

A literature review of Best Practices for Implementing Total Quality Management in Health Care Institutions

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Abstract

Total Quality Management (TQM) has emerged as a practical and effective strategy for health care institutions to enhance quality, reduce costs, and improve patient satisfaction. However, successful implementation of TQM requires a systematic approach and adherence to best practices. This study aims to identify a set of best TQM practices applicable to health care settings through a comprehensive literature review. Eight key practices were identified: top-management commitment (leadership), teamwork and participation, process management, customer focus and satisfaction, resource management, organizational behavior and culture, continuous improvement, and training and education. The findings suggest that top-management commitment is the most critical enabler for successful TQM implementation, followed by teamwork and participation, process management, and customer focus and satisfaction. Resource management, organizational behavior and culture, continuous improvement, and training and education were also found to be essential for effective TQM implementation. The study concludes that these eight practices can serve as a framework for quality improvement in health care institutions, leading to enhanced service quality, patient satisfaction, and improved institutional performance. The findings have significant managerial implications, emphasizing the role of top management and employees in initiating and ensuring the success of TQM, fostering a supportive organizational culture, and meeting stakeholder needs. Future research should explore barriers to TQM implementation, conduct

comparative studies across countries, examine the detailed impacts of the identified best practices, and evaluate patient perspectives on TQM practices.

Keywords: Total Quality Management, TQM, Health Care

Introduction

The health care and medical services sector is experiencing significant growth due to a high influx of private sector involvement, evolving disease patterns, medical tourism, and demographic changes. The introduction of innovative techniques, heightened awareness of patient safety, intense competition in the health care market, and the emergence of a new generation of purchasers and providers have compelled health care institutions to enhance their operational efficiency and embrace a consumer-oriented culture to optimize both cost and quality of care (Lee, Ng, & Zhang, 2017; Short, 2016). Ensuring the quality of care is a critical priority for all health care institutions, and there is an urgent need for reforms to address issues related to quality, alongside patient preferences, safety, and autonomy (Koeck, 2012). Another pressing challenge is the continuous escalation of operating costs for health care organizations. The growing health care expenditures have placed a substantial financial strain on national treasuries in countries such as Canada, the United States, the United Kingdom, and Taiwan, contributing to business decline and debt crises. Consequently, health care organizations must reevaluate their operational approaches to reduce costs while simultaneously improving the quality and value of their services.

To address these challenges, an extensive review of health care literature revealed the implementation of various quality management practices and tools, including ISO9000, continuous quality improvement, health quality improvement circles, and quality management systems. Among the suggested solutions, the adoption of a total quality management (TQM) approach has been highlighted as a practical and effective strategy to enhance quality in health care institutions (Manjunath, 2014; Kim & Johnson, 2016). TQM has assumed a pivotal role in health care quality management (McLaughlin & Simpson, 2009). By embracing TQM principles, health care institutions can transition from traditional quality improvement models to a customer-oriented system, emphasizing customer focus, process management, innovative tools and techniques, and teamwork (Klein, Motwani, & Cole, 2018). This approach fosters a physical, psychological, and social environment conducive to the well-being of patients and staff. Additionally, it promotes public health and community well-being while striving to reduce operational costs.

Although TQM concepts and practices have been widely accepted in health care institutions, their successful implementation requires sincere and systematic adoption. Research indicates that properly implemented TQM practices lead to improvements in health care institutions; however, improper implementation can result in failure (Claver & Molina, 2013). Numerous empirical and exploratory studies have been conducted to identify factors influencing the success of TQM implementation, which are well-documented. Nonetheless, studies specifically focusing on TQM practices within health care settings remain scarce. Thus, a systematic review to identify the practices underlying successful TQM implementation is imperative. Such a review would provide a foundation for future research and assist health care managers in adopting effective TQM practices.

The present study aims to identify a set of TQM practices applicable to health care settings for effectively addressing operational challenges. These identified practices, referred to as best TQM practices, are the focus of this research.

Moreover, this study provides a robust background for arguing that the systematic and proper implementation of these best TQM practices can serve as a framework for quality improvement in health care institutions. This, in turn, is expected to enhance service quality and patient satisfaction while improving institutional performance.

To achieve this objective, the article first examines the literature on the development of TQM programs within the health care sector. It then elaborates on the study's methodology and objectives. Subsequently, the results are presented in detail. Finally, the article concludes with a discussion of the findings and offers directions for future research in this field.

LITERATURE REVIEW

TQM in Health Care Environment

The concept of total quality management (TQM) was initially implemented in the manufacturing sector during the early 1980s, followed by its adoption in the service sector and other industries. In recent years, numerous health care institutions have applied TQM principles and practices to address many of the challenges they face (Chesanow, 2017; Counte, Glandon, Oleske, & Hill, 2015; Kim & Johnson, 2016). The reasons for the widespread acceptance of TQM in health care institutions are manifold; however, it is essential to understand what TQM entails within the context of the health care environment before delving into these reasons.

TQM in health care is defined as: "The satisfaction of patients, doctors, nurses, and suppliers (i.e., social shareholders) and other interested groups, achieved by implementing effective planning, programs, policies and strategies (i.e., hard issues), and human and all other assets (i.e., soft issues) efficiently and continually within a hospital context" (Arasli, 2012, p. 347).

TQM emphasizes customer (patient) satisfaction, continuous improvement, teamwork, process management, systematization, organizational culture and structure, and, importantly, commitment from management coupled with supportive leadership. Several studies have highlighted that successful implementation of TQM can lead to significantly improved outcomes in health care institutions (Counte et al., 2015). Among the outcomes observed are:

- Enhanced quality of service,
- Improved health care quality and institutional performance,
- Greater patient satisfaction,
- Reduced operational costs for health care institutions,
- Increased employee satisfaction, and
- Enhanced patient safety.

Consequently, many health care institutions have begun rigorous implementation of TQM, with some hospital associations and organizations mandating its adoption as a priority. Research indicates that TQM offers numerous benefits to hospitals, such as improved quality, financial performance, competitive advantage, and increased employee commitment (Alexander, Weiner, & Griffith, 2016; Chesteen, Heigheim, Randall, & Wardell, 2018; Douglas & Judge, 2013).

A study by Lee et al. concluded that for the successful implementation of a TQM system in hospitals, it is necessary to have strong hospital controls, develop an integrated performance measurement system, and adopt a comprehensive approach to quality improvement.

Horng and Huarng conducted a survey of 76 hospitals in Taiwan and tested a multilevel model addressing the issue of TQM adoption. Their analysis revealed that two of the five constructs identified—network relationships and prospector strategies—were positively and significantly related to the extent of TQM adoption. Furthermore, their findings indicated that prospector strategies were more closely associated with TQM adoption in profit-oriented hospitals, while network relationships were more relevant for nonprofit hospitals.

Yasin and Alavi utilized a market share model to demonstrate how TQM can provide a competitive advantage in health care. Their study concluded that TQM implementation enhances both market share and organizational effectiveness.

Komashie, Mousavi, and Gore noted that while the theory of quality has a long history, quality supervision and control in the health care industry have not evolved to the same level as in the

manufacturing sector. They attributed this discrepancy to differences in the nature of processes and production between the two industries and their respective quality concerns.

Chow-Chua and Goh observed that continuous improvement and innovative practices, such as TQM, have resulted in cost and time savings while streamlining work processes. Their research also indicated that larger hospitals and public hospitals are more inclined to adopt TQM, whereas medium-sized hospitals tend to favor continuous improvement for quality enhancement.

Implementing TQM principles and practices not only addresses financial challenges in health care institutions but also helps mitigate other critical issues they face. It is also important to recognize that the increasing pressures on health care institutions may drive them toward adopting TQM programs as a solution to these pressing challenges. Thus, TQM emerges as a viable alternative for policymakers and health care managers seeking to resolve critical issues effectively.

Best Practices in TQM Implementation

From the literature review, eight best practices for implementing Total Quality Management (TQM) in health care institutions were identified. These practices include top-management commitment, teamwork, process management, customer focus and satisfaction, resource management, organizational behavior and culture, continuous improvement, and training and education. These practices were determined based on their frequency of occurrence in the reviewed literature, as indicated by the numbers in parentheses. Each practice is further elaborated in the following sections.

Top-Management Commitment (Leadership)

Top-management commitment, also referred to as leadership, is recognized as the most critical enabler for successful TQM implementation in health care institutions. This includes leadership style, administrative support, involvement of upper management, support from senior leadership, and leadership focused on quality improvement. Studies indicate that leadership plays a significant role in determining the quality of care in hospitals (Eubanks, 2016) and serves as a fundamental driver of hospital systems. Top management is expected to act as a coach, guiding and influencing subordinates. Without support from hospital leadership, bottom-up quality initiatives are unlikely to succeed. In some cases, committed physicians also contribute significantly to the successful implementation of TQM programs in hospitals (Wakefield et al., 2011). Furthermore, top management fosters organizational contributions by encouraging participation and emphasizing process improvement over individual accountability (Raja, Deshmukh, & Wadhwa, 2007). Thus, top-management commitment is considered a prerequisite for the effective and successful implementation of TQM.

Teamwork and Participation

The development of teamwork and participation is another key practice in TQM implementation. To counteract sectionalism, the entire organization must collaborate on quality improvement initiatives and form quality improvement teams with active participation from all members. The effective formation of such teams is crucial to the success of TQM within an organization. It is imperative that each issue or problem within the organization is analyzed collectively by the team responsible for its resolution (Brashier, Sower, Motwani, & Savoie, 2014). In the context of hospitals, teams should consist of members from various departments capable of improving specific processes. A critical goal of teamwork and participation is to address quality-related issues promptly, often through quality action teams (Mayer, 2012). Teamwork and participation are particularly essential in health care institutions, as they require interdepartmental cooperation to ensure success. This practice is substantiated by eight published studies in the literature review. Other aspects of teamwork and participation include people management, staff focus, work systems, employee relations, and teamwork development.

Process Management

Process management is a vital TQM practice in health care, emphasizing compliance with patient (customer) requirements by delivering error-free services in the most efficient manner. This practice addresses the patient's experience with various hospital processes (Duggirala, Rajendran, & Anantharaman, 2008). Key aspects of process management include maintenance, setting standards, sincerity, effectiveness, fact-based management, prioritizing patient needs, emergency service systems, admission procedures, registration procedures, security systems, and clinical care processes. These elements aim to ensure quality outcomes free from errors. Process management also focuses on enhancing processes through quality improvement and operational performance (Raja et al., 2007). According to Zeithaml, Parasuraman, and Berry, process management refers to the procedures, mechanisms, and activity flows involved in delivering health care services. Ultimately, process management evaluates the patient's perception of both the treatment process and its outcomes. This practice is highlighted in eight published studies within the current literature review.

Customer Focus and Satisfaction

Customer focus and satisfaction represent a crucial aspect of the TQM framework, as health care institutions can gain a competitive advantage by effectively addressing patients' (customers') needs and demands, while also anticipating and adapting to their evolving preferences (Sureshchandar, Rajendran, and Anantharaman, 2013). The primary responsibility of these institutions is to provide patients with the highest quality services. These services commence with the patient's arrival at the hospital and interaction at the registration counter, where prompt and efficient actions—such as online registration and immediate attention to the patient's condition—are critical. The initial service plays a pivotal role in shaping the patient's perception of the hospital and can positively influence recovery.

High-quality food services, including proper food management and the provision of hygienic meals, are another essential aspect of patient care. Meals should be sufficient to meet patients' dietary requirements and cater to diverse patient groups (Arasli & Ahmadeva, 2014). Additional components of customer focus include emergency services, understanding customer expectations, building confidence, managing treatment costs, addressing patient needs, and resolving complaints. However, it is important to recognize that customer satisfaction is a short-term measure that does not necessarily translate to long-term commitment. The responsibility of management lies in ensuring that satisfaction evolves into sustained commitment. Skilled medical personnel are critical for accurate diagnoses, effective treatment, and comprehensive care (Raja et al., 2007). Ultimately, the goal is to achieve patient satisfaction. This practice was highlighted in eight published studies during the literature survey.

Resource Management

Resource management, a key TQM practice, evaluates patients' perceptions of quality in relation to the physical facilities available in health care institutions. It is concerned with the effective utilization of resources from the patient's entry into the hospital to discharge, making it a critical factor for institutional success. This practice encompasses resource assessment, infrastructure, cleanliness, maintenance, and the availability of essential services such as ambulances, laboratories, operating theaters, wards, materials, information systems, ATMs, banks, and drugstores. Even the most skilled medical professionals and staff cannot deliver high-quality services in the absence of adequate resources (Arasli & Ahmadeva, 2014). The availability of these facilities directly impacts patient satisfaction (Hancock, 2019). Seven studies included in this literature survey supported the importance of resource management as a TQM practice.

Organizational Behavior and Culture

Organizational behavior and culture significantly influence the successful implementation of TQM in health care institutions. A respectful and friendly atmosphere among staff and between staff and patients has a profound impact on patients' physical well-being. A culture rooted in total quality fosters an environment where individuals collaborate freely to achieve shared goals and derive satisfaction from the process. In such a culture, individuals feel valued, their opinions are given priority, and suggested actions are implemented. Hospitals should maintain cleanliness, cultivate teamwork for quality improvement, and focus on problem-solving and shared accountability. For TQM to succeed, the organizational culture and behavior must support and sustain it (Atchison, 2017). Six empirical studies validated the importance of this practice.

Continuous Improvement

Continuous improvement is another influential practice in the successful implementation of TQM. Supported by five empirical studies, this practice emphasizes eliminating barriers, resolving patient dissatisfaction, and addressing complaints. The primary aim is to meet patients' (customers') needs. Continuous improvement requires the ongoing training and education of all staff and physicians and the application of various quality improvement tools, techniques, and approaches. This practice encourages organizations and staff to exceed minimum standards and utilize available resources to their fullest potential. Key elements of this practice include the measurement of quality care, performance assessment, innovation, and performance analysis. Furthermore, the pursuit of quality improvement is an ongoing process rather than a finite task, presenting continuous opportunities for advancement. This approach has no definitive endpoint but reflects the commitment to achieving better outcomes and patient satisfaction as the ultimate objective (Sureshchandar et al., 2013).

Training and Education

Training and education are also recognized as supportive practices for the successful implementation of the TQM approach. At least five studies cited this practice in the current review. It reflects the organization's ability to utilize quality management tools and techniques effectively (Wardhani, Utarini, van Dijk, & Post, 2009). This practice includes aspects such as technical support, management training, statistical process control, employee training, a scientific problem-solving approach, and the use of information systems. It is widely accepted that the success of TQM hinges on continuous education and training of personnel at all levels (Brashier et al., 2014).

Technical training is designed to meet the demands of high workplace performance and has a direct impact on employee efficiency and safety. Moreover, employees and staff require training in statistical techniques to enhance quality management processes (Mahadevappa & Kotreshwar, 2020). Therefore, staff training and education are considered fundamental building blocks during TQM implementation.

Discussion

The present literature review identified eight significant TQM practices: top-management commitment (or leadership), teamwork and participation, process management, customer focus and satisfaction, resource management, organizational behavior and culture, continuous improvement, and training and education. These eight practices were found to be essential for the successful implementation of TQM in health care institutions, leading to improved organizational performance, patient satisfaction, enhanced quality of care, and reduced operational costs. Consequently, these practices are deemed the best practices of TQM in this study.

However, the findings of this research differ, to some extent, from prior studies that explored TQM practices. Other studies have identified a varying number of practices, as well as practices not observed in this study's results. This inconsistency may be attributed to several factors:

- Limitations of the research methodology employed in the studies.
- External environmental factors specific to each research site.
- Outcome measures utilized in the studies.

A brief analysis of these factors reveals that most empirical studies included in this review employed cross-sectional analysis, except for a few exploratory studies that relied on descriptive methodologies such as literature reviews. Additionally, variations in sampling type and size across the studies may have influenced the outcomes.

The inclusion of hospitals with diverse sizes, structures, and ownership models in this study may also contribute to the observed inconsistencies. Lastly, differences in outcome measures could further explain the discrepancies. Most of the selected studies employed standard models such as the Malcolm Baldrige National Quality Award, the European Foundation for Quality Management, or Kanji's Business Excellence Model to assess the degree of TQM implementation. The choice of models used for assessment could influence the results.

The findings of this study underscore that top-management commitment is considered the foremost requirement for implementing TQM, as supported by many research findings. Therefore, top management should lead the initiative to enhance quality in health care institutions. Other practices, such as teamwork and participation, process management, and customer focus and satisfaction, are also identified as critical for successful TQM implementation. These practices are well-supported by numerous studies and play a dominant role in health care institutions.

Similarly, practices like resource management, organizational behavior and culture, continuous improvement, and training and education were demonstrated to be essential, as elaborated in the previous sections. It is concluded that all eight TQM practices identified in this study are highly effective and critical for the successful implementation of TQM in health care institutions. Therefore, these practices can be considered as the best TQM practices for such institutions.

Managerial Implications

For the effective implementation of the TQM philosophy in health care institutions, several managerial implications can be drawn from the current study:

- Managers can utilize TQM philosophy as a strategic tool to achieve desirable outcomes, including patient satisfaction, improved quality of care, and enhanced organizational performance.
- Both managers and quality policy makers in health care institutions should emphasize the critical roles of top management and employees in initiating, implementing, and ensuring the success of TQM.
- Managers should focus on fostering an organizational culture that encourages teamwork and participation at all levels while prioritizing the provision of training and education for employees to facilitate the successful implementation of TQM principles.
- Lastly, managers must recognize the importance of meeting the needs and expectations of all internal and external stakeholders when introducing TQM strategies.

Recommendations for Future Research

The scope and suggested directions for further studies in this field include:

- Future research should explore the barriers to implementing TQM programs and extend this study to other developing countries to gain broader insights.
- Comparative studies can be conducted with other less-developed countries to identify the similarities and differences in TQM implementation across various health care systems.
- Further research should focus on examining the detailed impacts of the eight best practices identified in this study on the implementation of TQM.

- Empirical studies are needed to evaluate the understanding and application of TQM practices from the perspective of patients (customers).

The findings of this study can assist managers and practitioners in successfully adopting TQM programs within their organizations. Additionally, they will open new avenues for researchers in this domain, thereby contributing to the body of knowledge on enhancing the implementation of TQM philosophy.

Conclusion

The findings of this study have identified eight critical practices for the successful implementation of Total Quality Management (TQM) in health care institutions. These practices—top-management commitment, teamwork and participation, process management, customer focus and satisfaction, resource management, organizational behavior and culture, continuous improvement, and training and education—are instrumental in achieving enhanced performance, improved patient satisfaction, superior quality of care, and cost efficiency in health care organizations.

While the identified practices align with many prior studies, some variations were observed due to differences in methodologies, environmental contexts, and outcome measures across the reviewed literature. Nonetheless, the overarching consensus emphasizes that TQM offers a robust framework for addressing challenges and driving excellence in health care.

It is evident that top-management commitment serves as the cornerstone for TQM implementation, while other practices such as teamwork, process management, and customer focus significantly contribute to the success of the TQM philosophy. Moreover, resource allocation, organizational culture, and continuous improvement further enhance the ability of institutions to deliver high-quality care.

The study underscores the importance of integrating these practices systematically and recommends further research to explore barriers to TQM implementation, cross-country comparisons, and the detailed impacts of each practice. By addressing these aspects, health care managers and practitioners can better adopt and sustain TQM strategies, paving the way for improved institutional outcomes and patient experiences. Ultimately, the successful application of TQM principles holds the potential to transform the health care landscape, ensuring sustainable quality improvements and stakeholder satisfaction.

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