

## **Determinants of Patient Satisfaction regarding Hospital Quality in West Bengal**

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### **ABSTRACT**

In the liberalized world, there is an urgent need for quality control in the hospitals in India. The establishment of NABH (National Accreditation Board for Hospitals and healthcare providers) under the umbrella of QCI (Quality Control of India) is a bold step towards the journey of excellence.

Today people are acquainted with the term Total Quality Management (TQM) which is a journey towards excellence. Briefly speaking TQM is a continuous process of improving quality of the organization in all dimensions, to become quality responsive as well as superior in quality of services, Health Organizations must pursue for the benefit of the patients and simulate and create a quality of culture throughout the organizations involving employees (from top to bottom) in discharging their responsibilities.

The demand for quality in healthcare services has been accelerated by the market forces such as medical tourism, insurance and corporate sectors, for which there is a growing demand for better health care. The necessity for accreditation is felt from various quarters as the accreditation benefits all the stake holders and specifically the patients.

The necessity for accreditation is felt from various quarters as the accreditation benefits all the stakeholders specifically patients. Accredited results in high quality of care and patient safety. ]. As on date NABH accredited hospitals in India is 437, whereas in West Bengal the number is 12.

From the study it reveals that three factors namely Hospital General Views, Internal aspects of hospital quality and technical knowhow determine the patient satisfaction regarding the quality of the hospitals. Those three factors are the determinants of patient satisfaction. And the factors of the patient satisfaction differ across different types of hospitals, NABH hospitals, non- NABH hospitals (Private hospitals) and Government hospitals. Vigorous monitoring, strategy making and implementation are the remedies for the performance of the hospitals.

*Keywords:* (QCI, NABH, Accredited, TQM, COP, AAC, medical tourism)

## **Introduction**

In the liberalized world for the fast changing environment, there is an urgent need for the quality control in the hospitals in India. The establishment of NABH (National Accreditation Board for Hospitals and healthcare providers) under the umbrella of QCI (Quality Control of India) is a bold step towards the journey of excellence. The vision of NABH is to be the apex national health care accreditation and quality improvement body, functioning at par with the global benchmarks and the mission is to operate accreditation and allied programs in collaboration with the stakeholders focusing on patient safety and quality of health care based upon national and international standards through the process of self and external evaluation.

NABH provides accreditation to hospitals irrespective of their ownership, legal status, size and degree of independence [1].

The guiding principles for finalization of the standards have been the experience of members as assessors on one end and drivers of quality in their role in their own respective organizations on the other end. In addition to the feedback and inputs obtained formally and informally from various stakeholders during the revision exercise formed a very important and major contributory factor for the revision of various standards. Emphasis was laid referring to best practices in various countries with regard to accreditation standards, national and international guidelines on key areas like infection control, patient safety and quality improvement [2].

Today people are acquainted with the term Total Quality Management (TQM) which is a journey towards excellence. Briefly speaking TQM is a continuous process of improving quality of the organization in all dimensions, to become quality responsive as well as superior in quality of services, Health Organizations must pursue for the benefit of the students and simulate and create a quality of culture throughout the organizations involving employees (from top to bottom) in discharging their responsibilities.

It is estimated that in India there are more than 15000 hospitals operating in and out of which 30 percent are in public sector. In West Bengal there are 42 new Super Specialty Hospitals, among them 33 already been opened [3]. As on date NABH accredited hospitals in India is 437, whereas in West Bengal the number is 12. Measuring quality and productivity of products are easier than to measure health sector. Internal awareness is a continuous process. The presence of an external agency in controlling and measuring quality of services is unquestionable. The demand for quality in healthcare services has been accelerated by the market forces such as medical tourism, insurance and corporate sector and for that there is growing demand from the consumers for better healthcare. Mechanisms limit their access for appropriate health services.

The hospital industry nowadays faces serious challenges; not only in the challenge of lower occupancy rate, different rules and laws from different bodies, but also the demand for expensive technology, and increase competition . In order to survive, the hospitals are concurring about the patients' satisfaction and emphasizing The necessity for accreditation is felt from various quarters

as the accreditation benefits all the stakeholders specifically patients. It is based on optimum standards professional accountability and encourages healthcare organizations to pursue continuous excellence. Accredited results in high quality of care and patient safety. Patient satisfaction is regularly evaluated and their rights are respected and protected.more on marketing.

The values of NABH are:

1. Credibility: Provides credible and value addition service.
2. Responsiveness: Willingness to listen and continuously improving the service.
3. Transparency: Openness in communication and freedom of information to its stakeholders.
4. Innovation: Incorporating change, creativity, continuous learning and new ideas to improve the services being provided.

The above mentioned vision, mission and values of NABH speak itself its relevance and importance in the present day scenario.

The accreditation standard is divided into 10 chapters, which have been further divided into 102 standards, and these standards have been further divided into 636 objective elements. Objective elements are measurable components. Objective elements are required to meet in to meet the requirements of a particular standard. [2]

In general, the organization will need to identify, meet the requirements of and provide objective evidence of compliance with the following issues:

1. Patient related: monitoring safety, treatment standards and quality of care. This includes effective meeting of expectations of patient, their attendants, families and visitors.
2. Employee related: Monitoring competence, ongoing training, awareness of patients requirement and employee satisfaction.
3. Regulatory related: Identifying, complying with and monitoring the effective implementation of meeting legal, statutory and regulatory requirements.
4. Organizing policy related: Defining, promoting awareness of and ensuring implementation of the policies and procedures laid down by the organization amongst staffs, patients and interested parties including visit in medical consultants.
5. NABH Standard related: Identification of how the organization meets the NABH Standard and the objective elements.

As we know NABH standards have 10 chapters out of which five are patient oriented and five are organization oriented.

Patient Centered Standards:

1. Access, Assessment and Continuity of Care (AAC)
2. Care of Patients (COP)
3. Management of Medication (MOM)
4. Patient Right and Education (PRE)
5. Hospital Infection Control (HIC)

Organization Centered Standards:

1. Continuous Quality Improvement (CQI)
2. Responsibilities of Management (ROM)
3. Facility Management and Safety (FMS)
4. Human Resource Management (HRM)
5. Information Management System (IMS)

Indian hospitals may enter for NABH Accreditation. Top management governance should educate themselves about the benefit of accreditation. Few reasons are there to enter for this process:

1. If one hospital accepts, other competitors have to follow. So a great pressure for them.
2. For getting the insurance, accreditation is crucial.
3. For encouragement or expansion of medical tourism it works [4].

NABH accredited hospitals have the involvement in continuous quality improvement and patient safety process. But it does not confer the excellent patient safety outcome or the absolute guarantee of quality.

In India, small percentage of Hospitals is accredited through NABH. The reason behind this:

1. No compulsion to opt for it.
2. It does not confirm that the Hospitals will be more profitable.
3. It is a strenuous journey.
4. It is expensive one as different programs are essential for it such as Infection Control Program, Quality Assurance Program, Hospital Safety Program as well as Continuous Improvement Program.

The growth of accreditation programs is low in low and medium income countries provides important examples of innovation in leadership, governance and mission which could be adopted in developed countries [5].

Often health service research on patient satisfaction and experience, provides evidence of how the sector manages the extreme complexity, co-production and intangibility of healthcare delivery, where the financial and human consequences of low quality are high. So healthcare organizations have developed practices to overcome intangibility, co-production to customize care and improve patient satisfaction and service quality. [6].

The attempts to involve a voluntary accreditation system started in late 1980s with the Bureau of Indian Standards putting down standards for 30, 100, and 250 bed hospitals. National Institute of Health and Family Welfare had also specified rules for more than 50- bed hospitals. Since health is a State subject, there had been attempts in some States to incorporate standards for hospitals. Such compartmentalized initiatives have laid to further fragmentation of an already segmented industry. The lacuna lies in not having a united and single system, to monitor the functioning of hospitals in India, and the stringency of compliance, to establish standards.

Accreditation is one of the mechanisms identified in WTO agreement, as means to promote universal acceptance of conformity, assessment, results. Realizing the need for establishing a national accreditation structure, that was suitable to Indian conditions and credible in the eyes of international markets, an inter-ministerial task force was setup in 1991. The report of the task force was brought out in January 1993. As an outcome of its recommendations, Quality Council of India (QCI) was established in 1997, as an autonomous body. The mandate given to QCI was to establish and operate the national accreditation structure and obtain international recognition for its accreditation schemes.

National Accreditation Board for Hospitals and Healthcare providers (NABH) had been setup under the national accreditation structure, to establish and operate accreditation program for healthcare organizations. NABH is an institutional member of International Society for Quality and Health Care (ISQua). The board has representation from all stakeholders, including government, consumers and healthcare industry. The structure incorporates Accreditation Committee, Technical Committee, Appeal Committee, Secretariat and a panel of over 100 assessors/ surveyors selected among clinicians', hospital administrators and nursing supervisors. They have been empanelled after having qualified through a five-day training program. In healthcare, health outcomes play a crucial role in determining quality. However, the importance of customer experience and customer delight, cannot be underestimated. Hospitals and Health Care institutions have consistently focused on improving patient's experience and providing devices, in timely and orderly fashion. However, it is often difficult to rate the quality of services (both clinical and non-clinical) using similar indicators. Health Care providers often use patient satisfaction surveys to understand the lacuna in quality of care provided, and identify critical areas of

improvement. Patient satisfaction surveys can be used to measure the quality of services, from the perspective of subjective opinion of the patients/beneficiaries.

There are various accreditation and quality assurance systems presently available. These accreditations and quality assurance system help organization to streamline their processes, provide timely services and thereby enhance patient outcomes. Evidence from JCI has indicated that accreditation tends to help enhance the overall quality of patient care services based on select case studies from across the globe. Unfortunately there is little documented evidence about the effectiveness of NABH in improving patient outcomes and quality. In this perspective of said little documented evidence, this proposed research study has been undertaken.

### **Objective**

The present study concentrates on the level of satisfaction of patients in hospitals based on various quality dimensions. The basic objective of study is to find out which factors are responsible for patient satisfaction regarding quality of hospitals in West Bengal. The study also tries to find out that the satisfaction level of the patient in West Bengal varies across the hospital or not.

### **Data and Methodology**

The primary data were collected on perception of medical patients of NABH certified hospitals and non- NABH private hospitals and Government hospitals in West Bengal with the help of structured questionnaires (Annexure- 1). Result involves the response of 100 patients in each category (total 300 patients) of hospitals on 5-point rating scale of satisfaction that were collected during July 2016 to January 2017. On 5-point rating scale of satisfaction, it is signified to completely dissatisfied (1) to completely satisfied (5). The survey is conducted in and around hospital premises.

### **Analysis and findings**

Total 15 variables are considered to study patient satisfaction related with the quality of the hospitals. The variables are Ambiance of the room, technical qualities of the nurses, hospital's billing or financial aspects, quality of food, laboratory services, the behavior of doctors/ nurses with the patients, communication system of the hospitals, the accessibility of the doctors, overall hospital services, transparency with the patients, hospital infection control system, safety measure, analysis of feedback form, satisfaction of NABH certified hospitals and the TPA Insurance related services.

Factor analysis was used to construct the factors affecting the patient satisfaction regarding the quality of the hospital. Patient satisfaction is important factor for standardization of quality of the NABH certified hospital, non NABH hospitals and Government hospitals in West Bengal.

The value of Kaiser-Meyer-Olkin (KMO) is 0.908 (see table 1) which indicates that the sample size in the study is suitable for factor analysis. The value of chi-square in Bartlett's Test is 7108.570

and statistically significant. Consequently, PCA is suitable for analyzing the factors affecting the patient satisfaction regarding the quality of the hospital.

Table 1

<b>KMO and Bartlett's Test</b>		
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.908
Bartlett's Test of Sphericity	Approx. Chi-Square	7108.570
	Df	105
	Sig.	.000

Table-2 has shown the results of the PCA . This study has reflected three principal components which have Eigen value greater than 1. Rotation Sums of Squared Loadings show that the first rotated principal component has explained 66.622% of total variation in patient satisfaction regarding the quality of the hospital. The second rotated principal components have explained 15.203 % of variance and the third have explained 7.599% of total variation. Three components explain 89.425% of total variation in the patient satisfaction regarding the quality of the hospital.

**Table:2- Result of Principal Component Analysis(PCA)**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.993	66.622	66.622	9.993	66.622	66.622	6.496	43.307	43.307
2	2.280	15.203	81.825	2.280	15.203	81.825	4.412	29.413	72.720
3	1.140	7.599	89.425	1.140	7.599	89.425	2.506	16.705	89.425
4	.378	2.518	91.943						
5	.262	1.744	93.687						
6	.200	1.334	95.021						
7	.179	1.192	96.213						
8	.121	.808	97.021						
9	.112	.747	97.769						
10	.085	.564	98.333						
11	.068	.454	98.787						
12	.057	.377	99.164						
13	.045	.301	99.465						
14	.043	.284	99.749						
15	.038	.251	100.000						

Table 3: depicts the result of rotated component matrix. After factor analysis three factors are identified and whose Eigen value is greater than 1. From the table of rotated component matrix it is clear that the variables ambiance of the room, communication, accessibility, transparency, hospital infection control, safety measures, feedback for continuous quality improvement, NABH certification are in the first factor. The first factor is named as Hospital General views.

**Table 3: Rotated Component Matrix**

	Component		
	1	2	3
NABH_cert	.957	.116	-.006
HIC	.930	.229	.043
Safety_measure	.867	.409	.082
Transparency	.842	.473	.079
Feedback_for_CQI	.801	.483	.144
Ambiance_of_room	.795	-.158	.542
Accessibility	.784	.389	.298
Communication	.687	.481	.322
Financial_aspect	.151	.864	.340
TPA/Ins.	.374	.844	.161
Hospital_Services	.539	.742	.198
Behaviour_of_Doctors	.618	.700	.174
Quality_of_food	.200	.696	.555
laboratory_rvice	.134	.232	.921
technical_quality	.050	.526	.785

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The second factor is named as Internal aspects of hospital quality (the variables in this particular be financial aspects, quality of food, behavior of doctors/ nurses, hospital services, TPA/Insurance services) and the third factor named as Technical knowhow(the variables are technical quality, laboratory services) .

So as a whole three variables such as Hospital General Views, Internal aspects and technical

knowhow determined the Patient Satisfaction regarding the hospital quality. If the Hospital is NABH accredited the management and HR of the hospitals follow the standardization issues and give importance to Patient Satisfaction. In case of non NABH hospitals mainly private hospitals are not restricted by such strict obligations. The management of them establishes their own rules and regulations so as to enhance their profitability or else their business. In case of Government hospitals lack of hospital general views restrict the hospitals for being NABH accreditation. So the obvious question comes of the above analysis that these factors vary across the hospital or not. More specifically the study tries to investigate the following hypothesis.

HYPOTHESIS 1. Hospital General Views vary across the hospital type, NABH, non-NABH and Government. Hospitals.

HYPOTHESIS 2. Internal aspects vary across the hospital type, NABH, non- NABH and Government. Hospitals.

HYPOTHESIS 3. Technical knowhow varies across the hospital type, NABH, non- NABH and Government Hospitals.

To test the above hypothesis the study uses ANOVA .The table 4 represents the result of ANOVA.

Table 4: ANOVA result

	F	Sig.
Hospital General Views	95.109	.000
Internal Aspects of Hospital	92.755	.000
Technical Knowhow	3.220	.041

From ANOVA it is clear that three variables such as Hospital general views, internal aspect of hospital quality and technical knowhow differ across the hospital type (all the cases p-values are lesser than .05.)

## Conclusion

With globalization, Quality Control and TQM of the hospitals create its importance. The infrastructure of the hospitals, the quality service providers of the hospitals, the hygienic environment, the behavior of the doctors, and the connectivity of the hospitals affect the satisfaction level of the patients. The establishment of NABH under the umbrella of QCI is a step towards the journey of excellence in hospitals. Govt. of West Bengal instructed the hospitals to maintain and improve quality services to the patients. E-prescription and transparency of the treatment must be provided to them. From the study it reveals three factors namely Hospital

General Views, Internal aspects of hospital quality and technical knowhow determine the patient satisfaction regarding the quality of the hospitals. Those three factors are the determinants of patient satisfaction. And the factors of the patient satisfaction differ across different types of hospitals, NABH hospitals, non- NABH hospitals (Private hospitals) and Government hospitals. There is wide opportunity of growth and development in medical tourism in West Bengal. By accreditation of NABH, the Hospitals may maintain the continuous assessment, accessibility and continuity of care.

**Annexure I**

**Questionnaire on Patient Satisfaction**

Data were collected from inpatients irrespective of demographic differentiation, of NABH certified hospitals and non-NABH hospitals and Government hospitals in West Bengal

The patients were asked to respond to each question using a 5-point scale of answers that included, 'Very dissatisfied'(1), 'dissatisfied', 'neither dissatisfied nor satisfied', 'satisfied and very satisfied'(5).

1. How is the ambiance of the patient's room?

1	2	3	4	5
				1

2. How are the technical qualities of the nurses, staffs?

1	2	3	4	5

3. Are you satisfied with the hospital's billing or financial aspects?

1	2	3	4	5

4. How is the quality of food?

1	2	3	4	5

5. How is the laboratory services?

1	2	3	4	5

6. How is the behavior of doctors to patients and patients' family members?

1	2	3	4	5

7. How is the communication System of the hospital?

1	2	3	4	5

8. Are the higher management, doctors, and nurses accessible? What is your satisfaction level?

1	2	3	4	5
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9. What is your opinion about overall hospital services?

1	2	3	4	5

10. How the hospital maintains transparency with the patients? What is your satisfaction level?

1	2	3	4	5

11. Are you satisfied with Hospital Infection Control System?

1	2	3	4	5

12. Are you satisfied with safety measures of the hospital?

1	2	3	4	5

13. Do you think that your complaint/ feed back forms are analysed for Continuous Quality Improvement? Are you satisfied with it?

1	2	3	4	5

14. Are you satisfied with NABH certification of the hospital? What is your satisfaction level?

1	2	3	4	5

15. Are you satisfied with TPA/ Insurance related services? What is your satisfaction level?

1	2	3	4	5

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