

Assessing the Patient Safety Culture at a Super-Specialty Charitable Hospital

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Abstract—A comprehensive assessment of patient Safety Culture (PSC) at a super-specialty charitable hospital in New Delhi. Conducted from May to July 2025, the study aimed to evaluate the effectiveness of existing processes and systems in ensuring patient safety across various departments and to examine the quality of communication, teamwork, and the incident reporting culture within the hospital.

A quantitative research design was employed, utilizing a modified version of the Hospital Survey on Patient Safety Culture (HSOPSC) tool. Data was collected via structured questionnaires from a sample of 656 healthcare professionals, including doctors, nurses, and administrative staff, selected through stratified random sampling across 20 key departments.

The analysis revealed significant strengths in areas such as departmental reviews of work processes, implementation of positive changes post-error, perceived effectiveness of safety procedures, and strong teamwork among employees. Staff also expressed confidence in leadership responsiveness and the value of quality-safety training sessions. However, the study identified critical gaps, including inconsistent communication of patient safety errors across units, underreporting of incidents (especially non-harmful errors), and concerns regarding workload intensity and information loss during shift changes.

The report concludes that while a foundational culture of safety exists, targeted interventions are necessary to foster a more robust and proactive PSC. Key recommendations include standardizing and enhancing communication protocols, tailoring training programs to specific departmental needs, strengthening non-punitive error reporting mechanisms, and promoting more proactive management involvement. These measures are essential for continuous improvement in patient safety outcomes and aligning with global healthcare quality standards.

Index Terms—Patient Safety Culture, Hospital Survey on Patient Safety Culture (HSOPSC), Healthcare

Quality, Error Reporting, Communication, Teamwork, Super-Specialty Hospital.

I. INTRODUCTION TO PATIENT SAFETY CULTURE

In the realm of healthcare, ensuring patient safety has emerged as a critical concern, drawing attention from ancient times to the modern era[1]. Patient safety is defined as “the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum”[2]. Within the broader health system context, it is “a framework of organized activities that creates cultures, processes, procedures, behaviours, technologies and environments in health care that consistently and sustainably lower risks, reduce the occurrence of avoidable harm, make error less likely and reduce impact of harm when it does occur” [2]. Patient safety is a critical aspect of healthcare quality, encompassing the prevention of errors and adverse effects to patients associated with healthcare. The culture of patient safety within healthcare organizations is fundamental in fostering an environment where patient safety is prioritized, and errors are minimized [3].

Patient safety culture (PSC) is a critical component of healthcare quality, influencing both patient outcomes and staff performance [4]. The concept of patient safety culture encompasses the collective values, beliefs, and behaviors that healthcare professionals share regarding the importance of safety in their daily practices. A positive patient safety culture is characterized by open communication, teamwork, and a non-punitive approach to error reporting, which are essential for identifying and mitigating risks within healthcare settings [4]. It is a distinct yet intertwined

with patient safety, representing the collective values, beliefs, and behaviors within healthcare organizations that promote safe practices [1].

The poor PSC correlates with lower-quality care and a higher incidence of medical errors. Recognizing this, it becomes imperative to gauge healthcare professionals' attitudes towards patient safety, especially among physicians and other healthcare providers (HCPs) who face varied challenges in clinical settings [1]. There are many unique challenges in establishing and maintaining a robust patient safety culture these challenges are compounded by resource constraints, variations in healthcare infrastructure, and historical practices [6]. Despite significant advancements in medical science and healthcare delivery, patient safety remains a global challenge, particularly in countries with limited resources[6]. Several strategies have been identified to enhance patient safety culture, including patient safety education and training , the utilization of Team Strategies and Tools to Enhance Performance and Patient Safety, and root cause analysis[7]. However, factors such as long working hours for nurses have been reported to negatively impact patient safety culture . Studies in China and Korea have similarly found that deteriorating working conditions are linked to poorer patient safety culture[7] .

A variety of tools have been developed to measure patient safety culture, with the Hospital Survey on Patient Safety Culture (HSOPS), developed by the US Agency for Healthcare Research and Quality (AHRQ) in 2004 [5]. HSOPS has been employed globally to report variations in safety culture among healthcare facilities, departments, and occupational categories. Studies from North America, Europe, Asia, and the Middle East have all utilized the survey [12]. It helps identify areas of organizational failures or weaknesses at all levels, providing valuable insights for improving patient safety [5]. In Asia, related studies have primarily focused on evaluating the psychometric properties of the Hospital Survey on Patient Safety Culture (HSOPSC) [12]. In 2010, the French National Health Authority (Haute Autorité de Santé, HAS) integrated a criterion for patient safety culture into the national accreditation process for all French hospitals, reflecting the increasing importance of these survey results for healthcare decision-makers [13]. Establishing a strong patient safety culture is essential to mitigate risks, improve care quality, and ensure

patient safety, globally because in countries like Ethiopia, existing studies using the Agency for Healthcare Research and Quality's (AHRQ) patient safety culture survey tool reveal alarmingly low positive patient safety grades due to poor understanding and implementation of patient safety culture in Africa[8].

The relationship between workplace pressure and burnout significantly impacts patient safety, studies have demonstrated that patient safety culture scores tend to be lower in environments where burnout is prevalent, high scores are often associated with factors such as supervisory expectations and teamwork within units, whereas nonpunitive responses to mistakes typically score the lowest[10]. The cultivation of a robust patient safety culture is identified as a key factor in reducing adverse events (AEs) in healthcare settings, despite significant efforts, AEs continue to present a global challenge, with no country having fully resolved its patient safety issues, developed nations, the incidence of AEs ranges from 2.9% to 16.6%, and in the United States alone, medical errors contribute to an estimated 44,000 to 98,000 deaths annually and the situation is even more dire in developing countries, where resource limitations and inadequate infrastructure exacerbate patient safety risks [9]. Despite the extensive use of staff surveys to measure safety culture, there has been limited attention to patients' perceptions of safety culture during their hospital stays. Patients and their relatives experience and observe safety culture through interactions and observations, providing a unique and valuable perspective that can complement staff and management views[14].

II. BACKGROUND

Patient safety culture is a critical aspect of healthcare quality and delivery, significantly impacting patient outcomes, staff well-being, and overall organizational performance. Within hospital settings, the culture surrounding patient safety is shaped by the collective attitudes, beliefs, perceptions, and values of the staff members[1]. This culture influences how safety protocols are implemented, how errors are reported and addressed, and how continuous improvement is pursued [2]. The concept of patient safety culture emerged from the broader notion of organizational

culture, which encompasses the shared norms and practices within a workplace. In healthcare, patient safety culture specifically focuses on reducing harm to patients and enhancing care quality[3]. It is built on the principles of transparency, accountability, and continuous learning. A positive patient safety culture encourages open communication, where staff feel comfortable reporting mistakes and near misses without fear of punitive action. This openness is crucial for identifying potential safety hazards and developing strategies to mitigate them[6].

The significance of patient safety was highlighted by the Institute of Medicine's (IOM) landmark report "To Err Is Human: Building a Safer Health System" published in 1999[15]. The report revealed that medical errors were a leading cause of death in the United States, prompting a global call for systemic changes to improve patient safety. Since then, numerous initiatives and frameworks have been developed to foster a culture of safety in healthcare institutions. Despite these efforts, the journey towards achieving a robust patient safety culture remains ongoing, with varying degrees of success across different settings.[15]

Factors Influencing Patient Safety Culture

Several factors influence the development and sustainability of patient safety culture within hospitals. Leadership commitment is paramount, as leaders set the tone for safety priorities and allocate resources to support safety initiatives. Staff engagement and empowerment also play a vital role, as engaged employees are more likely to adhere to safety protocols and contribute to safety improvements[8]. Training and education programs are essential for equipping staff with the knowledge and skills needed to practice safely. Additionally, effective communication and teamwork are critical components, as they enable the sharing of information and collaborative problem-solving.

□ Leadership and Management

Effective leadership and management practices are fundamental to cultivating a patient safety culture. Leaders must not only endorse safety initiatives but also actively participate in them, demonstrating their commitment to safety through their actions. This includes providing necessary resources, facilitating staff training, and fostering an environment where safety concerns can be raised without fear of retribution.

Leadership styles that are inclusive, supportive, and transparent tend to be more successful in promoting a safety culture compared to authoritarian or punitive approaches[16].

□ Staff Engagement and Empowerment

The engagement and empowerment of healthcare staff are crucial for the success of patient safety culture. When staff members feel valued and involved in decision-making processes, they are more likely to take ownership of safety practices and contribute to a positive safety culture. Empowerment can be achieved through continuous professional development opportunities, recognition of staff contributions, and the establishment of clear and achievable safety goals[16].

□ Training and Education

Ongoing training and education are vital for maintaining a high standard of patient safety. Regular training programs that cover the latest best practices, safety protocols, and emerging risks ensure that healthcare professionals are well-equipped to handle various safety challenges. Simulation-based training, in particular, has proven effective in preparing staff for real-life scenarios without compromising patient care[16].

□ Communication and Teamwork

Effective communication and teamwork are at the heart of a strong patient safety culture. Clear communication channels and protocols ensure that critical information is accurately conveyed and understood by all team members. Interdisciplinary collaboration, where different healthcare professionals work together, fosters a holistic approach to patient safety. Teamwork exercises, such as regular safety huddles and debriefings, can help identify potential safety issues and develop coordinated responses[17].

Challenges in Establishing a Patient Safety Culture

Despite the recognized importance of patient safety culture, hospitals face numerous challenges in establishing and maintaining it. High workload and staffing shortages can lead to burnout and reduced vigilance, compromising safety. Resistance to change and hierarchical barriers can hinder the adoption of new safety practices. Moreover, inconsistent safety policies and procedures across different departments can create confusion and reduce compliance[18].

□ High Workload and Staffing Shortages

High workloads and staffing shortages are common challenges in healthcare settings that can negatively

impact patient safety culture. Overworked staff are more prone to errors due to fatigue and stress. Ensuring adequate staffing levels and manageable workloads is essential for maintaining vigilance and adherence to safety protocols. This requires careful workforce planning and resource allocation to balance patient care demands with staff well-being[16].

□ Resistance to Change

Resistance to change is another significant barrier to establishing a patient safety culture. Staff may be hesitant to adopt new safety protocols or reporting systems due to fear of the unknown, comfort with existing practices, or skepticism about the effectiveness of new initiatives. Overcoming this resistance requires effective change management strategies, including clear communication of the benefits of new practices, involvement of staff in the planning and implementation process, and continuous support during the transition period[16].

□ Hierarchical Barriers

Hierarchical barriers can impede open communication and collaboration, which are essential for a robust safety culture. In some healthcare settings, lower-ranking staff may feel intimidated or reluctant to speak up about safety concerns to higher-ranking colleagues. [17].

□ Inconsistent Safety Policies

Inconsistent safety policies and procedures across different departments can lead to confusion and reduce compliance. Standardizing safety protocols and ensuring their consistent application across the entire organization is crucial for maintaining a cohesive safety culture. This requires coordinated efforts from hospital leadership, quality assurance teams, and departmental managers to develop and enforce uniform safety standards[18].

□ Current Research and Gaps

Research on patient safety culture has expanded over the past two decades, focusing on various aspects such as measurement tools, interventions to enhance safety culture, and the impact of safety culture on patient outcomes. Tools like the Safety Attitudes Questionnaire (SAQ) and the Hospital Survey on Patient Safety Culture (HSOPSC) are widely used to assess safety culture within healthcare organizations. However, gaps remain in understanding the long-term sustainability of safety culture interventions and the specific contextual factors that influence their effectiveness[18].

□ Measurement Tools

The development and use of measurement tools have been central to assessing patient safety culture. The Safety Attitudes Questionnaire (SAQ) and the Hospital Survey on Patient Safety Culture (HSOPSC) are among the most widely used tools. These instruments help identify areas of strength and weakness within an organization's safety culture, guiding targeted interventions. However, while these tools provide valuable insights, there is a need for more nuanced measures that can capture the complexities of safety culture in diverse healthcare settings[17].

□ Sustainability of Interventions

One of the critical gaps in current research is understanding the long-term sustainability of safety culture interventions. Many studies focus on short-term outcomes, leaving questions about the enduring impact of these initiatives. Longitudinal studies are needed to track the persistence of safety culture improvements over time and identify factors that contribute to their sustainability[16].

□ Contextual Factors

The influence of contextual factors on patient safety culture is another area that requires further exploration. These factors include organizational structure, resources, patient demographics, and external regulatory environments. Understanding how these variables interact with safety culture can help tailor interventions to specific contexts, enhancing their effectiveness[18].

III. AIMS & OBJECTIVES

AIMS:

- To address the critical need for a robust patient safety culture in healthcare

Patient safety culture is a cornerstone of high-quality healthcare delivery, as it directly influences the attitudes, behaviors, and practices of healthcare professionals in relation to preventing harm to patients. This study aims to underscore the urgent necessity of fostering a strong and proactive patient safety culture within healthcare settings, particularly in Super-Speciality charitable hospitals where the complexity of care increases the risk of errors.

- To provide evidence-based insights that can inform policy and practice

In the rapidly evolving field of healthcare, it is imperative that hospitals adopt policies and practices that are grounded in solid evidence. This study aims to assess the current state of patient safety culture within a Super-Speciality charitable hospital, identifying key areas where safety practices are either excelling or falling short. The findings from this research will generate valuable data that can inform the development of targeted interventions, policies, and training programs tailored to the specific needs of the hospital.

- To contribute to the growing body of knowledge on patient safety in Super-Speciality hospitals

Super-Speciality charitable hospitals face unique challenges in maintaining patient safety due to the diversity and complexity of care provided across various departments and specialties. This study is particularly important because it seeks to fill a gap in existing research by focusing on the specific patient safety issues that arise in such complex healthcare environments. By conducting a thorough assessment of the patient safety culture in a Super-Speciality charitable hospital, the study will provide new insights into how different departments and specialties can collaborate more effectively to ensure patient safety.

Objectives:

- To assess the effectiveness of existing processes and systems in ensuring patient safety across different departments within the hospital.

Ensuring patient safety is a critical component of healthcare quality, aiming to prevent errors and adverse effects during the provision of healthcare. Hospitals consist of multiple departments, each with distinct processes and systems that contribute to overall patient care. Guaranteeing patient safety in such a diverse environment requires a comprehensive understanding of these processes and systems, including clinical protocols, communication systems, safety protocols, incident reporting mechanisms, and quality assurance processes. The primary goal is to assess the effectiveness of current processes and systems in promoting and ensuring patient safety

across various hospital departments such as emergency, surgery, pediatrics, intensive care, and outpatient services.

- To evaluate the quality of communication, teamwork, and the reporting culture within the hospital.

Effective communication, teamwork, and a strong reporting culture are crucial for ensuring patient safety and delivering quality healthcare. These elements play a key role in preventing errors, promoting coordinated care, and fostering a culture of transparency and continuous improvement. The primary objective is to assess the impact of human and organizational factors on patient safety and overall hospital performance. This involves evaluating the clarity, accuracy, and efficiency of communication among healthcare providers, their collaborative approach to delivering patient care, and the openness of the hospital's incident reporting system. Additionally, it includes examining how incidents are reported, managed, and leveraged to enhance practices and outcomes.

IV. MEASUREMENT AND ASSESSMENT TOOLS

Accurate measurement of patient safety culture is crucial for identifying strengths and areas needing improvement. The HSOPS framework is widely recognized for its effectiveness in evaluating safety culture dimensions. A systematic review by Sorra et al. (2021) highlights the diverse characteristics of HSOPS dimensions, including variability in scoring strategies and the impact on result interpretation. This review emphasizes the need for a nuanced understanding of how different dimensions are scored and interpreted to ensure accurate assessments.

In addition to HSOPS, other tools have been developed to assess patient safety culture from various perspectives:

1. Patients' Perceptions of Safety Culture Scale: This tool captures patients' views on safety practices within hospitals, providing insights into how safety practices align with patient expectations and identifying gaps that need to be addressed (Sorra et al., 2017). For example, a study conducted in Bangalore

utilized this scale to evaluate safety culture among healthcare providers, revealing specific areas requiring improvement and contributing to a more comprehensive understanding of safety culture (Krishnan et al., 2022).

2. **Staff Safety Culture Surveys:** These surveys assess staff perceptions of safety practices and identify areas for improvement. They often include questions related to teamwork, communication, and error reporting, providing valuable information for enhancing safety culture.

3. **Observational Tools:** Observational tools involve direct observation of safety practices within healthcare settings. These tools help identify safety concerns and assess adherence to safety protocols in real-time.

The development of these tools reflects ongoing efforts to enhance the measurement of patient safety culture. By capturing various perspectives and dimensions, these tools contribute to a more holistic view of safety culture and its impact on patient outcomes.

Global Perspectives and Regional Variations

Perceptions of patient safety culture vary significantly across regions and healthcare settings. Research in different countries provides valuable insights into regional variations and the effectiveness of safety culture initiatives. The research conducted from 2012 to 2015 in Saudi Arabia demonstrated trends in improving safety culture through benchmarking and continuous assessment. This study highlights the importance of regional initiatives in enhancing safety culture and identifies areas for further improvement (Alshammari et al., 2017). The findings underscore the need for tailored approaches to safety culture improvement based on regional characteristics and healthcare practices.

A baseline study in Moldova provided insights into safety culture across various healthcare settings, revealing differences in safety culture maturity between institutions. This study emphasizes the need for region-specific strategies to improve safety culture, considering local practices and institutional characteristics (Cahill et al., 2018). The public hospitals in Dessie town explored the influence of factors such as working hours and shift patterns on

safety culture perceptions among healthcare professionals. This study highlights the importance of considering local work conditions in shaping safety perceptions and underscores the need for context-specific interventions (Ayele et al., 2019).

A study in Japan examined the relationship between safety culture and factors such as night shifts and days off. The findings emphasize the role of local work conditions in influencing safety culture and highlight the need for adjustments to working conditions to enhance safety culture (Kawashima et al., 2020).

These regional variations illustrate how local factors can impact safety culture and the need for context-specific approaches to improving safety culture across different settings.

Factors Influencing Safety Culture

1. **Leadership:** Effective leadership is a critical determinant of safety culture. Leaders must prioritize safety, provide necessary resources, and engage with staff to foster a positive safety culture (APS, 2020). Research by Lee et al. (2019) highlights the importance of leadership in sustaining safety culture improvements over time. Leaders who demonstrate a commitment to safety and actively support safety initiatives can significantly impact the overall safety culture of an organization.

2. **Working Environment:** The working environment plays a significant role in shaping safety culture. Factors such as workload, staffing levels, and the physical work environment impact staff perceptions of safety and their adherence to safety protocols (Wang et al., 2020). For instance, a study in Japan examined how working conditions, including shift patterns and workload, affect safety culture among healthcare workers. The findings revealed that these factors influence staff perceptions of safety and highlight the need for adjustments to working conditions to enhance safety culture (Kawashima et al., 2020).

3. **Organizational Factors:** Organizational factors, such as management practices and resource allocation, also significantly impact safety culture. Research on patient safety culture in Tunisian healthcare settings identified organizational and

environmental factors as key determinants of safety culture perceptions (Bougherara et al., 2017). Similarly, a study on safety culture variability in China demonstrated how organizational factors, such as management practices and resource allocation, impact safety culture perceptions (Huang et al., 2013). Addressing these organizational factors is crucial for fostering a positive safety culture.

Patient and Staff Engagement

Engaging both patients and staff in safety culture initiatives is essential for achieving meaningful improvements. Understanding patients' perceptions of safety and incorporating their feedback into safety practices is vital. The Patients' Perceptions of Safety Culture Scale helps capture patient views and identify gaps between patient expectations and staff practices (Sorra et al., 2017). By addressing these gaps, healthcare organizations can improve safety practices and enhance patient satisfaction. Staff who are actively involved in safety practices and feel supported by their supervisors are more likely to report safety issues and participate in safety initiatives (Stolper et al., 2019). Effective communication and involvement in safety improvements contribute to a stronger safety culture and better patient outcomes. Ensuring that staff are engaged and empowered to participate in safety initiatives is essential for fostering a culture of safety.

Challenges and Future Directions

Variability in safety culture across different settings and differences in measurement approaches complicate the development of universal solutions. Future research should focus on addressing these challenges by refining measurement tools, exploring the impact of emerging technologies, and evaluating the effectiveness of interventions across diverse settings (Sorra et al., 2021). A scoping review by Negarandeh et al. (2021) on factors determining safety culture in hospitals highlights the need for a more comprehensive understanding of the interplay between various determinants of safety culture. This includes examining the role of organizational structure, staff attitudes, and external factors such as regulatory requirements. Understanding these determinants can help develop more effective strategies for improving safety culture. Integrating safety culture principles into routine practice requires sustained effort from all organizational levels. Ensuring that safety culture

initiatives are not only implemented but also maintained over time is crucial for achieving long-term improvements (Lee et al., 2019). Ongoing commitment and continuous evaluation are necessary to sustain safety culture improvements and ensure that safety practices remain effective.

Influence of Organizational Factors

Research on patient safety culture in Tunisian healthcare settings identified organizational and environmental factors as key determinants of safety culture perceptions (Bougherara et al., 2017). The study emphasized the importance of addressing organizational issues, such as management practices and resource allocation, to enhance safety culture effectively. A study on safety culture variability in China demonstrated how management practices and resource allocation impact safety culture perceptions (Huang et al., 2013).

This study highlights the need for organizational commitment to safety culture initiatives to achieve meaningful improvements. Addressing organizational factors, such as leadership support and resource allocation, is crucial for fostering a positive safety culture.

Innovations and Emerging Trends

The integration of technology, such as electronic health records and patient monitoring systems, can enhance safety culture by improving data accuracy and facilitating communication (Gordon et al., 2020). For example, electronic health records can provide real-time data on patient conditions and treatment outcomes, enabling healthcare providers to make informed decisions and reduce errors. Emerging technologies, such as artificial intelligence and machine learning, have the potential to further enhance safety culture by providing predictive analytics and decision support (Gordon et al., 2020). Future research should explore how these technologies impact safety culture and contribute to reducing errors and improving patient outcomes.

Research Gap

Research Gap 1: Inconsistencies in the Assessment of Patient Safety Culture Across Departments

One area lacking research is the assessment of patient safety culture across different departments within a single hospital. While many studies focus on patient

safety at a hospital-wide level, there is limited research on how safety culture varies across various departments. This is crucial because different departments may face unique challenges related to patient safety, which can affect the overall effectiveness of safety processes and systems. To address this gap, it is important to focus on the differences between departments within a multi-specialty charitable hospital in order to provide targeted recommendations for improving patient safety practices in specific departments.

Research Gap 2: Underexplored Impact of Communication and Teamwork on Patient Safety Outcomes

An area that needs further exploration is the impact of communication and teamwork on patient safety outcomes, especially in multi-specialty settings where cross-departmental collaboration is essential. While the importance of communication and teamwork is acknowledged by many studies, there is a lack of detailed analysis on how these factors directly influence patient safety outcomes. Closing this gap involves evaluating the quality of communication and teamwork across different departments and linking these factors to patient safety outcomes, in order to provide practical insights for enhancing collaboration and communication within the hospital.

Research Gap 3: Limited Focus on Non-Punitive Reporting Culture in Multi-Specialty Hospitals

There is limited focus on reporting culture in multi-specialty hospitals. While non-punitive error reporting is recognized as a weakness in existing studies, there is little exploration of how this culture is developed and maintained in multi-specialty hospitals, where diverse departments may have varying levels of reporting practices. Addressing this gap involves assessing the reporting culture within the multi-specialty hospital to understand the barriers to and facilitators of a non-punitive reporting environment. This can help in developing strategies to encourage more consistent and open reporting across all departments.

V. PROBLEM STATEMENT

“Assessing the Patient Safety Culture at a Super-Specialty Charitable Hospital”

Patient safety has become a critical concern in healthcare systems globally, given its direct impact on patient outcomes, hospital reputation, and overall healthcare quality. The establishment of a robust patient safety culture within healthcare organizations is essential, as it serves as the foundation for the effectiveness of safety protocols, promotes error reporting, and fosters an environment of continuous improvement. This is particularly crucial in multi-specialty charitable hospitals, where the complexity of care delivery is heightened by the diverse range of departments, each facing unique challenges and practices.

It is vital to recognize how safety is perceived and practiced across various departments within the institution. Multi-specialty hospitals bring together different medical specialties, leading to variations in communication styles, teamwork dynamics, and the implementation of safety practices. While this diversity is advantageous in providing comprehensive care, it also presents significant challenges in ensuring a cohesive and consistent patient safety culture across all departments.

Existing literature on patient safety culture has predominantly focused on broad organizational assessments, often treating hospitals as homogenous entities without fully considering the intra-hospital differences that may exist between departments. While these studies offer valuable insights, they may overlook the nuanced ways in which patient safety culture is experienced and enacted within specific hospital departments. For example, the communication challenges and teamwork dynamics in a surgical unit may differ significantly from those in an outpatient department or a critical care unit. Therefore, a standardized approach to patient safety culture assessment may not adequately capture the complexities of safety practices in a multi-specialty setting. Moreover, there is a scarcity of research on how elements such as communication, teamwork, and non-punitive error reporting are integrated and sustained within the diverse environment of a multi-specialty hospital. The lack of a detailed understanding of these dynamics poses a barrier to developing targeted interventions that can enhance patient safety culture and, subsequently, patient outcomes.

This study aims to address these gaps by conducting a comprehensive assessment of the patient safety culture

at a multi-specialty charitable hospital. The primary objective is to evaluate the effectiveness of existing processes and systems in ensuring patient safety across different departments. Through an examination of the quality of communication, teamwork, and the reporting culture within the hospital, this research will identify specific areas requiring improvements. Additionally, the study will provide actionable recommendations for fostering a more robust and unified patient safety culture that can be tailored to the unique needs of each department. The outcomes of this study are expected to contribute to a broader understanding of patient safety culture in complex healthcare settings and offer practical solutions for enhancing safety practices in multi-specialty hospitals. By addressing the intra-hospital variations and focusing on department-specific safety culture dynamics, this study aims to provide a more nuanced and effective approach to improving patient safety, ultimately leading to better care quality and patient outcomes."

VI. RESEARCH QUESTIONS

Question 1: How effective are the current procedures and systems in preventing errors from occurring in various departments?

This question is important as it directly deals with the heart of patient safety culture - error prevention. It is essential to understand how effective current procedures and systems are in order to identify any gaps that could lead to adverse events. By assessing the functionality of these processes in different departments, the study can identify areas that need improvement, thus ensuring that patient safety is not compromised by procedural inefficiencies or system failures. Furthermore, this question aids in understanding the differences in safety practices across departments, which is crucial for developing targeted interventions to enhance overall safety culture.

Question 2: How adequate are the hospital's resources and training programs in supporting patient safety efforts and enhancing staff knowledge and practices? Establishing and maintaining a robust patient safety culture relies on accessible resources and comprehensive training. This evaluation is critical in assessing whether the hospital is adequately

supporting its staff to uphold high levels of patient safety. Sufficient resources, including staffing, equipment, and time, are imperative in preventing errors. Furthermore, effective training guarantees that the staff is well-versed in best practices and can consistently apply them. By scrutinizing these elements, we can gauge the extent of the hospital's commitment to patient safety and determine if further enhancements are needed to empower the staff and optimize patient outcomes.

Question 3: How effectively is information about patient safety errors communicated to staff members across different units?

Effective communication plays a crucial role in patient safety culture. This aspect is significant as it delves into the efficiency of disseminating information about patient safety errors, which is vital for learning and improvement. Inadequate communication of safety errors may result in staff repeating the same errors, leading to recurring issues and jeopardizing patient safety. Through an assessment of communication practices, the study aims to pinpoint any barriers to effective information flow and strategize on ways to overcome these obstacles. This will ensure that all staff members are informed about potential risks and can take necessary actions to prevent future errors.

Question 4: How often are patient safety incidents reported to improve patient safety practices?

In a culture that prioritizes safety, it is vital to report patient safety incidents. This question is important because it assesses how often and how effectively incidents are reported, which is crucial for identifying trends, understanding root causes, and taking corrective actions. Regular and accurate reporting indicates a strong safety culture where staff feel empowered to report issues without fear of reprisal. Conversely, low reporting rates may point to issues in the hospital's reporting culture, such as a fear of blame or lack of awareness. This question helps in evaluating the maturity of the hospital's safety culture and its commitment to continually improving patient safety practices.

These research questions are designed to comprehensively assess the effectiveness of existing systems, resources, communication, and reporting practices within the hospital, all of which are critical

to fostering a strong patient safety culture. Addressing these questions will provide valuable insights into areas that require improvement and support the development of strategies to enhance patient safety across the hospital.

VII. RESEARCH OBJECTIVES

- To assess the effectiveness of existing processes and systems in ensuring patient safety across different departments within the hospital.

Ensuring patient safety is a critical component of healthcare quality, aiming to prevent errors and adverse effects during the provision of healthcare. Hospitals consist of multiple departments, each with distinct processes and systems that contribute to overall patient care. Guaranteeing patient safety in such a diverse environment requires a comprehensive understanding of these processes and systems, including clinical protocols, communication systems, safety protocols, incident reporting mechanisms, and quality assurance processes. The primary goal is to assess the effectiveness of current processes and systems in promoting and ensuring patient safety across various hospital departments such as emergency, surgery, pediatrics, intensive care, and outpatient services.

- To evaluate the quality of communication, teamwork, and the reporting culture within the hospital.

Effective communication, teamwork, and a strong reporting culture are crucial for ensuring patient safety and delivering quality healthcare. These elements play a key role in preventing errors, promoting coordinated care, and fostering a culture of transparency and continuous improvement. The primary objective is to assess the impact of human and organizational factors on patient safety and overall hospital performance. This involves evaluating the clarity, accuracy, and efficiency of communication among healthcare providers, their collaborative approach to delivering patient care, and the openness of the hospital's incident reporting system. Additionally, it includes examining how incidents are reported, managed, and leveraged to enhance practices and outcomes.

VIII. RESEARCH HYPOTHESIS

Hypothesis 1:

- Null Hypothesis (H_0): The current procedures and systems in various departments are effective in preventing errors.

This hypothesis assumes that the existing processes and systems within the hospital are functioning well and are successful in minimizing errors across different departments. Accepting this hypothesis would suggest that the hospital's protocols are sufficiently robust and that there is no significant need for overhauling or implementing major changes to these systems.

- Alternate Hypothesis (H_1): The current procedures and systems in various departments are not effective in preventing errors.

This hypothesis posits that the existing procedures and systems are inadequate and fail to prevent errors effectively. If this hypothesis is supported by the research, it would indicate that there are flaws or gaps in the current practices, necessitating a review and improvement of the systems to enhance patient safety.

Hypothesis 2:

- Null Hypothesis (H_0): The hospital's resources and training programs are adequate in supporting patient safety efforts and enhancing staff knowledge and practices.

This hypothesis suggests that the hospital has provided sufficient resources, including equipment, staffing, and training programs, to support patient safety initiatives. If accepted, it would indicate that current resource allocation and training efforts are meeting the needs of the staff and adequately contributing to patient safety.

- Alternate Hypothesis (H_1): The hospital's resources and training programs are not adequate in supporting patient safety efforts and enhancing staff knowledge and practices.

This hypothesis assumes that the hospital's resources and training programs are lacking or insufficient,

leading to gaps in patient safety efforts and staff preparedness. Supporting this hypothesis would imply that improvements in resources, training, or both are necessary to better equip the hospital staff in maintaining a safe environment for patients.

Hypothesis 3:

- Null Hypothesis (H_0): Information about patient safety incidents is effectively communicated to staff members across different units.

This hypothesis presumes that the hospital has efficient communication channels in place, ensuring that information regarding patient safety errors is promptly and clearly shared across all units. Accepting this hypothesis would suggest that the hospital's communication processes are strong and contribute positively to patient safety.

- Alternate Hypothesis (H_1): Information about patient safety incidents is not effectively communicated to staff members across different units.

This hypothesis suggests that there are issues in how patient safety errors are communicated among staff members, such as delays, misunderstandings, or incomplete information transfer. Supporting this hypothesis would highlight a need to improve communication strategies to ensure that all relevant staff are adequately informed about safety issues.

Hypothesis 4:

- Null Hypothesis (H_0): Patient safety incidents are reported frequently enough to significantly improve patient safety practices.

This hypothesis assumes that patient safety incidents are being reported regularly and sufficiently, contributing to a continuous improvement in safety practices within the hospital. If this hypothesis is true, it would indicate that the reporting culture is strong and supports the hospital's patient safety goals.

- Alternate Hypothesis (H_1): Patient safety incidents are not reported frequently enough to significantly improve patient safety practices.

This hypothesis posits that there is a lack of frequent or adequate reporting of patient safety incidents, which could hinder efforts to improve safety practices. Supporting this hypothesis would suggest that there are barriers to reporting, such as fear of blame or a lack of awareness, which need to be addressed to enhance the overall safety culture in the hospital.

IX: RESEARCH METHODOLOGY

Sampling Frame

The study will involve a diverse array of healthcare professionals from a multi-specialty charitable hospital. This will include doctors, nurses, administrative staff, and other healthcare workers directly involved in patient care or management. By encompassing various roles, the research aims to capture diverse viewpoints and experiences, essential for a comprehensive assessment of patient safety culture. Involving a wide range of departments will ensure that the study covers the full spectrum of patient care, from direct clinical services to supportive functions contributing to overall patient safety.

The departments included in the sampling frame are as follows:

1. ICU (Intensive Care Unit): The ICU is critical for understanding patient safety culture due to the high acuity of care and the frequent occurrence of life-threatening conditions. Healthcare professionals in this unit face unique challenges in ensuring patient safety.
2. Laboratory: The accuracy and timeliness of laboratory results are vital for patient safety. Laboratory staff play a crucial role in preventing diagnostic errors and ensuring proper treatment.
3. GOPD (General Outpatient Department): As the first point of contact for many patients, the GOPD is essential in capturing patient safety culture in the outpatient setting, where errors can occur during diagnosis or treatment planning.
4. Wards: General wards are where patients spend the majority of their time during hospitalization. The patient safety culture here reflects the day-to-day interactions between staff and patients, including medication administration and routine care.
5. Radiology: The radiology department is key in diagnosing and monitoring patient conditions.

Errors in imaging or interpretation can have significant consequences, making this department crucial for the study.

6. **Emergency Department:** The fast-paced and high-pressure environment of the emergency department often leads to unique patient safety challenges, making it a critical area for assessment.

7. **Operating Theatre (OT):** Surgical procedures carry inherent risks, and the safety culture in the OT is vital for preventing surgical errors and ensuring patient safety during operations.

8. **Dialysis Unit:** The dialysis unit involves specialized care for patients with kidney failure. Ensuring patient safety in this context requires strict adherence to protocols and continuous monitoring.

9. **Private Rooms:** Patient safety in private rooms is important as it involves individualized care, often for patients who require privacy and additional attention.

10. **POPD (Private Outpatient Department):** Pediatric care presents unique challenges, particularly in communication and ensuring the safety of children during treatment.

11. **Laundry and Housekeeping:** While not directly involved in patient care, these departments play a supportive role in maintaining a safe and clean environment, which is crucial for preventing hospital-acquired infections.

12. **Pharmacy:** The pharmacy department is responsible for the safe dispensing and management of medications, a key aspect of patient safety.

13. **NICU (Neonatal Intensive Care Unit):** The NICU involves the care of critically ill newborns, where safety culture is paramount due to the vulnerability of the patient population.

14. **Billing and Admission Office:** These administrative departments are included to assess how non-clinical staff contribute to the overall patient safety culture.

15. **Food Service:** Proper nutrition and food safety are essential components of patient care, making the food service department relevant to the study.

16. **Nursing Service:** Nurses are central to patient care, and their perceptions of safety culture are crucial for understanding the hospital's overall safety environment.

17. **MRD (Medical Records Department):** Accurate and accessible medical records are essential

for safe patient care, making the MRD a key department for the study.

18. **Dental Department:** The dental department is included to ensure that all aspects of patient care, including oral health, are considered in the assessment of safety culture.

19. **CSSD (Central Sterile Services Department):** The CSSD is responsible for sterilizing medical equipment, a critical function for preventing infections and ensuring patient safety.

20. **Herbarium, Human Resources, and Quality:** These departments are included to provide a broader perspective on how organizational culture, human resources practices, and quality assurance processes contribute to patient safety.

The sampling frame has been meticulously designed to ensure that the study encompasses a wide array of perspectives on patient safety culture within the hospital. This comprehensive approach will facilitate a detailed evaluation of the effectiveness of current processes and systems in ensuring patient safety. Additionally, it will assess the quality of communication, teamwork, and reporting culture across the hospital. Our aim is to involve professionals with diverse levels of experience, ranging from junior staff to senior consultants and managers, in order to gather various viewpoints. This diversity will enable us to capture insights from individuals involved in implementing safety protocols as well as those overseeing their effectiveness. While doctors and nurses are at the forefront of patient care, we acknowledge the vital role of administrative staff in patient safety culture. Involving them in the sampling frame will provide valuable insights into how safety policies are communicated, implemented, and managed within the hospital. By carefully selecting a sampling frame that includes diverse healthcare professionals from different departments, the study will be well-equipped to evaluate the effectiveness of existing processes, communication, teamwork, and reporting culture related to patient safety. This comprehensive approach ensures that the findings will be robust and applicable for improving patient safety across the hospital.

Sampling technique

A stratified random sampling technique will be employed. This involves dividing the hospital staff

into different strata based on their roles and then randomly selecting a proportional number of participants from each stratum. This ensures representation across all key groups involved in patient safety. In our study, these strata are based on the roles of healthcare professionals, such as doctors, nurses, administrative staff, and other healthcare workers involved in patient care or management. By using this technique, we ensure that every subgroup is proportionally represented, which is especially important in a study where different roles might have varying perspectives and experiences regarding patient safety culture.

Justification for Using Stratified Random Sampling

1. **Heterogeneity of the Population:** The hospital workforce is highly heterogeneous, comprising various professionals with different responsibilities, experiences, and levels of interaction with patients. Stratified random sampling allows you to capture this diversity, ensuring that the views of all relevant groups are reflected in the study.
2. **Improved Precision and Accuracy:** By ensuring that each subgroup is adequately represented, stratified random sampling reduces the variability within each stratum. This leads to increased precision and accuracy of the study's findings, as the results are less likely to be skewed by the over-or under-representation of any single group.
3. **Relevance to the Research Objectives:** Your research aims to assess patient safety culture across different departments within the hospital, making it essential to include participants from all key roles. Stratified random sampling aligns perfectly with this objective, allowing you to draw meaningful comparisons and insights between different groups.
4. **Mitigating Sampling Bias:** One of the key advantages of this technique is its ability to reduce sampling bias. Since participants are randomly selected within each stratum, the likelihood of over-representing or under-representing any particular group is minimized, leading to more balanced and generalizable results.

Implementation of Stratified Random Sampling

1. **Identification of Strata:** The first step is to identify the relevant strata within the hospital. In your study, these strata could be based on the different roles

of healthcare professionals, such as doctors, nurses, administrative staff, and others.

2. **Determination of Sample Size within Each Stratum:** Once the strata are defined, the next step is to determine the appropriate sample size for each stratum. This will be based on the proportion of each subgroup within the overall population of the hospital staff.
3. **Random Selection of Participants:** Within each stratum, participants will be randomly selected to form the final sample. This ensures that every individual within a stratum has an equal chance of being included in the study.
4. **Ensuring Proportional Representation:** Finally, it is important to ensure that the number of participants from each stratum reflects their proportion in the overall population. This step is crucial to maintain the balance and representativeness of the sample.

Sample Size

When determining the sample size for our study, we aimed to ensure that it would accurately represent the entire hospital staff and be large enough to provide statistically significant insights. With a total staff population of 1,400, including doctors, nurses, administrative staff, and various support personnel across different departments, we meticulously planned to capture data from over 50% of the total staff. This would result in a targeted sample size of approximately 650-700 participants, allowing us to obtain a deep and comprehensive understanding of the patient safety culture within our hospital. The strategic approach was designed to encompass a wide range of perspectives and roles within the hospital, enabling us to detect variations in patient safety culture across various departments and gain insights into the effectiveness of safety processes and communication.

The rationale for selecting a sample size of 650-700 participants was based on the need for statistical power. Statistical power refers to the ability of a study to detect an effect or difference when one truly exists. By opting for a larger sample size, we aimed to increase the likelihood of identifying significant patterns and trends in patient safety culture, providing more robust and reliable findings. Given the diversity of roles and responsibilities within the hospital, a sample size exceeding 50% of the total staff

population was necessary to ensure that the data reflected the views and experiences of all key stakeholders involved in patient care. Additionally, this sample size allowed for a more detailed and nuanced analysis, enabling us to explore differences in patient safety culture between various departments and roles, ultimately enhancing the depth of our study.

In summary, a sample size of 650-700 participants, representing over 50% of the hospital staff, was essential for ensuring that the study's findings were both statistically significant and representative of the diverse perspectives within the hospital. This comprehensive approach provided a thorough understanding of patient safety culture, informing efforts to enhance safety practices and improve patient outcomes.

Type of Data

In this study, the type of data utilized is quantitative, which is particularly suited for the structured analysis of patient safety culture within a multi-specialty charitable hospital. Quantitative data is essential in this context as it allows for the systematic measurement of variables related to patient safety, enabling the assessment of the effectiveness of existing processes, communication, and reporting practices across various departments within the hospital. The primary tool for data collection will be structured questionnaires, which are designed to gather quantitative data from healthcare professionals, including doctors, nurses, administrative staff, and support personnel. The use of quantitative data in this study offers several advantages. Firstly, it allows for the objective measurement of perceptions and experiences, which can be statistically analyzed to identify trends, patterns, and correlations within the data. This objectivity is critical when assessing complex

X. PROCEDURE FOR DATA COLLECTION

This study utilizes a quantitative research design to assess the patient safety culture among staff members in a hospital setting. It employs the Hospital Survey on Patient Safety Culture (HSOPSC) and involves modifying and validating the survey to ensure it meets the specific requirements of the hospital. Subsequently, a systematic process of data collection

and analysis is undertaken to evaluate patient safety culture.

Instrument Selection and Modification

The Hospital Survey on Patient Safety Culture (HSOPSC), developed by the Agency for Healthcare Research and Quality (AHRQ), is a widely recognized tool for assessing the safety culture within healthcare organizations. It includes dimensions such as communication openness, teamwork, leadership support for safety, and non-punitive response to errors, among others. Given its comprehensive nature, the HSOPSC was chosen for this study to provide a holistic evaluation of the patient safety culture in the hospital.

However, in order to ensure that the survey accurately reflects the unique context and needs of the hospital, certain modifications were made to the original HSOPSC. These modifications were guided by consultations with hospital leadership, frontline staff, and experts in patient safety. This process involved tailoring the survey questions and response options to better align with the specific operational and cultural aspects of the hospital. The modifications aimed to capture the nuances of the hospital's safety culture, as well as to address any particular areas of concern that may not have been fully captured by the standard HSOPSC. By involving various stakeholders in this process, including hospital leaders and frontline staff, the modified survey was designed to be more relevant and impactful in identifying opportunities for improvement and promoting a culture of safety within the hospital. These modifications represent a valuable effort to enhance the applicability and effectiveness of the HSOPSC within the specific context of the hospital, ultimately aiming to drive positive changes in patient safety practices and outcomes.

The key areas of modification included:

□ Customization of Terminology: This involves adjusting specific terms and phrases in the survey to match the hospital's internal jargon and practices. For example, generic terms are replaced with department-specific language to ensure that the questions are easily understood and directly relevant to the respondents' daily work environment. This customization not only fosters better understanding but also enhances the relevance of the survey to the hospital's staff and their roles, thereby contributing to more accurate and meaningful responses.

□ **Addition of Context-Specific Items:** This includes adding extra questions that address specific safety concerns or initiatives unique to the hospital. Examples could be questions about recent safety campaigns, specific protocols introduced in response to past incidents, or particular challenges faced by the hospital's staff. By incorporating context-specific items, the survey becomes more comprehensive and tailored to the hospital's specific safety culture and practices, which in turn provides a more comprehensive view of the overall patient safety landscape within the organization.

□ **Omission of Irrelevant Items:** This involves removing items that were considered irrelevant to the hospital's operational context. This streamlining process helps maintain respondent engagement and ensures that the survey focuses only on the most pertinent aspects of patient safety culture. By eliminating irrelevant items, the survey becomes more concise and targeted, which is crucial for gathering actionable insights and ensuring that respondents are only providing feedback on areas that are directly relevant to their roles and responsibilities within the hospital.

Tool Validation Process:

The modified Hospital Survey on Patient Safety Culture (HSOPSC) underwent an extensive validation process to ensure its reliability and validity within the hospital setting, a critical step in ensuring the accuracy and effectiveness of the survey as a tool for assessing patient safety culture. To begin, the modified survey was carefully reviewed by the Ethical committee including the Director of the hospital, Assistant Directors, Medical Directors and Head of Departments, to assess its content validity. Feedback from the committee was instrumental in refining the survey items, ensuring that they effectively captured the intended aspects of patient safety culture. The committee's insights on the relevance and clarity of the survey items were invaluable in shaping the final survey instrument. Moreover, the Ethical Committee also reviewed the survey for ethical considerations to ensure compliance with the ethical standards for research involving human participants. Their feedback not only ensured the ethical soundness of the survey but also contributed to further refining the survey items to meet the highest ethical standards.

Following the review by the Ethical Committee, the survey underwent a pilot test with a small sample of hospital staff from various departments. This pilot test aimed to evaluate the clarity, relevance, and comprehensiveness of the survey items. The feedback collected from the participants in the pilot test was meticulously analyzed, and the insights gained from this process led to additional adjustments to the survey. This iterative approach allowed for the identification of any ambiguities or difficulties in the survey questions, ultimately facilitating final refinements before the full-scale administration. The collaboration with the Ethical Committee and the careful pilot testing not only ensured the reliability and validity of the modified HSOPSC but also demonstrated a commitment to ethical research practices and the development of a survey instrument that accurately and comprehensively captures the nuances of patient safety culture within the hospital setting.

Data Collection Process:

We undertook the adaptation of the Hospital Survey on Patient Safety Culture (HSOPSC) recognizing the need to tailor the survey to our specific hospital's context and requirements. As we delved into this process, we acknowledged the substantial variations in organizational structures, patient demographics, and safety challenges across different healthcare institutions. It became evident that a standardized approach might not effectively capture the unique nuances of each setting. Therefore, through the modification of the HSOPSC, our aim was to incorporate questions and dimensions that align with the experiences and safety concerns specific to our institution. By customizing the survey, we ensured that it reflected the specific experiences and safety issues relevant to our staff, thereby enhancing the applicability and relevance of the data collected.

We were able to address particular areas of interest or concern that may not have been adequately covered by the original survey, empowering us to capture a comprehensive understanding of our hospital's safety culture. Our modifications went beyond simply tailoring the survey to our institution; we ventured to incorporate contemporary issues and terminology familiar to our staff. This approach aimed to improve their understanding and engagement with the survey,

likely resulting in more accurate and meaningful responses. Inclusivity was a key focus, encompassing the perspectives of all staff roles, from frontline healthcare workers to administrative and support personnel, to ensure a comprehensive and holistic representation of our hospital's safety culture.

The tailored survey also allowed us to establish institution-specific benchmarks, facilitating ongoing assessments and comparisons to track progress over time. This capability enabled us to measure the impact of specific interventions and continuously improve our patient safety culture. Our ability to adapt the survey to our unique hospital environment and requirements significantly enhanced its effectiveness as a tool for understanding and improving our hospital's safety culture. This, in turn, has helped to foster a culture of safety and continuous improvement within our institution.

The data collection process involved several steps to maximize response rates and ensure the representativeness of the sample:

- The research study was meticulously designed to ensure the inclusion of participants from various departments and professional roles within the hospital. The approach chosen for participant selection was stratified random sampling, which allowed for the representation of diverse perspectives on patient safety culture. To achieve this, the participants were selected based on criteria such as department, job role, and years of experience, thereby ensuring a comprehensive and insightful picture of the hospital's safety culture. This method aimed to capture a wide range of viewpoints and experiences, providing a more holistic understanding of the organization's safety culture.

- In terms of survey distribution, a carefully planned strategy was implemented to ensure that all staff members had the opportunity to participate. Following the validation and approval of the modified HSOPSC, the survey was distributed in a paper format. The distribution of paper surveys was personally handled, with surveys being handed out to different departments. This approach was adopted to accommodate staff members, regardless of their preferred mode of communication, and to facilitate their involvement in the survey process.

- Anonymity and confidentiality were paramount considerations in the survey design. The structure of the survey was intentionally created to maintain anonymity, with the aim of encouraging participants to provide honest and candid responses. Given the sensitive nature of the survey topic, it was crucial to ensure that participants felt comfortable expressing their views openly. Participants were informed that their responses would be kept confidential and solely used for research purposes. To reinforce this promise, the survey did not collect any identifying information, thereby maintaining anonymity, and stringent confidentiality measures were implemented to secure the handling of survey data.

- The survey distribution process included a comprehensive response monitoring mechanism. This involved tracking response rates and implementing strategies to increase participation, such as sending reminders and follow-ups to non-respondents. Regular updates on response rates were provided to the participants and targeted reminders were sent to departments or roles with lower response rates. This proactive approach was undertaken to ensure a balanced and representative sample, thereby enhancing the validity of the research findings.

By implementing these robust sampling, distribution, and monitoring procedures, we aimed to gather reliable and comprehensive data on the hospital's safety culture, ultimately contributing to meaningful insights and potential improvements in patient safety practices.

Data Collection Tool

For the purpose of our study, we utilized a meticulously structured questionnaire to gather crucial data on the perceptions and experiences of healthcare professionals concerning patient safety culture within our multi-specialty charitable hospital. This questionnaire was thoughtfully designed with the intent to capture quantitative data, providing valuable insights into the various facets of patient safety practices. The questionnaire encompassed a series of Likert-scale questions, allowing participants to express their level of agreement or disagreement with numerous statements pertaining to the effectiveness of existing processes and systems, communication

quality, teamwork, and reporting practices related to patient safety. The deliberate design of the questionnaire was informed by established and validated tools used in patient safety research, ensuring its relevance and reliability. This approach helped us to construct a questionnaire that effectively addresses the multifaceted nature of patient safety culture, catering to the diverse perspectives and roles within the healthcare setting.

The questionnaire's selection was based on its capacity to capture a broad spectrum of insights from a diverse group of healthcare professionals, including but not limited to doctors, nurses, administrative staff, and other personnel involved in patient care. Its structured nature facilitated the consistent and comparable collection of data across various departments and roles within the hospital. By using this approach, we aimed to enable a comprehensive analysis of patient safety culture, thus contributing to a deeper understanding of the existing dynamics and potential areas for improvement within our healthcare institution.

The questionnaire, titled "Safety and Quality Survey," was divided into seven sections, each targeting key aspects of patient safety, communication, reporting practices, and training within the hospital.

XI. STRUCTURE OF THE QUESTIONNAIRE

Section A: Your Unit/Work Area

This section focused on gathering responses regarding the effectiveness of the department's processes, teamwork, and systems in preventing errors and ensuring patient safety.

Section B: Your Supervisor/HOD

This section included statements that assessed the role of supervisors or heads of departments in addressing patient safety concerns and considering staff suggestions for improvement.

Section C: Communication

This part explored the frequency and effectiveness of communication related to patient safety errors and changes within the unit.

Section D: Reporting Patient Safety Events

Respondents were asked how often patient safety incidents were reported, including those that were caught before causing harm and those that reached the patient but did not result in harm.

Section E: Your Hospital

This section gathered perceptions regarding the hospital management's support for patient safety, resource allocation, and the safety of the working environment.

Section F: Training and Education

The final section assessed the effectiveness of training sessions in improving patient safety measures and enhancing staff knowledge.

Each section of the questionnaire contained Likert-scale questions, allowing respondents to express their level of agreement or frequency with various statements. The responses provided quantifiable data, which were subsequently analyzed to draw insights into the patient safety culture within the hospital.

XII. ANALYSIS AND INTERPRETATION

Response Distribution by Department

To ensure a comprehensive assessment of patient safety culture, data were collected from staff across various departments within the hospital. This section provides a detailed account of the number of responses received from each department.

Table 1: Total Number of Responses Received from each Department

Department	No. of Responses Received
ICU	97
LABORATORY	47
GOPD	44
WARD	92
RADIOLOGY	41
EMERGENCY	41
OT	39
DIALYSIS	36
PR	67
POPD	20
LAUNDRY	17
HOUSE KEEPING	17
PHARMACY	16
NICU	15
BILLING	11
ADMISSION OFFICE	10
FOOD SERVICE	9
NURSING SERVICE	7
MRD	7
DENTAL DEPT.	6
CSSD	6
HERBARIUM	4
DENTAL	3
HUMAN RESOURCE	2
QUALITY DEPARTMENT	2
Grand Total	656

Perceptions of Procedural Effectiveness Across Departments

In exploring the effectiveness of the existing procedures and systems within the hospital, a variety of responses emerged from the data collected across different departments. The perspectives gathered provide insight into the general confidence among staff regarding the current measures in place to prevent errors.

Null Hypothesis (H₀): The hospital’s resources and training programs are adequate in supporting patient safety efforts and enhancing staff knowledge and practices.

Alternate Hypothesis (H₁): The hospital’s resources and training programs are not adequate in supporting patient safety efforts and enhancing staff knowledge and practices.

For this hypothesis we will analyze responses to the following questions:

1. Department Regularly Reviews Work Processes to Improve Patient Safety:

Regular evaluations demonstrate a proactive approach to enhancing patient safety and indicate the department's dedication to identifying and addressing potential errors.

2. After Mistakes, Department Implements Positive Changes:

Making positive changes after errors indicates a learning-focused culture that aims to prevent future incidents, supporting the effectiveness of procedures and systems.

3. Our Procedures and Systems Are Good at Preventing Errors from Happening:

A positive response would support the null hypothesis by indicating that current measures are perceived as effective in error prevention.

4. In This Unit, Measures for Improving Patient Safety Are Checked to Evaluate Their Efficiency:

Regular evaluation involves continually optimizing procedures and systems to support the hypothesis of effectiveness.

5. In This Department, Employees Work Together as an Effective Team:

This question assesses departmental collaboration, as effective teamwork improves safety measure implementation and success.

6. In this department, the workload is so intense that it negatively affects patient safety:

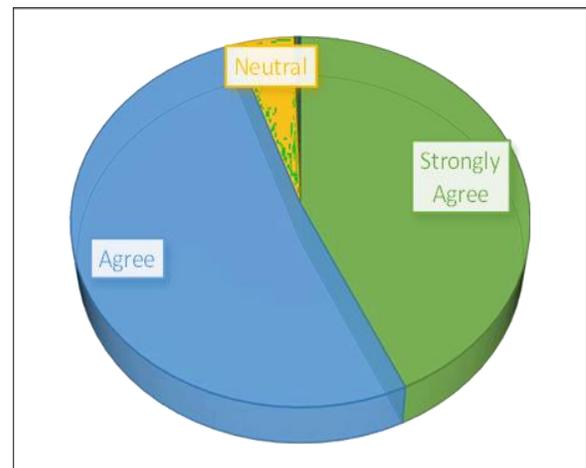
If the overwhelming workload negatively impacts safety, it supports the alternate hypothesis (H₁). If it doesn't affect safety, it supports the null hypothesis (H₀) that the procedures are effective.

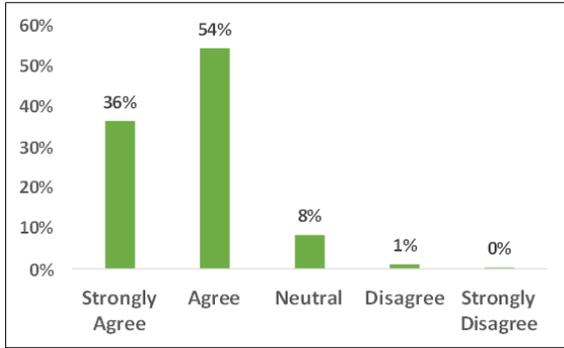
7. In This Department, There Is a Lack of Knowledgeable Support Staff Involved:

If the department lacks qualified staff, it may weaken safety procedures and systems.

Table 2: Survey Responses on Effectiveness of Procedures and Systems

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Department regularly reviews work processes to improve patient safety.	43%	52%	5%	0%	0%
After the mistakes, department implements positive changes.	36%	54%	8%	1%	0%
Our procedures and systems are good at preventing errors from happening	30%	53%	15%	1%	0%
In this unit, measures for improving patient safety are checked to evaluate its efficiency.	37%	55%	7%	0%	0%
In this department, employees work together as an effective team	42%	43%	12%	2%	0%
In this department, the workload is so intense that it negatively affects patient safety	7%	24%	14%	42%	13%
In this department, there is a lack of knowledgeable support staff involved.	6%	17%	16%	45%	15%

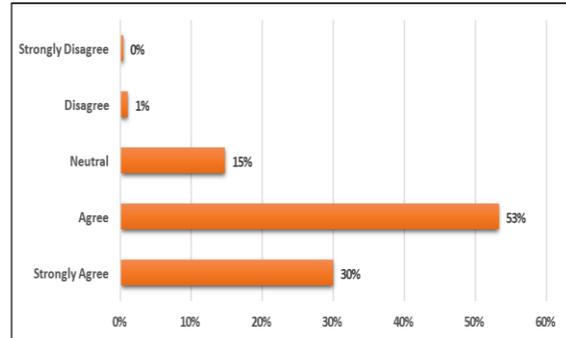




The pie chart in Figure 2 shows that a vast majority of respondents (95%) believe that their department regularly reviews work processes to enhance patient safety. Of those, 43% strongly agree and 52% agree. These strong levels of agreement suggest that the department is actively involved in continuous improvement efforts, demonstrating a proactive approach to enhancing patient safety practices. The absence of disagreement or strong disagreement indicates a consensus among staff regarding the commitment to process reviews. This strong support suggests a well-established culture of evaluation and improvement, which is essential for maintaining high standards of patient safety. However, it is important to further investigate whether these reviews are leading to tangible improvements in safety outcomes or if there are specific areas within the process reviews that could be optimized.

The data presented in Figure 3, in the form of a bar chart, indicates that 90% of the survey respondents feel that their department effectively implements positive changes following mistakes. Specifically, 36% strongly agree with this statement, while 54% agree. This high level of consensus suggests that the department is perceived as responsive and adaptive, effectively leveraging errors to prevent their recurrence. The substantial positive response rate reflects a culture of continuous learning and improvement, which is crucial for fostering an environment where mistakes are seen as opportunities for growth rather than failures. However, the 8% neutral responses imply that there might be varying perceptions or experiences among staff regarding the implementation of changes. These neutral responses could highlight areas where communication or the implementation process could be further enhanced to ensure that all staff members are equally aware of and involved in the improvement measures.

Figure 4: Effectiveness of Procedures and Systems in Preventing Errors



According to the data presented in Figure 4, the majority of respondents, accounting for 83%, believe that the current procedures and systems effectively prevent errors. Within this group, 30% strongly agree and 53% agree, indicating a general confidence in the existing systems. However, 15% of respondents remained neutral and 1% disagreed. The neutral and disagree responses suggest the possibility of room for improvement or a need for clearer communication about how these systems function. Additionally, the neutral responses may reflect uncertainty or variability in experiences, pointing to potential inconsistencies in the application or understanding of the procedures among staff. This indicates the importance of reviewing these systems to ensure uniform understanding and application across all departments. The data presented in Figure 5 illustrates that 92% of the survey respondents believe that the department regularly evaluates measures to improve patient safety for their effectiveness. Among the respondents, 37% strongly agree with this statement, while 55% agree. This strong consensus suggests that the department not only implements safety measures, but also rigorously evaluates their effectiveness, which is crucial for

ensuring continuous improvement in patient safety. The absence of disagreement in this area reinforces the perception that the department is diligent in its efforts to assess and enhance safety practices. However, the 7% neutral responses may indicate that some staff are either unaware of these evaluations or unsure of their outcomes, pointing to the need for more transparent communication regarding the evaluation processes and their impact on patient safety.

Figure 5: Evaluation of Safety Measures for Efficiency

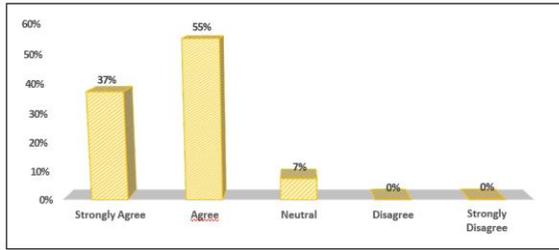


Figure 6: Teamwork Among Employees

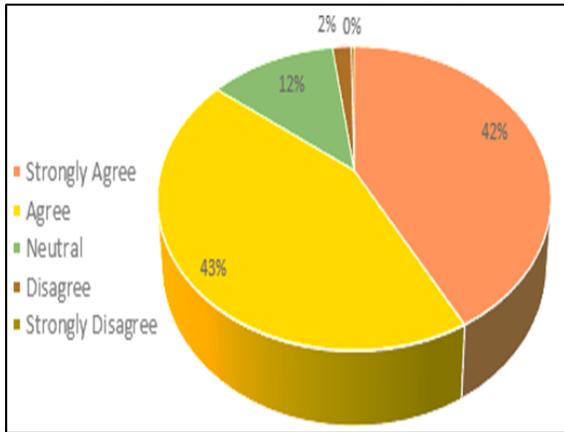


Figure 7: Lack of knowledgeable support staff

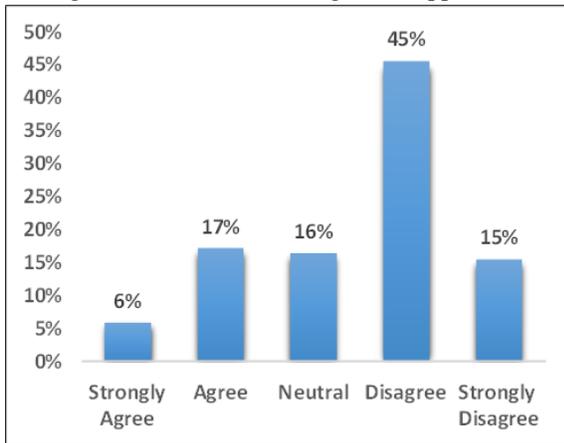
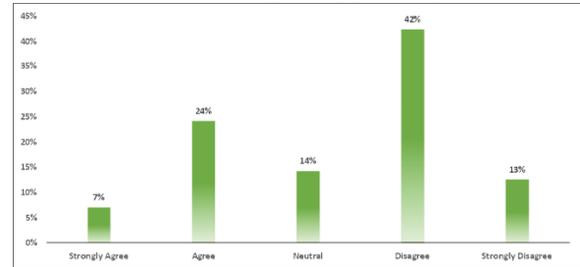


Figure 6 reveals that a vast majority of respondents (85%) believe that employees effectively work together as a team, with 42% strongly agreeing and 43% agreeing. This indicates that teamwork is generally perceived as a strength within the department, which is crucial for ensuring effective communication, coordination, and problem-solving in a healthcare setting. Strong teamwork not only enhances operational efficiency but also contributes to

a safer environment by reducing the likelihood of errors. However, the 12% neutral and 2% disagree responses suggest that there may be some variability in teamwork across different units or situations. These responses could indicate areas where team dynamics may need improvement, possibly through enhanced team-building initiatives or more structured opportunities for collaboration.

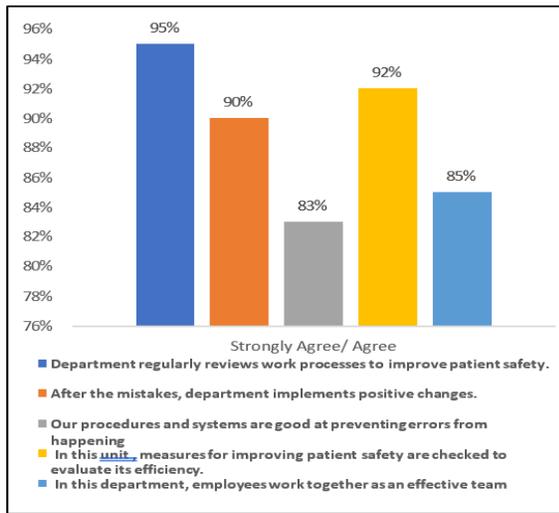
Additionally, Figure 7 highlights that 60% of respondents disagree with the notion that there is a lack of knowledgeable support staff, with 45% disagreeing and 15% strongly disagreeing. This suggests that most staff members feel they are supported by well-informed colleagues, which is crucial for the effective functioning of the department. The availability of knowledgeable support staff is essential for providing high-quality care and ensuring that all team members have the resources and guidance they need to perform their roles effectively. However, the fact that 23% of respondents either agree or are neutral regarding the adequacy of knowledgeable support staff points to potential gaps. This could indicate inconsistencies in the distribution of knowledge across the department or highlight areas where additional training or support may be needed.



The bar chart (figure 8) illustrating perceptions of workload intensity and its impact on patient safety reveals a significant concern among staff regarding the intensity of their workload. A substantial 42% of respondents disagree with the statement that the workload negatively affects patient safety, suggesting that a large portion of the staff does not perceive their workload as excessively burdensome or harmful to patient safety. However, 13% strongly disagree and 42% disagree, indicating that while some staff members believe the workload does not impact patient safety negatively, the intensity of workload remains a critical issue for a considerable portion of the team. Conversely, 24% of respondents agree that the intense workload negatively affects patient safety, and 7%

strongly agree. This highlights a notable concern among these staff members, who may feel that the high demands of their roles compromise their ability to provide safe, high-quality care. The 14% neutral responses suggest that there are staff members who are either unsure of the impact or do not have a strong opinion on whether the workload affects patient safety.

Figure 9.1: Overall staff perception on the effectiveness of procedures and processes.

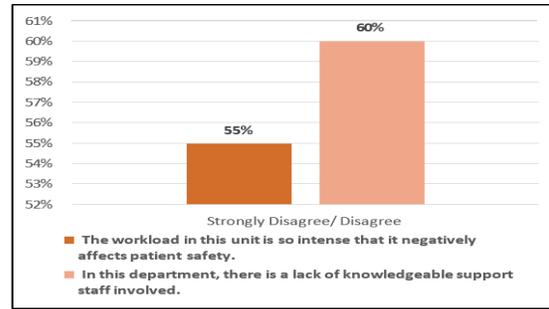


A high level of agreement (95%) on regular reviews of work processes (Figure 9.1) reflects a commitment to continuous improvement, suggesting that the hospital allocates adequate resources for patient safety. Similarly, 90% agreement on the implementation of positive changes after mistakes (Figure 9.1) underscores effective use of resources in learning from errors and making improvements, a key aspect of a robust safety program. Confidence in the current procedures and systems is evident, with 83% of respondents believing they are effective in preventing errors (Figure 9.1), though the 15% neutral responses indicate some areas may require further support. The strong consensus (92%) on the regular evaluation of safety measures (Figure 9.1)

implies that the hospital is effectively assessing and enhancing its practices, supported by adequate training programs. The high agreement (85%) on effective teamwork (Figure 9.1) suggests that resources are facilitating good communication and collaboration, essential for patient safety, although some isolated instances may need additional team-building efforts. Meanwhile, the data showing that 60% disagree with

the notion of a lack of knowledgeable support staff (Figure 9.2) indicates that the majority feel adequately supported, though 23% neutral or agree responses point to potential gaps in resource distribution or training. The responses to workload intensity were mixed,

Figure 9.2: Perceived Impact of Workload and Knowledgeable Support Staff on Patient Safety



with 55% disagreeing and 31% agreeing that it negatively affects patient safety (Figure 9.2 and 7). This raises a potential area of concern. While

most individuals do not consider workload as a significant issue, the 24% who believe that workload intensity impacts patient safety imply that current procedures may be stretched under high workload conditions. This finding slightly challenges the null hypothesis by indicating that workload management may need to be addressed to ensure the continued effectiveness of error prevention strategies.

Overall, the responses largely support the null hypothesis that the hospital's resources and training programs are adequate in supporting patient safety efforts and enhancing staff knowledge and practices. However, the presence of neutral and disagree responses in certain areas suggests that while the programs are broadly effective, specific improvements could be made, such as targeted training, better communication, and ensuring all staff have access to necessary support.

Adequacy of Hospital Resources and Training Programs in Supporting Patient Safety

In evaluating the adequacy of the hospital's resources and training programs, the data collected from various departments offers a comprehensive view of staff perceptions. The analysis reveals a spectrum of

opinions, highlighting both strengths and potential areas for improvement within the institution.

Null Hypothesis (H₀): The hospital’s resources and training programs are adequate in supporting patient safety efforts and enhancing staff knowledge and practices.

Alternate Hypothesis (H₁): The hospital’s resources and training programs are not adequate in supporting patient safety efforts and enhancing staff knowledge and practices.

To evaluate Hypothesis 2, the following questions were included in the survey to determine the adequacy of resources and the effectiveness of training programs in enhancing patient safety:

1. Supervisor/HOD Takes Action to Address Patient Safety Concerns:

Active leadership engagement is vital for maintaining a safety culture and efficient resource utilization.

2. Supervisor/HOD Considers Staff Suggestions for Improving Patient Safety:

The consideration of staff input is an indicative of a supportive environment that fosters continuous improvement.

3. Hospital Management Provides Adequate Resources to Improve Patient Safety:

This question directly assesses staff perceptions of the resources provided by hospital management for patient safety initiatives.

4. Hospital Management Seems Interested in Patient Safety Only After an Adverse Event Happens:

This question examines whether hospital management is proactive or reactive in addressing patient safety, with a reactive approach suggesting potential deficiencies in resource allocation and training prioritization.

5. During Shift Changes, Important Information Is Often Left Out:

This assesses communication effectiveness during shift changes, crucial for care continuity and patient safety. Lapses may signal insufficient resources and handover training.

6. Hospital management provides an appropriate and safe working environment:

This question evaluates if the hospital management provides a safe working environment, crucial for patient safety. If the hospital does, it supports the null hypothesis (H₀); if not, it supports the alternate hypothesis (H₁).

7. Quality-Safety Training Sessions Are Effective in Improving Patient Safety Measures:

Positive feedback indicates that the training sessions are well-structured and contribute to the enhancement of safety practices.

8. Quality-Safety Training Sessions Would Be Effective in Enhancing Knowledge About Patient Safety:

This question aims to assess how staff members perceive the potential impact of quality-safety training sessions on their understanding of patient safety measures. It will provide insight into whether the current training efforts are seen as beneficial and if they effectively address the educational needs of the staff.

Table 3: Staff Perceptions on the effectiveness of hospital resources and training programs in enhancing patient safety

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Supervisor/HOD takes action to address patient safety concerns that are brought to their attention.	43%	49%	6%	1%	0%
Supervisor/ HOD considers staff suggestions for improving patient safety.	39%	49%	10%	1%	0%
Hospital management provides adequate resources to improve patient safety.	40%	46%	11%	3%	0%
Hospital management seems interested in patient safety only after an adverse event happens.	9%	17%	19%	38%	16%
During shift changes, important information is often left out.	5%	19%	15%	46%	6%
Hospital management provides an appropriate and safe working environment.	38%	47%	12%	3%	1%
The quality-safety training sessions are effective in improving patient safety measures in the department.	47%	46%	5%	1%	0%
The quality-safety training sessions would be effective in enhancing the knowledge about patient safety measures in the department.	45%	48%	7%	1%	0%

The findings in figure 10 indicate that 92% of the staff either strongly agree (43%) or agree (49%) that their supervisors or HODs proactively address patient safety concerns. Therefore, it is evident that the leadership within the department is viewed as highly

responsive and dedicated to ensuring patient safety. The minimal neutral (6%) and disagree (1%) responses further reinforce this positive perception, which suggests that effective leadership plays a crucial role in shaping the safety culture within the department.

Figure 10: Supervisor/HOD Takes Action on Patient Safety Concerns

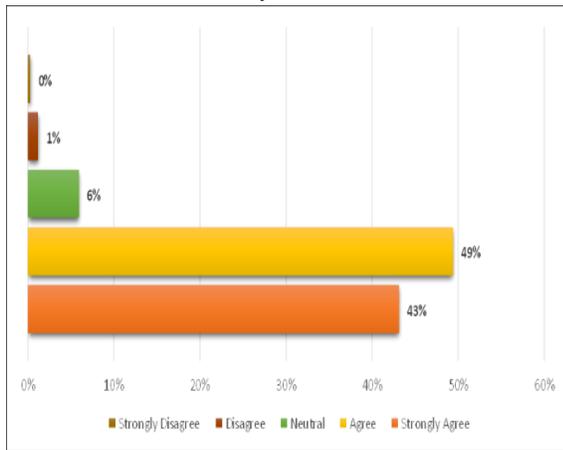
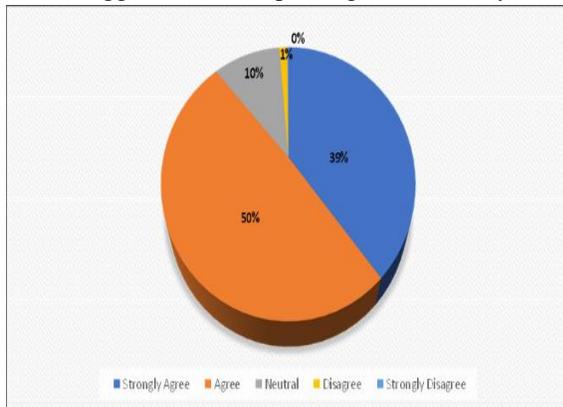


Figure 11: Supervisor/HOD Considers Staff Suggestions for Improving Patient Safety



The data in figure 11 shows that the majority of staff feel that their suggestions for improving patient safety are taken into consideration by their supervisors or HODs, with 88% strongly agreeing (39%) or agreeing (49%). This suggests a collaborative environment where staff input is highly valued, which is crucial for ongoing improvement. The 10% of neutral responses may indicate some inconsistency in how suggestions are handled, but the overwhelmingly positive feedback emphasizes a strong culture of inclusion and shared responsibility for patient safety.

Figure 12: Hospital Management Provides Adequate Resources to Improve Patient Safety

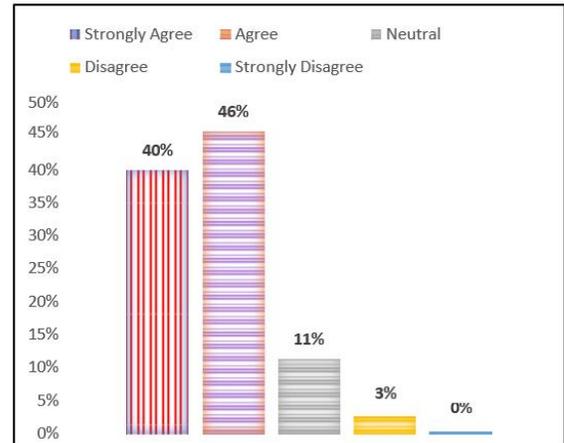
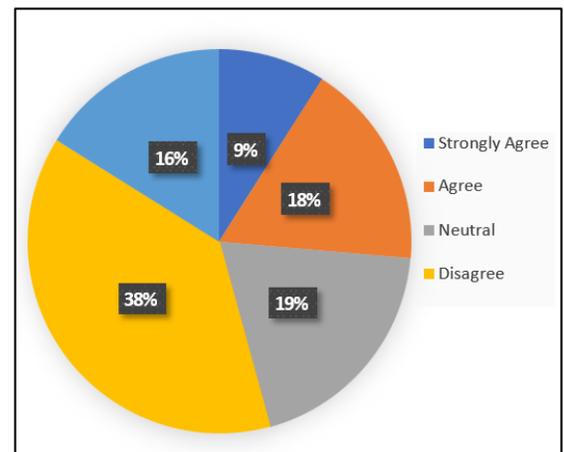


Figure 13: Hospital Management's Interest in Patient Safety Post-Adverse Events



The data in figure 12 indicates that the majority of respondents, 86%, agree or strongly agree that the hospital management provides sufficient resources for patient safety. However, 11% of the respondents were neutral, and 3% disagreed, suggesting that there may be some disparities in how resources are distributed or perceived across different departments. Overall, the data indicates a positive sentiment towards hospital management and their support in ensuring the availability of essential resources for patient safety. On the other hand, the findings presented in figure 13 show mixed perceptions regarding the hospital management's interest in patient safety, particularly in the context of adverse events. While 54% of staff members disagree or strongly disagree with the notion that management is only interested in safety after an adverse event, 26% either agree or strongly agree with

this statement. Additionally, 19% of the responses were neutral, indicating some uncertainty or variation in experiences.

These varied responses suggest that while many staff members believe that management is committed to safety beyond reactive measures, there are still concerns that need to be addressed in order to promote a proactive safety culture.

Figure 14: Communication During Shift Changes

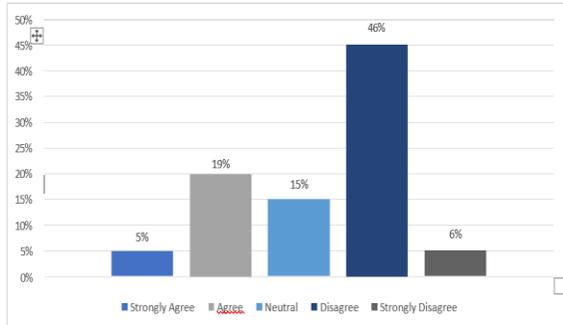
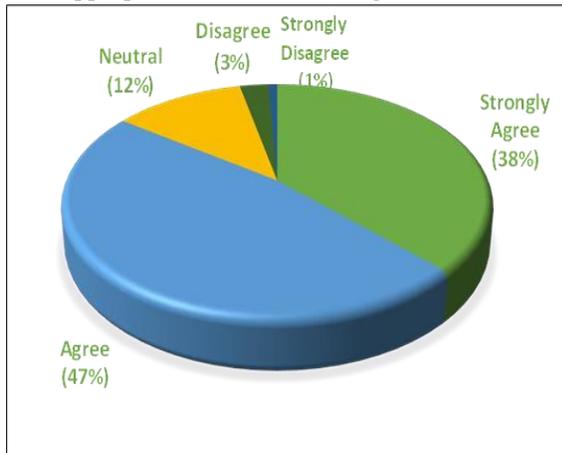


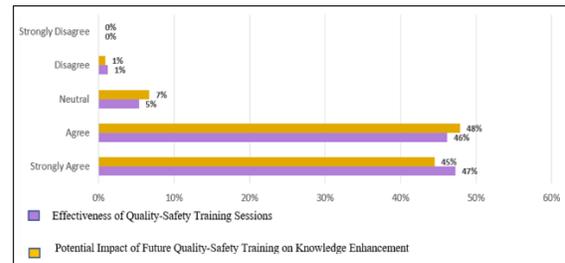
Figure 15: Hospital Management Provides an Appropriate and Safe Working Environment



The data presented in figure 14 highlights a significant issue regarding communication during shift changes. According to the survey, 52% of respondents either disagree (46%) or strongly disagree (6%) that important information is frequently omitted during these transitions. On the other hand, 24% agree (19%) or strongly agree (5%) that such omissions occur, while 15% remain neutral. These results indicate that although the majority of respondents are confident in the communication processes during shift changes, a notable minority believes there are gaps that could potentially compromise patient safety. This underscores the need to reinforce communication

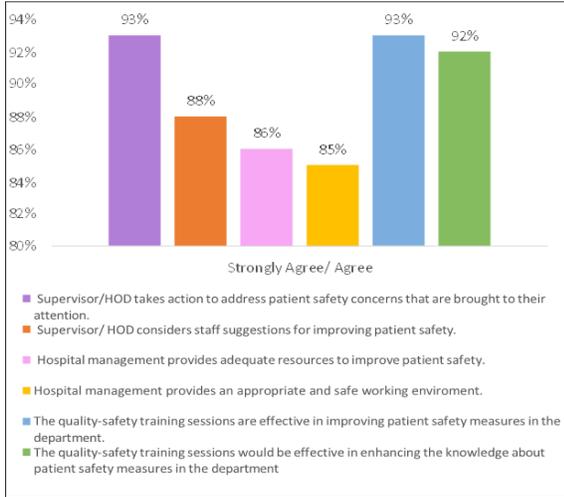
protocols to ensure consistency and reliability across all shifts. Additionally, the figure 15 reveals that 85% of respondents agree (47%) or strongly agree (38%) that hospital management provides a safe and suitable working environment. Only 16% of respondents expressed neutral (12%) or negative (4%) viewpoints on this matter. The high level of agreement suggests that most staff members feel supported by management in terms of their working conditions, which is crucial for ensuring patient safety and overall staff well-being. The limited number of dissenting responses indicates that while there is general satisfaction, there may still be specific areas for improvement.

Figure 16: Effectiveness and Potential Impact of Quality-Safety Training Sessions on Knowledge Enhancement



A notably positive perception of the quality-safety training sessions (figure 16), specifically, 93% of staff either agreed (46%) or strongly agreed (47%) that these sessions effectively enhance patient safety measures. This underscores a strong belief in the value of ongoing training as a fundamental component of patient safety. The minimal neutral (5%) and disagree (1%) responses suggest that, while the majority find the training beneficial, continuous assessment and improvement of these sessions could help address any potential gaps or areas of concern. Additionally, the responses also indicated a favorable outlook on future quality-safety training sessions with 93% of respondents either agreed (48%) or strongly agreed (45%) that these sessions would significantly enhance their understanding of patient safety measures. This widespread confidence underscores the perceived significance and effectiveness of ongoing education in sustaining and enhancing patient safety practices. The low levels of neutrality (7%) and disagreement (1%) indicate that nearly all staff acknowledge the crucial role of training in promoting a secure hospital environment.

Figure 17.1: Evaluation of Leadership Actions, Resource Provision, and Training Impact on Patient Safety

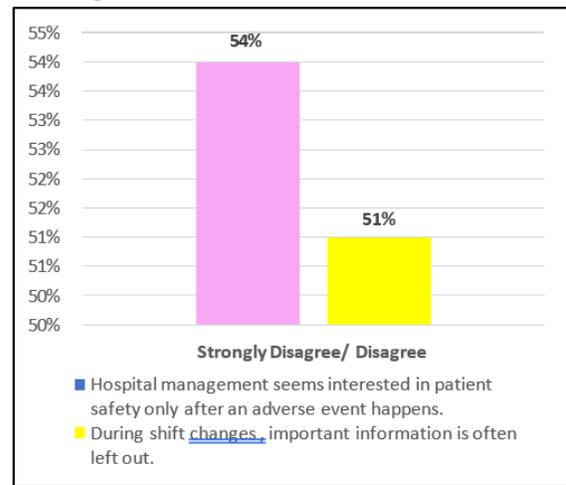


The survey results strongly indicate that the hospital's resources and training programs effectively support patient safety efforts and enhance staff knowledge and practices. A significant 92% of respondents (figure 16.1) confirm that their supervisors or heads of departments actively address patient safety concerns brought to their attention. This level of support aligns with the null hypothesis, suggesting that leadership is making effective use of available resources to uphold high standards of patient safety. Additionally, 88% of respondents (figure 17.1) feel that their suggestions for improving patient safety are taken into consideration by their supervisors. This points towards an open and responsive management culture, further reinforcing the hypothesis that the hospital's resources, particularly in leadership and communication, are adequate and positively impacting patient safety practices. Moreover, 86% of respondents (figure 16.1) believe that hospital management provides sufficient resources to improve patient safety. This high level of agreement reflects confidence in the hospital's commitment to safety and resource allocation, thus strengthening the null hypothesis that resources adequately support safety efforts. Notably, only 26% (9% strongly agree, 17% agree) of respondents feel that hospital management shows interest in patient safety primarily after adverse events occur, with a significant 54% (figure 17.2) disagreeing with this statement. This indicates that the hospital's interest in safety is perceived as proactive rather than reactive, aligning with the null hypothesis

and demonstrating ongoing efforts to maintain safety standards irrespective of adverse events.

However, a concerning 51% of respondents (figure 16.2) disagree that important information is often left out during shift changes, with only 24% (5% strongly agree, 19% agree) indicating that this is an issue. While the majority view is positive, the presence of a notable percentage perceiving this problem suggests a potential area for improvement in communication practices during transitions, which may benefit from additional training or revised protocols. In addition, a substantial 85% of respondents (figure 16.1) agree that hospital management provides an appropriate and safe working environment. This high level of satisfaction with the work environment indicates that management is successfully utilizing resources to maintain safety, thus supporting the null hypothesis.

Figure 17.2: Evaluation of Leadership Actions, Resource Provision, and Training Impact on Patient Safety



Lastly, there is strong agreement regarding the effectiveness of quality-safety training sessions with 93% combined agree and strongly agree (figure 17.1) in both improving safety measures and enhancing knowledge, with minimal disagreement (1% in both cases), further supporting the hypothesis. This suggests that the training programs are well-received and likely effective in enhancing patient safety. Overall, the high levels of agreement across key indicators such as leadership responsiveness, resource allocation, and training effectiveness suggest that the hospital is successfully cultivating a culture of safety. However, the mixed responses regarding information

sharing during shift changes indicate a potential area for further improvement, which could involve targeted interventions to ensure comprehensive communication.

Effectiveness of Communication on Patient Safety
 Null Hypothesis (H₀): Information about patient safety incidents is effectively communicated to staff across different units.

Alternate Hypothesis (H₁): Information about patient safety incidents is not effectively communicated to staff across different units.

To rigorously evaluate the above hypothesis, the following key questions were incorporated into the survey to assess the efficacy of communication concerning patient safety within the hospital:

1. You are being informed about the patient safety errors happening in your unit.

This question assesses how well communication channels convey information about patient safety errors to staff in a timely and accurate manner within their respective units.

2. You are involved in a patient safety incident happening in your unit.

Meaningful involvement in these matters often hinges on clear, consistent communication that empowers staff to take ownership of patient safety.

3. Staff speak up if they see something that may negatively affect the quality of patient care.

Open, transparent communication is a cornerstone of patient safety, enabling early identification and mitigation of potential risks.

4. In the department, the employees are informed about changes that are made based on event reports. While this question touches on the aftermath of reporting, its primary focus is on the effectiveness of communication regarding changes or improvements made in response to patient safety events.

Table 4: Communication Regarding Patient Safety Incidents

Questions	ALWAYS	MOST OF THE TIMES	SOMETIMES	RARELY	NEVER
You are being informed about the patient safety errors happening in your unit.	57%	26%	12%	4%	1%
You are involved in a patient safety incident, happening in your unit.	42%	24%	20%	8%	6%
Staff speaks up if they see something that may negatively affect quality of patient care.	41%	31%	16%	8%	4%
In the department the employees are informed about changes that are made based on event reports	54%	30%	11%	4%	1%

The responses in figure 18 show that while 57% of staff feel adequately informed, indicating effective communication regarding safety issues, there is a

notable portion—26%—who are somewhat informed, and 12% who are minimally informed. Additionally, 4% report being inadequately informed, and 1% feel completely uninformed. These findings highlight a significant gap in communication about patient safety errors, suggesting that while many staff members are receiving necessary information, improvements are needed to ensure that all staff members are consistently updated.

Figure 18: Awareness of Patient Safety Errors

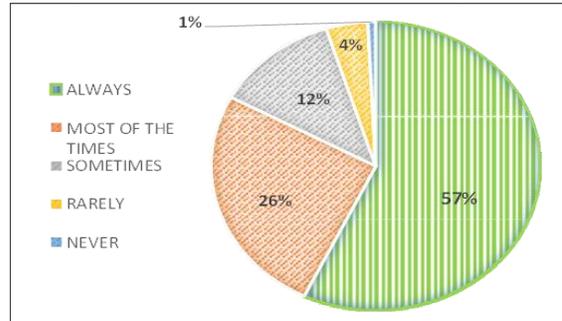


Figure 19: Involvement in Patient Safety Incidents

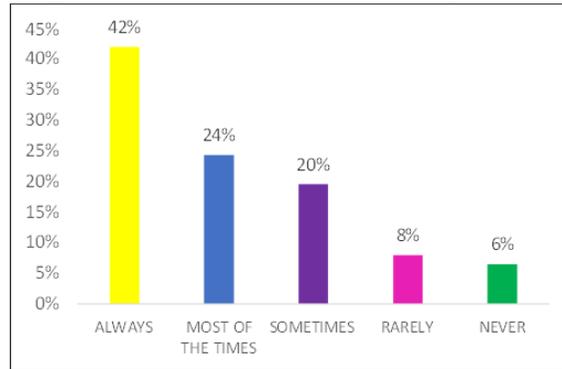
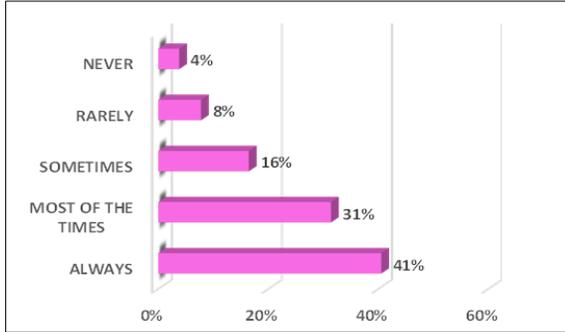


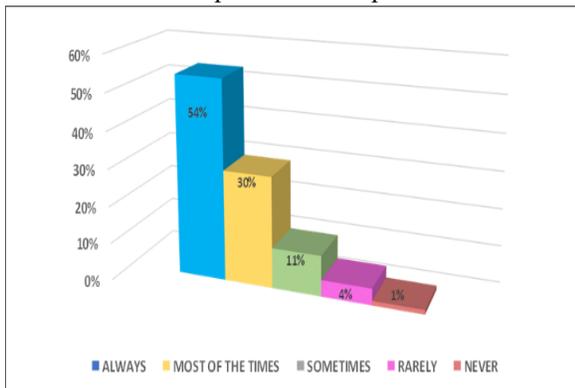
Figure 19 indicates that 42% of staff are actively involved in such incidents, suggesting a significant engagement with patient safety issues. Meanwhile, 24% report occasional involvement, implying a variable but notable interaction with these events. A further 20% experience minimal involvement, and 8% are rarely involved, while 6% have never encountered a safety incident. These findings underscore a diverse range of experiences among staff, highlighting the need for tailored strategies to support those frequently involved and to improve preparedness and awareness across all units. This variation points to the importance of addressing the different levels of involvement in patient safety incidents to enhance overall safety practices and ensure comprehensive staff training and support.

Figure 20: Staff Willingness to Speak Up About Quality of Patient Care



In figure 20, 41% of staff are proactive in raising concerns, indicating a strong culture of communication and vigilance regarding patient care. Additionally, 31% of respondents occasionally speak up, suggesting that while they recognize the importance of reporting issues, their actions may be less consistent. In contrast, 16% report minimal willingness to speak up, and 8% rarely do, with 4% never speaking up. These figures suggest that while a significant portion of staff are engaged in reporting potential issues, there is a need to encourage and support a more universal commitment to speaking up to enhance overall patient safety. Further in figure 21, 54% of staff feel that they are adequately informed about such changes, reflecting effective communication regarding improvements and responses to safety events. Another 30% are somewhat informed, which indicates that while they receive some updates, there may be room for improvement in ensuring consistent and comprehensive communication. However, 11% report minimal information, 4% rarely receive updates, and 1% never get informed.

Figure 21: Communication of Changes Based on Event Reports in the Department



The responses reveal a generally positive communication culture, with a significant 57% of participants indicating that they are always informed about patient safety errors occurring in their unit, and an additional 26% reporting that they are informed most of the time. This high level of awareness among the majority of staff members suggests that the department is effective in maintaining consistent communication about patient safety errors, thereby supporting the null hypothesis that information about patient safety errors is effectively conveyed to staff across different units. However, while communication appears strong, the level of staff involvement in patient safety incidents presents a more varied picture. Only 42% of respondents indicated that they are always involved in patient safety incidents occurring within their unit, and 24% are involved most of the time. This implies that while a core group of staff is regularly engaged in managing patient safety incidents, a considerable proportion—34% of respondents—are only sometimes, rarely, or never involved. This gap in involvement may point to an opportunity for the department to improve its processes, ensuring that a broader spectrum of staff is consistently engaged in patient safety efforts. Enhancing staff involvement could contribute to more comprehensive and collaborative management of patient safety incidents, further supporting the department's overall safety objectives.

Moreover, 41% of the staff always take action by voicing concerns, and 31% do so most of the time, there remains a significant 28% of respondents who are less consistent in this behavior. This indicates that, although a majority of staff members are proactive in addressing potential patient safety issues, there may be underlying factors—such as fear of reprisal, lack of confidence, or insufficient encouragement—that prevent some staff from consistently speaking up. In addition, the responses show that 54% of participants are always informed about changes made based on event reports, with another 30% being informed most of the time. This indicates that the department places a strong emphasis on communicating updates and changes that arise from safety event reports, further supporting the null hypothesis by demonstrating effective dissemination of information that impacts patient safety practices. However, the remaining 16% of respondents who are less frequently informed suggest that there may be room to improve the

consistency and reach of this communication, ensuring that all staff members are equally aware of changes that could affect their work and patient outcomes. Overall, high levels of awareness and communication support the null hypothesis, affirming that patient safety information is being effectively communicated to staff members. However, the findings also identify specific areas where improvement is possible.

Frequency and Effectiveness of Error Reporting

Null Hypothesis (H₀): Patient safety incidents are reported frequently enough to significantly improve patient safety practices.

Alternate Hypothesis (H₁): Patient safety incidents are not reported frequently enough to significantly improve patient safety practices.

This hypothesis can be examined by focusing on two distinct scenarios that are critical for patient safety:

1. When a mistake is caught and corrected before reaching the patient, how often is this reported: The evaluates how frequently staff report incidents where a mistake is identified and corrected before it can affect the patient. The reporting of near misses is a key indicator of a proactive safety culture within the hospital. By analyzing how often these incidents are reported, this study aims to assess whether the hospital's safety protocols are robust enough to capture these potentially harmful events before they escalate, thereby preventing future occurrences.

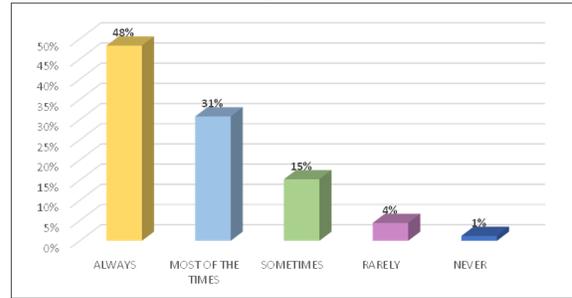
2. When a mistake reaches the patient and could have harmed the patient but did not, how often is this reported:

Although the patient is unharmed, such incidents still represent failures in the system that require thorough investigation. The frequency of reporting these errors will provide insight into the hospital's commitment to learning from all mistakes, regardless of their immediate impact, and improving overall patient safety practices.

Table 5: Frequency of Reporting Near Misses and Non-Harmful Errors by Hospital Staff

Questions	ALWAYS	MOST OF THE TIMES	SOMETIMES	RARELY	NEVER
When a mistake is caught and corrected before reaching the patient, how often is this reported.	48%	31%	15%	4%	1%
When a mistake reaches the patient and could have harmed the patient but did not, how often is this reported.	48%	22%	13%	12%	5%

Figure 22 : Frequency of Reporting Near Misses by Hospital Staff



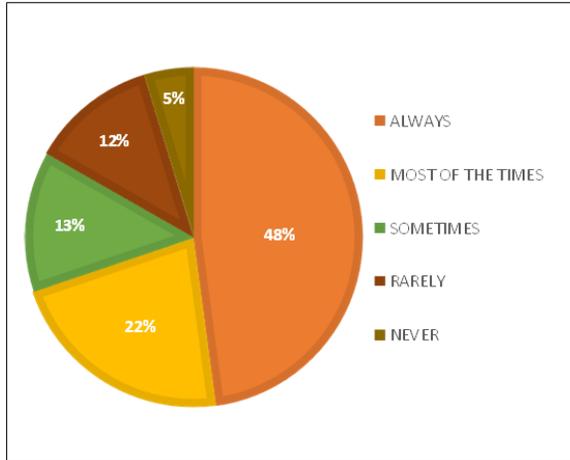
The data sheds light, that 48% (figure 22) of respondents indicate always report near misses, and 31% report them most of the times. These figures suggest that the majority of staff members are diligent in documenting near misses, which is a positive reflection of a proactive safety culture. The consistent reporting of near misses is vital, as it allows the hospital to identify potential risks and take preventive measures before harm occurs. However, the fact that 15% of respondents only sometimes report these incidents, with 4% doing so rarely and 1% never, points to inconsistencies in reporting practices. These inconsistencies could undermine the hospital's ability to fully learn from near misses and implement system-wide improvements.

The reporting behavior appears to be somewhat less consistent when the mistake reaches the patient but does not result in harm. While 48% of respondents (figure 23) still always report such incidents, only 22% report them most of the time, and the remaining responses are more evenly distributed, 13% sometimes, 12% rarely, and 5% never. This indicates a potential decline in the commitment to reporting errors that, while not harmful, are nonetheless critical for identifying and mitigating risks. The lower frequency of reporting these types of incidents suggests that there may be barriers or disincentives to reporting errors that do not cause immediate harm, which could limit the hospital's ability to learn from all types of errors and improve patient safety practices comprehensively.

The high percentage of reporting such incidents does support the null hypothesis, indicating that a significant portion of the staff are consistently engaged in reporting errors. However, the variation in reporting behavior—especially in cases where errors reach the patient without causing harm—highlights areas for potential improvement. Strengthening the culture of

error reporting, particularly for non-harmful incidents, could significantly enhance the hospital’s ability to learn from its experiences and further bolster patient safety. By addressing these inconsistencies, the hospital can work towards ensuring that all errors, regardless of their immediate impact, are reported and analyzed, thereby contributing to a more robust and effective patient safety culture.

Figure 23: Frequency of Reporting Non-Harmful Errors by Hospital Staff



XIII: CONCLUSION AND RECOMMENDATIONS

This study offers an extensive evaluation of patient safety culture within a multi-specialty charitable hospital, elucidating key aspects such as communication, management involvement, training effectiveness, and error reporting. The research reveals significant gaps in the communication of patient safety errors, indicating that safety information is not consistently and effectively shared across various units. This deficiency underscores the urgent need for enhanced communication protocols to ensure that critical safety information reaches all relevant staff members in a timely and accurate manner. Effective communication is pivotal in fostering a culture of safety, where staff are aware of potential risks and can take proactive measures to mitigate them.

The study also highlights the varying effectiveness of safety training programs across departments. While these programs generally improve staff knowledge about patient safety, their impact on actual practice and safety outcomes is inconsistent. This variation suggests that a one-size-fits-all approach to training is

insufficient. Instead, training programs should be tailored to address the specific needs and challenges of different departments, incorporating practical, department-specific scenarios and continuous feedback mechanisms to ensure that the training translates into improved safety practices. The research further emphasizes the reactive nature of management involvement in addressing patient safety concerns.

Although there is some engagement from hospital leadership, it is often triggered by adverse events rather than being part of a proactive strategy to prevent such events. This reactive approach can undermine efforts to build a strong safety culture, as it may create a perception that safety is only prioritized when problems arise. For a more robust safety culture, management should adopt a proactive stance, actively seeking to identify and address potential safety issues before they escalate. This includes regularly soliciting staff feedback, engaging in open dialogue about safety concerns, and implementing systemic changes based on that feedback to continuously improve safety practices. The study also uncovers inconsistencies in error reporting practices, revealing that some staff members are hesitant to report safety incidents due to perceived ineffectiveness of reporting systems or fear of repercussions. To address these issues, hospitals need to strengthen their error reporting mechanisms, ensuring that they are user-friendly, supportive, and geared towards learning rather than punishment. Creating a non-punitive environment where staff feel safe to report errors without fear of retribution is essential for accurate reporting and subsequent safety improvements.

Despite the valuable insights provided, this study has limitations, including its focus on a single institution, which may affect the generalizability of the findings to other healthcare settings. Future research should address these limitations by expanding the sample size to include multiple institutions, which would offer a broader perspective on patient safety culture and practices. Additionally, incorporating objective measures of safety practices, such as incident rates and patient satisfaction scores, alongside self-reported data, would provide a more comprehensive and accurate assessment of safety culture. Longitudinal studies could also offer valuable insights into how safety culture evolves over time and the long-term effects of safety initiatives on patient outcomes and staff satisfaction.

Moreover, exploring the role of different leadership styles and organizational cultures in shaping patient safety practices could yield new strategies for fostering a supportive and effective safety culture. By examining how leadership influences safety culture and implementing targeted interventions based on these insights, hospitals can enhance their safety practices and better support their staff. In summary, this study underscores the critical importance of improving communication, tailoring training programs, adopting proactive management strategies, and strengthening error reporting mechanisms to enhance patient safety culture. The recommendations provided offer a roadmap for addressing the identified gaps and implementing effective practices to ensure that patient safety remains a top priority. By taking these steps, healthcare organizations can create a more supportive and safety-conscious environment, leading to better patient outcomes and a higher quality of care.

Recommendations

The findings of this study provide a critical foundation for enhancing patient safety culture within a multi-specialty charitable hospital. To address the identified gaps and foster a robust safety culture, several key recommendations are proposed. Firstly, enhancing communication channels is paramount. The study highlighted significant deficiencies in how safety information is disseminated across different units. To remedy this, the hospital should develop and implement clear, standardized communication protocols that ensure the timely and accurate sharing of safety-related information. Regular interdisciplinary safety meetings should be introduced to facilitate cross-departmental dialogue, allowing for the discussion of safety concerns, the sharing of best practices, and collaborative problem-solving. Such meetings can bridge communication gaps and promote a unified approach to safety. Furthermore, leveraging technology can play a crucial role in improving communication. Implementing a digital safety reporting system or an internal safety portal could streamline the reporting process and ensure that safety information is easily accessible to all relevant staff members. Providing training on effective communication strategies is also essential. Staff should be trained not only on how to report safety concerns but also on how to communicate safety information clearly and accurately, which can be

integrated into regular professional development programs.

In addition to improving communication, safety training programs need to be tailored to better meet the needs of different departments. The study revealed that while safety training generally improves staff knowledge, its effectiveness varies across departments. Therefore, training programs should be customized to address the specific challenges and needs of each department. This customization could involve incorporating practical, department-specific scenarios into training content and providing continuous feedback mechanisms to ensure that the training is relevant and impactful. Regular updates to training materials are also crucial to keep pace with the latest safety standards and guidelines. Implementing ongoing training and refresher courses can reinforce safety practices and ensure that staff remain current with new developments and best practices in patient safety.

Promoting proactive management involvement is another critical area for improvement. The study found that management's involvement in addressing patient safety concerns is often reactive, occurring only after an adverse event. To shift towards a proactive approach, hospital leadership should regularly review safety data, anticipate potential risks, and implement preventive measures before issues escalate. Proactive engagement from management involves not only responding to incidents but actively seeking staff feedback, engaging in open dialogue about safety concerns, and implementing systemic changes based on that feedback. Establishing safety champions within each department can further enhance management's proactive role. These individuals would act as advocates for safety, facilitate communication between staff and management, and lead safety improvement efforts within their departments.

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