# Sustainability of Quality Improvement Initiatives within the Saudi Ministry of Health Hospitals: An Institutional Overview

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**Abstract**

*Background:* The failure of quality improvement projects has been a global issue that exists within different geographical and organisational contexts. The case of this in the healthcare sector is more obvious, given the complex and contingent characteristics of healthcare organisations. For this reason, healthcare settings require more deliberate thought and extensive efforts to sustain the gains of quality improvement. Within the context of Saudi Arabia, the Ministry of Health (MOH) has long been introducing a number of improvement initiatives and quality accreditation projects to improve hospitals' performance. These efforts represent precious investments that are supposed to sustain and flourish over time. *Summary:* The sustainability of the improvement initiatives within the MOH hospitals is still the main struggle. This challenge requires a more holistic analysis that exceeds hospitals' boundaries by considering the external influences that undermine the capability of these hospitals to sustain the improvement. The institutional environment is one of the most critical dimensions that need to be ex- plored prior to implementing quality improvement initia- tives. Understanding the institutional characteristics pro- vides significant overview of the regulatory powers that af- fect the implementation of quality improvement initiatives within healthcare organisations. *Key Messages:* An institu- tional perspective has been employed in this study to pro- vide an overview of the external institutional influences that affect the sustainability of improvement initiatives. This study establishes a baseline for further debate on the medi- ating role of the institutional powers in determining the sus- tainability level of quality improvement initiatives within the healthcare sector.

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## Introduction

Improvement sustainability involves maintaining the gains of the implemented improvement initiatives [1], which leads to a state of organisational acceptance and implementation. This allows newly introduced practices to prosper for the aim of continuous improvement [2]. Drawing on this, sustainability is perceived as a compre-

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hensive concept to describe the dynamic and continuous efforts that are necessary for maintaining the achieved improvement results without which the improvement projects become just a waste of resources due to what has been described as "improvement effect evaporation" [3]. Therefore, sustaining the improvement initiatives has become a burning issue among both researchers and executives within the field of quality improvement.

Phillip Crosby stated in his seminal work *Quality Is Free* that >90% of quality improvement initiatives failed in the USA [4]. Similarly, the renowned change authors Beer and Nohria [5] described the change failure among different sectors in the USA as a "brutal fact." At the global level, a comprehensive survey, conducted by McKinsey and company using over 3,000 executives from different global industries around the world, revealed that only a third of participants stated that their organisations succeeded in achieving the performance improvement level they had aimed for. Other antecedents about quality improvement failure have been identified in different industries and areas of the world [6]. Aside from the contrasting interpretations of improvement failure, increasing concerns about the sustainability of quality improvement efforts prompt further understanding of the complexity of this domain. This requires broadening the debate beyond an organisation's boundaries by considering the contextual influences that may hinder and or encourage the level of improvement capability, especially within public healthcare organisations.

Public healthcare organisations are viewed as complex entities, given their contextual conditions such as interdependent networks, political influence, and bureaucratic structure [7]. This complexity is a critical determinant for selecting the proper mechanism by which the improvement can be achieved [8]. Burnes [6] pointed out the necessity of gaining further understanding about organisations in order to explore the how and why aspects of improvement including an organisation's structure, management, and behaviour. Moreover, Berwick [9] stated that quality improvement is a "system property" that requires changing the system to achieve better results. This means that a system-wide implementation of improvement initiatives needs to be considered in relation to the whole context of healthcare organisations to ensure successful and sustainable improvement. Thus, a more holistic approach is required, given the complex nature of healthcare settings. In keeping with this view, the principles of the general systems theory draw attention to the wider context within which organisations exist [10]. According to this, organisations are viewed as rational entities [6] and living organisms that must be adapted to their institutional environment to survive [11] and sustain the achieved improvement. The institutional environment represents the exogenous normative and regulatory powers that shape and constrain the policies and actions of organisations [12]. This draws further attention to the mediating role of the institutional environment to which healthcare organisations belong in determining the sustainability level of quality improvement initiatives. Thus, the institutional perspective in this study is a starting point from which further sustainability lessons can be learnt from within the Saudi healthcare context. In other words, this study sheds new light on the use of an institutional lens for analysing the contextual impact on the sustainability of quality improvement initiatives within the public healthcare sector.

**Quality Improvement within the Saudi Healthcare Context**

The history of quality improvement within the Saudi Ministry of Health (MOH) dates back to the 1990s, upon the establishment of the National Committee on Quality Assurance in primary healthcare services [13, 14]. These efforts were accompanied by increased quality awareness at the national level that culminated with the establishment of the King Abdulaziz Quality Award in 1999 [15]. The aim of this award was to encourage private and public sectors to achieve high-quality performance including healthcare services. Despite the strong government commitment to improve healthcare quality, the Saudi healthcare system has been struggling with various challenges such as medical errors, long waiting times, and low quality of services [16]. With these critical challenges in mind, the healthcare system experiences suboptimal performance, despite the huge expenditure.

The largest actor in the Saudi healthcare system is the Ministry of Health [17]. So, it is significant that it has recently assigned a deputy minister for planning and organisational excellence with the aim of building distinctive capabilities that can accelerate the improvement process and achieve high quality standards [18]. Accordingly, several improvement initiatives have been introduced into the MOH hospitals between the period 2009 and 2018 [19, 20].

However, given that the improvement initiatives are expected to be sustained as a new way of working [1], the evergreen question is to what extent the implemented improvement initiatives are sustained? Answering this ques-

tion requires a more holistic approach that goes beyond the content of improvement by shedding light on the context within which the improvement initiatives take place. Thus, exploring the institutional configuration of the MOH hospitals provides further understanding about the mechanism by which the quality improvement initiatives are being adopted and sustained. This implies further consideration of the institutional powers that interact with the internal environment of the hospitals and shape their capability in adopting and sustaining the quality improvement initiatives.

*Institutional Framework of the MOH*

The MOH delivers about 60% of healthcare services in Saudi Arabia [21, 22]. Such a wide scope of service requires substantial operational expenses. Around SAR 83, 766, 424 billion was allocated to the MOH budget in 2017 to cover healthcare services [20]. This is an inevitable consequence of the expanded structure of the MOH as a "large-scaled institution" that maintains free access to most healthcare services for all Saudi nationals.

The MOH is committed to providing curative and preventive healthcare services [18]. A centralised hierarchy that contains multiple layers of management governs the 2 domains of healthcare services. The central structure of the MOH identifies its responsibility for setting strategic plans, establishing healthcare policies, and overseeing healthcare programmes, in addition to controlling and monitoring other healthcare services [17]. This centralised structure integrates a broad network of healthcare services dispersed over 13 governorates with diverse geographic and socioeconomic characteristics.

A directorate of health affairs [23] manages the healthcare services in each of the 13 governorates. The central body of the MOH plays the decisive role in allocating and determining most of the resources and the strategic decisions of these directorates. For instance, article 8 of the internal MOH by-laws states that the provincial healthcare directorates are responsible for executing all plans and programmes set by the MOH [24]. This reflects the functional role of these directorates, as being executive bodies with limited authority. The health directorates work collaboratively with the central body of the MOH to oversee preventive and therapeutic healthcare services. These services are delivered via various healthcare settings, such as hospitals, primary healthcare centres (PHCs), and other specialised medical centres, located in different cities and villages in each province.

The provincial healthcare services are delivered at primary, secondary, and tertiary levels [14]. The primary level is composed of PHCs that work as gatekeepers by providing preventive and curative healthcare services and referring cases that require further management to secondary or tertiary levels [21–23]. These service levels are delivered via a broad network of healthcare facilities distributed among different catchment areas. This network includes 2,261 PHCs, in addition to 286 general and tertiary hospitals with a total capacity of 44,665 inpatient beds [20]. There are a total of 256,604 employees in different healthcare and administrative specialities. This network of healthcare organisations represents the institutional framework within which the MOH operates. Such a wide healthcare network is being managed and controlled by a highly centralised governance structure.

*Improvement Efforts within the MOH Hospitals*

Derived by the national transformation plan Vision 2030, the healthcare sector in Saudi Arabia is on the brink of structural change. This plan is being sponsored by the top political leaders in the country who are highly committed to achieving its objectives. The healthcare sector is actively participating in Vision 2030. A theme called "Caring for our Health" represents one of the milestones of the vibrant society theme. This theme includes various strategic goals aimed at improving social and healthcare services in both public and private sectors. The vision sets a major goal of increasing the average life expectancy from 74 to 80 years as an ultimate outcome of various healthcare improvement programs. The vision also requires the public and private healthcare sectors to improve the quality and efficiency of the organisations [25].

In response to Vision 2030, several administrative and medical improvement initiatives have been implemented within the MOH hospitals [19, 20]. Some corporate improvement methodologies have been adopted in order to implement initiatives that aim at improving the quality of services in the MOH hospitals [26]. These methodologies include TQM, Lean, Six Sigma, and Lean Six Sigma that have mainly been adapted to improve the workflow in certain departments such as operation rooms and outpatient and inpatient wards [26, 27]. These initiatives achieved remarkable success upon their introduction and were considered effective tools to improve service quality within a number of MOH hospitals across the country.

In parallel, the MOH has intensified its efforts to pursuing accreditation for its hospitals. Seeking accreditation is based on the idea that compliance with evidence-based standards will lead to high levels of service quality within a safe work environment [28]. Thus, the accreditation programmes have been introduced as leverage for quality

improvement within the MOH hospitals. A national ac-creditation body named the Central Board for Accredita-tion of Healthcare Institutions (CBAHI) was established to maintain continuous compliance of healthcare facili-ties with the standards of quality and patient safety [29]. It also aims to assess the quality of healthcare services based on predetermined quality standards.

By and large, the main question about the implement-ed quality improvement initiatives including the accredi-tation programmes is to what extent they are sustained over time in a way that benefits the overall quality of healthcare outcomes and support the healthcare transfor-mation strategy. The following institutional analysis pro-vides further understanding as to the extent to which these initiatives are implemented and sustained within the MOH hospitals.

## Analysis of Institutional Barriers to Sustain Quality Improvement Initiatives

To provide further analysis of the institutional barri-ers, it is necessary to draw attention to the potential con-flict between the institutional and contingency theories [30]. This is attributed to the contrasting assumptions that underpin each theory in dealing with the improve-ment initiatives. The main assumption of the contingen-cy theory revolves around an organisation's ability to fit its internal characteristics with external contingencies in order to achieve high performance [31, 32]. Meanwhile, the institutional theory implies that an organisation needs to adopt legitimacy to garner support [30]. Legitimacy is achieved when an organisation conforms to the rules and requirements of its institutional environment [33, 34].

Within the improvement context, the institutional principles suggest that organisations embrace improve-ment initiatives to support their legitimacy that can lead to increasing their chances to survive [35]. Unlike the contingency theory, the institutional theory has been crit-icised for its emphasis on conformance and legitimacy, rather than achieving real organisational effectiveness [36]. The current governance structure of the MOH re-flects one of the negative impacts of conformance and legitimacy powers on sustaining the quality improvement initiatives. The government regulations and the MOH's top-down hierarchy represent major institutional powers that dominate over hospitals. The consequences of these institutional powers are presented in the following di-mensions.

### Centralised Governance

The widespread network of MOH hospitals is gov-erned by a centralised organisational hierarchy [17–39] that relies on coercive isomorphic power [40] in which organisational structures including policies, routines, values, and regulations are embedded to form general principles that guide organisations' behaviours [41]. These institutional elements are being imposed on organ-isations without much consideration to the quality as-pects of the work at hand [36]. This perspective sacrifices effectiveness at the expense of achieving formality. The current implementation mechanism of the quality im-provement initiatives within the MOH hospitals provides an illustrative example of this situation.

The centralised governance of the MOH is beset with various operational challenges that undermine the qual-ity of the delivered healthcare services. These include in-creasing challenges in terms of medical errors, long wait-ing times, low service quality [16] as well as low bed avail-ability, and poor utilisation rates [22–42]. Recent MOH statistics show low hospital bed coverage of 13.2 beds per 10,000 people, accompanied by a low occupancy rate of 60% of the available beds [20]. These facts also question the effectiveness of the improvement efforts that have been exerted by the MOH to improve hospital perfor-mance.

Hassanain et al. [26] reported their findings on one clinical improvement initiative that adapted lean meth-odology. The initiative, named surgical pathway im-provement, aimed at improving the utilisation and pa-tient flow in operation rooms in different MOH hospitals across the country. It has been reported that one-third of the hospitals that implemented these initiatives have failed to achieve the expected performance. Another as-sessment study by Hassanain et al. [43] reported the fail-ure of establishing performance improvement units in applying lean 6 sigma and change management method-ologies across 13 governorates. It has been stated that the established performance improvement units have dropped back to the baseline level after 9 months of their establishment. This failure was attributed to the low level of sustainability of this initiative as it was successfully im-plemented in the beginning, yet it required further com-mitment, empowerment, and training of the team mem-bers to sustain its early success.

### Top-Down Approach to Improvement Initiatives

The quality improvement initiatives are imposed us-ing a top-down approach where the provincial healthcare settings including hospitals are obliged to implement

them. Such a unilateral improvement approach does not pay attention to the contextual variations and health indicators according to which the unique improvement needs are identified for each province and worked upon accordingly. This approach contradicts the contextual variations between the MOH hospitals that are located over wide geographical areas. The household health survey of 2017 revealed significant variations between provinces in different indicators of health status and the prevalence of, for example, smoking, road traffic accidents, cancer, and chronic diseases [44]. There are also inconsistent levels of quality of the delivered healthcare service and an unequal distribution of healthcare services and professionals across the provinces [45]. Thus, the MOH facilities vary from one province to another in terms of their technical and scale efficiency (inputs compared to outputs) [46]. These aspects question the effectiveness of the current coercive imposition of the quality improvement initiatives on the MOH hospitals that face diverse challenges.

Under the coercive imposition of improvement initiatives, hospitals are required to conform to the rules and requirements of the MOH regulations and CBAHI standards, aside from the quality aspects of the work at hand [33, 34]. Reflecting on these facts and bearing in mind the current mandatory mechanism of quality improvement initiatives, the MOH hospitals tend to apply quality improvement initiatives for legitimacy and formality purposes, rather than achieving service improvement. In this case, the MOH hospitals implement the quality improvement initiatives mainly to conform to the top regulatory bodies with less attention to their real improvement outcomes. Dealing effectively with these challenges would require a decentralised governance model to provide autonomy and internal capability for the MOH hospitals. This would offer better adaptability based on the contingency principles where hospitals can identify and introduce the improvement initiatives that fit their specific contingencies.

### Compulsory Accreditation Schemes

The CBAHI accreditation has become a mandatory programme in Saudi Arabia where all public and private healthcare institutions are obliged to fulfil its requirements [28]. Such compulsory accreditation contrasts with most of the international accreditation programmes [47, 48] that are set as a voluntary continuous improvement framework. Under new regulations issued by the Saudi Council of Ministers in 2013, the accreditation became mandatory for all MOH hospitals as a prerequisite for the renewal of their operation licences [29]. Accordingly, the accreditation programmes became national programmes that represent additional coercive regulatory power that impact the MOH hospitals.

By comparing the voluntary and coercive approaches of accreditation, variation has been identified in terms of their improvement outcomes. Drawing on an extensive range of international sources, Alkhenizan and Shaw [49] in their systematic review reported consistent evidence on the positive association between a number of voluntary international accreditation programmes and healthcare service improvement across the literature. This included different clinical practices such as ambulatory surgical care, trauma, myocardial infarction, infection control, and pain management.

On the contrary, there is a lack of empirical evidence about the positive impact of the current coercive accreditation projects on hospital quality within the Saudi context. Alasmari [50] recently conducted a comparative review of 42 quality-of-care indicators in 88 MOH hospitals. Remarkably, the study revealed that the non-accredited hospitals outperform the accredited hospitals by achieving better quality indicators. In a similar vein, Almasabi and Thomas [28] conducted a study of over 669 employees and 12 senior managers working in 3 MOH-accredited hospitals. The study revealed that the accreditation did not impact the quality indicators in the hospitals under review and that no monitoring mechanism has been set to assess basic outcomes.

The variation between the outcomes of the national and international accreditation projects questions the usefulness of the coercive approach where the accreditation became a government regulatory tool. This contradicts the normative role of the accreditation programmes as a non-governmental body that contribute towards promulgating professional standards [10–49, 51]. Such a mandatory approach represents a form of coercive institutional power where hospitals are required to adhere to a list of centrally imposed standards without considering the contextual variations between these hospitals such as the scope of service, bed capacity, or infrastructure. These contingencies are important determinants that need to be considered prior to introducing accreditation projects. Understanding these contingencies and effectively interacting with them must be accompanied by a certain level of hospital autonomy that can support their capabilities to adapt and sustain the accreditation projects.

### Research Proposition for Adopting an Institutional Perspective

This article has shed light on the use of an institutional lens for analysing the contextual impact on the sustainability of quality improvement initiatives within the public healthcare sector. This perspective has long been applied to understand a wide range of organisational reforms and change initiatives [52]. It suggests that organisations embrace change initiatives to support their legitimacy that can lead to increasing their chances to survive [35]. This legitimacy is achieved when an organisation conforms to the rules and requirements of its institutional environment [33, 34]. This conformance is described as "the degree of compliance by an organisation with the organisational form of structures, routines, and systems prescribed by institutional norms" [53].

The institutional environment represents a group of networked and homogeneous organisations that share similar characteristics. The legitimacy of an organisation to fit the institutional environment is influenced by the institutional isomorphic change that forces an organisation to resemble other organisations where it operates. This change may take different forces, i.e., coercive, mimetic, or normative [40]. Each of these forces has an influential impact on how an organisation fits within its institutional environment. Thus, understanding these forces provides useful analysis framework for service organisations, like healthcare settings, as to how improvement efforts are being institutionalised.

Generally, the service improvement literature has focussed on back office and routine work processes [54], yet healthcare has different environmental aspects that need to be considered in relation to improvement projects. The attention afforded to healthcare improvement is a recent phenomenon, and health care is a complex system which poses many challenges to the basic set of enablers and success factors [55, 56]. The healthcare sector operates with a network of different actors [57] and cannot be improved by individuals or elites alone [9]. It has been suggested that the understanding of the context around healthcare quality improvement is based on the complexity of improvement as well as the diversity of healthcare organisations where prescriptive methods for managing improvement are unlikely to succeed [58].

Such a complex and interdependent context represents a unique environment with multiple institutional powers. Although extensive research has been carried out on different contextual conditions of improvement [58–60], to the best of our knowledge, no research has been found that adopts an institutional lens in analysing the improvement context and its impact on the sustainability of quality improvement initiatives within the healthcare sector. Therefore, this overview establishes a baseline for further debate on the mediating role of institutional powers in determining the sustainability level of quality improvement initiatives within the healthcare sector.

### Conclusion and Recommendations

This overview gives an account of the institutional environment within which the MOH hospitals exist. Such an environment represents the external regulatory powers that shape and constrain the quality improvement initiatives within these hospitals and play a decisive role in their adoption and sustainability. The MOH is governed by a central organisational structure that includes an overwhelming number of healthcare settings that deliver multifaceted healthcare services. These services are spread over a number of provinces with varying socio-demographic characteristics. The current bureaucratic governance does not support the implementation of quality improvement initiatives within the dispersed MOH facilities. The limited autonomy and scope of authority offered to these healthcare settings including hospitals lessen their capability to adopt and sustain the improvement initiatives. Likewise, these hospitals struggle with sustaining the outcomes of quality accreditation projects due to the mandatory implementation approach the does not pay much attention to the contextual variations between hospitals.

Accordingly, the institutional perspective is expected to provide an effective analysis framework that can be used for both scientific and applied research to study the institutional powers that affect the adoption and sustainability of the quality improvement initiatives within the healthcare context in general. The top-down improvement approach as well as the centralised governance and less autonomy offered to the MOH hospitals represent public policy challenges that need to be taken aboard to support the improvement capability of these hospitals. These issues represent public policy challenges that require deliberate assessment from a macro-level perspective. In other words, further attention needs to be paid by the people in charge of the healthcare transformation strategy when establishing the new models of care. Moreover, the role of mandatory accreditation in supporting the improvement capability of the MOH hospitals needs further assessment in terms of its sustainable outcomes.

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## Conflict of Interest Statement

The authors declare that they have no conflict of interest.

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## Author Contributions

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