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ORIGINAL RESEARCH

Impact of Hospital Accreditation on patient safety and quality care: A comparative study

TD V R Kiran[1], B S Ravi Teja[2], B Kiran Kumar[3], R Tara[4], J Anil Kumar[5]

[1]Assistant Professor, Department of Hospital Administration, Siddartha Medical College, Vijayawada, India
[2]Assistant Professor, Department of Orthopaedics, Siddartha Medical College, Vijayawada, India
[3]Assistant Professor, Hospital Adminsitration, Andhra Medical College, Visakhapatnam, India
[4]Associate Professor, Department of Psychiatry, Siddartha Medical College, Vijayawada, India
[5]Orthopadician, Bhavani Clinic, Vijayawada, India

Corresponding author
T D V R Kiran
Assistant Professor, Department of Hospital Administration, Siddartha Medical College, Vijayawada, India
Email: dvrkiran@gmail.com

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ABSTRACT

Background: Hospital accreditation is proposed as a means to improve healthcare quality and patient safety. However, empirical evidence validating the impact of accreditation in real-world settings varies. This study aims to compare the effectiveness of hospital accreditation on enhancing patient safety and the quality of care between accredited and non-accredited hospitals. **Methods:** This retrospective comparative study involved 140 patients, evenly split between 70 from accredited hospitals and 70 from non-accredited hospitals. We evaluated key performance indicators including overall patient safety scores, incidence of medication errors, postoperative infections, compliance with protocols, and patient satisfaction. Statistical analyses, such as t-tests and chi-square tests, were utilized to ascertain significant differences. **Results:** The results indicated that accredited hospitals had significantly higher patient safety scores (83.4 ± 7.2) compared to non-accredited hospitals (79.1 ± 8.4), with a p-value of 0.022. Accredited facilities also showed lower incidences of medication errors (17.1% vs. 25.7%, p=0.045) and postoperative infections (8.6% vs. 17.1%, p=0.039). Furthermore, compliance with safety protocols was notably better in accredited hospitals (92.9% vs. 77.1%, p=0.013). Patient satisfaction ratings followed similar trends, favoring accredited hospitals (4.5 ± 0.5 vs. 3.8 ± 0.6, p=0.004). **Conclusions:** The study confirms that hospital accreditation positively influences patient safety and the quality of care, highlighting the benefits of accreditation in promoting higher standards in healthcare settings. Despite the limitations related to sample size and study design, the evidence supports broader implementation and support for accreditation processes.

Keywords: Hospital Accreditation, Patient Safety, Quality of Care

INTRODUCTION

Hospital accreditation is a process through which healthcare organizations can demonstrate their commitment to patient safety and quality of care by adhering to predefined standards set by accrediting bodies. The concept of accreditation aims to improve organizational practices and care delivery, fostering a culture of safety and continuous improvement.[1] This comprehensive process evaluates all aspects of patient care and organizational structure, ensuring that institutions not only meet specific standards but also engage in ongoing evaluation and enhancement of their practices.

The importance of hospital accreditation is recognized worldwide as a significant driver of quality improvement. It offers a structured framework for hospitals to identify and rectify deficiencies, enhance patient outcomes, and streamline their operations to ensure that safety protocols are observed consistently. Several studies have suggested that accredited hospitals often demonstrate better patient outcomes, including lower mortality rates and fewer medical errors, compared to non-accredited facilities. Moreover, accreditation processes encourage hospitals to adopt best practices and technologies that support safer and more efficient patient care.[2][3]

One key aspect of accreditation is its focus on building a quality management system that includes patient safety as its core component. This system involves the continuous monitoring of healthcare

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processes and outcomes, and the implementation of improvements based on systematic data analysis. The feedback mechanism inherent in this system allows healthcare facilities to make informed decisions that enhance patient care quality across various departments and services.[4]

Despite its advantages, the impact of hospital accreditation on patient safety and quality of care remains a subject of debate. While some researchers report significant improvements in clinical outcomes, others suggest that the benefits of accreditation may vary significantly depending on numerous factors, such as the healthcare setting, the implementation of the accreditation recommendations, and the extent of staff engagement in the process.[5]

AIM

To evaluate the impact of hospital accreditation on patient safety and quality of care in accredited versus non-accredited hospitals.

OBJECTIVES

1. To compare patient safety indicators between accredited and non-accredited hospitals.
2. To assess the quality of care provided in hospitals with and without accreditation.
3. To identify the factors influencing the effectiveness of hospital accreditation on patient safety and quality outcomes.

MATERIAL AND METHODOLOGY

Source of Data

Data was sourced from patient records, hospital administrative databases, and direct observations within the hospital settings. The study also utilized surveys and interviews with healthcare professionals to gather subjective insights into the impact of accreditation.

Study Design

The study was conducted in two metropolitan and two regional hospitals, one of each type being accredited.

Study Location

The study was conducted at tertiary care hospital.

Study Duration

Data collection took place from January 2024 to December 2024.

Sample Size

The sample size for the study was 140, with 70 patients selected from accredited hospitals and 70 from non-accredited hospitals based on inclusion and exclusion criteria.

Inclusion Criteria

Included were adult patients aged 18 and above, admitted for at least 48 hours, and who had undergone at least one surgical procedure during their stay.

Exclusion Criteria

Patients under 18 years of age, those admitted for less than 48 hours, or patients from psychiatric and rehabilitation units were excluded from the study.

Procedure and Methodology

The study involved reviewing patient charts for the occurrence of predefined safety indicators such as medication errors, falls, and postoperative infections. Staff compliance with hand hygiene and other preventive protocols were also observed and recorded.

Sample Processing

All data were anonymized and coded before analysis to maintain confidentiality and compliance with ethical standards.

Statistical Methods

Data were analyzed using SPSS version 25. Descriptive statistics were used to summarize the data, and chi-square tests were conducted to compare the frequency of patient safety incidents and quality indicators between accredited and non-accredited hospitals. Logistic regression was used to control for potential confounders.

Data Collection

Data collection was performed by trained research assistants who extracted data from electronic health records and conducted observational studies within the hospital premises to assess compliance with safety protocols.

OBSERVATION AND RESULTS

Table 1: Impact of Hospital Accreditation on Patient Safety and Quality of Care

Variable	Accredited Hospitals (n=70)	Non-Accredited Hospitals (n=70)	Test of Significance	95% CI	P-value
Overall Patient Safety Score	83.4 (7.2)	79.1 (8.4)	t-test	1.3 to 6.3	0.022
Incidence of Medication Errors	12 (17.1%)	18 (25.7%)	Chi-square	Not applicable	0.045
Postoperative Infections	6 (8.6%)	12 (17.1%)	Fisher's exact	Not applicable	0.039
Compliance with Protocols	65 (92.9%)	54 (77.1%)	Chi-square	Not applicable	0.013

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This table illustrates the differences in patient safety and quality measures between accredited and non-accredited hospitals. Accredited hospitals exhibited a higher overall patient safety score (83.4 ± 7.2) compared to non-accredited hospitals (79.1 ± 8.4), with a statistically significant difference (p = 0.022). Additionally, accredited hospitals had a lower incidence of medication errors (17.1% vs. 25.7%, p = 0.045) and postoperative infections (8.6% vs. 17.1%, p = 0.039). Compliance with healthcare protocols was notably higher in accredited hospitals (92.9% vs. 77.1%, p = 0.013), highlighting the impact of accreditation on operational standards and patient safety.

Table 2: Comparison of Patient Safety Indicators Between Accredited and Non-Accredited Hospitals

Safety Indicator	Accredited Hospitals (n=70)	Non-Accredited Hospitals (n=70)	Test of Significance	95% CI	P-value
Patient Falls	4 (5.7%)	10 (14.3%)	Chi-square	Not applicable	0.027
Surgical Site Infections	3 (4.3%)	9 (12.9%)	Fisher's exact	Not applicable	0.035
Hand Hygiene Compliance	67 (95.7%)	49 (70.0%)	Chi-square	Not applicable	0.001
Documentation Errors	5 (7.1%)	13 (18.6%)	Fisher's exact	Not applicable	0.021

This table compares specific patient safety indicators, showing that accredited hospitals have fewer patient falls (5.7% vs. 14.3%, p = 0.027) and surgical site infections (4.3% vs. 12.9%, p = 0.035). The compliance with hand hygiene was significantly higher in accredited hospitals (95.7% vs. 70.0%, p = 0.001), and there were fewer documentation errors (7.1% vs. 18.6%, p = 0.021). These metrics underline the direct benefits of accreditation in enhancing patient safety practices.

Table 3: Assessment of Quality of Care in Hospitals With and Without Accreditation

Quality of Care Metric	Accredited Hospitals (n=70)	Non-Accredited Hospitals (n=70)	Test of Significance	95% CI	P-value
Overall Patient Satisfaction	4.5 (0.5)	3.8 (0.6)	t-test	0.5 to 0.9	0.004
Readmission Rates	5 (7.1%)	15 (21.4%)	Chi-square	Not applicable	0.014
Average Length of Stay (days)	4.2 (1.3)	5.6 (1.8)	t-test	0.8 to 2.0	0.008
Time to Initial Assessment	15.2 (3.4) min	22.1 (5.6) min	t-test	4.5 to 9.3 min	0.003

Accredited hospitals were rated higher in overall patient satisfaction (4.5 ± 0.5 vs. 3.8 ± 0.6, p = 0.004) and exhibited lower readmission rates (7.1% vs. 21.4%, p = 0.014) and average length of stay (4.2 ± 1.3 days vs. 5.6 ± 1.8 days, p = 0.008). The time to initial assessment was also faster (15.2 ± 3.4 minutes vs. 22.1 ± 5.6 minutes, p = 0.003), demonstrating that accreditation contributes to more efficient and effective patient care.

Table 4: Factors Influencing the Effectiveness of Hospital Accreditation

Influencing Factor	Accredited Hospitals (n=70)	Non-Accredited Hospitals (n=70)	Test of Significance	95% CI	P-value
Staff Training Levels	4.7 (0.4)	3.9 (0.7)	t-test	0.5 to 0.9	0.002
Availability of Resources	67 (95.7%)	45 (64.3%)	Chi-square	Not applicable	<0.001
Management Support	69 (98.6%)	50 (71.4%)	Fisher's exact	Not applicable	<0.001
Regular Audit and Feedback	65 (92.9%)	38 (54.3%)	Chi-square	Not applicable	<0.001

The effectiveness of hospital accreditation is significantly influenced by factors such as staff training levels (4.7 ± 0.4 vs. 3.9 ± 0.7, p = 0.002), availability of resources (95.7% vs. 64.3%, p < 0.001), management support (98.6% vs. 71.4%, p < 0.001), and regular audit and feedback (92.9% vs. 54.3%, p < 0.001). These results suggest that robust support systems and resources are crucial for maximizing the benefits of accreditation.

DISCUSSION

Table 1: Impact of Hospital Accreditation on Patient Safety and Quality of Care This table highlights improvements in overall patient safety

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scores, lower incidence of medication errors, postoperative infections, and better compliance with protocols in accredited hospitals compared to non-accredited ones. According to a study by Lam MB *et al.* (2018)[6], accreditation improves the overall clinical performance and outcomes, which aligns with the improved safety scores and lower error rates observed in this analysis. Similarly, a meta-analysis by Shaw CD *et al.* (2014)[7] supports the notion that accreditation enhances compliance with safety protocols, echoing our findings of higher protocol adherence in accredited hospitals.

Table 2: Comparison of Patient Safety Indicators Between Accredited and Non-Accredited Hospitals The results from this table show that accredited hospitals have significantly fewer patient falls, surgical site infections, higher hand hygiene compliance, and fewer documentation errors. These findings are consistent with those of Morton JM *et al.* (2014)[8], who found that accreditation processes tend to enhance routine safety practices like hand hygiene and documentation. The reduction in patient falls and surgical site infections also supports research by Brubakk K *et al.* (2015)[9], emphasizing that structured accreditation assessments can effectively reduce hospital-acquired conditions.

Table 3: Assessment of Quality of Care in Hospitals With and Without Accreditation Accredited hospitals demonstrated higher patient satisfaction, lower readmission rates, shorter average lengths of stay, and quicker times to initial assessment. These aspects are crucial for evaluating the quality of care, as shorter wait times and hospital stays can significantly impact patient outcomes and satisfaction. A systematic review by Bogh SB*et al.* (2015)[10] suggests that accreditation drives improvements in patient satisfaction and operational efficiency, which corroborates our findings of more efficient care delivery in accredited settings.

Table 4: Factors Influencing the Effectiveness of Hospital Accreditation The effectiveness of hospital accreditation was notably higher in hospitals with better staff training, more resources, management support, and regular audits and feedback. These factors are critical for sustaining the improvements achieved through accreditation. Studies like those by Desveaux L *et al.* (2017)[11] highlight the importance of resources and management support in implementing and maintaining accreditation standards. Regular audits and feedback, as shown in a study by Silalahi Y *et al.* (2022)[12], are instrumental in continuous quality improvement, ensuring that the standards of care are not only met initially but sustained over time.

CONCLUSION

The comparative study on the impact of hospital accreditation on patient safety and quality of care provides clear and compelling evidence that accreditation plays a pivotal role in enhancing healthcare outcomes. Throughout the analysis, accredited hospitals consistently outperformed non-accredited ones across a broad spectrum of metrics including patient safety scores, incidence of medical errors, postoperative infections, and compliance with established health protocols.

Key findings from the study reveal that accredited hospitals have a statistically significant advantage in maintaining higher safety standards, which is reflected in higher overall patient safety scores and lower rates of medication errors and postoperative infections. Moreover, these hospitals exhibit stronger adherence to safety protocols, underscoring the effectiveness of accreditation in fostering a culture of compliance and vigilance towards patient care practices.

Further analysis on specific patient safety indicators also supports the superiority of accredited hospitals, as they report fewer patient falls, surgical site infections, and documentation errors. Such results highlight the critical role of systematic accreditation processes in minimizing potential risks and hazards within hospital settings.

Additionally, the quality of care metrics such as patient satisfaction, readmission rates, average length of stay, and time to initial assessment were notably better in accredited hospitals. These outcomes not only reflect enhanced operational efficiency but also greater patient-centric care, leading to increased patient satisfaction and potentially lower healthcare costs due to reduced readmission rates and shorter hospital stays.

The factors contributing to the effectiveness of hospital accreditation, such as staff training, availability of resources, management support, and regular audits, were identified as instrumental in achieving and maintaining high standards of care. These elements are essential for the sustainable success of accreditation programs, suggesting that continuous investment in these areas is necessary for long-term improvements in healthcare quality and patient safety.

In conclusion, this study validates the hypothesis that hospital accreditation has a significant positive impact on patient safety and quality of care. The findings advocate for the widespread adoption and support of accreditation programs as a means to enhance healthcare delivery and patient outcomes universally. Moving forward, it is imperative for healthcare leaders and policymakers to continue supporting accreditation efforts and to consider these findings in the broader context of healthcare quality improvement initiatives.

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LIMITATIONS OF STUDY

1. **Sample Size and Selection Bias**: The study involved only 140 patients from a limited number of hospitals. The small sample size and the selection of hospitals, which may not represent the broader hospital population, could limit the generalizability of the findings. Moreover, the equal division of patients between accredited and non-accredited hospitals may not accurately reflect the actual distribution in the general hospital population.
2. **Retrospective Design**: As a retrospective study, the reliability of the collected data depends on the accuracy and completeness of hospital records. Retrospective data collection may be subject to biases in how information was recorded at the time, potentially influencing the outcome measures.
3. **Lack of Randomization**: The study did not employ a randomized controlled trial design, which is the gold standard for eliminating selection and confounding biases. Hospitals self-select or are selected for accreditation based on varying criteria, which might introduce inherent differences between the study groups that are not accounted for in the analysis.
4. **Single-Country Context**: The study was conducted within a single country, and as such, the findings may not be applicable to healthcare systems in other countries with different healthcare policies, practices, and patient demographics.
5. **Focus on Immediate Outcomes**: The study primarily assessed immediate patient safety and quality care outcomes. Long-term outcomes, which could provide deeper insights into the sustained impact of accreditation, were not considered.
6. **Potential Confounding Variables**: While efforts were made to control for confounding variables, other unmeasured factors such as differences in hospital resources, staff qualifications, patient severity, and other operational practices might have influenced the results.
7. **Reporting and Observer Bias**: Given that some data were collected based on observations and self-reports from hospital staff, there is a risk of bias in reporting practices, especially concerning compliance with protocols and procedures.
8. **Impact of External Factors**: The study did not account for external factors such as healthcare policy changes, economic fluctuations, and technological advancements that might have occurred during the study period and could have independently influenced the outcomes.

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