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**Review Article: Importance of TQM And Business Excellence Models With Continuous Improvement Implementation of Initiatives and Sustainable Business Results in the UAE Organization**

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**Abstract**

**Purpose:** This review article is to investigate the models of business excellence along with Total Quality Management (TQM) in healthcare specifically. It also illustrates how these models contribute to maintaining sustainability. Generally, total quality management provides a respected environment for patients, staff, and procedures. Moreover, EFQM and MBNQA are promoting the full frameworks in terms of satisfaction, strategies, and resources. While Sigma and lean methodology are crucial for the improvement and reduction of waste. Furthermore, a continuous improvement approach is used to improve both processes and services in the organization.

**Methodology:** A comprehensive search by use of secondary data collection “Google Scholar”, search terms include “TQM”, “Continuous Improvement”, “Business Excellence”, and “Sustainability”. Most of the results have been filtered within studies published between 2020 and 2024, our references are matches with cited articles. In this review article, Medcare Medical Group has been chosen as a leading healthcare in the UAE providing health service at a high-quality level. TQM and business excellence models were involved in Medcare Medical Group to foster efficiency.

**Findings:** The review article has mentioned the importance of TQM and business excellence in healthcare particularly, the reflection of these models towards patient focus and the implemented strategies to maintain with changes.

**Unique Contribution to Theory, Practice and Policy:** A feedback collection provides future guidance for patient and employee engagement and introduces AI in healthcare strategies to target ethical issues.

**Keywords:** *Total Quality Management, United Arab Emirates, European Foundation for Quality, Malcolm Baldrige National Quality Award*

**JEL Codes of Classification:** M10; O53; M10; M10

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## **INTRODUCTION**

### **Objective**

The paper seeks to evaluate the significance of business excellence and total quality management (TQM) models in the healthcare sector in the MENA/UAE region, with an emphasis on how these models promote continuous improvement and produce financial benefits that last. It will examine these models' conceptual basis and real-world executions, focusing on several recent studies, including different authors' publications. This investigation will focus on the conception and application of TQM and Business Excellence models in the healthcare industry, emphasizing how they may improve the quality and effectiveness of care.

### **Relevance**

It is not possible to overestimate the value of merging TQM and Business Excellence principles in the healthcare sector. These models present an organized approach for enhancing customer service and operational efficiency in a time where healthcare systems must deal with increasing challenges and the need for better customer service (Rafeea et al., 2021; Eideh et al., 2022). They place significant value on implementing a patient-centric approach, which promotes healthcare institutions to constantly improve and expand their services in order to fulfil growing customer needs and expectations (Aburayya et al., 2020). This strategy is especially crucial in the MENA/UAE domain, where healthcare systems are rapidly evolving and changing.

### **Scope**

A thorough analysis of Medcare Medical Group in the UAE will showcase this investigation, providing a clear understanding of the application of TQM and Business Excellence models in real-life settings. It aims to identify the unique possibilities and problems encountered in implementing these strategies in an evolving healthcare system by focusing on Medcare Medical Group which is a real-world insight.

## **LITERATURE REVIEW**

### **TQM and Business Excellence Basics**

TQM promotes the significance of a patient-focused approach in the healthcare sector and incorporates staff members at all phases of procedures for continuous improvement (Aburayya et al., 2020). Its primary goal is to establish an environment that respects outstanding patient care, employee engagement, and organized procedure oversight. Medical organizations can critically assess and improve their operations and tactical procedures with the use of business excellence models like the European Foundation for Quality Management (EFQM) and Malcolm Baldrige National Quality Award (MBNQA), which provide complete frameworks (Zainal & Salloum, 2021). To achieve greater patient satisfaction, these models emphasize quality in staff administration, procedures, policies and strategies, leadership, and resource allocation (Zainal & Salloum, 2021). To remain competitive and effective, they also push healthcare organizations to embrace new approaches and adjust to technological developments (Eideh et al., 2022).

### **Healthcare-Specific Models**

Healthcare-specific approaches, such as Lean and Six Sigma, are essential for reducing waste, improving the utilization of resources, and simplifying procedures. The healthcare industry has successfully applied lean methodology since its inception, focusing on reducing delays, improving patient flow, and enhancing customer satisfaction (Rafeea et al., 2021). Six Sigma's

data methodology recognizes it as a tool to reduce variation in healthcare processes, ensuring consistency and reliability in patient treatment (Aburayya et al., 2020). Incorporating these models into healthcare operations results in effective resource utilization, increased patient happiness, and enhanced productivity (Zainal & Salloum, 2021). Additionally, the EFQM and MBNQA models significantly elevate healthcare organizational excellence. EFQM promotes a balanced focus on all areas of excellence, especially processes, while MBNQA provides a comprehensive framework for quality management, leading to improvements in efficiency, cost management, and patient care in the UAE's healthcare sector (Zainal & Salloum, 2021). Furthermore, the use of the Kano model in the healthcare field improves in identifying and ranking of patient demands, allowing healthcare practitioners to provide services that not only match but exceed customer expectations, resulting in increased patient confidence and loyalty (Eideh et al., 2022). These models, along with the Dubai Government Excellence Program, emphasize leadership, quality management, and customer satisfaction, vital for maintaining competitiveness in today's evolving healthcare landscape. By guaranteeing that medical providers can offer excellent treatment while maintaining effectiveness and long-term viability in an atmosphere that is becoming more and more productive, these models considerably support efforts toward improving quality (Zainal & Salloum, 2021).

### **Continuous Improvements**

Generally, Continuous Improvement (CI) is an approach to improving an organization's process/services, and a philosophy to encourage healthcare providers to keep asking for an improved culture towards patient care (Price et al., 2017; Ciasullo et al., 2023). The significant impact of continuous improvement in healthcare was tested across safety, quality of care, and operational efficiency. In terms of patient safety, the program among major children's hospitals has shown a decline in hospital harm, mortality rates, and serious events by testing the healthcare provider's attitude (Berry et al., 2020). Moreover, medication errors are considered a major cause leading to death and are estimated to account for 0.7% of total global health expenditures, according to the World Health Organization (WHO) (Manias et al., 2020). Interventions like Computerized Physician Order Entry (CPOE) helped to reduce medication errors from 63.6% to 18.8%, while 5-moment medication safety helps to tackle the errors (Manias et al., 2020; Braithwaite, Glasziou, et al., 2020). Besides, telemedicine interventions are an example of care quality, as they help diabetic patients with glycaemic control, reduce the mortality rate, manage patients' pain, and improve mental health and the quality of their diet (Eze et al., 2020). Operational efficiency can be implemented using lean management that increases patients' satisfaction by improving operation room resources, reducing waiting time, and implementing quality improvement initiatives that reduce pre-operative delays, along with saving costs for hospitals and patients (Sales-Coll et al., 2023; Gupta et al., 2022).

### **Sustainable Outcomes**

Sustainability is commonly measured in healthcare organizations by collecting data on the patient's length of stay (LOS), readmission, and financial data (Braithwaite, Ludlow, et al., 2020). For instance, LOS is generally measured hospital efficiency, and the higher the LOS means increasing in mortality resulted in a negative impact in terms of the experience and safety of the patients (Zdęba-Mozoła et al., 2023).

As mentioned above, EFQM helps in creating satisfied customers, good management change, which affects positively on leaders and provides value to the customer, resulting in the creation of future sustainability, which leads to vision inspiration (Motaghi et al., 2021; de et al., 2022).

In healthcare, EFQM implementation improves patient satisfaction and complaint indicators (Kamal, 2023). While MBNQA has a successful impact on healthcare in measuring the performance of leadership, the strategic plan, and patient focus and providing information on hospital performance levels (Purnama, 2023). Zainal & Salloum, (2021) successfully illustrated variables that play a role in differentiation from competitors, like innovations that invested in UAE hospitals, employee's involvement that helps in improving their productivity, human resources, which keep targeting talented professionals to promote the best care to patients, quality management, satisfied customers regarding hospital quality service, and in terms of research field for upgrading the advantages.

### **CASE STUDY**

The Medcare Medical Group is the leading healthcare organization in the United Arab Emirates that provides high-quality health care services. With advanced healthcare facilities, this organization is comprised of expert healthcare professionals and is established as the most reliable health care provider in the MENA/UAE region. The organization is committed to providing exceptional quality services to patients and catering to the expanded population of patients in the UAE (Zairi, 2011).

Medcare Medical Group has accepted healthcare models, including TQM and Business Excellence, to foster the efficiency of healthcare operations and provide advanced services to patients. The group focuses on healthcare models that contributed to a high rate of patient satisfaction and, over the past three years, raised it by 34%. They have considered the significance of integrating these healthcare models to enhance consistent growth and improve the satisfaction of a diverse patient population (Hafeez, 2018). The organization has implemented Total Quality Management and Business Excellence models through an inclusive approach that applies the principles of quality management to all organizational operations. Such as the EFQM Excellence Model, which is the European Foundation for Quality Management. Correspondingly, they strived for consistent improvement by accrediting healthcare professionals and nurses to follow quality measures and implement the Standard Operating Procedures (SOP) all over the patient care system. These models have been implemented in their framework to enhance the performance of the organization. Medcare Medical Group complies with the methods, approaches, and standards of business excellence to accomplish the highest distinction in healthcare service delivery. The group has implemented different TQM and business excellence strategies to achieve its goals of delivering high-quality health care services:

#### **Reengineering Mechanism**

The organization has commenced the reengineering of mechanisms to simplify healthcare productivity, reduce patient waiting times, and foster the effectiveness of healthcare services. Various processes in the healthcare system at this organization have been optimized. This includes the appointment plan, admittance, and discharge process for patients (Unnikrishnan, 2019). They enhanced the services that contribute to patient satisfaction.

#### **Safety System of Patients**

They have developed a robust safety system for patients that is aimed at reducing inaccuracies, preventing the transfer of infectious diseases, and adhering to the safe standards for patients in the UAE. Robust healthcare services reduce medical errors by up to 60%. This includes implementing measures for medication safety, surgical interventions, and standard precautions.

## **Training and Development (T&D) of Healthcare Professionals**

Medcare Medical Group has implemented training and development (T&D) programs for healthcare professionals to deliver competent and high-quality healthcare. Consistent training programs that include medical expertise, interpersonal skills, and patient-oriented healthcare services to improve the efficiency of healthcare professionals (Lasrado, 2016). There were significant challenges in the healthcare landscape of the UAE region, including patient diversification, regulatory compliance, and constraints in resource allocation. The group is implementing the following measures to address these challenges:

### **Diversification of Patients**

The diversified population of patients in UAE poses a significant challenge for this healthcare provider in the context of the cultural aspects, communication barriers, and partialities of the healthcare services. To manage the diverse UAE population, a training program that focuses on cultural differences was given to the staff, tailored customer care plans, and interpreter services for the UAE's diverse patient population.

### **Alignment With Regulatory Measures**

The organization has significantly faced regulatory challenges due to which it has established a steadfast alignment with the regulatory requirements of the UAE as advocated by the Ministry of Health and Prevention (MOH). Medcare Medical Group conducts regular audits to identify improvement areas and compliance with UAE healthcare regulatory guidelines.

### **Restraints in Resource Allocation**

The organization faced a shortage of funding a lack of resources for appointing skilled staff. The organization regulated the allocation of resources by investing in advanced technology to train medical staff and enhance healthcare delivery outcomes by up to 35% for the target patient population. In addition to this, they have collaborated strategically with community sectors and healthcare organizations to leverage the required resources and expand healthcare services (Zainal, 2021).

The data presented in this report regarding the case study of Medcare Medical Group has been collected by reviewing the healthcare services reports of the respective organization. The research publications of the healthcare industry of the MENA/UAE region were reviewed for the collection of additional information.

Medcare Medical Group has implemented advanced Business Excellence and TQM strategies to deliver exceptional quality healthcare services in the UAE. With strategic collaboration, the organization has circumnavigated the challenges and improved the delivery of healthcare outcomes.

## **ANALYSIS OF IMPACT ON HEALTHCARE DELIVERS**

The impact on healthcare delivery is crucial for the CI and best outcomes of patient care. It can be outlined into performance metrics, long-term sustainability, and theoretical and practical alignments.

### **Performance Metrics**

Metrics in health delivery like improvements in patient waiting time (WT) to the triage in the Emergency department (ED). Shen & Lee, (2020) illustrate the use of Plan-Do-Study-Act (PDSA) showed the average wait time for the triage across the week reduced from 18 minutes

to 13 minutes, It also helps to characterize the WT from 27 minutes to 4 minutes (Elkholi et al., 2021). Metrics used for patient satisfaction with a patient portal showed a 9.5% reduction in missed appointments and a 53% decline in the no-show rate (Graham et al., 2020). Patient safety is top of the quality aims that hospitals maintain, the WHO introduced the Surgical Safety Checklist (SSC), a program to address diagnostics errors to enhance patient engagement, are tool to maintain safety (MacGillivray, 2020; Röhsig et al., 2020; Giardina et al., 2022). Electronic health records (EHR) are helpful tools to ensure quality improvement that supports user involvement (Amponin & Brittler, 2023; Fennelly et al., 2020). A well-trained nurse offers quality healthcare, and long-term care insurance (LTCI) that was implemented on hospital utilization, it reduced the LOS by 41%, the in-patient expenditures by 17.7%, and health insurance expenditures by 11.4%.(Font-Cabrera et al., 2023; Feng et al., 2020).

### **Long-Term Sustainability**

The interventions of continuing care help in reducing readmission cases in the short-term, while focusing on factors of clinical and socioeconomic might keep the reduction long-term with closer cooperation (Facchinetti et al., 2020). Leadership management's effects on quality planning and their positive influence resulted in sustainability achievements, decision-making is another factor in solving problems and allocating resources that play an important role in sustainability as well (Zehir & Zehir, 2023). As hospitals aim to provide long-term improvements, TQM focuses on the CI that provides orientation for improving and developing sustainability facilities (Zehir & Zehir, 2023). Setting sustainability goals towards allocating resources will show a realistic solution for care (Fang et al., 2020).

### **Theoretical and Practical Alignments**

In comparison with the literature review and the real case (Medcare Medical Group), there were similarities in the outcome expectations. For instance, a literature review has focused on the EFQM and MBNQA models, same as mentioned in the real case of Medcare which improves the accreditation of nurses and healthcare professionals to follow the quality measurements. It also explained in the literature review the operational efficiency measures by improving patient WT to reach their satisfaction and Medcare Medical Group has used a reengineering mechanism that goals in reduction of patient WT. In patient safety, the literature review illustrated some examples of patient safety such as the 5-moment for Medication Safety that introduced by WHO (Braithwaite et al., 2020). Interventions in surgical areas and medication safety have been elaborated by the Medcare Medical Group. As mentioned above, the reengineering mechanism implemented in the Medcare Medical Group showed a significant reduction in patient waiting times. A published paper on Daycare infusion therapy illustrated that the implementation of the DMAIC (Define, Measure, Analyze, Improve, Control) methodology resulted in an improvement in waiting time turnaround time from 32% to 89% and a reduction of waiting time from 108 minutes to 59 minutes (Mamballikalam et al., 2024).

## **CRITICAL ASSESSMENT**

### **Effectiveness in Healthcare**

The advantages of TQM and business excellence models in healthcare can be seen in the rise in patient satisfaction at Medcare Medical Group (Hafeez, 2018). However, it is important to acknowledge the complicated nature of implementing them. These models require major funding and organizational culture modification, which may be a major challenge, particularly in healthcare settings with limited resources. Furthermore, although lean methodologies have

achieved some degree of accomplishment (Rafeea et al., 2021), their focus on excellence may at times fail to consider the complicated factors associated with patient-centered care. Sticking to data-driven methodologies, like Six Sigma, guarantees unity in patient care; however, it also requires an important level of literacy from individuals, which may prove to be difficult to acquire. As a result, although these models offer significant advantages, their implementation in healthcare must be fully personalized to suit specific organizational factors and set toward awareness of possible restrictions and needs for continuous adjustment.

### **Insights and Lessons Learned**

Additional insights and teachings helped to improve this knowledge. Taking account of characteristics that are specific to the healthcare environment, including the demographics of patients and resource accessibility, is of the utmost priority (Lasrado, 2016). Maintaining a balance between productivity and customer service is a top priority, but while lean methods may help speed up processes, the standard of patient care must remain the primary concern (Aburayya et al., 2020). For effective execution, which promotes an environment of continuous improvement, leadership and an environment that is supportive are important (Zainal & Salloum, 2021). Ongoing training ensures that medical professionals remain skilled in successfully using these techniques (Lasrado, 2016). In the present day of data-driven decisions, it is important to establish data literacy because it enables the successful execution of models such as Six Sigma (Aburayya et al., 2020). By implementing these findings, it is possible to be certain that the TQM and Business Excellence standards not only increase the level of healthcare but also strengthen customer satisfaction and efficiency in the complicated and constantly shifting healthcare environment.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

To end, this report has illustrated the business excellence and total quality management significance in healthcare, the importance of patient focus enhancement along with operational efficiency, and the strategies that are implemented to adapt to the changes. The literature review has targeted different business excellence models such as EFQM, MBQNA, and Kano. It highlighted the impact of CI on various aspects with examples in healthcare settings. In terms of the real case study, the Medicare Medical Group has been chosen for the real case of local organizations as a benefit of a relationship with an employee working there to collect data in person. The use of business excellence models analyzed on various measures, and efficiency meant the explanation of how well the resources are implemented to achieve goals (Bukvič, 2022). While healthcare Standards Operating Procedures (SOP) guidelines promote the efficiency of healthcare professionals and patients.

### **Recommendations**

Recommendations can be patient-centered care which involves the patient/ their family in the decision-making. For example, collecting feedback that helps in future guidance for quality improvement to engage patient's families in the intensive care unit (McAndrew et al., 2020). Another interesting recommendation is to introduce Artificial intelligence (AI) in medicine to help in patient outcomes improvement concerning potential concerns and considerations (King, 2023). Employee engagement is a critical factor that must be implemented by an intervention plan that provides patients and their families improved (Rasheed et al., 2021). The Strategies in the healthcare sector could be focused on AI as one of the studies mentioned, the application of AI



governance in healthcare to address the concerns and ethical issues to help in the growth of delivery (Reddy et al., 2020). Another Strategy is that healthcare organizations must establish an Integrated Quality Enhancement Strategy that coordinates the fundamentals of TQM with the business excellence models like EFQM, MBQNA, and Kano. The objective of this approach is to promote the ongoing enhancement, patient-centered care, and employee involvement in each division of the organization (Zainal & Salloum, 2021; Aburayya et al., 2020; Eideh et al., 2022; Rasheed et al., 2021).

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