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The Impact and Implications of ISO Certification on Patient Satisfaction-A Single-Centre Study

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ABSTRACT

Objective: To examine the impact of the international organization for standardization (ISO), the challenges faced in its implementation and the implications of the process on patient care in the long-term accreditation in a tertiary care hospital in Kharian.

Study Design: Cross-Sectional Study

Place and Duration of Study: Combined Military Hospital, Kharian Pakistan, from Jan to Dec 2019.

Methodology: Patient satisfaction questionnaires were given to 1600 patients presenting to the Indoor, Outdoor, Accidents & Emergency, Pharmacy, Radiology Department and Laboratory of Combined Military Hospital, Kharian Pakistan, as a part of a routine ISO audit annually for 2019. Responses were analyzed and tabulated.

Results: The upward trend in patient satisfaction was attributed to administrative intervention policies based on patient complaints and suggestions incorporated into the questionnaires' comment boxes. There was a significant difference between the response rates of patients in departments (p=0.016). It indicates that the satisfaction rate was higher among different departments.

Conclusion: Patient satisfaction is directly proportional to interventional measures based on patient feedback. When utilised positively, these feedback loops can lead to an increase in the hospital's overall efficiency index and the standard of care.

Keywords: Global health; Internal audit; ISO certification; Patient care; Quality management; Standardization.

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INTRODUCTION

ISO certification is a universal regulatory process applied to manufacturing, business and healthcare industries to improve organizational structure and functioning.[1] Over the past few decades, ISO certification and accreditation have become a vital component of healthcare systems worldwide, with multiple kinds of research proving its efficacy in raising the standard of care hospitals provide.[2] ISO provides a wide range of guidance and associated benefits.[3] Job descriptions with associated codes are developed for each hospital member, from the nurses and sanitary workers to doctors and senior administrators, which clearly define the roles and expected duties of all individuals and the hierarchy for reporting on the day-to-day working of the hospital.[4] Every single procedure performed in the hospital, whether an X-ray or a laparoscopy, is subject to rules of conduct laid out in the regulatory guidelines provided.[5] Due to the extensive scope of the audits used to establish local guidelines in individual hospitals, many problem areas such as waste management, patient satisfaction, mortality data, and hospital-acquired infections (HAI) can be scrutinized, and standard operating procedures (SOPs) developed for tackling individual issues.[6]

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Previous studies have identified major areas of improvement in accredited hospitals, namely: professionals' approach to patient care, flexible and growth-centric policy-making, strengthened organizational framework, fiscal responsibility, quality assurance, program review, increased patient satisfaction, public image and repute, and timely identification of potential liabilities and casualties.[7,8] The extent of the improvement varies from hospital to hospital, depending on the methods used. However, the positive impact is statistically significant compared to similar parameters in non-accredited hospitals.[9]

However, the end-point of all these improvements remains an increase in patient satisfaction.[10] Therefore the recommendation rate of a particular hospital by those treated there is a primary component of assessing the effectiveness of total quality management (TQM) measures. This study aims to gauge the impact of ISO certification on the standard of care provided as a function of patient satisfaction.

METHODOLOGY

The cross-sectional study was conducted in the Indoor and Outdoor Departments, Accidents & Emergency, Pharmacy, Radiology and Laboratory of Combined Military Hospital, Kharian Pakistan, as a part of a routine ISO audit annually from January to December 2019. The sample size was estimated by

WHO Calculator using prevalence of routine ISO audit as 49%.[11] Non-probability consecutive sampling technique was used to identify the participants.

Inclusion Criteria: Patients presenting to the Indoor, Outdoor, Accidents & Emergency, Pharmacy, Radiology Departments and Laboratory were provided with Patient satisfaction questionnaires as part of the ISO toolkit. All completed responses were included in the study.

Exclusion Criteria: The incomplete responses were excluded from the study.

The questionnaires were administered in Urdu for maximum reach, translated into English, and the responses tabulated in percentage form. These percentages were then analyzed and plotted against time to gauge the rate of improvement in each quarter. Data were classified on a departmental basis as a function of patient satisfaction and dissatisfaction over time and stratified to form an overall review of the key patient interaction points of the hospital and their consequent performance daily per quarter.

Data were analyzed using Statistical Package for Social Sciences version 21.0. Qualitative variables were expressed as frequency and percentages. Quantitative variables were expressed as Mean±SD. The chi-square test was used to compare completed responses. The *p*-value of ≤0.05 was considered significant.

RESULTS

Out of the total questionnaires administered (n=1600), 1590 were completed and returned (overall response rate=99.3%), and ten were discarded due to incomplete responses. The respective number of responses for each Department was based on an analysis of routine traffic in each Department. The number of responses for Accidents & Emergency was 290 (response rate=18.2%), out of which 275(19.0%) were satisfactory, and 15(10.6%) were unsatisfactory. For Outdoor Departments, the sample population was 500 (response rate=31.4%), out of which 454(31.4%) were satisfactory, and 46(32.4%) were unsatisfactory. For Indoor Departments, the sample population was 500 (response rate=31.4%), out of which 459(31.7%) were satisfactory, and 41(28.9%) were unsatisfactory, thus giving the highest rate of satisfaction overall. For Pharmacy, the number of responses was 100(response rate=6.3%), and out of the completed responses, 84 (5.8%) were satisfactory, and 16(11.3%) were unsatisfactory, overall giving the lowest satisfaction rate in the data set. Comparison of Response rate to examine the impact of ISO accreditation and challenges faced in its implementation and implications of the process on patient care in the long term. There was a significant difference (p=0.016) between the response rates of patients in different Departments. It indicates that the satisfactory rate was higher among different Departments shown in the Table.

Table: Comparing Patients Response rate in Different departments (n=1590)

Departments	Responses		Total	*p*-value
	Satisfactory (n=1448)	Unsatisfactory (n=142)		
Accidents & Emergency	275(19.0%)	15(10.6%)	290(18.2%)	0.016
Indoor	459(31.7%)	41(28.9%)	500(31.4%)	
Laboratory	88(6.1%)	12(8.5%)	100(6.3%)	
Outdoor	454(31.4%)	46(32.4%)	500(31.4%)	
Radiology	88(6.1%)	12(8.5%)	100(6.3%)	
Pharmacy	84(5.8%)	16 (11.3%)	100(6.3%)	

DISCUSSION

In our setup, patients reported a high value of satisfaction with minimal complaints. Due to administrative streamlining, wait and admission times for patients presenting to outdoor and indoor departments needed to be higher. However, patients were well satisfied with the standard of care provided. The time from presentation to testing, reporting and diagnosis was reasonable, with only a few incidental delays. Clearance and patient attendance rates in the Accidents and Emergency Department were high and associated with minimal mortality outcomes. The most complained about the area was the Pharmacy, where patient feedback was centred on difficulty accessing the medical store and technical issues stemming from using the Hospital Management System (HMS) to assign prescriptions resulting in either inaccurate medication assignment or systemic delay. The general satisfaction was high for patients presenting to Radiology Department and Laboratory. Reporting times were reasonable; appointment waitlists were no more than two weeks long, and the quality of lab reports was up to the mark. The main complaint in these areas (also the most recurring) was the need for more patient information. Patients purportedly felt excluded from their healthcare decision-making process, did not feel adequately counselled about preparation for certain procedures and consequently had to present to the hospital multiple times for the same complaint. In most cases, patients received guidance when they actively asked for it, did not have their medications explained to them at the Pharmacy, and were not counselled about the value of their test results or the importance of keeping them as records.

As evidenced by the results, although there is increasing satisfaction every year, there remains room for improvement. Patient satisfaction as a subset of certification faces challenges, including but not limited to personnel communication gap, evolving healthcare landscape, hesitancy to invest time and effort into additional training and the lack of inherent knowledge of surveyors carrying out the audit.[11] Frequent administrative turnover, the adoption of a non-holistic approach, the setting of arbitrary short-term goals and inconsistency in the level of commitment to quality management compound the issue.[12] Many problems are systematic and can be rectified by the increased focus on team building and assigning greater personal responsibility to all stakeholders.[13] The characteristics of the hospital system itself are perhaps less easily modifiable and, consequently, form the biggest hurdle to optimized care.[14] A lack of evolving infrastructure, resource limitation in providing all requisite testing and diagnostic services to patients, generally poor literacy about the value of certification and resistance to adherence to specified guidelines on the part of the doctors are all areas that can be targeted for better results.[15]

While ISO certification has provided a regulatory framework for the daily functioning of the hospital, identifying factors that adversely affect patient satisfaction can serve as an important indicator of the overall standard of quality management systems.[16] ISO guidelines, policies and SOPs do an exceptional job of bringing hospital services to international standards. However, human error within the framework is the key area to be targeted for raising the efficiency index of hospitals.[17] To this end, there should be an increase in the number of training modules carried out for ISO certification. The number of medical and paramedical staff attending these courses should be amplified. Monthly meetings to review hospital performance should involve the individuals who are the primary points of patient contact-such as pharmacists, phlebotomists, nursing staff etc. and they should be educated on improving patient literacy so that a bilateral feedback loop is established, which can be used to expedite the improvement of problematic areas with minimal hassle and expense. Above all, literacy about ISO certification, its impact and implications should be developed in healthcare workers so the gain from such certification can be utilized to the maximum extent.[18]

CONCLUSION

Patient satisfaction is directly proportional to interventional measures based on patient feedback. When utilised positively, these feedback loops can lead to an increase in the hospital's overall efficiency index and the standard of care.

Conflict of Interest: None.

Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

MQAK & NS: Conception, study design, drafting the manuscript, approval of the final version to be published.

MS & RQK: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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