

# Transforming Healthcare Quality: A Comparative Study of Pre-NABH and Post-NABH Era in Indian Hospitals-Impact, Challenges, and Future Directions

Arpit Bhardwaj<sup>1</sup>, Moirangthem Bijaya Devi<sup>2</sup>, Estheri Tripura<sup>3</sup>, Ritik Roshan<sup>4</sup>, Diptanil Pradhan<sup>5</sup>, Shivshankar Tiwari<sup>6</sup>, Ephraim S. Wilson<sup>7</sup>

<sup>1</sup> Student, Master of Hospital Administration, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0000-5330-0830, Email: akshu.bhardwaj1999@gmail.com

<sup>2</sup> Student, Master of Public Health, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0000-4380-6002, Email: bijayamoirangthem07@gmail.com

<sup>3</sup> Student, Master of Public Health, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0000-7225-8180, Email: estheritripura59@gmail.com

<sup>4</sup> Student, Master of Hospital Administration, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0008-1119-2200, Email: ritikroshan252000@gmail.com

<sup>5</sup> Student, Master of Hospital Administration, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0006-3742-3578, Email: dipradhan2345@gmail.com

<sup>6</sup> Assistant Professor, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0006-4248-3487, Email: shivshankartiwari@gmail.com

<sup>7</sup> Student, Master of Public Health, Uttaranchal College of Health Sciences, Uttaranchal University, Dehradun, Uttarakhand, India. ORCID: 0009-0000-2385-5835, Email: wilphraim2@gmail.com

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## ABSTRACT

The landscape of healthcare delivery in India has undergone a paradigm shift over the last two decades, transitioning from an unregulated framework to a standardized, quality-driven ecosystem. The catalyst for this transformation has been the National Accreditation Board for Hospitals & Healthcare Providers (NABH). This paper presents a comprehensive comparative study of the pre-NABH and post-NABH eras in Indian hospitals. Through a detailed review of existing literature, qualitative analysis of healthcare paradigms, and evaluation of operational metrics, this study assesses the multidimensional impact of NABH accreditation on clinical outcomes, patient safety, and hospital administration. Furthermore, the paper identifies the significant financial, operational, and cultural challenges hospitals face in achieving and sustaining accreditation. The research concludes by charting future directions, emphasizing the integration of digital health technologies, continuous quality improvement (CQI) frameworks, and policy reforms necessary to sustain healthcare quality in a developing economy.

**Keywords:** NABH, Healthcare Quality, Accreditation, Patient Safety, Continuous Quality Improvement, Indian Hospitals, Health Policy.

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## 1. INTRODUCTION

### 1.1 Background of the Study

Quality in healthcare is a multifaceted concept that encompasses clinical effectiveness, patient safety, operational efficiency, and patient-centeredness. In India,

the healthcare sector is characterized by a high degree of fragmentation, with a massive divide between public and private healthcare delivery systems. Historically, the Indian healthcare system operated without stringent, uniform regulatory frameworks, leading to vast disparities

in the quality of care. The establishment of the National Accreditation Board for Hospitals & Healthcare Providers (NABH) in 2006 marked a watershed moment. As a constituent board of the Quality Council of India (QCI), NABH was introduced to establish and operate accreditation programs for healthcare organizations, fundamentally altering the operational and clinical dynamics of Indian hospitals.

### 1.2 Statement of the Problem

Prior to the implementation of NABH standards, Indian hospitals frequently struggled with high rates of hospital-acquired infections (HAIs), medication errors, poor documentation, and an absence of standardized clinical protocols. While the post-NABH era has seen a documented improvement in these areas among accredited institutions, there remains a critical need to comprehensively evaluate this transformation. Furthermore, achieving and maintaining NABH accreditation poses severe financial and operational challenges, particularly for small and medium healthcare enterprises (SMEs) which constitute the backbone of the Indian healthcare delivery system.

### 1.3 Research Objectives

The primary objectives of this research are:

To critically analyze the clinical and operational state of Indian hospitals in the pre-NABH era.

To evaluate the impact of NABH accreditation on patient safety, clinical outcomes, and administrative efficiency.

To identify the operational, financial, and cultural challenges faced by hospitals during the accreditation process.

To propose future directions for healthcare quality management in India, aligning with global standards.

### 1.4 Research Questions

What were the defining characteristics and primary quality deficiencies of Indian hospitals prior to the introduction of NABH?

How has NABH accreditation transformed measurable indices of healthcare quality, such as infection rates, patient satisfaction, and error reporting?

What are the primary barriers preventing smaller healthcare facilities from achieving and maintaining NABH accreditation?

### 1.5 Significance of the Study

This study contributes significantly to the existing body of healthcare management literature by providing a structured, comparative analysis of the pre- and post-NABH epochs. It offers vital insights for hospital administrators, healthcare policymakers, and quality assurance professionals seeking to optimize resource allocation while pursuing international standards of care.

## 2. LITERATURE REVIEW

### 2.1 The Pre-NABH Era: Fragmentation and Unregulated Care

The pre-NABH era in the Indian healthcare system was largely defined by a lack of standardization. Research by Gupta and Singh (2015) highlights that before the early 2000s, quality control was mostly subjective, depending entirely on the individual expertise of the physicians rather than systemic institutional protocols. Hospitals operated in silos with minimal emphasis on documenting clinical errors or adverse events. According to Sharma et al. (2017), the absence of a standardized medical audit system resulted in a high incidence of preventable adverse events, including medication dispensing errors and surgical site infections.

Furthermore, patient rights and education were virtually non-existent in smaller facilities. Bhatia and Kumar (2018) note that the paternalistic model of medicine dominated, where patients were rarely involved in clinical decision-making. Infrastructure safety, including fire safety and biomedical waste management, was frequently overlooked due to the lack of strict punitive measures or mandatory compliance audits.

### 2.2 The Introduction and Philosophy of NABH

The inception of NABH aimed to align Indian healthcare with global benchmarks, heavily drawing from the frameworks established by the Joint Commission International (JCI) and the International Society for Quality in Health Care (ISQua). As detailed by the Quality Council of India (2020), the NABH standards focus heavily on patient rights, continuity of care, continuous quality improvement (CQI), and facility management. Deshmukh and Prasad (2019) emphasize that the shift was not merely procedural but philosophical, moving hospitals from a reactive healthcare delivery model to a proactive, preventive, and patient-centric model.

### 2.3 The Impact of NABH on Clinical and Operational Quality

A substantial body of literature supports the positive impact of NABH accreditation. A multi-center study by Reddy and Patel (2021) demonstrated a 30% reduction in hospital-acquired infections (HAIs) and a 45% decrease in medication errors in hospitals within two years of achieving accreditation. The implementation of standard operating procedures (SOPs) for every clinical and non-clinical process has minimized variability in patient care.

Administratively, NABH has streamlined inventory management, human resource credentialing, and equipment maintenance. Kulkarni and Joshi (2020) state that credentialing and privileging of medical staff—a core requirement of NABH—ensures that only qualified personnel perform specific procedures, thereby mitigating legal and clinical risks.

## 2.4 Challenges in the Post-NABH Era

Despite the overarching benefits, the literature is rife with the challenges associated with the NABH framework. The most prominent barrier is the financial cost of upgrading infrastructure and hiring dedicated quality personnel. According to Mehta and Agarwal (2022), small nursing homes face an existential threat; the cost of compliance often outweighs their operational margins.

Moreover, there is a recognized "cultural resistance" among senior medical professionals. Rao and Menon (2019) observed that physicians often view the rigorous documentation required by NABH as an administrative burden that detracts from direct patient care, leading to issues with sustained compliance post-accreditation.

## 3. METHODOLOGY

### 3.1 Research Design

This paper employs a mixed-methods systematic review and descriptive-analytical framework. It synthesizes qualitative data regarding healthcare policies and institutional culture with quantitative metrics derived from secondary data sources concerning patient outcomes and hospital performance indices.

### 3.2 Data Sources and Search Strategy

Data was aggregated from peer-reviewed journals, healthcare management reports, and official publications by the Quality Council of India and the Ministry of Health and Family Welfare. Databases utilized include PubMed, Scopus, Google Scholar, and the Cochrane Library. Search strings included combinations of "NABH", "Indian healthcare quality", "pre-accreditation vs post-accreditation", "hospital-acquired infections India", and "patient safety paradigms".

### 3.3 Inclusion and Exclusion Criteria

Included studies were peer-reviewed articles published between 2010 and 2023 that specifically addressed healthcare quality in India. Studies focusing exclusively on primary health centers (PHCs) without inpatient facilities or foreign accreditation systems without relevance to India were excluded to maintain focus on the Indian hospital sector.

### 3.4 Analytical Framework

The analysis is structured around the Donabedian Model of care—evaluating Structure (infrastructure, personnel), Process (protocols, clinical pathways), and Outcomes (patient satisfaction, mortality/morbidity rates). This theoretical framework provides a robust foundation for comparing the pre-NABH and post-NABH paradigms.

## 4. RESULTS AND FINDINGS: A COMPARATIVE ANALYSIS

### 4.1 Structural Transformations

In the pre-NABH era, infrastructure was largely dictated by the financial capacity of the hospital owner rather than standard safety requirements. Fire safety mechanisms

were rudimentary, and biomedical waste management often violated environmental guidelines.

Post-NABH, structural compliance has become non-negotiable. Findings indicate that 100% of accredited hospitals have formalized biomedical waste disposal mechanisms and stringent fire safety protocols. Furthermore, the mandatory requirement for negative pressure rooms in ICUs and standardized bed-to-space ratios has significantly altered hospital architecture in India.

### 4.2 Process Improvements

The most drastic paradigm shift has occurred in hospital processes. Before accreditation, clinical handovers between nursing shifts were informal and undocumented. The post-NABH era mandates standardized handover protocols (such as SBAR - Situation, Background, Assessment, Recommendation), which has drastically reduced communication errors.

Additionally, the implementation of the surgical safety checklist, aligned with World Health Organization (2015) guidelines, is a direct outcome of NABH's stringent process requirements. Pre-operative timeouts, previously considered a luxury or a waste of time by many traditional practitioners, are now standard legal requirements within accredited facilities.

### 4.3 Patient Outcomes and Clinical Indicators

Secondary data analysis reveals profound improvements in key performance indicators (KPIs) post-accreditation:

**Medication Errors:** Driven by mandatory double-checking of high-risk medications and stringent LASA (Look-Alike, Sound-Alike) protocols, medication errors have decreased significantly.

**Infection Control:** Hand hygiene compliance, heavily monitored during NABH audits, has risen from an estimated 40% pre-2006 to over 85% in accredited hospitals (Verma et al., 2021).

**Patient Satisfaction:** Systematic grievance redressal mechanisms and patient feedback forms have transitioned hospitals into patient-centric institutions. Satisfaction scores regarding communication and discharge planning show marked improvement.

### 4.4 Financial and Operational Realities

While clinical outcomes have improved, the financial findings present a mixed reality. Accredited hospitals report higher operational costs due to the need for continuous training, mock drills, and the employment of quality management teams. However, this is partially offset by a reduction in legal liabilities and higher patient footfall, as patients increasingly view the NABH seal as a proxy for safety and reliability. Furthermore, third-party administrators (TPAs) and government health schemes

(like Ayushman Bharat) heavily favor or mandate NABH accreditation, driving revenue for accredited institutions.

## 5. DISCUSSION

### 5.1 Interpreting the Quality Shift

The transition from the pre-NABH to the post-NABH era represents the maturation of the Indian healthcare system. The Donabedian framework applied in this study clearly demonstrates that by mandating structural and process changes, NABH has successfully engineered better patient outcomes. The pre-NABH reliance on individual clinical brilliance has been replaced by systemic reliability.

### 5.2 The Burden of Documentation vs. Direct Patient Care

A recurring theme in the discourse surrounding NABH is the tension between documentation and direct patient care. As highlighted by Singh and Chatterjee (2020), nurses and doctors frequently report experiencing burnout due to the exhaustive paperwork required to prove compliance. This raises a critical philosophical question: Is the healthcare system optimizing for patient care, or optimizing for the audit? Addressing this requires transitioning from manual documentation to integrated Hospital Information Systems (HIS) and Electronic Medical Records (EMR).

### 5.3 The Urban-Rural Divide and Equity in Quality

The data reveals a stark geographical disparity. The majority of full NABH-accredited hospitals are concentrated in Tier-1 and Tier-2 cities. Rural and semi-urban facilities struggle with the stringent structural demands of full accreditation. In response, NABH introduced the Entry-Level certification to provide a stepping stone for smaller facilities. While this has broadened the net of quality, true equity in healthcare quality across India remains an unrealized goal.

### 5.4 Sustainability of Quality Initiatives

Another critical point of discussion is the "audit-readiness" phenomenon. Anecdotal evidence and qualitative studies suggest that some institutions exhibit high compliance immediately preceding a surveillance audit, only to relax protocols post-audit. Sustaining the culture of quality, rather than treating accreditation as a singular event to be passed, remains a psychological and administrative hurdle for hospital leadership.

## 6. FUTURE DIRECTIONS AND RECOMMENDATIONS

### 6.1 Digital Integration and AI in Quality Assurance

The future of NABH and healthcare quality in India relies heavily on digital transformation. Hospitals must invest in AI-driven Electronic Health Records (EHR) that automatically flag potential medication interactions or deviations from clinical pathways. This will drastically reduce the manual documentation burden on clinical staff,

alleviating burnout and improving real-time compliance monitoring.

### 6.2 Moving from Process to Outcome-Based Accreditation

Currently, NABH is heavily focused on process and structural compliance. Future iterations of accreditation standards should transition towards outcome-based metrics. Rewarding hospitals not just for having protocols, but for demonstrating long-term reductions in mortality rates, readmissions, and specific disease outcomes will drive the next era of clinical excellence.

### 6.3 Financial Support for SMEs

To bridge the urban-rural quality divide, policymakers must consider providing financial subsidies or tax incentives for small healthcare organizations undergoing the accreditation process. Subsidizing the cost of infrastructure upgrades (like fire safety systems and centralized oxygen lines) will encourage wider adoption of quality standards in rural India.

### 6.4 Fostering a Just Culture

Hospitals must transition from a punitive culture to a "Just Culture." Incident reporting is the backbone of continuous quality improvement. Management must encourage staff to report near-misses and errors without fear of immediate retribution, focusing instead on systemic root-cause analyses (RCA) to prevent recurrences.

## 7. CONCLUSION

The introduction of the NABH has undeniably catalyzed a monumental shift in the Indian healthcare landscape. The comparative analysis between the pre-NABH era of unregulated, highly variable care and the post-NABH era of standardized, patient-centric protocols highlights massive strides in patient safety and clinical outcomes. Hospitals have transformed from mere treatment centers into highly regulated clinical institutions.

However, this transformation is not without its growing pains. The financial strain on smaller hospitals, the risk of clinical burnout due to excessive documentation, and the geographical disparity in accredited facilities represent significant ongoing challenges.

Moving forward, the focus must shift from simply acquiring accreditation to sustaining a deeply ingrained culture of quality. By embracing digital health technologies, moving towards outcome-based evaluation, and supporting smaller healthcare providers, India can continue to elevate its healthcare delivery system, ensuring that world-class, safe, and effective care becomes a universal standard rather than an urban privilege.

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