

Short Communication

# Culture of Safety Environment: Findings from a Multi-Speciality Tertiary Care Hospital

Maitraye Basu<sup>1</sup>, Priya Srivastav<sup>2</sup>, Amrita Roy<sup>3</sup>

<sup>1</sup>DGM, Quality, Apollo Gleneagles Hospitals Limited

<sup>2</sup>Manager, Quality, Apollo Gleneagles Hospitals Limited

<sup>3</sup>Asst. Manager, Quality, Apollo Gleneagles Hospitals Limited

Corresponding Author: Dr Maitraye Basu

## ABSTRACT

**Introduction:** A 'Culture of Safety' describes the core values and behaviors related to providing safe care. The concept of the 'Culture of Safety' in healthcare came to the limelight following the report of the Institute of Medicine in 1999.

**Material and Methods:** This is a cross-sectional study doing an in-depth analysis of the findings from the 'Culture of Safety' Survey at the individual unit level. Data from the survey conducted in June 2018 with a sample size of 996 was collated and analyzed using Microsoft Office Excel 2013 and descriptive statistics. The validated Patient Safety Culture Survey questionnaire of the AHRQ was used and the self-reported survey was conducted through the 'Survey Monkey.

**Results and Discussion:** Analysis of top few positive responses and analysis of top few negative responses brought about the strengths and weaknesses. Strategies that were implemented based on these findings. The organization believes in the spirit of the 'Culture of Safety' and the leadership at every level leads from the front in driving the same.

**Conclusion:** Despite being an internationally accredited institution for the last decade or so and with the spirit of 'Culture of Safety' ingrained as a top down approach and among all levels of staffs and with a strong sense of commitment from the leadership to establish and make the 'Culture of Safety' a part and parcel of work culture in the unit, there are still scopes of improvement. The need of the hour is to promote the spirit of the 'Culture of Safety' in the Indian healthcare scenario.

**Key words:** Culture of Safety; Just Culture, Patient Safety

## INTRODUCTION

A 'Culture of Safety' describes the core values and behaviors related to providing safe care that prevail when there is a collective and continuous top down commitment lead from the forefront by the organizational leadership which percolates down the line through the managerial staffs to every health care provider in the organization. The aim is to emphasize safety over competing goals. [1]

The origin of the concept of 'Culture of Safety' is outside healthcare. The concept originated in the high reliability

organizations like the aviation industry or more precisely the military aviation systems. High reliability organizations are organizations which operate in complex, high-hazard realms for extended periods without serious accidents or catastrophic failures.

High reliability organizations thus have in built processes with an aim to minimize errors and maximize safety. New threats to safety can continuously emerge as uncertainty can never be obliterated and not two accidents can be exactly the same. With this mindset high reliability organizations

continuously work to create an environment in which potential problems are anticipated, detected early, and actions taken early to prevent catastrophic consequences. [2]

In 1999 the Institute of Medicine (IOM) published a stunning report on 'To Err Is Human: Building a Safer Health System'. In this landmark report and in another report that followed 'crossing the Quality Chasm: A New Health System for the 21st Century in 2001', it highlighted that thousands of people were injured by the very *health system* from which they sought help. As per the report, 44,000 - 98,000 people die in US hospitals each year as a result of preventable medical errors. Errors cost \$17 billion – \$29 billion per year. The reports further pointed out that majority of the medical errors are caused by faulty systems, processes, and conditions that lead people to make mistakes or fail to prevent them. [3]

The concept of the 'Culture of Safety' in healthcare came to the limelight following the report of the Institute of Medicine. The report put a thrust on the importance of creating and maintaining a 'Culture of Safety' and emphasized the need for ongoing action by all Health Care Organizations (HCOs) to achieve the goal for patient safety. It also addressed the need for all Health Care Organizations to measure their progress in the creation of such cultures. [4,5]

Although the magnitude of the reported problem is a gross underrepresentation of the actual situation, it is likely that millions of patients suffer from disabling injuries or death in consequence of clinical risk and safety incidents. [6]

More recent data points out that the numbers may be higher and represents the tip of the iceberg only. With an ever incremental complex scenario in which the healthcare system operates with newer technologies and complex interplay of new challenges being imbibed, there is a huge potential for more serious adverse events jeopardizing the safety of patients. [7,8]

The risk is much higher in developing countries where the concepts concerning 'Patient Safety' are still in the nascent stage. [9]

The concept of 'Culture of Safety' encompasses, the following principles: [10]

- accepting the high risk nature of the organization's activities and the determination of safe operations always
- blame free environment where personnel are able to report errors without the fear of being punished or reprimanded
- courage intra and inter-department free flow of communication irrespective of hierarchy with an aim to solve patient safety concerns
- strong organizational commitment by the higher leadership to promote and sustain an ambience of 'Culture of Safety'

The Agency for Healthcare Research and Quality (AHRQ), a U.S. government agency, the American Nursing Association and the Joint Commission International along with many other Internationally reputed healthcare research and accreditation bodies have been working relentlessly as expert agencies promoting the 'Culture of Safety' in healthcare with an aim to make healthcare safer, reduce errors and improve on the quality of healthcare provided.

Poor perceived safety culture has been linked to increased error rates. Thus conducting a 'Culture of Safety' survey atleast once a year to assess the spirit of 'Culture of Safety' across the organization with aim to know the strengths and weaknesses and take remedial measures to improve upon those is of utmost importance to reduce errors, improve patient safety and quality of care.

The National Quality Forum's Safe Practices for Healthcare and the Leapfrog Group both mandate safety culture assessment. The Agency for Healthcare Research and Quality also recommends yearly measurement of safety culture as one of its "10 patient safety tips for hospitals. [11]

'Culture of Safety' is fundamentally a local issue, with wide variations in the perception of safety culture within a single organization across units and among different staff levels. Many determinants of 'Culture of Safety' are dependent on inter-professional relationships and other local circumstances. Implementing a 'Safety Culture' and achieving sustained improvements in safety culture can thus be difficult. Thus changing safety culture occurs at a microsystem level. Therefore, organizational leadership must be deeply involved in promoting the concept of "Culture of Safety", have a deep understanding for the 'hidden culture' that often guide staff behavior and must be attentive to the issues frontline workers face and address those duly.

Targeted interventions like leadership walk rounds, establishing dedicated safety teams, promoting the spirit of teamwork and implementing structured communication methods like SBAR have helped address cultural issues such as rigid hierarchies and communication problems, but their effect on overall safety culture and error rates remains unproven.

The concept of the 'Culture of Safety' is in the nascent and evolving phase in the Indian scenario. However, with more and more hospitals becoming quality conscious, aiming for utmost levels of patient safety, care quality of international standards, concepts of culture of safety is gaining importance in the Indian scenario. Still, it is yet to pick up momentum. Thus studies on the environment of 'Culture of Safety' as it prevails in the Indian scenario practically does not exist. Though some hospitals may be participating in assessing the 'Culture of Safety' as it exists in the unit level as a part of group wide initiatives, but unit level data analysis and dissemination of the findings for knowledge sharing of the healthcare fraternity is practically non-existent.

This study was undertaken with this background to look into the 'Culture of Safety' as it exists in a multi-speciality

tertiary care internationally accredited hospital in Eastern India.

#### Materials and Methods

This 700 bed multi-speciality tertiary care internationally accredited hospital participates in the yearly 'Culture of Safety' survey undertaken as a part of a group wide initiative. The survey is conducted in the month of June every year. The validated Patient Safety Culture Survey questionnaire of the AHRQ was used and the self-reported survey is conducted through the 'Survey Monkey'. The questionnaire is a pre-structured one and takes about 10-15 minutes to complete. The questionnaire is divided into Sections from A to I. Section A focusses on the work area of the respondent; Section B focuses on the Supervisor/Manager; Section C focusses on Communications; Section D focusses on the Frequency of Events Reported; Section E focusses on Patient Safety Grade; Section F focusses on the Hospital Safety Culture as a whole; Section G focusses on Number of Events Reported; Section H focusses on the Background information of the Respondents and Section I is an open ended section for the general comments of the respondents. The number of participants from every category of healthcare provider based on the staff strength in each department is worked out to ensure a representative sample population.

The survey questionnaire is anonymous and focuses on asking the employees to rate the safety culture in their unit and in the organization as a whole, specifically with regard to the main parameters constituting the 'Culture of Safety' as discussed above. Majority of the questions were based on a weight of 5 points as 'Strongly agree' and 1 point for 'Strongly disagree'.

#### Statistics

This is a cross-sectional study doing an in-depth analysis of the findings from the 'Culture of Safety' Survey at the individual unit level (700 bed multi-speciality tertiary care hospital in Kolkata) in the year of commencement of the survey conducted

centrally from the Group level. Data from the survey conducted in June 2018 with a sample size of 996 was collated and entered in a computer based spreadsheet, recoded and analyzed using Microsoft Office Excel 2013 and descriptive statistics.

## RESULTS

The primary area of work for the staffs who participated in the survey was Intensive care unit (30%); Surgical unit (12%); Non surgical unit (9%); Emergency unit (7%) and rotating units (16%). Diagram 1

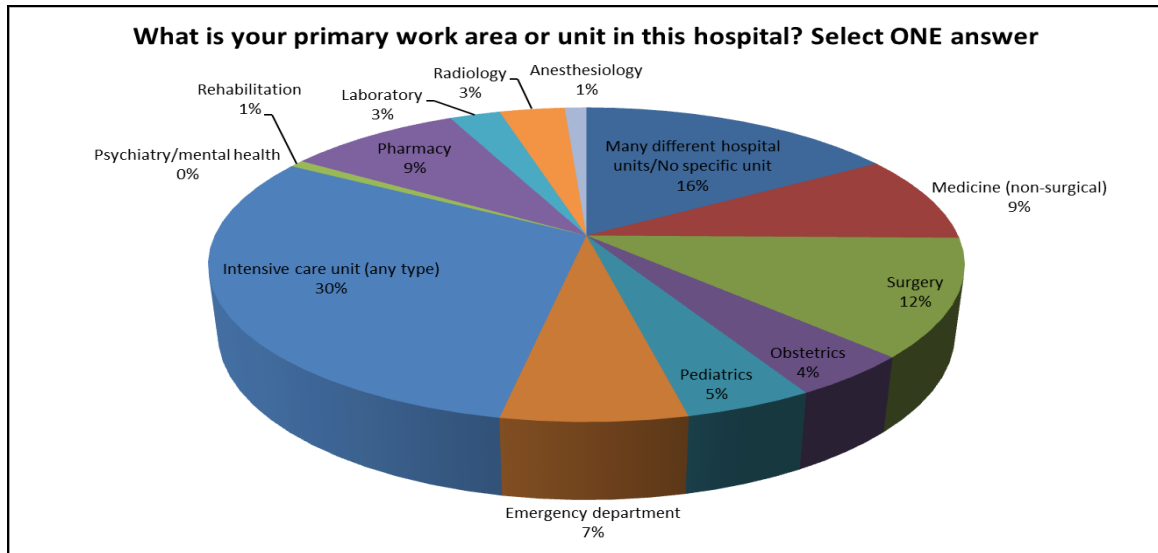


Diagram 1

44% of the staffs mentioned not reporting any events in the past 12 months. Diagram 2

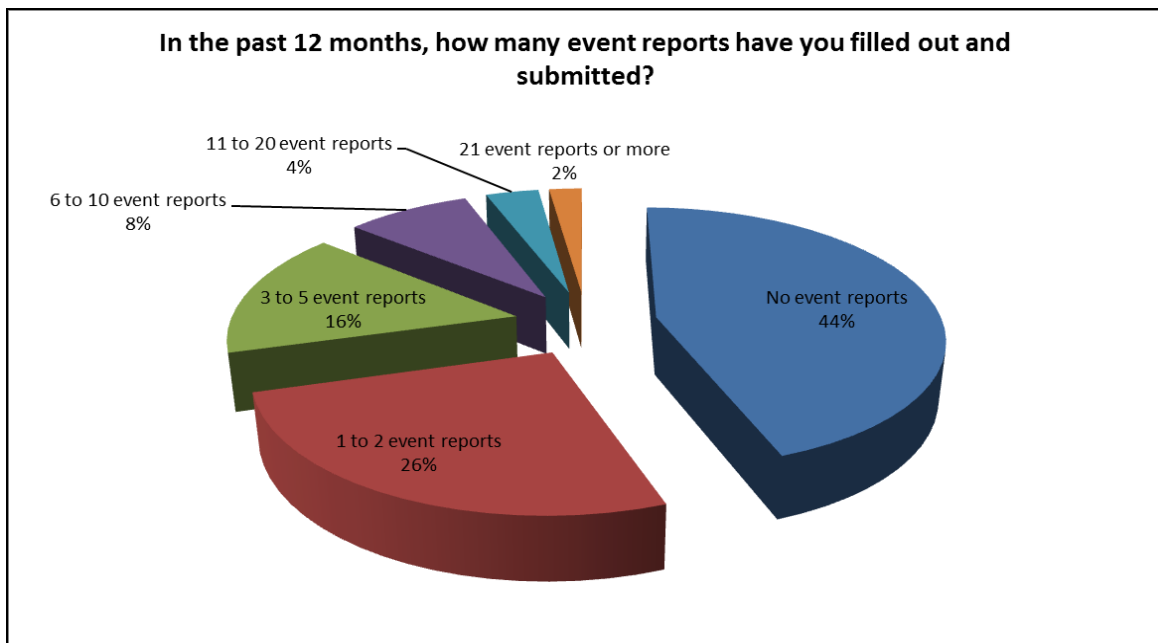


Diagram 2

15% of the staffs worked for < 1 year, 47% of the staffs had a working experience of 1 to 5 years, 25% of the staffs had a working experience of 6 to 10 years, 11% of the staffs had a working experience of 11 to 15 years and only 2% of the staffs had a working experience of 16 to 20 years in this hospital. Diagram 3

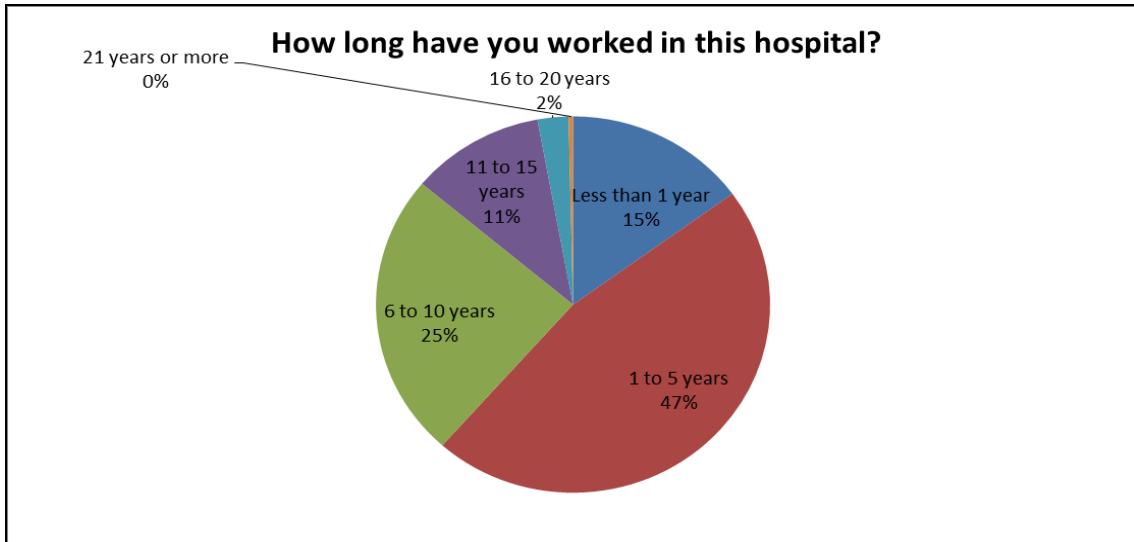


Diagram 3

The diagram below represents the staff distribution in a dedicated unit. Diagram 4.

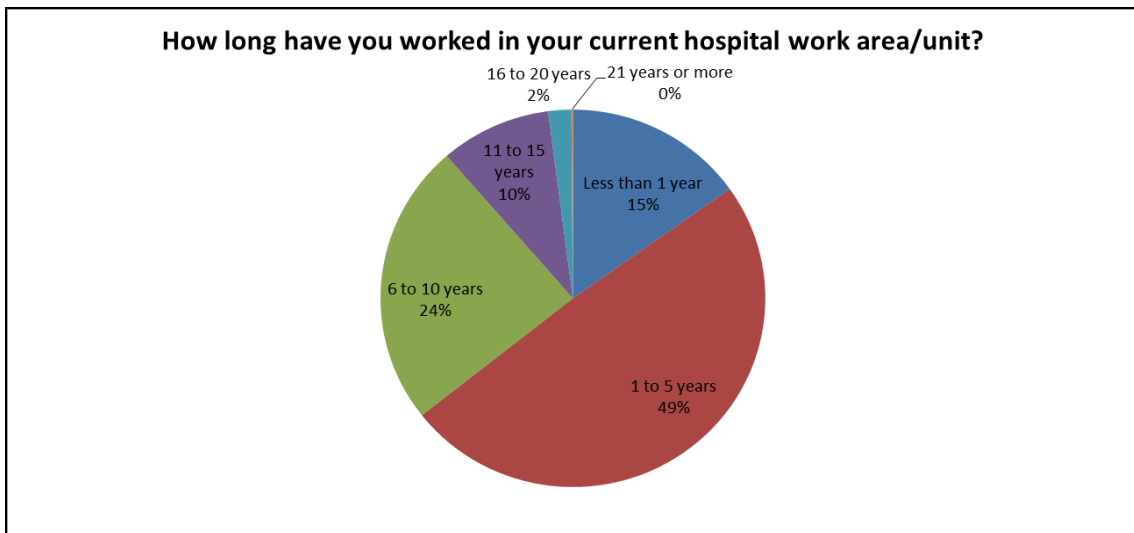


Diagram 4

59% of the staffs reported having worked for 40 to 59 hours per week, 34% reported having worked for 60 to 79 hours per week. Diagram 5.

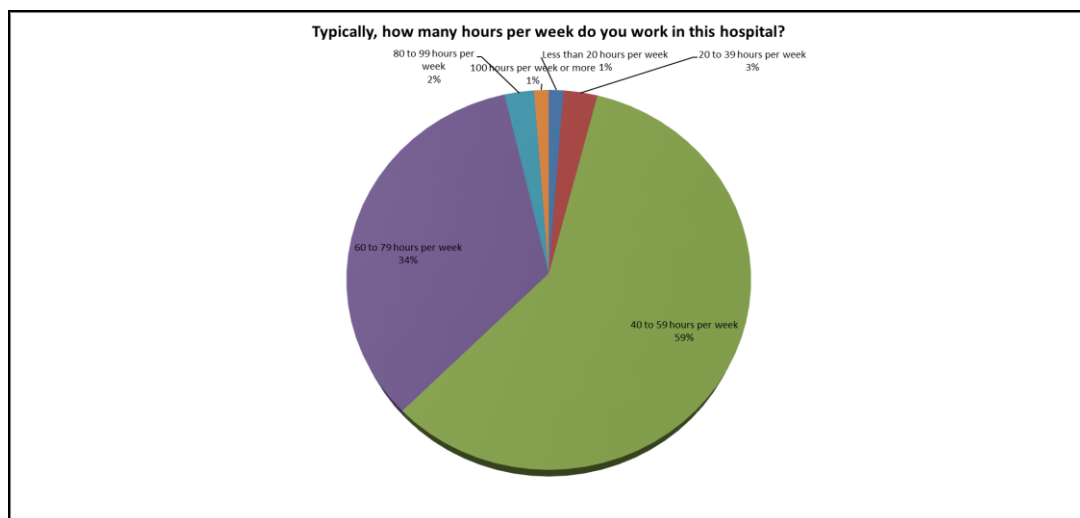


Diagram 5

62% respondents were registered nurses, 10% were administration/Management personnel, 6% Pharmacists, 4% were dieticians, 6% were Junior Medical Staffs and 1% Consultant physicians, 5% Technicians. Diagram 6

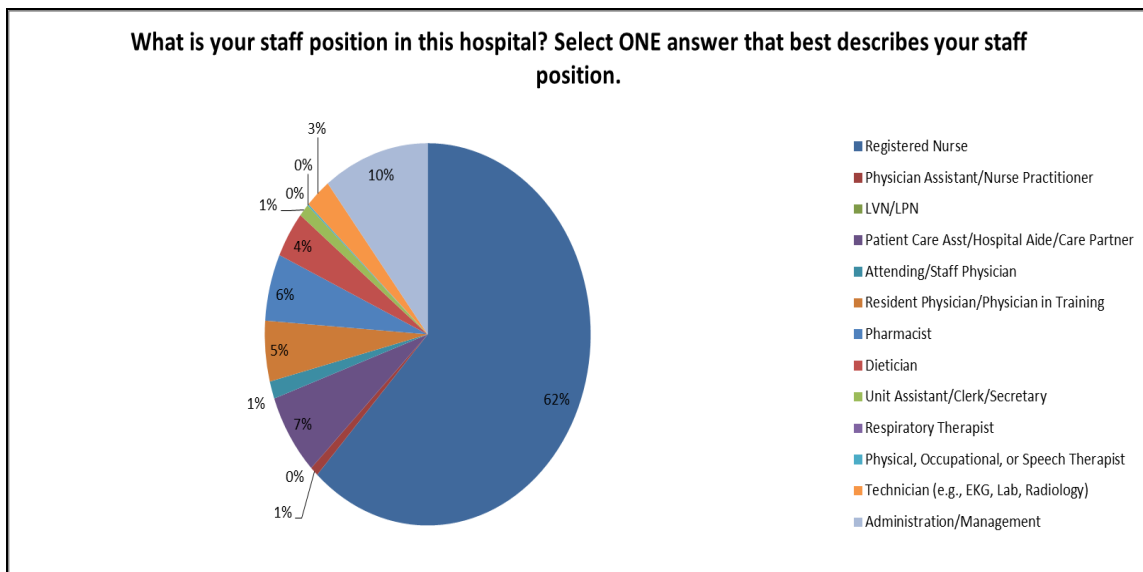


Diagram 6

86% of the respondents had direct interaction or contact with the patients which was in favor of fulfilling the objective of the study in bringing out a clear picture of the spirit of “Culture of Safety” in the unit and draw actionables based on the strengths and weaknesses highlighted.

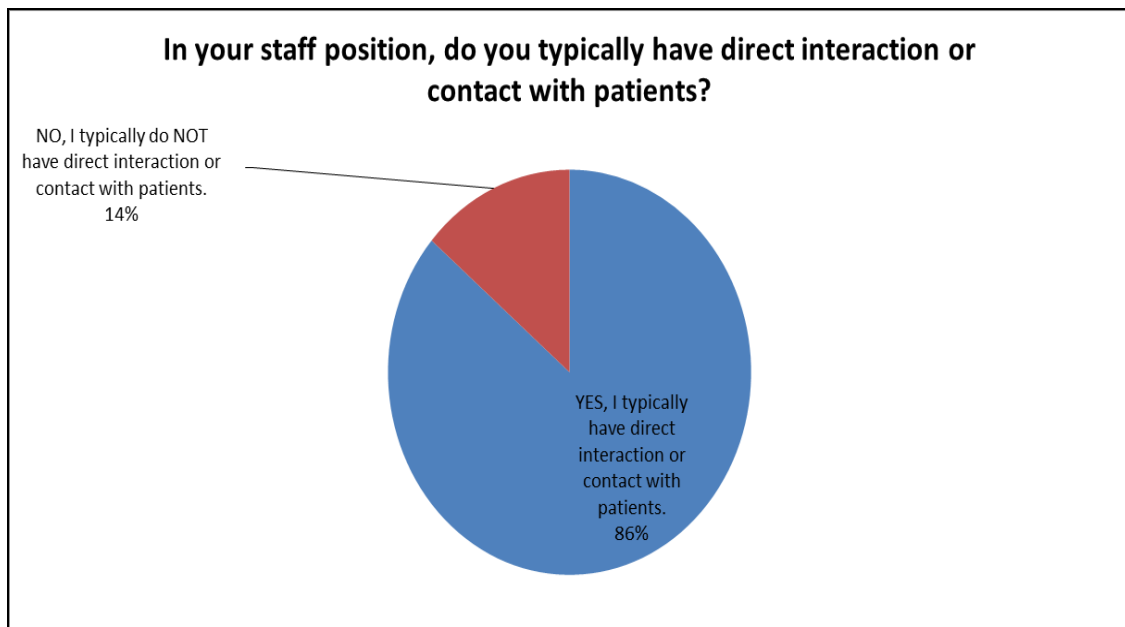


Diagram 7

45% of the staffs had an industry experience of 1 to 5 years and 25% of the staffs had an industry experience of 25%. Diagram 8. Thus the respondent population was a fairly experienced one which is in favor of the reliability of the study.



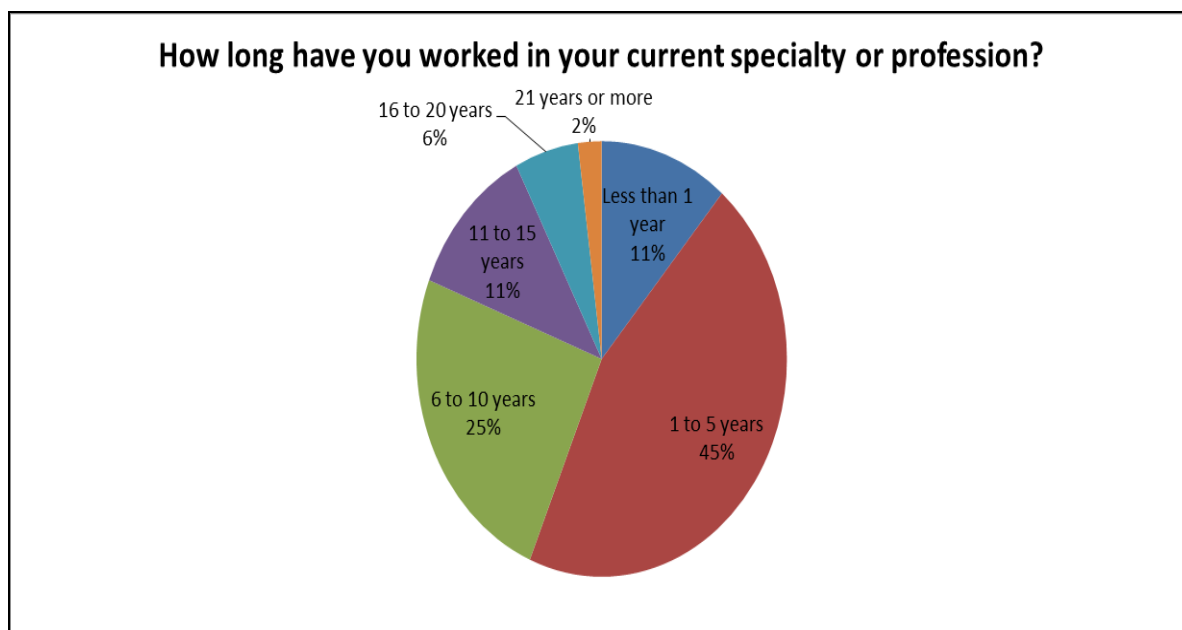


Diagram 8

The strengths and weaknesses with the opportunities for improvement were delineated from the survey based on the weighted average score of each parameter rated against a 5 pointer scale where 5 points corresponded with 'Strongly agree' and 1 point corresponded with 'Strongly disagree'.

Analysis revealed the top few positive feedbacks or strengths as follows:

- In this unit, we discuss ways to prevent errors from happening again (weighted average score of 4.51)
- We are informed about errors that happen in this unit (weighted score of 4.49)
- The actions of the hospital management show that patient safety is a top priority (weighted score of 4.44)
- We are actively doing things to improve patient safety (weighted score of 4.44)
- Hospital departments work well together to provide the best care for patients (weighted score of 4.33)
- When a mistake is made, that could harm the patient, but does not, how often is this reported? (weighted score of 4.32)

- When a mistake is made, but has no potential to harm the patient, how often is this reported? (weighted score of 4.29)
- After we make changes to improve patient safety, we evaluate their effectiveness (weighted score of 4.3)
- Supervisor/Manager seriously considers staff suggestions for improving patient safety (weighted score of 4.26)

Analysis of the top few negative responses brought out the weaknesses and the opportunities for further improvement in the unit towards strengthening the spirit of the 'Culture of Safety'.

- Staffs in this work area/ward/unit work longer hours than is best for patient care (weighted score of 4.26)
- We sometimes work in 'Crisis mode' trying to do too much, too quickly (weighted score of 4.05)
- When an event is reported, it feels like the person is being written up, not the problem (weighted score of 3.57)
- Staffs worry that mistake they make are kept in their personal files (weighted score of 3.23)
- Problems often occur in the exchange of information across departments (weighted score of 3.18)

## DISCUSSION

‘Culture of Safety’ is of paramount importance to improve patient safety. Implementing multiple interventions is a common strategy to improve the culture of safety. <sup>[12]</sup>

‘Culture of Safety’ is a local perception and may widely differ within a single organization.

The organization believes in the spirit of the ‘Culture of Safety’ and the leadership at every level leads from the front in driving the same.

The leadership and the staffs in the organization work continuously to keep the responses and the perception on patient safety high.

- The organization believes in an open culture of safety which is reflected in its processes. Staffs report incidents freely. Staffs are informed about errors that happen in their units and ways of prevention are discussed.
- The leadership is committed to ensure patient safety and are doing things actively to improve patient safety. The effectiveness of new initiatives are monitored and evaluated.
- The hospital believes in the strength of team work to provide best care for the patients.
- The supervisors give full support to the unit staffs to maintain the culture of safety with an aim to ensure patient safety.

The strategies thus formulated based on the top few negative responses are as follows:

- a) Staffing plan with contingency plan for every department
- b) Informing the Supervisors/departmental HODs of safety concerns
- c) Informing the vertical heads like Director Medical Services and Director of Nursing. We have an Open door policy and ‘Dear CEO Boxes’ for staffs to raise patient safety concerns
- d) Encouraging staffs to raise patient safety concerns through training programs. Staff

can also write mails to leadership expressing concerns on patient safety

e) Aiming to further facilitate and ease the process of incident reporting; subsequent analysis and feedbacks through popularizing the online Incident Reporting System);

f) Ongoing Training of staffs on the International Patient Safety Goals (IPSG) including IPSG 2 with an aim to Improve Effective Communication

g) One to one staff counseling with the supervisor and the Head of the Department and promoting the spirit of ‘Just culture’ to dispel the misconception among staffs on the culture of ‘blame game’. The hospital leadership aims to involve the department heads to intensify the promotion and the shift from blame for errors and instead focus on system issues and thus enhance event reporting and learning from failures

h) Designated Patient Safety Officer

i) Safety Pamphlets for Patients/Patient Relatives

j) Continue to Relay Safety Reports at Shift changes and Morning Huddle Dashboard for direct review by Leadership

Despite, the organization promoting the ‘no blame’ culture, the survey brought out that the culture of individual blame is still dominant as perceived by the respondents. This may affect negatively, the spirit of the ‘Culture of Safety’. But it is also worthwhile to consider that while the ‘no blame’ culture is appropriate for many errors, certain errors do seem blameworthy and demand accountability. In an effort to bridge both the requirements for no-blame and appropriate accountability, the concept of just culture with an aim to focus on identifying and addressing systems issues that lead individuals to engage in unsafe behaviors, while maintaining individual accountability by establishing zero tolerance for reckless behavior needs to be promoted. This can be done through reporting of incidents, doing detailed Root Cause Analysis, staff counseling and action taken report to address system issues.



## CONCLUSION

Despite being an internationally accredited institution for the last decade or so and with the spirit of 'Culture of Safety' ingrained as a top down approach and among all levels of staffs and with a strong sense of commitment from the leadership to establish and make the 'Culture of Safety' a part and parcel of work culture in the unit, there are still scopes of improvement. The need of the hour is to promote the spirit of the 'Culture of Safety' in the Indian healthcare scenario. Future studies should aim to analyse impacts of the interventions on the existing 'Culture of Safety'.

### Limitation of the Study:

The data was analyzed using descriptive statistics and thus associations between variables could not be delineated. Moreover, as a continuation to the study, with the interventions being implemented, future studies need to look into the effectiveness of the interventions and the overall impact on improving the Culture of Safety and reducing errors.

### Conflict of Interest:

The authors declare there is no conflict of interest associated with this article.

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## REFERENCES

1. Culture of Safety. Available from: <https://www.nursingworld.org/practice-policy/work-environment/health-safety/culture-of-safety/> (Last accessed on 31.10.2019)
2. High Reliability. Background. Available from: <https://psnet.ahrq.gov/primer/high-reliability> (Last accessed on 31.10.2019)
3. Improving the Safety and Quality of Health Care: The Impact of the National Academy of Medicine on Research and Collaboration Victor J Dzau, MD President, National Academy of Medicine AHRQ Research Summit: Improving Diagnosis in Health Care September 28, 2016. Available from: <https://www.ahrq.gov/sites/default/files/wysiwyg/news/events/ahrq-research-summit/dzau-summit2016.pdf>. [Last cited on 05.11.2019]
4. Institute of Medicine (US) Committee on the Work Environment for Nurses and Patient Safety; Page A, editor. Keeping Patients Safe: Transforming the Work Environment of Nurses. Washington (DC): National Academies Press (US); 2004. 7, Creating and Sustaining a Culture of Safety. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK216181/> [Last cited on 05.11.2009]
5. Baker A. Crossing the quality chasm: a new health system for the 21st century. BMJ: British Medical Journal. 2001 17;323(7322):1192.
6. Farokhzadian, J., DehghanNayeri, N. & Borhani, F. The long way ahead to achieve an effective patient safety culture: challenges perceived by nurses. BMC Health Serv Res 18, 654 (2018) doi:10.1186/s12913-018-3467-1
7. Wakefield MK. The Quality Chasm Series: Implications for Nursing. In: Hughes RG, editor. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 4. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK2677/>
8. Culture of Safety. Available from: <https://psnet.ahrq.gov/primer/culture-safety> (Last accessed on 31.10.2019)
9. Patient Safety Primer: Safety Culture. Published: July 1, 2014 by Agency for Healthcare Research and Quality (AHRQ). Available from <http://www.hret-hiin.org/resources/display/patient-safety-primer-safety-culture>. [Last cited on 05.11.2019]
10. Farokhzadian J, Nayeri ND, Borhani F. Assessment of clinical risk management system in hospitals: an approach for quality improvement. Glob J Health Sci. 2015;7(5): 294.

11. World Health Organization. 10 facts on patient safety. Available from: [http://www.who.int/features/factfiles/patient\\_safety/en/](http://www.who.int/features/factfiles/patient_safety/en/). (Last accessed on 31.10.2019). culture of safety as a patient safety strategy: a systematic review. *Ann Intern Med.* 2013; 158(5 Pt 2):369–374. doi:10.7326/0003-4819-158-5-201303051-00002
12. Weaver SJ, Lubomksi LH, Wilson RF, Pfoh ER, Martinez KA, Dy SM. Promoting a

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