

## **The Role of Quality Management System in Patient Satisfaction and its Benefits: A Study on Healthcare Sector of North Bengal**

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### **ABSTRACT**

*There is less or no research works done to date on the implementation of quality management system in healthcare in North Bengal. It is a general opinion that implementation of quality management system in healthcare brings safety to the patients, technical proficiency, politeness, good behavior of staff toward the patients, cheerful treatment environment, on-time accurate treatment, maintaining correct treatment procedures, patient feedback and immediate action, proper record keeping, quality treatment at inexpensive price, transparency in the services, proper diagnostic services, availability of canteen, ambulance, pharmacy, etc. The study tried to find out the level of patient satisfaction after implementation of quality management system in healthcare organisations and the benefits organisation received. The study was conducted under the real condition of the hospitals and on 60 patients and 30 hospital staff. The study on patients was conducted on both ISO 9001 based quality management system certified hospital and a non-certified hospital whereas, the staff sample was selected from the certified hospital only. The study on patient depicts that there is no significant change in patient satisfaction after implementation of the quality management system and the staff feels that there is a modest improvement in the overall operational processes of the organisation.*

**Keywords:** Compliance, Healthcare, Implementation, ISO 9001, Quality Management System.

### **INTRODUCTION:**

In India, the concept of implementation of quality management system in healthcare is comparatively new. The literature review illustrates that Florence Nightingale during the Crimean War of 1853-1855 conducted the first ever clinical audits. In the year 1918, American College of Surgeons framed the Hospital Standardization Programme that provided accreditation criteria and standards which were later adopted by the Joint Commission on Accreditation of Hospitals. Later in the year 1997, clinical audit's final outline was introduced in the white paper 'The New NHS' that considered it as a heart of quality improvement (Brice, 1989).<sup>[1]</sup>

The International Organisation for Standardization (ISO), a specialized international agency for standardization composed of the national standards bodies of more than 162 countries with its headquarter in Geneva, Switzerland published the popular ISO 9000 standard in 1987 (Sampaio et al. 2009).<sup>[2]</sup> The standard underwent major revision in 2000, revised again in 2008 and again after a major revision, its current version was published in September 2015.

The hospitals may voluntarily opt for ISO 9001 based quality management system implementation but the quality management system standards in hospitals in India are handled by National Accreditation Board for Hospitals & Healthcare Providers (NABH) and it is a constituent board of Quality Council of India (QCI). It establishes and operates accreditation programme for healthcare organisations. The accreditation boards are

supported by all stakeholders including industry, consumers, government and have full functional autonomy in its operation (Indumathy & Ravichandran, 2017).<sup>[3]</sup>

The significance of quality management system lies in ensuring minimisation of medical errors, enhancing patient's safety, reduction in patient discharge and stay time. This results in a safer, more efficient, cost-effective system for better-satisfied patients and healthcare service providers. The guideline in IPHS speaks about the structural gap such as availability of infrastructure, equipment, and manpower. The quality management system suggests the adoption of a process approach for developing, implementing, and improving the effectiveness of a quality management system. The quality management system enhances customer satisfaction by meeting customer requirement. ISO 9001: 2015 is a stepping stone for implementation of NABH (Sharma, 2012).<sup>[4]</sup>

### **THE NEED OF THE STUDY:**

The idea of a quality system or quality management system is not a familiar term to the healthcare providers who deal with quality concepts and tools on a regular basis. Most of the healthcare providers have no experience with a systematic program to implement quality management system within an organisation. The study is essential to understand the overall value of an ISO 9001 based quality management system, its value in implementing a quality culture within an organisation, using other quality tools within the ISO framework, clinical integration, accreditation, and performance improvement.

### **REVIEW OF LITERATURE:**

Moradi et al. (2015) in their study, 'Quality management systems implementation compared with organisational maturity in hospital' stated that a quality management system can provide a framework for continuous improvement in order to increase the probability of customers and other stakeholders' satisfaction. The findings of the study showed that there was no significant difference in the organisational maturity between the hospitals in different levels of the quality management systems implementation and in fact, the maturity of the organisations cannot be attributed to the implementation of such systems. As a result, hospitals made changes in the quantity and quality of quality management systems in an effort to increase organisational maturity, whereby they improved the hospital efficiency and productivity.<sup>[5]</sup>

Heuvel et al. (2005) in their study, 'An ISO 9001 quality management system in a hospital Bureaucracy or just benefits?' described how the Red Cross Hospital in Beverwijk, The Netherlands implemented an ISO 9000 Quality management system throughout the entire organisation. The focus on patients was re-established. All processes were identified and subjected to continuous improvement. The documentation system served the organisation needs without leading to bureaucracy. The positive effects on patient safety were demonstrated in comparison to other ten hospitals in the locality.<sup>[6]</sup>

Rodriguez et al. (2012) in their study namely, 'Implementation of a quality management system according to 9001 standard in a hospital in the home unit: Changes and achievements' described changes and results obtained after implementation of a quality management system (QMS) according to ISO standards in a Hospital in the Home (HiH) Unit. The findings were noted an increase in patients' satisfaction; decreased unscheduled returns to the hospital; less or no medical equipment failures; improved external suppliers' performance; material and medication needed by staff were available when necessary; increased number of admission; compliance to protocols improved and inappropriate referrals decreased. The paper describes changes made and outcomes achieved. The study was done in the HiH Unit, Clinico Hospital, Madrid, Spain that looked at admissions, mean stay, patient satisfaction, adverse events, returns to the hospital, no admitted referrals, complaints, compliance to protocols, equipment failures and resolution of urgent consultations.<sup>[7]</sup>

### **OBJECTIVE:**

The study aims to assess the patient satisfaction level after implementation of quality management system in a healthcare providing organisations and its benefits.

### **RESEARCH QUESTIONS:**

The main study questions were the following:

- i. How satisfied are the patients, after quality management system certification?
- ii. What are the benefits of such certification?

## **SCOPE:**

The study will contribute knowledge to the application of quality management systems in healthcare providing organisations not only in North Bengal but also in other states of India.

## **AREA OF STUDY:**

A comparative study was conducted between a hospital that recently attained ISO 9001 based quality management system certification and a non-quality management system certified hospital, situated in North Bengal. The study was conducted for four weeks and observation of all the important areas like wards, reception, pathology laboratories, radiology department, out-door, operation theatre etc.

## **LIMITATIONS:**

The study is restricted to two hospitals in North Bengal hence making it difficult to generalize the findings. The study relied on self-reported findings.

## **RESEARCH METHODOLOGY:**

### **Sample:**

The study was conducted on 60 patients and 30 hospital staff. The half of the patients was from an ISO 9001 based quality management system certified hospital rest from a non-certified hospital. The staff was selected from the certified hospital. The patients for the study were selected from the general ward as the wards were active and bed occupancy rate was high. Patients from Intensive Care Units (ICU), High Dependency Unit (HDU), Emergency Room, Burn Unit, critically ill patients, expired patients were not included in the study whereas, at least 48 hours of stay and mentally fit patients were considered for the study. The hospital staff was selected randomly throughout the hospitals.

### **Collection of data:**

The number of patients chosen for study from ISO 9001 based quality management system hospital was 30 and exactly the same number of patients was selected from the non-certified hospital too. The staff was selected randomly from the certified hospital. In table-1 and table-2 (ANNEXURE-I) the study details are shown.

The study was conducted mostly on medicine and surgery patients and the data was collected from the male and female general wards of the hospitals and the patients were conscious and in a position to answer the questions. The staff was selected randomly from the certified hospital.

## **ANALYSIS:**

The data analysis in table-3 (ANNEXURE-I) shows that statistically there is not much difference between quality management certified hospital and non-certified hospital in terms of patient satisfaction. In terms of safety to the patients, the affirmative responses in a certified hospital are 83.3% whereas in a non-certified hospital it is 80% which is not a major difference. In case of politeness and good behaviour of staff toward the patients, it is equal i.e. 87% in both the hospitals. The factors like patient feedback and immediate action (73%), transparency in the services (66%), proper diagnostic services (80%) and cheerful treatment environment (77%) are the areas in the non-certified hospital showing a little lower value in comparison to the certified hospitals. The study further shows that some factors like quality treatment at an inexpensive price (67%) and ambulance and pharmacy services (83%) show equal values. The analysis illustrates that there is very less significance of quality management certification on patient satisfaction. The aforesaid results also explain the generic nature of ISO 9001 that was designed for manufacturing industries but later implemented in service sector too. It may also be noted that the latest revision ISO 9001: 2015 illustrates that the applicability of QMS in the service sector has improved (Domingues & Fonseca, 2017).<sup>[8]</sup>

The staff of the quality management certified hospital as shown in table-4 (ANNEXURE-I) believes that there is an overall development in service quality of the hospital. The staff (86%) feels that the record keeping pattern improved after certification. A large population of the study (80%) feels that the implementation of quality management system increased efficiency in the hospital and the acceptance level of the hospital improved.

It was further observed that 70% of the staff is in high spirits as they feel that continual improvement will bring new changes in the hospital and that will benefit them in future. Nearly 70% subject feels that after training of QMS and facing the implementation process and audits there is an improved understanding of the client for the

quality of work done. Almost 66.7% staff feels that the rework or repair work reduced after QMS and their paperwork got systematic and organised but there are 33.3% who don't find any change. About 63% of staff finds more flexibility in operation, increased customer satisfaction and satisfaction of the employee due to reduction in repeat work but nearly 37% staff doesn't agree with such statement. Only 50% of staff finds improvement in the quality of subcontractors and suppliers after implementation of QMS but 50% still find no such changes.

## **CONCLUSION:**

The study on patient depicts that there is no significant change in patient satisfaction after implementation of the quality management system. The patient satisfaction level in certified and non-certified hospitals is more or less similar. It can't be expected that by the sole implementation of quality management system patient satisfaction will improve significantly. While, the study on staff observed that there is a modest improvement in the overall operational processes of the organisation but it can also be noted that a large section of staff feels that there is less or no change in terms of less rework or repair, less paperwork, continual improvement in the organisation, satisfaction of the employee due to reduction in repeat work, more systematic record keeping, increased customer satisfaction, more flexibility in operation, clear understanding of the client for the quality of work done and improved quality of subcontractors and suppliers. There is a scope for further research in hospital sector of North Bengal as there is less or no study in this field and the study will help the hospitals all over the country.

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## **REFERENCES:**

- Brice, J. (1989). On Introducing Medical Audit. *Journal of Management in Medicine*, 4(3), 179-183.
- Sampaio, P., Saraiva, P., Rodrigues, A. G. (2009). ISO 9001 certification research: questions, answers and approaches. *International Journal of Quality & Reliability Management*, 26(1), 38-58.
- Indumathy, J., Ravichandran, M. (2017). Analysis on the Effects of National Accreditation Board for Hospitals (NABH) and Healthcare Providers with reference to Nursing Professionals. *Asian Journal of Research in Social Sciences and Humanities*, 7(1), 1299 – 1304.
- Sharma, K. D. (2012). Implementing quality process in public sector hospitals in India: The journey begins. *Indian Journal of Community Medicine*, 37(3), 150 – 152.
- Moradi, T., Jafari, M., Maleki, M. R., Naghdi, S., & Ghiasvand, H. (2015). Quality Management Systems implementation Compared with Organisational Maturity in Hospital. *Global Journal of Health Science*, 8(3), 174.
- Heuvel, J. V., Koning, L., Bogers, A. J., Berg, M., & Dijen, M. E. (2005). An ISO 9001 Quality management system in a hospital - Bureaucracy or just benefits?. *International Journal of Health Care Quality Assurance*, 18(5), 361-369.
- Rodriguez-Cerrillo, M., Fernandez-Díaz, E., Inurrieta-Romero, A., Poza-Montoro, A. (2012). Implementation of a quality management system according to 9001 standard in a hospital in the home unit: Changes and achievements. *International Journal of Health Care Quality Assurance*, 25(6), 498-508.
- Domingues, P. & Fonseca, L. (2017). ISO 9001:2015 edition- management, quality and value. *International Journal for Quality Research*, 11, 149-158.

## ANNEXURE

**Table 1: Attributes of patients studied**

<b>QMS certified/ non-certified hospital</b>	<b>Number of patients</b>	<b>Percentage</b>
Hospital that is ISO 9001 based quality management system certified	30	50
Hospital without certification	30	50
<b>Gender</b>		
Female	24	40
Male	36	60
<b>Literacy level</b>		
Uneducated	10	16.66667
Secondary	20	33.33333
Senior Secondary	14	23.33333
Graduation	10	16.66667
Master Degree and above	6	10
Professional courses	0	0
<b>Resident</b>		
Rural	36	60
Urban	24	40
<b>Types of cases</b>		
Medicine	32	53.33333
Surgery	28	46.66667

**Table 2: Attributes of staff studied**

<b>Hospital details</b>	<b>Number of staff</b>	<b>Percentage</b>
Hospital that is ISO 9001 based quality management system certified	30	-
<b>Gender</b>		
Female	12	40
Male	18	60
<b>Literacy level</b>		
Uneducated	2	6.66667
Secondary	10	33.33333
Senior Secondary	8	26.66667
Graduation	3	10
Master Degree and above	1	3.33333
Professional courses	6	20

**Table 3: Comparison between the hospitals**

<b>Concern areas</b>	<b>QMS certified hospital</b>		<b>Non QMS certified hospital</b>	
	<b>Response</b>	<b>Percentage</b>	<b>Response</b>	<b>Percentage</b>
Safety to the patients	25	83.33333	24	80
Politeness and good behavior of staff toward the patients	26	86.66667	26	86.66667
Cheerful treatment environment	25	83.33333	23	76.66667
On-time accurate treatment	26	86.66667	27	90
Maintaining correct treatment procedures	26	86.66667	24	80
Patient feedback and immediate action	25	83.33333	22	73.33333
Quality treatment at inexpensive price	20	66.66667	20	66.66667
Transparency in the services	22	73.33333	20	66.66667
Proper diagnostic services	27	90	24	80
Availability of meals and canteen services	26	86.66667	25	83.33333
Ambulance and pharmacy services	25	83.33333	25	83.33333

**Table 4: Perceived benefits**

<b>Benefits</b>	<b>Response</b>	<b>Percentage</b>
Less rework or repair	20	66.66667
Less paperwork	20	66.66667
Increased efficiency in the organisation	24	80
Continual improvement in the organisation	21	70
Faster and easier acceptance of the organisation	16	80
Satisfaction of the employee due to reduction in repeat work	19	63.33333
More systematic record keeping	26	86.66667
Increased customer satisfaction	19	63.33333
More flexibility in operation	19	63.33333
Clear understanding of the client for the quality of work done	21	70
Improved quality of subcontractors and suppliers	15	50

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