

# An Investigation into the Challenges Towards Implementation of Total Quality Management Under the Saudi Healthcare National Transformation Program-2020

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## Abstract

This paper critically reviewed the existing literature with regarding to healthcare national transformation programs both in the developed and developing countries in order to understand the strength and weaknesses of the Saudi healthcare national program 2020. The organizational, managerial, human and technological challenges has been examined with reference to know their role and impacts in the implementation of technology driven TQM in Saudi healthcare services under the NTP 2020. Based on the review of the literature, a theoretical model was developed with schematic illustration to describe the relationship and impact of the independent variables with and on the dependent variables of the study. Both critical analysis of the existing research as well as Actor Network Theory (ANT) were used in order to link the results and findings with current Saudi healthcare system in the light of existing research to identify the major challenges/gaps in the NTP of Saudi Arabia and suggest quantifiable measures/recommendations. Furthermore, to network the theory with practice, the researcher also used field visits for interaction with employees. The study concludes that transformation of the healthcare system must focus on the provision of quality in healthcare services whereas, healthcare quality can only be improved by supportive visionary leadership, proper planning, education and training, availability of resources, effective management of resources, employees and processes, and collaboration and cooperation among providers and above all the hybrid management to manage the process in a smooth, efficient and effective manner.

**Keywords:** Vision 2020, Saudi Healthcare System, Implementation of TQM, Organization, Managerial, Human and Technological Challenges.

## 1. INTRODUCTION

The healthcare system transformation is a radical shift from the conventional to the modern state-of-the-art quality care of health. The Saudi national transformation program 2020 (NTP) is one of its kind and the major initiative in the history of Saudi Arabia which is expected to have significant and positive impacts that will bring revolution in the healthcare system delivery and will change the lives of Saudi citizens however, it is also expected that when it will come to the implementation phase, it will have to face several challenges and issues that will be impeding the system to bear the fruits. The shift towards accreditation of the whole healthcare organization under the Saudi National Healthcare Accreditation Standards will be the major change as implementation of total quality management (TQM) is the main pillar of NTP for improving the healthcare systems quality.

Despite this enormous investment in innovation and transformation, too many efforts seem to fail which always result into losing billions (Alijanzadeh et al., 2016). To reap the fruits of transformation and to address the issues of inefficiency, we must have to look into the forces that affect them, for good or ill.

According to WHO (2012) the “existing models of healthcare delivery, mostly subject to fragmentation and deficient coherence, seem to be one of the main causes which are impeding and limiting the efficiency of healthcare system’s interventions and quality of health outcomes”. Whereas US National Quality Strategy specifically defined the better care to improve the overall quality, by making health care more patient-centered, reliable, accessible, and safe; healthy people/healthy communities to improve the health of the population by supporting proven interventions to address behavioral, social and, environmental determinants of health in addition to delivering higher-quality care and an affordable care to reduce the cost of quality healthcare for the individuals, families, employers, and government as the principle components of healthcare system (Report to Congress, 2011).

The experts have identified six forces that can drive innovation - or kill it, including the players, funding, policy, technology, consumer/patients, and accountability (JCAHO of USA, 2006).

Asadullah, M., & Kundi, G.M. (2013) while analyzing the strength and weaknesses of the international environmental factors of the healthacer organizations asserts that organizational internal environment assessment and transformation is a very complex and complicated task as it not only includes materials but also the human element, understanding, predicting and controlling the behavioral aspects of the people involved is a Hercules task.

Besides, the bureaucratic nature of the health systems (Qureshi, N.A., Kundi, G.M., Qureshi, Q.A., Akhtar,

R., & Hussain, L., 2015) through analyses of the current Saudi healthcare system reveal the centralized structure, red tape and cumbersome procedures, development of cognitive maps, traditional mindset, buck-passing, delaying work, inefficiency that is eating more resources and major chunk of the budget in terms of finances and it is failing to meet the government objectives and patient needs, whereas, modern management theories and principles advocates more decentralization, autonomy and participative management both involvement of the employees as well as that of the patients (Qureshi et al., , Q.A., Kundi, G.M., Qureshi, N.A. & Akhtar, R., 2014).

The barriers could only be removed with technology driven health care innovations/ transformations supported by the laws and regulations and through a well contrived and logically developed plan and framework (Qureshi, N.A., Qureshi, Q.A., Chishti, K., Kundi, G.M., Akhtar, R., Khan, S.U., & Khan, I., 2014).

## 1.2 Objectives

This empirical study has been under taken as an effort with the aim to identify the main challenges being faced by the government of Saudi Arabia in successful implementation of NTP in healthcare system by 2020.

## 2. CRITICAL REVIEW OF THE EXISTING LITERATURE

### 2.1 Background- The Current State of Saudi Healthcare

Healthcare services in Saudi Arabia has been developed enormously since two decades. The Saudi Ministry of Health (MOH) has been providing about 60% of these services free of charge, while the rest are shared by the other government institutions and the private sector. A series of development plans in Saudi Arabia have resulted into the establishment of the infrastructure for curative services throughout the kingdom. This is evident from the rapid development of medical education and training for the anticipating Saudi health manpower. Further, to successfully take on the future challenges the Saudi health system are expecting to face with, vision 2020 with clear goals has been set by the government in order to ensure optimum use of current health resources with competent health management.

The healthcare system of Saudi Arabia can be categorized into national healthcare system governed by the Saudi government through numerous government agencies besides growing role and increasing of the involvement of the private sector in the delivery of the health care services.

The Ministry of Health (MOH) is responsible for delivery of preventive, curative and rehabilitative healthcare, it provides primary healthcare through 1925 center throughout the Saudi Arabia along with referral system for curative healthcare through general as well as specialized curative services with its 220 general and specialized hospitals (Saudi Ministry of Health, 2014).

Though the health sector in Saudi Arabia remains relatively under penetrated with around 2.2 beds per 1000 population against a global average of 2.7, and around 4 for the West and Europe. This is coupled with an expected population growth of 2.13% over the coming four years and with life expectancy set to increase from 74.1 years to 75.3 years by 2016. The MOH is responsible for the management, planning, financing and regulating of the health care sector besides overall supervision of the private sector (WHO (2012).

The MOH is providing about 60% of the health services without any charge through 13 regional health directorates, while 30% of the health services are also delivered free of charge through other government agencies and the remaining 20% is provided by the private sector, whose share is growing rapidly (Zohair A. Sebai, Waleed A. Milaat, & Abdulmohsen A. Al-Zulaibani, (2001). Therefore, the Saudi government is spending handsome amount out of their budget and it substantially increased from 39.549 SR in 1956 to 42.7 billion in 2014 to now 160 billion SR in 2015, which means 48% increase (Saudi Budget 2014 and 2015). Despite the global environment of lower oil prices, the Saudi government has maintained a high level of spending in the 2016 fiscal budget, healthcare and education remained the focus of government spending, which accounts to 35% of the total spending (Arab News, Monday 28 December, 2015).

The Saudi Red Crescent Society is also playing vital role in delivery of emergency services during the pre-hospital stage both in case of road accidents especially during Hajj and Umrah. Likewise, the private sector is also sharing the burden of government by providing health services through hospitals, dispensaries, laboratories, pharmacies and physiotherapy centers (WHO (2012). In the year 2005, for the first time, health insurance was declared mandatory for expats under the Cooperative Health Insurance Act, which was further extended in 2008 to also include the Saudi nationals working in private sector (Colliers International, 2012; Cooperative Act (2005, 2008).

The WHO official remarks that "Saudi healthcare system has well-equipped hospitals designated to serve that surpassed many of the world-class hospitals" (WHO (2012). Moreover, recently the Bloomberg has ranked Saudi Arabia on 29th in a ranking with regard to efficiency of healthcare systems around the globe. This ranking was based on life expectancy, healthcare expenditure as a proportion of GDP, and healthcare costs per capita. The Saudi government approved 10-year strategic plan for the period covering 2010-2020 that foresees tertiary and quaternary care in each region in order to give them independence in terms of provision of care (Aster DM Healthcare, November 29, 2015).

## 2.2 Transformational Management Models: Global View

The Business Dictionary defined the term transformation in an organizational context that it a “process of profound and radical change that orients an organization in a new direction and takes it to an entirely different level of effectiveness. Unlike 'turnaround' (which implies incremental progress on the same plane) transformation implies a basic change of character and little or no resemblance with the past configuration or structure” (Business Dictionary 2016).

The literature on transformational or change management models reflects two basic modes of transformation and change i.e. change management and emergent, these models are the dominant throughout the literature and owes much to the work of Kurt Lewin (Lewin, 1951). Lewin hypothesizes four theories including field theory, group dynamics, action research, and the 3-step model, which lead us to an understanding of, and a framework through which to bring about, planned change (Burnes, 2004). On other hand the emergent approach to transformation and change management is relatively new and currently lacks basic principle and theoretical foundation., yet the supporters of this approach are more unified in their stance against planned change (Drummond-Hay & Bamford, 2009). The analysis of the literature offers that currently, the most commonly cited models of emergent change management include Hinings and Greenwood’s model of change dynamics (Hinings and Greenwood, 1989), Kanter et al.’s “Big Three” model of organizational change (2003); and Pettigrew’s process/content/context model (Pattigrew, 1989). Similarly, the three such models specifically in healthcare include the Lukas et al.’s Organizational Model for Transformational Change in Healthcare Systems, Canadian Health Services Research Foundation (CHSRF)’s Evidence Informed Change Management Approach, and Canada Health Info way’s Change Management Framework.

### 2.2.1 Transformation Management Models in Healthcare

Lukas et al. has defined the healthcare organizations with four components: (1) mission, vision, and strategies to set direction and priorities; (2) the culture, to determine the values and norms; (3) operational functions and processes, which are personified by work done in patientcare; and (4) infrastructure, including information and communication technology, human resources, fiscal services, and facilities management that supports the delivery of healthcare services (Lukas et al., 2007). Lukas et al.’s offers a conceptual model for guiding healthcare organizations towards sustained organization-wide patientcare improvements. However, transformation in any of these four areas constitutes the change in organization/healthcare system.

Lukas model stresses on the facilitation of the process of five vital elements of transformational change in healthcare organizations i.e. impetus to transform, leadership commitment to quality, improvement initiatives to actively involve the employees in meaningful way of addressing the issues, alignment to achieve consistency of organization-wide goals with resource allocation and actions at all levels of the organization, and an integration to bridge traditional intra-organizational boundaries between individual components.

Furthermore, as well known researcher in the field of health care Martha Twaddle (2013) in her article ‘innovation in end-of-life care’ which has been published by hospital and health network, has stresses on the complicated fabrics of multi-dimensional components with are intricately interwoven, that are highly interdependent and intercoordinated, and one cannot be studies, designed, developed and implemented in isolation of the others. For each component, from start to end she presented four stages raging from stage 1 to stage 4. She breakdown her model into three major areas with regards to healthcare transformation and change to analysis and focus as these could result in success or otherwise failure too, they major areas to be considered while bring change in healthcare system includes the organizational/people, technology and data and workflow or the process.

Below figure-1 illustrates Martha Twaddle model of healthcare transformation change management.

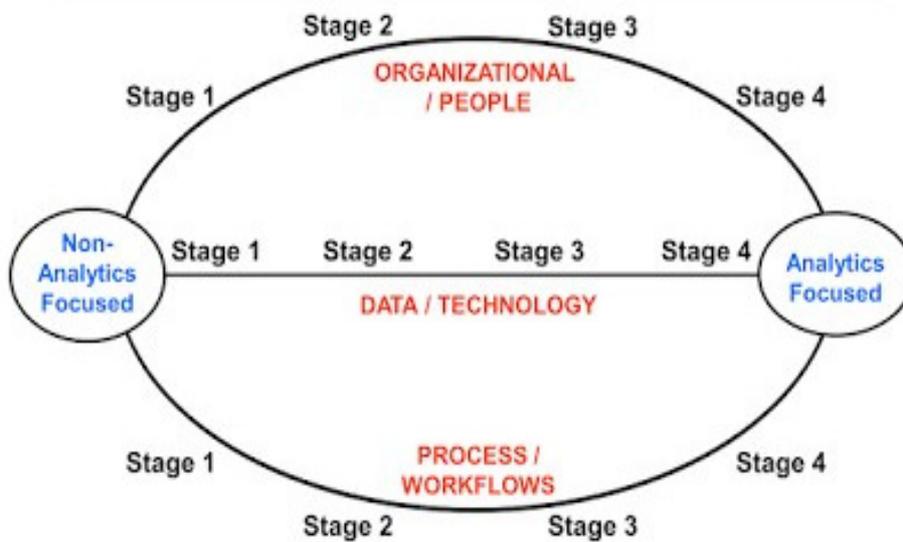


Figure-1: Healthcare Transformation Change Management

Likewise, since modern concept of quality stands for continuous quality improvement through TQM tools and techniques, therefore, researchers like Thomas London & Penelope Dash (2016) have presented a comprehensive six step model for digital transformation in healthcare quality (see figure-2). They assert to focus on the end user which include both the organizational professionals as well as the patients as today's learning organization are the going concerns so they advocate the new organizations of healthcare should be built with cross-functional teams by creating measurable targets with significant digital resource allocation by inducting new talent in order to maximize the fruits of these technologies and their application in health for improved quality of care and services.

### Six steps help get the digital transformation going.

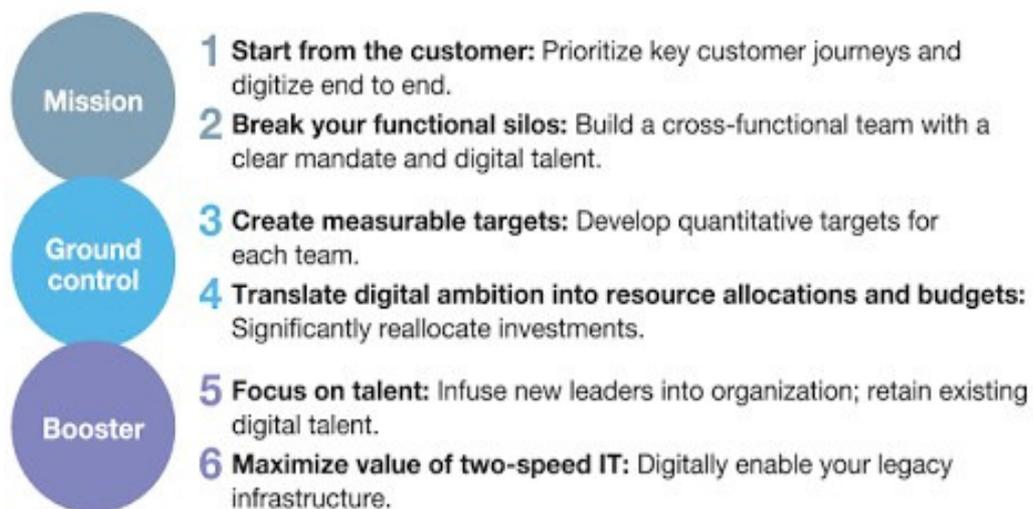


Figure-2: Thomas London & Penelope Dash Six stage model for transformation to eHealth

In the near past, the Canadian Health Services Research Foundation (CHRSF) has published a new approach towards healthcare transformation titled as Evidence Informed Change Management in Canadian Healthcare Organizations (Dickson, 2012) which targeted at Canadian healthcare organizations with the aim to develop leadership to support transformation management.

The report presents a practical approach consisting four stages: planning, implementing, spreading, and sustaining change (Dickson, 2012) in order to improve effectiveness (e.g. patient and workplace safety and quality improvement), efficiency (e.g., accountability, financial sustainability, and improved service delivery models), and/or the impact of scientific approaches and learning (e.g., maximizing the potential for researchers and decision makers to 'translate knowledge' and communicate with and learn from each other) (Dickson, 2012).

### 2.3 Perspective on Saudi Healthcare Transformation Program-2020

Several countries are striving hard to deliver the cost-effective and quality healthcare services to their citizens including Saudi Arabia, which is experiencing high cost and apprehensions about quality of care (Zohair A. Sebai, Waleed A. Milaat, & Abdulmohsen A. Al-Zulaibani, 2001). To resolve these issues, the government of Saudi Arabia is currently restructuring the healthcare system under the vision 2020.

According to the 2020 vision, there will be major shift from public to private sector and at least the share of private sector will be increased from 25 % to 35 % over the next five years. To successfully put in place, the plan government has earmarked 6 billion SR to support the transformation of health sector through the funding of health insurance and public-private partnerships (Simeon Kerr, 2016). The overall operating model of NTP 2020 is highlighted in figure-3.

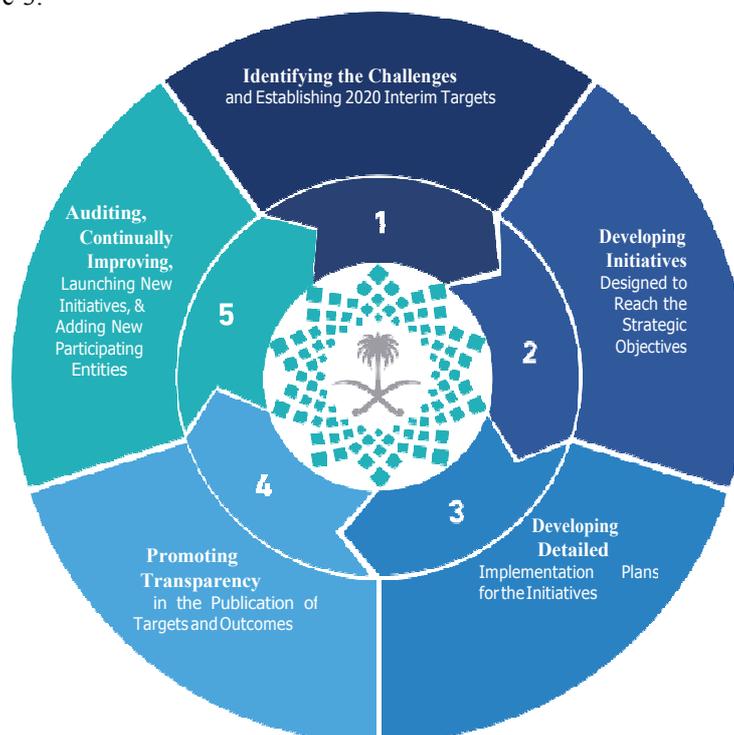


Figure-3: Operating Plan of Vision 2020

The major objective before initiating the 2020 program as envisaged by the Saudi leadership include the increase in the private sector share of spending through alternative financing methods and supervision, increase efficient utilization of available resources, improve the efficiency and effectiveness of healthcare sector through the use of information technology and digital transformation, increase training and development both locally and internationally, improve governance in the healthcare system in order to enhance accountability with regard to quality issues and patient safety, improve the infrastructure, facility management and safety standards in healthcare facilities (NTP-2020).

However, the major pillar around these objective revolves is the implementation of the total quality management in order to bring continuous improvement in the working, operations and facilities in the Saudi healthcare system to materialize the dream of transparency, accountability, efficiency and economy of scale with better quality care for patient satisfaction.

### 2.4 Major Challenges and Issues in NTP-2020 Implementation

To execute a program is not simple rather it need care from major parts to the minutely intricate and complexity dimensions that could result into the failure, with regards to transformation of the systems through a criterion of quality, organization are facing with multi-dimensional challenges with variety of magnitude and impacts.

#### 2.4.1 Organizational, Managerial and Human Issues

The success or failure of any plan depends on its smooth and effective implementation as it needs not only financial resources but also the knowledge, skills, ability, capability, devotion, time and above all flexibility. The carefully selected approaches and strategies could help however education and training, involvement of the stake holders coupled with the incentive plan could minimize the resistance on part of human factor and could pave way forward for smooth implementation. If we carefully analyze the Saudi vision 2020, however, despite the tall claims, the complexity of changing a healthcare system will be facing with the many challenges associated with the transformation (Walston S., Al-Harbi Y., & Al-Omar B., 2008). Transformational change in a complex

system like that of Saudi healthcare system takes time and it demands consistency, constancy of purpose and organizational stability as identified by NETS in July 2010, it has been found that leadership style is a critical to the success of transformational change (Hunter DJ., Erskine J., Hicks C., McGovern T., Small A., Lugsden E., Whitty P., Steen IN., & Eccles M., 2014) besides reorganization.

Researchers have observed that well committed and stable leadership with their focus and attention to team-building across the healthcare institutions at many levels is essential for the continuous improvement for serious efforts to distribute leadership tasks at all levels in the healthcare organizations could be helpful to achieve positive changes in sustainable improvements to organizational culture and quality and efficiency to deliver (Erskine J., Hunter DJ., Small A., Hicks C., McGovern T., Lugsden E., Whitty P., Steen N., Eccles MP., 2013).

The concept of total quality management consists of organization-wide efforts to install and make permanent a climate in which an organization, contentiously improve its ability to deliver high-quality services to customers (Deming, W. Edwards, 1986; Juran Joseph M, 1995). However, despite the potential benefits that total quality management (TQM) offers, several healthcare organizations throughout the world are encountering difficulties in its implementation as TQM implementation and its impact depend on the ability of leadership to adopt and adapt its values and concepts in professional healthcare systems, however, unsuccessful TQM efforts in healthcare organizations can be attributed to the non-holistic approach, which is mostly adopted during its implementation, the major issues associated with implementation of TQM in healthcare system consists of inadequate knowledge, frequent turnover of the top management, inadequate and poor planning, ambiguous and short-termed improvement goals inter alia the lack of consistency of the healthcare officials and their commitment to and involvement in TQM implementation (Regina, 2006). Moreover, the lack of a corporate quality culture, lack of team orientation, lack of continuous education and training and lack of customer focus, human resource problems, cultural and strategic problems could be the most significant barriers in the successful implementation of the TQM respectively (Mosadeghrad AM, 2014).

The researchers assert the failure of TQM in healthcare organizations can be attributed to the strongly centralized, departmentalized, bureaucratic and hierarchical structure of the healthcare system in both the developed countries in general and particularly in the developing countries like Saudi Arabia (Asadullah, M., & Kundi, G.M., 2013). The professional independence, rigidities between administrators and professionals besides problems in assessing the healthcare processes and outcomes (Mosadeghrad AM, 2013).

The research on the barriers to TQM is widely researched, and it has been observed by the quality researchers that in healthcare systems the bottleneck include the lack of consistent administrators' along with the employees' commitment to and involvement in TQM implementation, likewise poor leadership and management, lack of a quality-oriented culture, insufficient training, and inadequate resources are hampering most of the efforts in transformation process of the healthcare systems towards its major shift in the form of TQM (Mosadeghrad AM, 2013).

The U.S. Department of Veterans Affairs (VA) has gone through massive reorganization in order to change itself into the more vibrant, efficient and patient-focused healthcare system, yet during this transformation it was observed to achieve the rapid, sustainable transformation the healthcare system must have to change its culture as the rigid, functionally focused, command-and-control culture which has been considered a hallmark is no more effective and it need to be replaced by the more speedy and flexible processes for the delivery of high-quality and cost-effective patient care. While doing so, the unique barrier that was faced US Department of Veterans Affairs include the entrenched bureaucratic traditions and behaviors, a slow and procedurally complex exercise, such a climate does not encourage change whereas successful transformation must be well orchestrated. They have identified that in order to drive the change, the leadership must be mobilized as a team, new work processes must be developed, and a full range of human resource processes must be established (Vestal KW. Fralicx RD., & Spreier SW., 2007).

#### **2.4.2 Technological Issues**

The technological advanced nation is reaping the fruits of technology driven transformations that have dramatically change their organizational edifice, efficiency, effectiveness with cost effective operations. eHealth has been considered now as the major driver of improvement in all organizations including healthcare (Qureshi, Q.A., Qureshi, N.A., Chishti, K.A., Kundi, G.M., & Akhtar, R., Khan, S.U., & Khan, I., 2014).

The developed countries have transformed their organizational structure by infusing information technology and information systems from conventional mode of operation to online mode of business especially in their health sector organizations, health management information systems (HMIS), e-Health Records, telemedicine and medical transcriptions are the few out of huge list that has transformed their organizational life by bring more transparency, speed, reliability and efficiency (Kundi, G.M., Nawaz, A., & Akhtar, R., 2014). However, Mohammed AL Yemeni (2014) is of the view that introduction of computer based information system could not be materialized unless and until the environment has not been reshaped, which not only money for hardware, software and networking but also completely new breed of IT-professionals. The development of the conducive environment and change in mind set is the prerequisite for the successful transformation driven by the

technology like eHealth/eSystem, this demands provision of physical and legal infrastructure and development of IT-professional of international standards to cater the local demands and needs.

The careful analysis of the current Saudi healthcare with regard its movement towards use of information technology or eHealth although points varying availability of services and support across the Kingdom (Aljuaid M., Mannan F., Chaudhry Z, Rawaf S, & Majeed A. (2016), however, it also highlights that difference in level of eHealth maturity, similarly, there is also lack of standardization or consistency in technology investments, furthermore, there is limited connectivity between primary health care centers and hospitals and limited clinical collaboration which are the major issues being faced by Saudi healthcare system in its transformation from conventional mode of business into digital operations.

Transformation of the existing Saudi healthcare system will not be fruitful unless besides the improvement program NTP-2020, the implementation teams are not specifically developed, trained and aligned with the NTP-2020. As development of the plan by itself is not a single step jump and activity rather several steps and activities goes in parallel direction simultaneously, therefore it has been found in several studies that parallel sub plans for example development of implementation teams must be there at right time with clear vision and needed support and resources so that plan may be implemented in disciplined and smooth way.

### 3. METHODS AND MATERIALS

Critical review of the literature in language of research is simply an overview of the published and unpublished materials that is helpful in understanding two fundamental questions, like, what are the current theoretical or policy issues and debates related to your topic, and second what is the current state of knowledge about these issues and problems? Therefore, keeping in view the qualitative nature of the study in hand the researcher has employed the critical systematic review and analysis of the existing literature on the topic related with both the developed and developing world in order to get understand about the issues and challenges during implementation of the quality in transformation of healthcare systems through critical success factors (Pope C, Van, Royen P., Baker R., 2002; Rydin, Yvonne, 2012).

Recently, researchers have been a moved to Actor Network Theory as an analytical tool which is applied in a range of applied disciplines including health administration, public health and nursing (Beauregard, 2012; Rydin and Tate, 2016, Carrol, 2014). Therefore, researcher has applied both critical analysis of the existing research as well as Actor Network Theory (ANT) in order to link the results and findings with current Saudi healthcare system in the light of existing research to identify the major challenges/gaps in the NTP of Saudi Arabia and suggest quantifiable measures/recommendations.

Furthermore, to network the theory with practice, the researcher also paid field visits to interact with healthcare officials and employees in different regions in general and Qassim in particular.

#### 3.1 Schematic Framework of the Research Model

Based on the critical analyses of the literature review and Actor Network Theory below figure-2 describe the schematic or theoretical framework of this research, which bring into fore the role and impact of the independent variables (IVs) of the study i.e. organizational, managerial, human and technological issues over the Dependent Variable i.e. success or failure of the TQM under the national transformation plan 2020 in Saudi healthcare system.

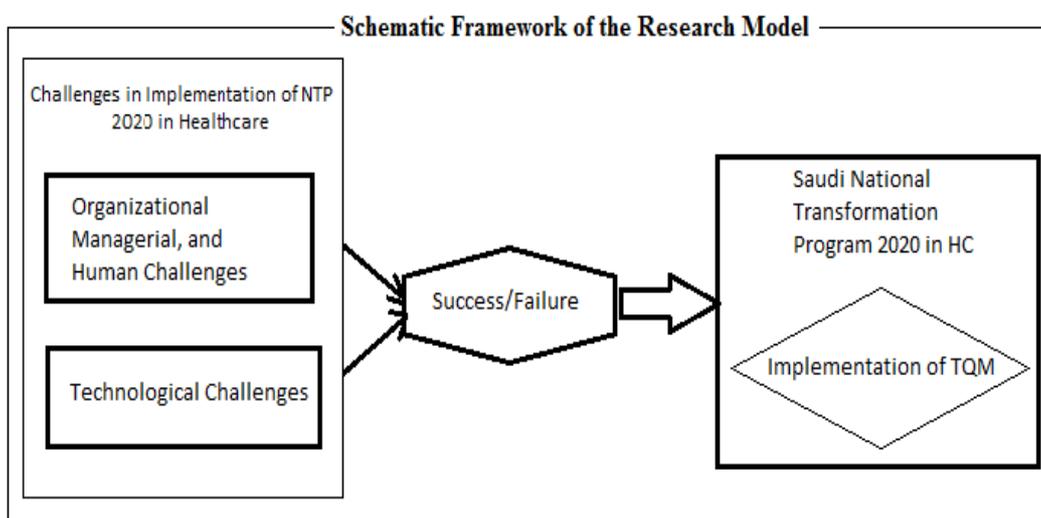


Figure-2: Schematic Diagram of the Theoretical Model of the Study

#### 4. MAJOR FINDINGS

Based on the above critical review and analyses of the literature, below are the major findings of the study.

It is evident from the documented material that as far as the vision and goals are concerned these are much clear in the mind of the Saudi leadership especially Muhammad Bin Salman whose is the reformer and leader behind this vision, and ministry of health. They are well aware of the transformation areas, time and final destination where they want to take the Saudi healthcare in 2020. Therefore, government is investing huge funds for the restructuring and transformation, since 2020 all Saudi healthcare organizations will apply and implement national accreditation standards, yet it has been found that still this is not clear in the mind of the people working the healthcare organizations, and they do not have clear idea that what is going to happen in future.

The critical review of the international trends in healthcare transformation if compared with that of the readiness of the Saudi healthcare for NTP 2020 pinpoints that there is a need to first assess the international organizational environment/systems in order to comprehend its weaknesses and deficiencies with regards to the structure, size, nature and style of the local leadership. In case of Saudi healthcare, its bureaucratic nature could be the major hurdle, therefore, sociologists and experts like Luthans (2006) emphasize on the restructuring and reshaping the current system into more flexible and decentralized and humanized managerial style before any transformational initiative, yet it has been found that currently bureaucratic nature and centralization plays down the human values and elements, the reason behind the poor performance.

Likewise, the employees in the Saudi healthcare have some apprehensions about the new system, i.e. loss of jobs or change in nature on job due to emergence of new job titles and entrance of the more educated technology driven workforce, considering the change will endanger their status and position in the organizations along with bringing economic and status threats, yet, this necessitates the education and involvement of the employees that transformation will benefit the future of the country and generations. During field visits, it was observed that with regard to transformation, most of the employees were reluctant as they feel their jobs insecurity, since the innovation will change the nature and types of jobs, so there are serious concerns on part of the employees due to non-clarity that whether in case of privatization of some areas like laboratories and pharmacies etc. or downsizing, they will lose their jobs, and whether they will be accommodated in some other sectors or they will get financial compensation like the golden shake hand schemes etc. therefore, it is anticipated the transformation process during implementation phase could also face with resistance too.

Since the inception and then visualization and realization of the idea of NTP 2020, it has been found that there is lack of intensive conferences, workshops to train the people for NTP implementation besides lack of participation/ involvement of the regional leadership of the healthcare system as these will be major players for implementation particularly in the changes process.

Furthermore, according to Asadullah, M., & Kundi, G.M. (2013) the lack of coordination between the healthcare organizations with the strategic planners of the NTP is another burning issue which stresses on the development of develop link and to bridge the gap for more coordinated and integrated efforts.

Since, TQM could only be derived through eHealth systems, yet current review of the existing healthcare system seems not be ready to take on this responsibility as there is insufficient IT infrastructure in the healthcare organizations therefore, it is anticipated that shift from conventional system to eSystem will affect the implementation of TQM and NTP 2020 as before execution of the program, the physical, legal infrastructure needs to be developed along with new breed of IT-Professionals (Qureshi, Q.A., Shah, B., Khan, N., Kundi, G.M., & Nawaz, A., 2013).

This study has found that transformation and change in the entire system will be based on criterion of quality healthcare which demand more human and material resources, time, money and proper planning and training to materialize the plans. The budget documents for the financial years 2014 shows slight increase 8 percent rise in its budget, to SR108 billion, accounting for 12.9 percent of total spending, yet in 2016 it shows decrease in the investment in healthcare and it was dropped by a sizable 34 percent year-on-year to SR105 billion. This trends could also be one of the barriers towards execution of the NTP 2020.

#### 5. CONCLUSIONS

Transformation of the healthcare system in today's world focus on the provision of quality in healthcare services whereas, healthcare quality can only be improved by supportive visionary leadership, proper planning, education and training, availability of resources, effective management of resources, employees and processes, and collaboration and cooperation among providers and above all the hybrid management to manage the process smoothly, efficiently and effectively.

The Saudi healthcare system was established with the birth of kingdom and has become a symbol of good health for the Saudi society, the system was designed on the principle that healthcare is the social good and that all countrymen must have equal access to the suitable healthcare facilities. The Saudi healthcare system still gathers awe-inspiring public support. However, evolving challenges threaten to destabilize a healthcare system. It is expected that the existing healthcare delivery model will no longer be adequate to meet the needs of the

Saudi citizens. Therefore, to provide the best possible care in the most reasonable and efficient way, Saudi government is required to work hard to transform and modernize the way they provide healthcare services, an effort fueled by the ubiquitous availability of technology.

Though the growth and development of healthcare system in Saudi Arabia has profound impacts on the citizen's life in the Kingdom and it brought positive changes as the earlier plans developed the basic infrastructure for the health services with outstanding outcomes. Yet, experts like Emily, M., Nirusan, R., and Hadi, S. (2014) believe that these goals could be achieved with more flexible and decentralized system i.e. 'moving care outside of provider settings and into the home and community', and secondly, connectivity i.e. 'open data sharing and communication across patients and healthcare providers'. Furthermore, success of an ideal healthcare system must deliver acceptable, high quality service i.e. blend of preventive and curative services, for there is a need first develop management with administrative skills through the concept and introduction of quality systems, this could be materialized through intensive quality training of Saudi health workforce.

Similarly, good governance could be ensured through visionary and direction oriented leadership which could bring transparency, accountability mechanisms along with involvement of the professionals and service users (Asadullah, M., & Kundi, G.M., 2013). The governance has two aspects, first, extending along a continuum the decentralization from the command and control to fully independence around the managerial tools and mechanisms, for example status and recognition, financing, accountability and decision capacity.

The most significant aspect of any meaningful transformation initiative like NTP 2020 of Saudi healthcare is the quality assurance through technology (eHealth) driven TQM (Qureshi, Q.A., Shah, B., Khan, N., Kundi, G.M., & Nawaz, A., 2013). This includes a multifaceted pattern of participants and a variety of apparatuses and gadgets for example, certification and re-certification, quality standards, accreditation and re-accreditation of the healthcare institutions and guidelines for clinical practice.

There is also a need to ensure an adequate information infrastructure involving administrative databases, registries, electronic health records, etc. in order to enable meaningful assessment of performance. Despite the fact that ministry of health in Saudi Arabia has a bold vision for eHealth, yet, achieving that vision will require bold and sustained leadership, to see the transformation through to realize the benefits.

## 6. RECOMMENDATIONS

The critical review and analysis of the related literature with regard to the reformation of the health sector under the Saudi Vision 2020 and interaction with the healthcare officials, and based on the theoretical model of this study, the researcher is able to present the below recommendations for the consideration of the government and future researchers.

1. The authorities should also focus on the implementation of quality management systems in healthcare with a clear vision and roadmap of national transformation program of healthcare of Saudi Arabia.
2. The lack of awareness need more emphasis on the education and training along with incentive plan for the employees in healthcare system as there is dire need to launch national awareness/ education program and campaign in order to address the concerns of the stakeholders.
3. The successfully execute NTP 2020, top management support will also be one of the critical factor for successful implementation of technology driven quality management systems, thereby they should keep development of IT-infrastructure on their priority for which system will need resources i.e. state-of-the-art hardware, software, orgware, peopleware and networking etc.
4. Equally important are the reforms in the internal environment of the healthcare organizations i.e. size, structure, culture, politics, attitude, behavior, methods, procedures which are principal predictors of efficiency, economy and cost of service, moreover the culture of hard work, punctuality, honesty, loyalty, sincerity to the organization could be materialized if the management set themselves as role model.
5. As evident from the history of mankind that effective and optimum use of resources are attributed to concept of responsibility and accountability mechanism in the human created organizations, therefore, a strict accountability mechanism may be not only put in place rather it should be made system built-in.
6. Though privatization of the public sector healthcare system is need of the hour to reduce the burden on government exchequer during the period of the current financial crunch for example labs and pharmacies along with compulsory health insurance schemes for all Saudi citizens, this will pave a way forward for successful implementation and competitiveness that will result into better health service delivery. Yet on other hand, right sizing/downsizing, emergence of new job and termination of the of the irrelevant persons could also result into unemployment, however, employees concern must be addressed through incentive plans or their engagement in other sectors of economy.
7. Finally, it has been observed the currently most of the job are routine natures, and employees are found in the office by making gossip, enjoying traditional gawa or busy with their cellular phones, therefore, it

is strongly recommended to redesign of the nature of jobs and work i.e. challenging and rewarding instead of routine.

#### Abbreviations

**NTP 2020:** National Transformation Program

**IT:** Information Technology

**TQM:** Total Quality Management

**DV:** Dependent Variable      **IVs:** Independent Variables

**ANT:** Actor Network Theory

**HMIS:** Health Management Information Systems

#### Declarations

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##### Ethical View

The researcher declared that the work is original contribution to the field of healthcare research, however, credit is given to the research of others and cited properly. All ethical measures were taken during the course of this study.

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##### Competing Interests

The authors declare that he has have no competing interests.

##### Author's contributions

The author Dr. Fahed Mohammed Albejaidi have made substantial contributions to the study design and in data analyses and data interpretation and writing the manuscript. Dr. Ghulam Muhammad Kundi contributed in acquisition of data from secondary sources. We being sole authors read and approved the final manuscript.

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