical officers, patient relations' officers, non-clinical managers and executive staff, contractual staff, laboratory staff and administrative staff of the hospital.

b. Sample size for action-research: To assess training efficiency, 32 samples were included. The sample population comprise of nurses, medical officers, patient relations' officers, non-clinical managers and executive staff, contractual staff, laboratory staff.

### **3.4 Study participants:**

|                                                       |            |
|-------------------------------------------------------|------------|
| Total population                                      | 741        |
| Respondents who did not fill the complete survey form | 25         |
| Total number of completed respondents                 | 125        |
| Response Rate                                         | <b>83%</b> |

*Table 1: Data characteristics*

The sample population were categorised into six categories including both clinical and non-clinical background. The staff involved in the study were-

- A. Patient care staff involving nurses and medical officers (31%)
- B. Patient frontline care staff involving patient relations' officers (10%)
- C. Back office staff involving non-clinical managers and executive staff (25%)
- D. Supportive care staff involving contractual staff such as housekeeping, steward, security staff, and attendant staff (14%)
- E. Diagnostic department staff involving staff of radiology, pathology and blood bank (16%)
- F. Administrative staff involving senior level managers and head of departments (4%)

### **3.5 Sampling Method:**

A non-probability convenient sampling method was used as sampling method as only those who were conveniently available were included in the study.

### **3.6 Inclusion criteria and Exclusion criteria:**

#### **Inclusion Criteria-**

- Respondents who were willing to participate
- Day shift staff

#### **Exclusion Criteria-**

- Night shift staff
- Respondents who were hesitant about the study

### **3.7 Study Duration:**

The study was conducted within a span of 03 months starting from 22<sup>nd</sup> March 2021 – 10<sup>th</sup> June, 2021.

### **3.8 Study Tool:**

- Cross-sectional survey: Paper based incident reporting questionnaire was used as a tool to collect data for cross sectional survey. The questionnaire was developed after reviewing various studies on incident reporting. Error! Reference source not found.,Error! Reference source not found. This questionnaire was made available in English, Hindi and Gujarati language to reduce the hesitancy in participating due to language barrier. (Annexure 1)
- Training assessment tool: A pre-training and post-training assessment test was used as a tool to assess the training efficiency (Annexure 2,3). This tool was designed to assess hospital incidents and incident reporting systems; as such, it was developed considering these factors.

### **3.9 Data Analysis method:**

- Cross-sectional survey: Of the sample size 150, 25 respondents' forms were incompletely filled. So the effective number of respondents turned out to be 125. This data was then analyzed using Microsoft excel.
- The training was conducted based on the subject of availability of staff. 32 participants showed up and training of those was conducted. Before starting with the training session, the participants were given a pre-training assessment test paper. After the training was over, the participants were given a post-training assessment test paper. Data collected from these pre and post-training assessment tests were analyzed using SPSS software by applying paired 't' test as a statistical tool to assess the training efficiency.

**3.10 Analytical framework:**

A fishbone diagram was used as an analytical framework to identify possible causes to underreporting of incidents at KD Hospital.

**3.11 Ethical Consideration:**

Every respondent was made aware of the purpose of the study before taking the response. Complete anonymity of the respondents was maintained throughout the investigation. The data gathered was kept secure and was not utilized for any other reason.

**3.12 Limitations of the study:**

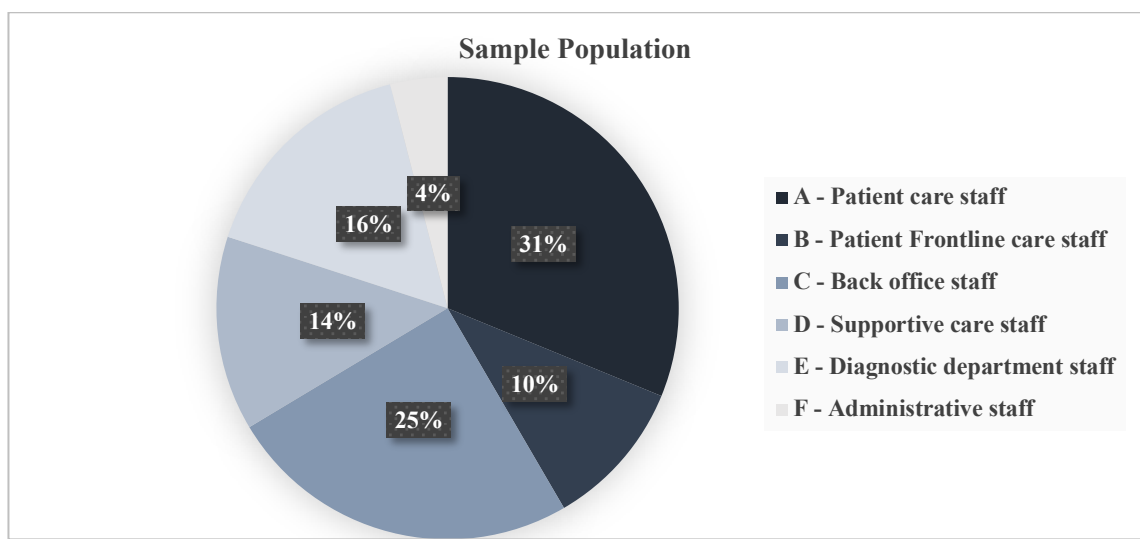
As we needed to limit questionnaire burden, we might have omitted variables and barriers that could have been important. Although responding anonymously, respondents may have provided a more socially acceptable response for fear of being identified. The non-responder bias could not be eliminated due to the anonymous design of the survey, which made collecting information about non-responders impossible. Moreover, the study could not accurately assess the impact of the intervention in terms of training, as it does not include data on the incident reporting rate post training.

## CHAPTER 4: RESULTS

### 4.1 Descriptive statistics: (Exploratory research based)

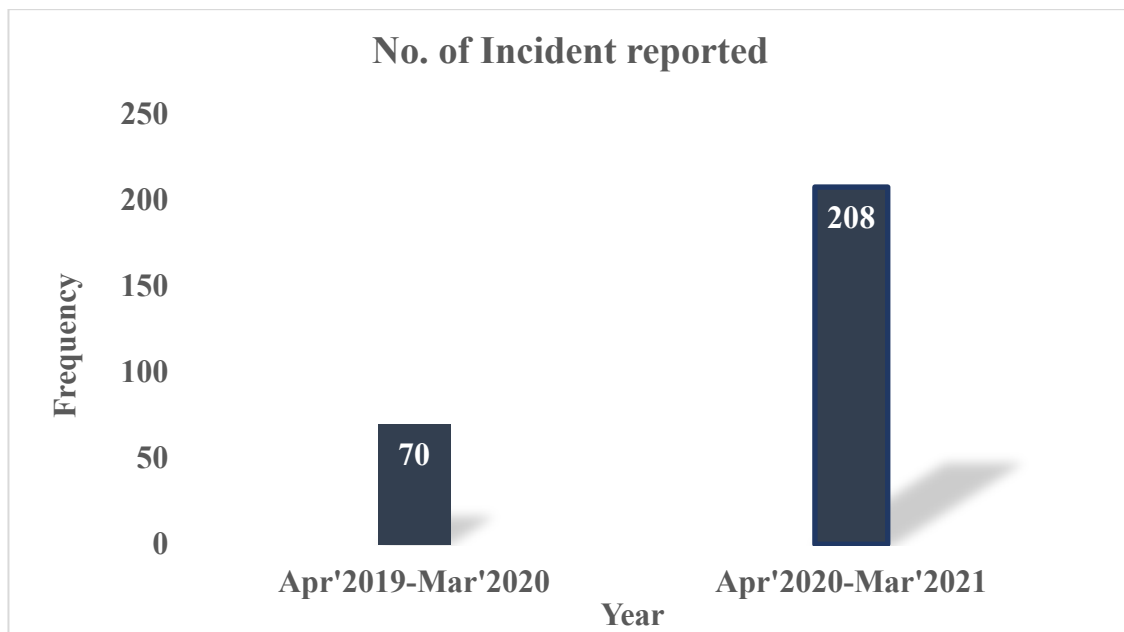
Our results were based on the cross-sectional survey questionnaire. The study planned to include survey of 150 samples to understand the staff behaviour towards incident reporting. The response rate of the sample population was 83% hence the actual sample size was 125. The results of the survey gave us results which can be quantified in terms of the frequency and their respective percentages.

The sample population was divided into six categories as per figure 2.



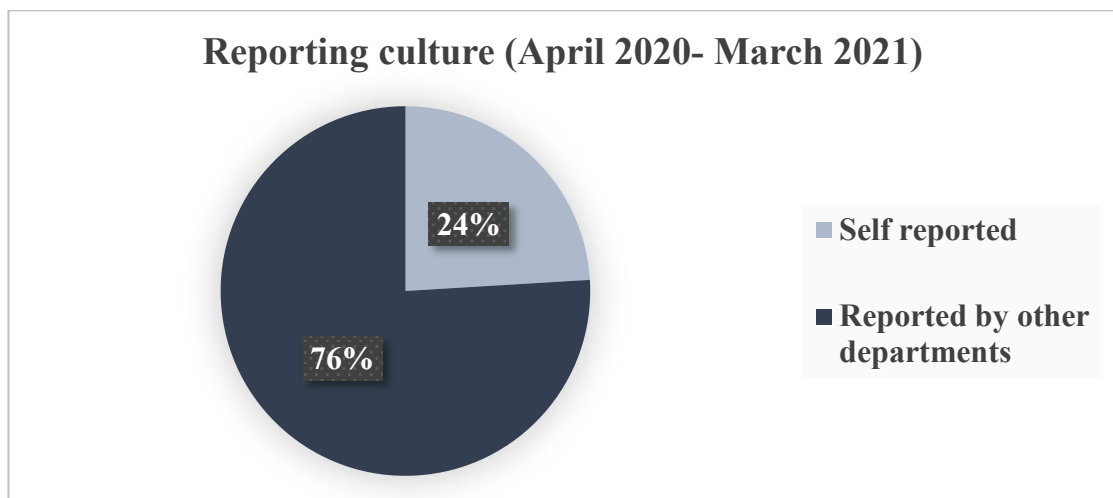
*Figure 2: Sample Population*

- A. Patient care staff involving nurses and medical officers (31%)
- B. Patient frontline care staff involving patient relations' officers (10%)
- C. Back office staff involving non-clinical managers and executive staff (25%)
- D. Supportive care staff involving contractual staff such as housekeeping, steward, security staff, and attendant staff (14%)
- E. Diagnostic department staff involving staff of radiology, pathology and blood bank (16%)
- F. Administrative staff involving senior level managers and head of departments (4%)



*Figure 3: No. of incidents reported in last two years*

The above figure depicts that in the year April 2019- March 2020, a total of 70 incidents and in the year April 2020- March 2021, a total of 208 incidents were reported.



*Figure 4: Reporting culture*

In the year April 2020- March 2021, out of 208 incidents, 76% (158) incidents were reported by other departments, while only 24% (50) incidents were self-reported.

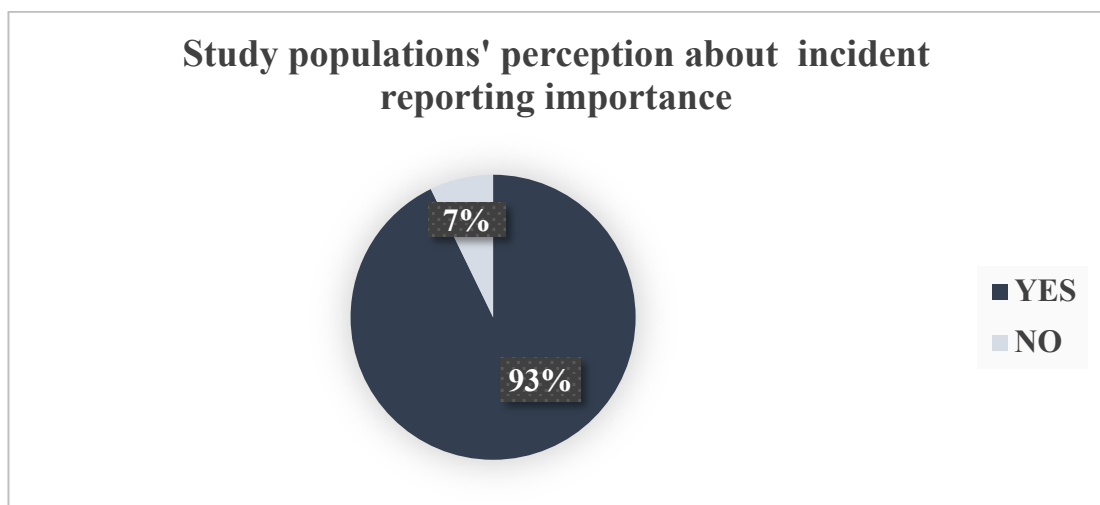
- The first aspect of the study was to know if the study population was aware regarding KD Hospital's IRS.



*Figure 5: Awareness among KD hospital staff regarding IRS*

In Figure 5, we can see that out of 125 respondents, 80 respondents were aware regarding the hospitals incident reporting system while, 27 respondents were partially aware and 18 respondents were fully unaware about the hospital's IRS.

- The next aspect was to understand the study populations' perception regarding importance of incident reporting.

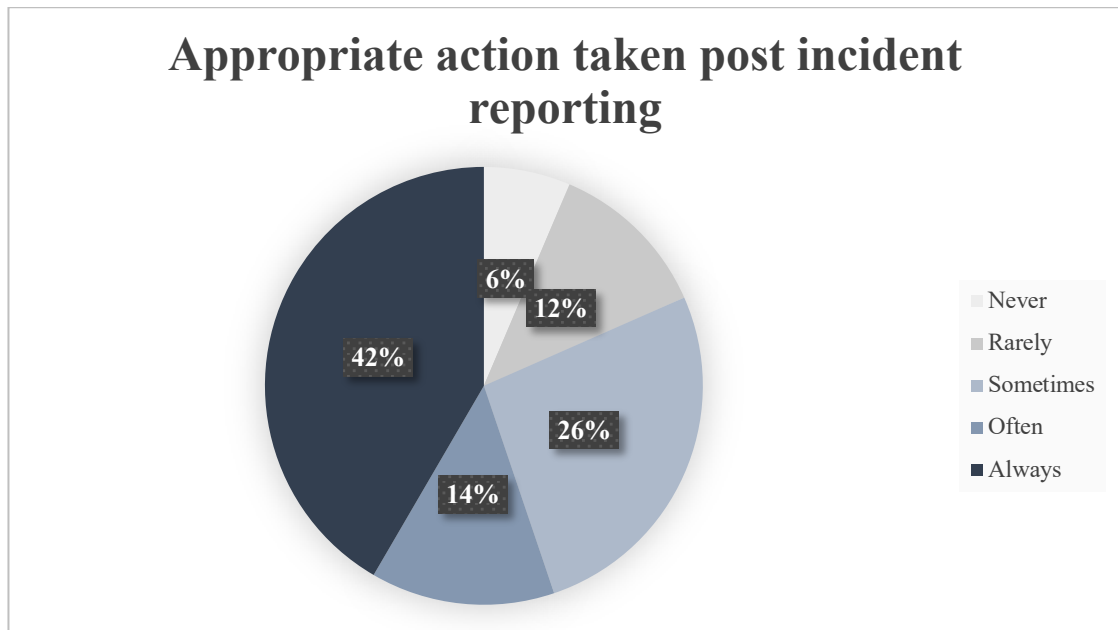


*Figure 6: Incident reporting importance among study population*

In figure 6, we can note that 93% of the respondents agreed that incident reporting is important in order to enhance patient safety and quality care, while 7% of the respondents denied the importance of incident reporting.

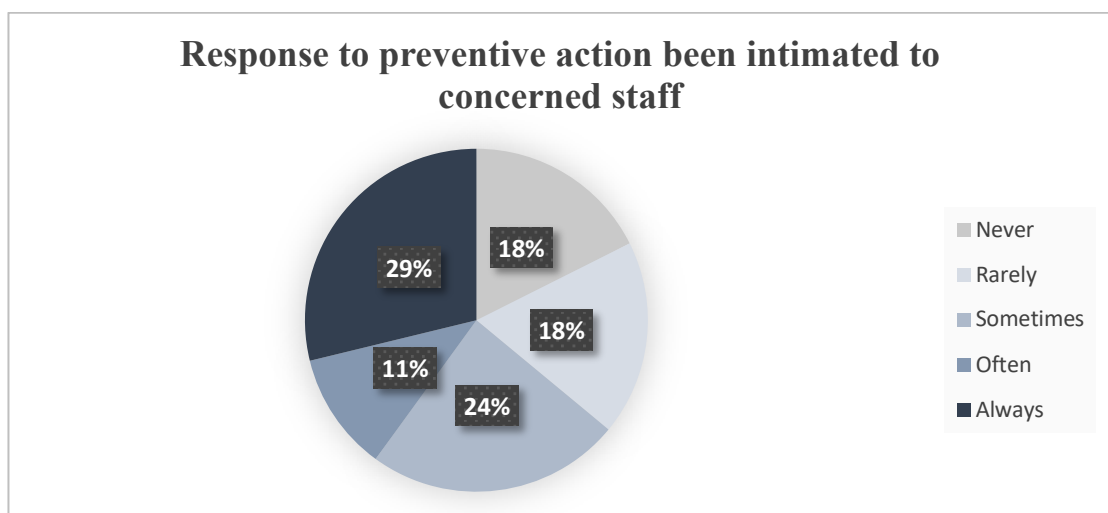
- Taking appropriate corrective and preventive action is one of the main purposes of incident reporting and intimating the same to the concerned staff is an important aspect to avoid repetition of similar incidents. Hence, analysis based on their response

for taking appropriate action after reporting incident as well as the same being intimated to the concerned staff was made as follow. To make the graphical representation, pie chart was used for representing answers given by respondents between always, often, sometimes, rarely and never.



*Figure 7: Appropriate action being taken post incident reporting*

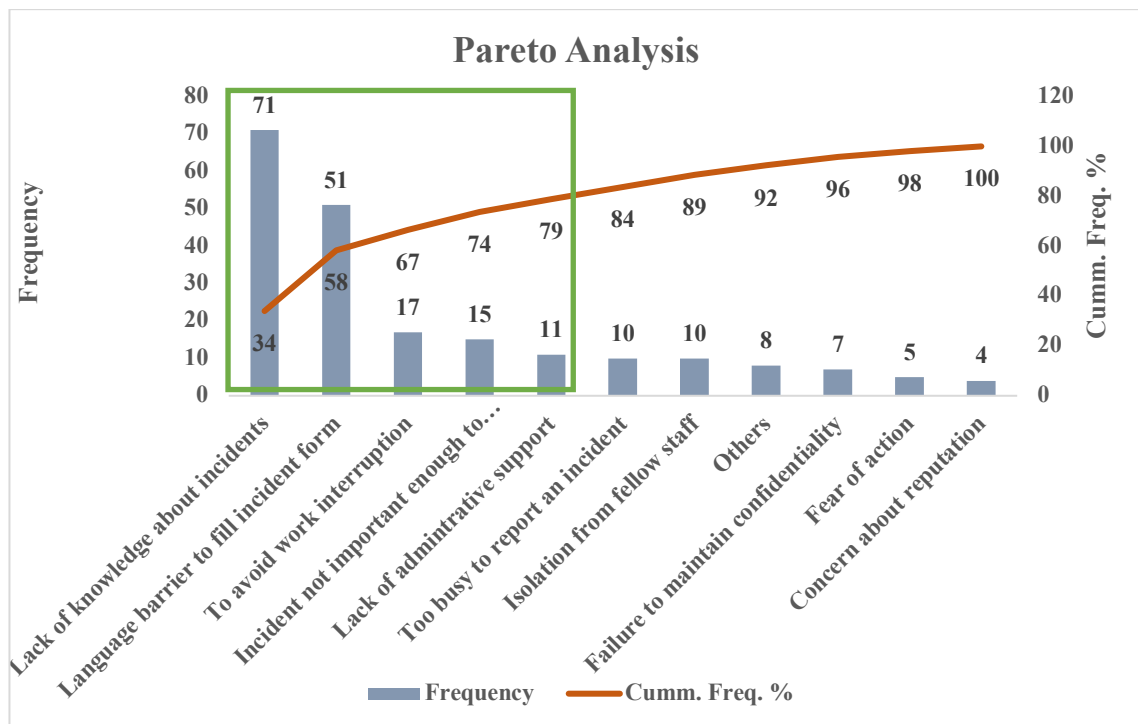
Figure 7 reveals that 42% of respondents agreed that appropriate action was taken when an incident was reported, while 26% and 14% answering sometimes and often, respectively. It's noteworthy to note that 6% of respondents believe that action taken after reporting is not appropriate, while the remaining 12% believe that appropriate action is done only rarely after an incident is reported.



*Figure 8: Response to preventive action been intimated to concerned staff*

Similarly, when asked if preventive action on incidents was communicated to the relevant staff/teams in order to avoid repetition, the responses ranged from always to never, with 29%, 11%, 24%, 18%, and 18%, respectively as shown in figure 8. A mixed response has been noted in doing this analysis as there is a very minor difference between the percentages.

- The major aspect of the study was to understand the factors affecting the incident reporting behaviour. Multiple response from the study population was then analysed.



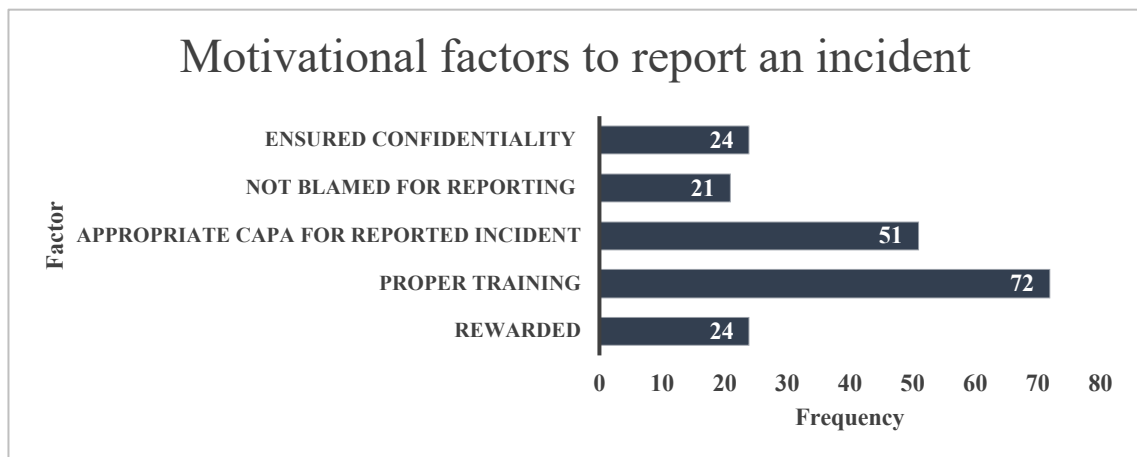
*Figure 9: Pareto analysis of the factors affecting incident reporting behaviour among respondents*

As in figure 9, we can see that a Pareto chart has been used as a decision making tool to derive the top causes for underreporting of incidents. We can say that 80% of the problem is due to the 46% of the causes (vital few) which includes –

- Lack of knowledge about the incidents
- Language barrier in filling out the incident form
- To avoid work interruption
- An incident not being important enough to report
- A lack of administrative support

The remaining 20% of the problem (trivial many) includes-

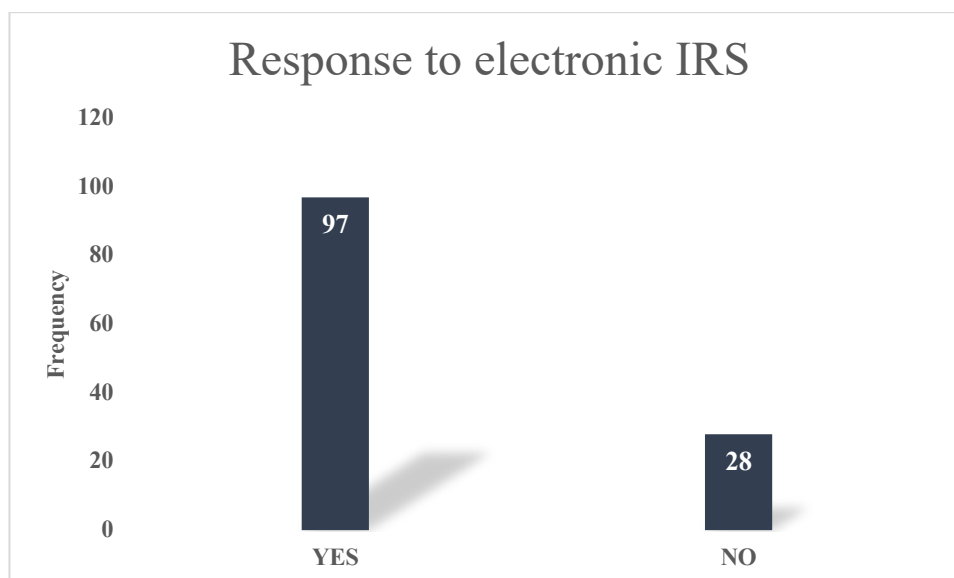
- i. Too busy to report an incident
  - ii. isolation from co-workers
  - iii. failure to maintain confidentiality
  - iv. fear of action
  - v. Concern about their reputation
  - vi. Others (Those who responded to others as their option, reported incidents as they happened, hence the mentioned reasons did not apply to them.)
- The next aspect to analyse was the motivational factors that could possibly motivate the staff to report an incident. Multiple response from the respondents were then analysed.



*Figure 10: Motivational factors to report an incident*

Figure 10 clearly depicts that the major respondents (i.e., 72 responses) considered training about incidents and the IRS as an important motivational factor to enhance incident reporting. The respondents who believed that an appropriate CAPA was not taken after reporting an incident (51 responses) agreed that an appropriate CAPA for a reported incident was their motivating factor to report it. Respondents also considered rewards (24 responses), confidentiality (24 responses) and blame free (21 responses) culture as their motivational factors.

- KD Hospital currently uses a paper-based incident reporting system. An electronic IRS would assist staff in reporting an incident to the HMIS, potentially saving significant time, and would keep all concerned staff in the loop so that they could see the actions taken, potentially avoiding the repetition of similar incidents.



*Figure 11: Response to electronic IRS*

When asked if they thought an electronic incident reporting system would make it easier to report an incident, as shown in figure 11, 97 respondents said yes, while only 28 said no. Hence, we can say that e-IRS can play a major role in enhancing incident reporting system at KD Hospital.

#### **4.3 Inferential Statistics: (Action-research based)**

Lack of knowledge about incidents was the key factor affecting incident reporting behaviour of the personnel at KD Hospital, according to our analysis. Effective training was cited by employees as a motivating element in improving incident reporting.

So, the next step was to train hospital staff members on incidents and the hospital's incident reporting system in addition to creating awareness of why reporting incidents is important. In accordance with the availability of samples, 32 samples received training. Before giving training, the participants were given a pre-training assessment test paper. A 30-minute training session followed. Once the training session was done, a post-training assessment test paper was given to the participants.

Scores from both pre and post training assessment test were noted. Paired 't' test was used as a statistical tool to understand the effectiveness of training. The results were analysed using SPSS software.

**Null Hypothesis:** There is no difference between the pre and post training assessment scores.

**Alternate Hypothesis:** There is difference between the pre and post training assessment scores.

| Paired Samples Statistics |      |    |                |                 |
|---------------------------|------|----|----------------|-----------------|
|                           | Mean | N  | Std. Deviation | Std. Error Mean |
| Pre_training_score        | 3.94 | 32 | 1.014          | 0.179           |
| Post_training_score       | 7.66 | 32 | 1.494          | 0.264           |

*Table 2: Descriptive statistics for paired 't' test*

| Paired Samples Test                      |                    |                |                 |                                           |         |    |       |              |             |
|------------------------------------------|--------------------|----------------|-----------------|-------------------------------------------|---------|----|-------|--------------|-------------|
| Pre_training_score - Post_training_score | Paired Differences |                |                 |                                           |         | t  | df    | Significance |             |
|                                          | Mean               | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |         |    |       | One-Sided p  | Two-Sided p |
|                                          |                    |                |                 | Lower                                     | Upper   |    |       |              |             |
|                                          |                    |                |                 |                                           |         |    |       |              |             |
|                                          |                    |                |                 |                                           |         |    |       |              |             |
| -3.719                                   | 1.442              | 0.255          | -4.239          | -3.199                                    | -14.587 | 31 | <.001 | <.001        |             |

*Table 3: Inferential statistics for paired 't' test*

As shown in table 2, the mean value for pre-training score was 3.94 while 7.66 for post training scores with 1.014 and 1.494 std. deviation respectively.

As shown in table 3:

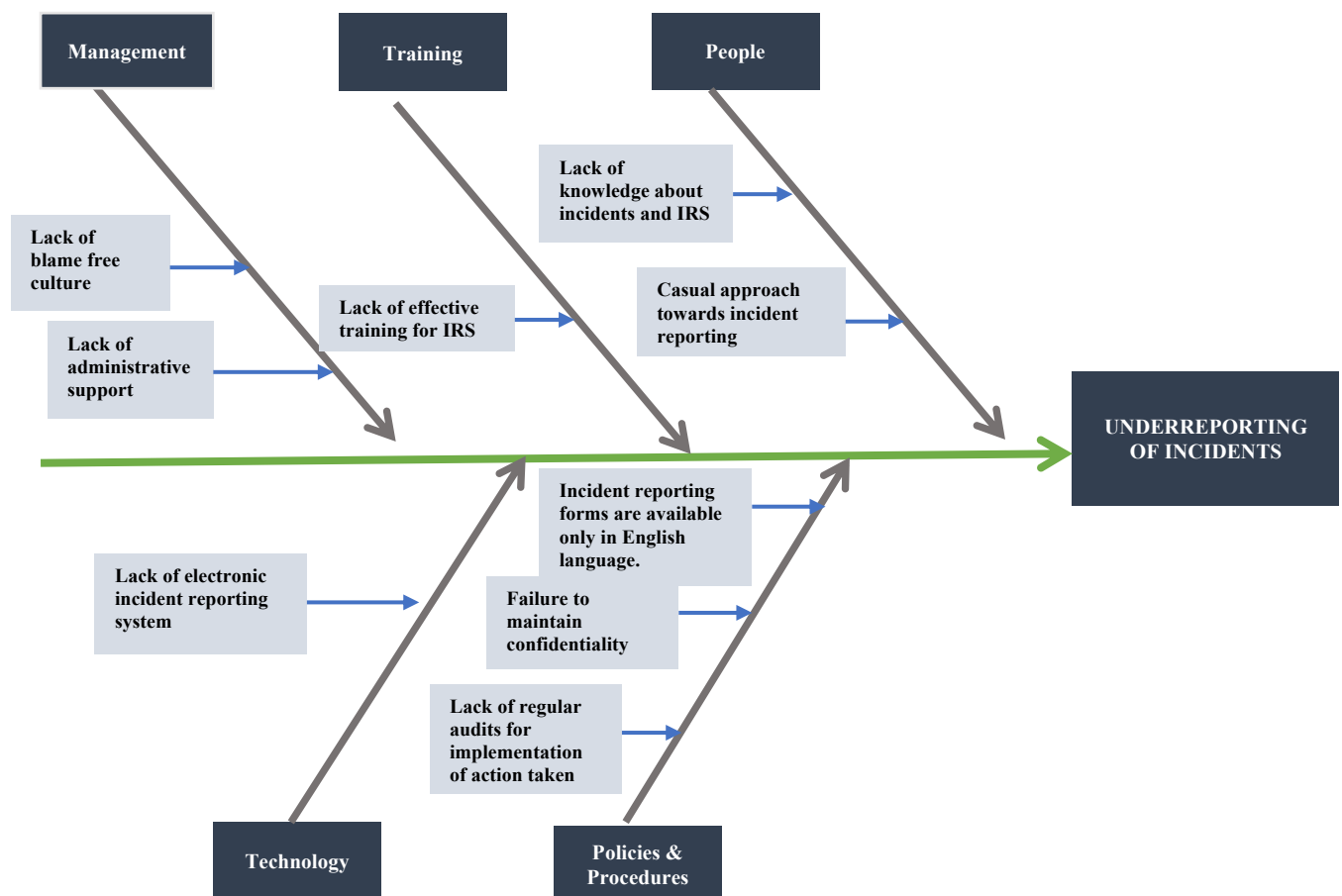
- Our t value (14.587) is much greater than the critical value CV (2.040) at 31 degree of freedom and 95% confidence interval.
- Our p value (<.001) is also less than 0.05.
- Neither our upper value nor does our lower value at 95% CI includes 0.

Hence, we rejected our null hypothesis and accepted the alternate hypothesis.

Therefore, we can say that training was effective in terms of imparting knowledge regarding incidents and IRS to the staff. However, the impact of training can only be assessed by comparing it with the incident reporting rate after giving training to entire staff of the hospital.

## CHAPTER 5: DISCUSSION

- The study reveals some major findings pertaining to incident reporting culture. The current Incident Reporting practice reveals that the number of incidents reported is significantly less. Despite knowing the importance of incident reporting and the hospital's incident reporting system, reporting is far too limited. Fear of punitive action and a blame culture have been identified as reasons for the hospital's lack of a self-reporting culture. However, even though most staff were aware of the existence of Incident reporting system, more than a quarter stated that they lack sufficient knowledge about incidents and thus don't know when to report them. Despite the fact that nonprobability sampling is less perfect than random selection, our results were similar to those found by SM Evans et al in a collaborative hospital research, implying that the findings are representative. (11)
- Root cause analysis for barriers leading to underreporting of incidents is done using a fishbone diagram as shown in figure 12.



*Figure 12: Fishbone Diagram*

- According to the results, the majority of respondents agreed that appropriate preventive actions were taken following the reporting of an incident and that the same was communicated to the relevant staff. However, there was a minority of respondents who disagreed, which could not be ignored.
- The majority of respondents thought the electronic incident reporting system will make incident reporting easier.
- 71 respondents agreed that knowing what to report, how to report it, and who to report it to when an incident occurs is critical. It is self-evident that one should never report anything about what he or she does not comprehend, as well as to whom and how.
- The study identified motivational factors that could enhance incident reporting in the hospital. The majority of respondents considered training as the major encouraging factor followed by a blame-free culture, reward and appreciation, appropriate CAPA, and maintaining the confidentiality of those reporting the incidents.
- Therefore, a sample population was trained to determine its effectiveness. The results of the study demonstrate that effective training increased understanding of incidents and the incident reporting process in the hospital. Statistically certain, the effectiveness of the training cannot be determined because the study failed to track the frequency of incidents reported post-training. Hence, there is a need for further research to understand the impact of training on incident reporting. It will allow us to know if there is any significant difference in the incident reporting rate after training the entire population of the Hospital.

## **CHAPTER 6: CONCLUSION**

### **5.1 Summary of the findings**

The study reveals that there are certain loopholes in the incident reporting practices at the hospital because of which there is a lower rate of incident reporting. Lack of incident related knowledge and language barriers to fill the incident form are the major barriers to report an incident followed by work interruption, too trivial to report, lack of administrative support, too busy, isolation from co-workers, failure to maintain confidentiality, fear of action and concern about their reputation. The study also identified some motivational factors such as training, rewards, confidentiality, proper CAPA and blame free incident reporting culture. Training as an interventional strategy proved to be effective.

### **5.2 Conclusions**

The goal of this study was to find out how people in the safety culture felt about reporting incidents among the KD Hospital's entire staff and to elicit their willingness to report incidents. This study provides integrated findings based on a questionnaire survey of the hospital's staff attitudes and barriers to reporting patient safety events. According to the survey results, one of the biggest hurdles to incident reporting is a lack of awareness about events and the IRS. In addition, the survey discovered a number of characteristics that increase incident reporting.

### **5.3 Recommendations:**

Training proved to be an effective intervention in terms of enhancing knowledge regarding incidents and incident reporting system of the hospital. Hence, continuous training for encouraging the already trained staff and imparting knowledge of newly joined staff is vital.

Another barrier for reporting incidents was the language barrier as the forms available for reporting incidents are only in English language hence the forms shall be made available in Hindi and the local language i.e., Gujarati. This will allow the ground level staff such as housekeeping, security staff, attender staff and stewards to report incidents. An e-

reporting system shall be incorporated as this will ease the whole process of reporting. The failure of hospital reporting systems is commonly cited as a result of ineffective communication of outcomes. Hence, with an e-IRS in place, all the concerned staff can get information about the entire incident with its RCA and CAPA in one place and implementation of the actions taken can be done promptly. The existing incident reporting form lacks anonymity. Hence, a revised form maintaining the confidentiality of those reporting an incident shall be put in place.

Reduce the reporting threshold by encouraging employees to report even minor incidences, which are just as significant in identifying and analysing problems as major events.

When it comes to reporting, administrative help can make a major impact. Employees may fear they may be victimised if they report events. Trust is the most important factor. Staff members who report issues must trust that senior staff and management would treat them properly and not criticise them unfairly or make them a victim if the system is to succeed. It is imperative that senior employees and management have faith that the team will maintain vigilance and report concerns as they arise. It will take time for employees to grasp that reporting occurrences will not result in disciplinary action. Most health care workers embrace the reporting system once they see visible changes and see that their commitment to safety is valued.

Regular audits should be done to ensure implementation of the preventive actions taken. Lastly, it is imperative that we foster a Team Approach, since patient safety and quality care are shared responsibilities, and not exclusive to one individual.

#### **5.4 Scope for future work:**

Statistically certain, the effectiveness of the training cannot be determined because the study failed to track the frequency of incidents reported post-training. Hence, it would be worthwhile to conduct further research to accurately measure the impact of training the entire hospital staff and to measure incident reporting levels after the training.

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## *Annexure 1*

### **Incident Reporting Survey Questionnaire**

- 1. Please mark the correct employee category you fall into.**
  - i) A- Patient care staff
  - ii) B- Patient frontline care staff
  - iii) C- Back office staff
  - iv) D- Supportive care staff
  - v) E- Diagnostic department staff
  - vi) F- Administrative staff
- 2. Are you aware about the organization's incident reporting system?**
  - i) Yes
  - ii) No
  - iii) Partially aware
- 3. Do you think that incident reporting is important?**
  - i) Yes
  - ii) No
- 4. What is the justified reason for you to not report an incident?**
  - i) Lack of knowledge about the incidents
  - ii) Language barrier to fill the incident form
  - iii) Failure of administration to keep confidentiality of those who reports an incident
  - iv) Lack of organizational support
  - v) Do not think that the incident is important enough to report
  - vi) Fear of disciplinary action
  - vii) Too busy to report an incident
  - viii) Concern about your reputation
  - ix) To avoid work interruption
  - x) Isolation by fellow staff after one has reported an incident
  - xi) Others \_\_\_\_\_
- 5. Do you think that an appropriate action is been taken if an incident is reported?**
  - i) Never
  - ii) Rarely
  - iii) Sometimes
  - iv) Often
  - v) Always
- 6. Do you think that an electronic based incident reporting system would be easier to report an incident?**
  - i) Yes
  - ii) No
- 7. Do you think that preventive action of incidents is conveyed to concerned staff/ team to avoid repetition of the same?**
  - i) Never
  - ii) Rarely
  - iii) Sometimes
  - iv) Often
  - v) Always
- 8. What is the factor that would encourage you to report an incident?**
  - i) If I'm rewarded for reporting an incident
  - ii) If training for proper reporting of an incident is given
  - iii) If appropriate corrective & preventive actions are taken
  - iv) If I'm not blamed for reporting an incident
  - v) If confidentiality is maintained for reporting an incident
  - vi) Others \_\_\_\_\_

## *Annexure 2*

### **Pre - Training Assessment**

**Name of the Employee:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Employee ID:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Marks :10**

**A. Identify the type of incident (near miss, incident, adverse, sentinel) - 5 marks**

1. Patient trying to get out of the bed with high fall score and slipped leading to brain injury \_\_\_\_\_
2. Left side total knee replacement was done instead of right side due to wrong site marking \_\_\_\_\_
3. Expired medication dispatched by IP pharmacy to ER \_\_\_\_\_
4. Unlabeled urine culture was sent to laboratory \_\_\_\_\_
5. Power trip at server room \_\_\_\_\_

**B. Tick the correct options - 5 marks**

1. Completion time for root cause analysis and action plan in case of near miss event?
  - a. 48 hours
  - b. 24 hours
  - c. 36 hours
  - d. Immediately
2. What would be your steps if you witness/commit an incident?
  - a. To inform quality department
  - b. To inform the concern department head
  - c. To fill the incident form
  - d. All of the above
3. Completion time for root cause analysis and action plan in case of sentinel event?
  - a. 48 hours
  - b. 24 hours
  - c. 36 hours
  - d. Immediately
4. Where are you supposed to submit the Incident reporting form after taking corrective & preventive action?
  - a. To the department where the incident happened
  - b. To quality department
  - c. To your own department head
  - d. Both (a) & (b)
5. Who are the team member in the root cause analysis meeting?
  - a. Quality team member
  - b. Staff of the department where the incident happened along with the HOD
  - c. Staff of the department by who the incident happened along with the HOD
  - d. All of the above

### *Annexure 3*

#### **Post - Training Assessment**

**Name of the Employee:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Employee ID:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Marks :10**

**C. Identify the type of incident (near miss, incident, adverse, sentinel) - 5 marks**

6. Patient trying to get out of the bed with high fall score and slipped leading to brain injury \_\_\_\_\_
7. Left side total knee replacement was done instead of right side due to wrong site marking \_\_\_\_\_
8. Expired medication dispatched by IP pharmacy to ER \_\_\_\_\_
9. Unlabeled urine culture was sent to laboratory \_\_\_\_\_
10. Power trip at server room \_\_\_\_\_

**D. Tick the correct options - 5 marks**

6. Completion time for root cause analysis and action plan in case of near miss event?
  - e. 48 hours
  - f. 24 hours
  - g. 36 hours
  - h. Immediately
7. What would be your steps if you witness/commit an incident?
  - e. To inform quality department
  - f. To inform the concern department head
  - g. To fill the incident form
  - h. All of the above
8. Completion time for root cause analysis and action plan in case of sentinel event?
  - e. 48 hours
  - f. 24 hours
  - g. 36 hours
  - h. Immediately
9. Where are you supposed to submit the Incident reporting form after taking corrective & preventive action?
  - e. To the department where the incident happened
  - f. To quality department
  - g. To your own department head
  - h. Both (a) & (b)
10. Who are the team member in the root cause analysis meeting?
  - e. Quality team member
  - f. Staff of the department where the incident happened along with the HOD
  - g. Staff of the department by who the incident happened along with the HOD
  - h. All of the above