Research Journal of Medical Sciences 12 (1): 12-25, 2018
ISSN: 1815-9346

An Overview of the Reality of Healthcare Reform in Saudi Arabia with Emphasis on Public Hospitals: A Critical Appraisal

Musaed Ali Alharbi
School of Health, University of New England, Armidale, Australia

Abstract: Globally, healthcare systems are evolving constantly, becoming ever more complex in terms of the interrelatedness of system components. Healthcare system reform frequently involves complex challenges, primarily because there is a significant need to review the underlying policies and regulations associated with the sources of these challenges. A major concern for large healthcare systems worldwide has been how to eliminate or limit, recurrent challenges. Thus, this study intends to depict the impact of the challenges and their sources on Saudi's healthcare reform by focusing on the public hospitals. A critical appraisal for the literature is paramount to formulate effective strategies and policies on which to structure reform. However, health services rate among the largest consumers of financial resources in the funding of services to the population which may entail extended policy conflict within government. The background information presented in this study reflecting that Saudi Arabia's current public healthcare system is completely dependent on government support (excluding the private sector) with some inherent challenges and that the government has tried to reduce the burden of expatriate access to free public healthcare services provided to Saudi citizens by enacting a reform strategy presented by health insurance scheme. In addition, population growth and the consequent escalating healthcare demand, poses a major threat to the Saudi government by increasing healthcare expenditure which will ultimately force the government to create new legislation to finance the extended coverage.

Key words: Saudi Arabia, reforms, challenges, MOH, public hospitals, legislation

INTRODUCTION

Overview of Saudi Arabia: An outline of Saudi Arabia's historical development and description of its three-tier healthcare framework is prerequisite to understanding the study location and its context within the current national healthcare environment. At the beginning of the 20th century, the dwindling Ottoman Empire still controlled most of the Arabian Peninsula which comprised many small territories, ruled by the dominant tribal ruler. In 1902, Abdulaziz bin Abdulrahman Al Saud, generally known as Ibn Saud who also known as a founder of the modern Saudi State, regained control of Riyadh in Nejd for the Al Saud Dynasty, marking the founding of Saudi Arabia. Ibn Saud spent the next 30 years in conquest, combining the surrounding territories into a single nation, the Kingdom of Saudi Arabia, officially constituted and recognized in September 1932 (Bowen, 2014). The nation during this period of country's establishment gradually achieved an affiliate sense of their citizenship rather than tribal affiliations prevailing before that (Determann, 2010).

The nation at that stage, also remained an agrarian society, one of the poorest in the world but paramount was the fact that the Saudis had regained control of the Islamic Holy Cities of Mecca and Medina from Hashemite government which was supporting by British government in 1920 after subdued the Ottoman Empire in Al Hasa and its alley Ibn Rashid in central and Northern territories, focus of the Hajj, the visit of millions of Islamic pilgrims from around the world to Mecca and the city of the Holy Prophet Mohammed (Medina). The major territorial objective for Abdulaziz behind annexing the holy cities was to eliminate the abuses of Haj administration in that time. The Hajj at that time, constituted the only external source of Saudi national revenue (McHale, 1980).

During the early 20th century, oil was discovered in Persia (now Iran), the first of many similar discoveries in the Arabian Gulf Region including Iraq as well. The Arabian Peninsula had generally been discounted as a potential source, however, after the granting of a prospecting concession to an American company by King Abdulaziz, oil was discovered in 1938. That discovery was followed by the sequential emergence of new oil wells, paralleling a growing global demand for oil which began during WW1 and continued throughout the century (McHale, 1980).

Corresponding Author: Musaed Ali Alharbi, Ministry of Health in Kingdom of Saudi Arabia, Riyadh, Saudi Arabia

Fig. 1: Map of Saudi Arabia; Designed by SmartDraw

By 1970, the national picture of Saudi Arabia as well as its international importance had changed forever. The country maintained nearly 25% of the world's oil reserves and was ranked as the world's largest oil exporter (Jannadi *et al*., 2008; Kose *et al*., 2013). Modern Saudi Arabia, covering an area of 2,240,000 km^2 is the largest country in the Middle East. It occupies nearly 80% of the Arabian Peninsula (Wynbrandt, 2010) bordered to the West by the Red Sea to the North-East by the Arabian Gulf and on land by Jordan, Iraq, Kuwait, Qatar, United Arab Emirates, Oman and Yemen as shown in Fig. 1. The country's official language is Arabic. Saudi Arabia is considered one of the fastest growing nations in the Middle East, exuding a general renaissance atmosphere. The infrastructure has undergone enormous changes in recent years, supported by comprehensive developments in sectors such as industry, education and health (Anonymous, 2018).

UNDERSTANDING THE SAUDI ARABIAN HEALTHCARE FRAMEWORK

The Saudi Arabian Government has increasingly extended the country's healthcare services in the establishment of 12 healthcare agencies including the public healthcare provider, the Ministry of Health (MOH). Most healthcare services belong to the MOH with the remainder falling under the National Guard, the Ministry of Education, the Ministry of Defence, the Ministry of the Interior, Aramco, King Faisal Specialist Hospital and Research Centre, the Royal Commission for Jubail and Yanbu, the General Sports Authority, the Red Crescent Society, the Saline Water Conversion Corporation and the healthcare services provided by Saudi Airlines at the country's airports (Ministry of Health, 2015). Whereas the MOH serves the public through its health institutions the other healthcare agencies provide services to specific groups, mainly sector employees and their families as well as emergency services where necessary (Alghamdi and Urden, 2016). In addition to these governmental healthcare agencies, private healthcare service providers play an important role in the delivery of chargeable healthcare to citizens and expatriates, effectively decreasing the pressure on government health organizations, especially in the larger cities (Almalki *et al*., 2011).

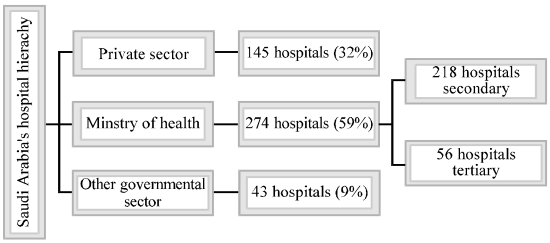

Fig. 2: Saudi hospital hierarchy (Ministry of Health, 2015)

Thus, the current provision of healthcare in Saudi Arabia falls into three categories, the public healthcare provider, other government healthcare providers and private healthcare providers (Ministry of Health, 2015). The Saudi Arabian constitution guarantees free healthcare services to citizens as well as expatriates working in the government sector. Health services for expatriate workers employed in the private sector are provided by their sponsors (Walston *et al*., 2008). There are 274 MOH-affiliated public hospitals in Saudi Arabia with a capacity of 41,297 beds, representing about 59% of the country's total of 462 hospitals. Consequently, the MOH is considered the main provider of healthcare services in Saudi Arabia as shown in Fig. 2-4. A further 43 hospitals with a capacity of 11,449 beds are affiliated to other government healthcare agencies with the remainder constituting 145 private hospitals with a capacity of 16,648 beds as shown in Fig. 2-4 (Ministry of Health, 2015).

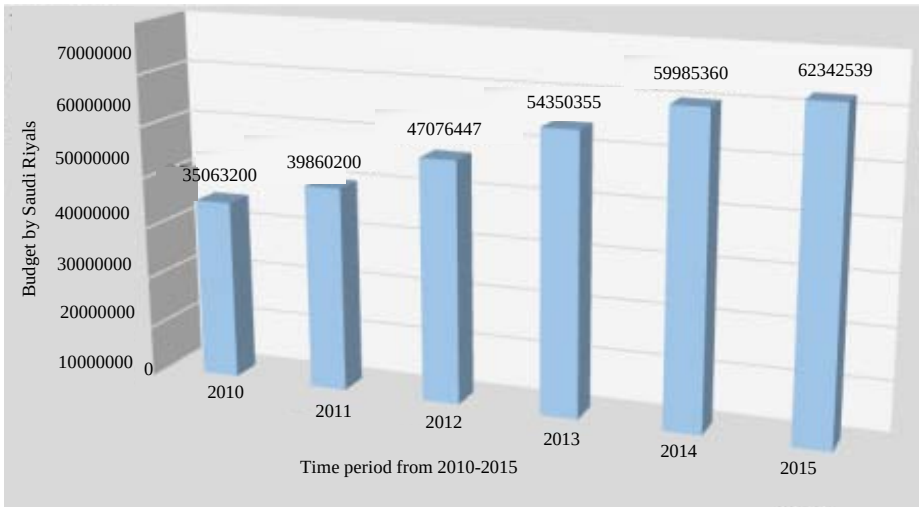

Fig. 3: MOH budget from 2010-2015 (Ministry of Health, 2015)

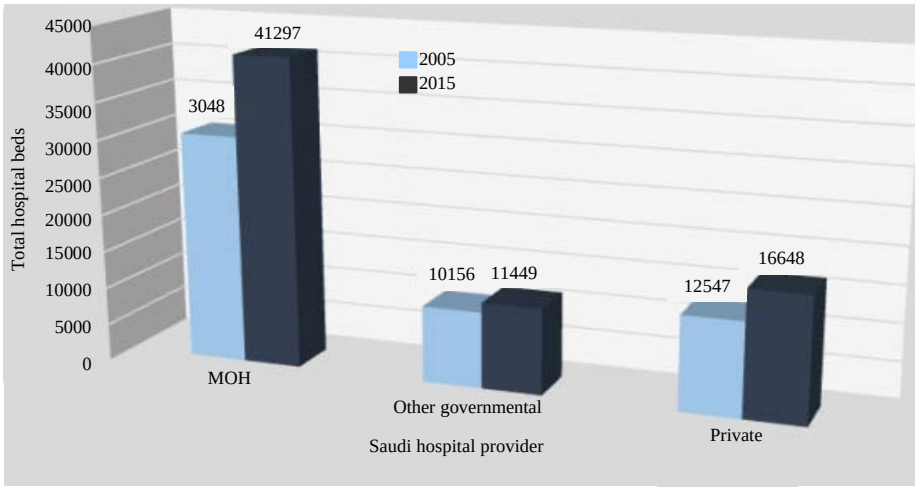

Fig. 4: Proportion of hospital beds from 2005-2015 across all Saudi health providers (Ministry of Health, 2005, 2015)

Official healthcare services in Saudi Arabia commenced in 1926 when the Department of Health was established and mandated, commensurate with the limited national revenue of the time to provide healthcare for citizens and pilgrims visiting the two Holy Mosques of Saudi Arabia (Al-Harthi *et al*., 1999; Al-Sharqi and Abdullah, 2013). The MOH was established in 1954 (Niblock, 2004) at a time when the population numbered 3.4 million. Oil wealth provided the funding to improve national healthcare services which had previously focused on traditional methods for treating diseases (Saati, 2000). Expansion of national healthcare services countrywide over the past few decades was paralleled by an increased birth-rate and rapid population growth, attributed to improved healthcare which has necessitated increased funding for healthcare services annually as illustrated in Fig. 3 (Ministry of Health, 2015). According to the Central Department of Statistics and Information (CDSI) (Anonymous, 2016; MOH, 2011), the population increased from 28, 376, 355-31, 742, 580 between, 2011 and mid-2016 with expatriates representing 36.7% of the total population. A noteworthy comparison is that while the population of Saudi Arabia increased ten-fold between, 1954 and 2016, the US population doubled from 163-325 million between the same 2 years.

The oil transformation of the Saudi Arabian economy has seen the elevation of healthcare as a government priority. A comparison of healthcare statistics between, 2005 and 2015 reveals consistent annual increases in the number of hospital beds, especially in MOH-affiliated hospitals as shown in Fig. 4. In 2005, MOH hospitals had

30,489 hospital beds, other government hospitals 10,156 beds and private hospitals 12,547 beds. In 2015, these numbers had increased to 41,297 beds in MOH hospitals, 11,449 in other governmental hospitals and 16,648 in private hospitals (Ministry of Health, 2005, 2015). Based on a 2000 report by the World Health Organization (WHO), improvements in healthcare over the last two decades has seen Saudi Arabia achieve an international a ranking of 26th out of 190 countries for efficiency of performance in terms of available resources as well as ranking 61th in overall standard of healthcare system (WHO, 2000).

This ranking prompted some debate among Saudi healthcare researchers. Alkhamis (2012) contended that no subsequent international reports have supported this ranking which appeared in 2000. However, the WHO report clearly defined the factors over the previous decades, leading to the significant improvement in some fundamental indicators. Life expectancy increased from 66 years in 1983 to 73.5 in 2009 (Al-Sharqi and Abdullah, 2013). Additionally, evidence over a few years following the report, indicated further significant developments. Gallagher (2002) asserted that despite the vast geographical area and rapid population growth, Saudi Arabia has achieved consistent advancement in its healthcare system in terms of both quality and quantity.

Public healthcare structure: Saudi Arabia's MOH is the primary provider of healthcare services to citizens as well as expatriates in government sector employment. MOH healthcare services have a three-tier structure of primary, secondary and tertiary levels (Ballal *et al*., 2002). The primary level evaluates all medical conditions after which a case may be transferred to the secondary level for more sophisticated care (Almalki, 2012). Similarly, the tertiary level receives patients referred from the secondary level when the highest level of treatment is required (Mulla, 2001).

Primary healthcare level: Following the Alma Ata Declaration of 1978, the WHO resolved to strive towards the global provision of primary healthcare for all as a fundamental human right (WHO., 1978). In response to Alma Ata, Saudi Arabia's MOH prioritised the establishment of a system of integrated primary healthcare centres, providing maternal and child and community healthcare services including management of people with chronic illnesses in both urban and rural localities (Al-Ahmadi and Roland, 2005). The MOH offers primary healthcare through nationwide centres linked to a wide range of secondary and tertiary services, available on referral (Aldossary *et al*., 2008). Over recent decades, primary healthcare has undergone notable improvements.

The Annual Health Statistical Yearbooks from 2010-2015, provide clear statistical evidence of the construction of additional MOH primary healthcare centres, over those 5 years. As illustrated in Fig. 5, the number of primary healthcare centres increased from 2,094 in 2010 to 2,282 in 2015.

Secondary and tertiary healthcare levels: Saudi Arabia's secondary healthcare level treats patients referred from the primary level while the tertiary level specialist hospitals treat patients with advanced forms of disease on recommendation from the secondary level. According to the Ministry of Health (2015), the total number of public hospitals for these two levels was 274, distributed across 13 health directorates. Figure 6 illustrates the increase in the number of public hospitals from 249-274, between 2010 and 2015. As illustrated in Fig. 2, 56 specialist hospitals provide tertiary level healthcare nationwide while the remaining hospitals are classified as secondary level (Almasabi, 2015).

Health insurance scheme: At present, health insurance is a major factor in terms of improving healthcare service delivery which is considered a basic human right in most societies (Dawoud *et al*., 2016). In line with the global growth of health insurance, since, the early 1990's, Saudi Arabia has employed progressive healthcare management strategies, easing the overall financial load on the government by implementing a national health insurance scheme (Aboul-Enein, 2002). Aboul-Enein (2002) reported that at the end of 1995, the government introduced a mandatory health insurance policy for expatriate employees with 80% of the costs contributed by employer and 20% by employee. Current Saudi healthcare literature shows few studies that have assessed the current status and progress of health insurance implementation but there are some that have provided important insights into its low implementation rate in the Saudi healthcare system.

With its increasing oil revenue, the Saudi Arabian Government budgeted millions of dollars for socioeconomic developments, including the adoption of health insurance by establishing the Cooperative Health Insurance Council (CCHI) in 1999 with the goal of making national healthcare insurance mandatory, through a three-phase implementation plan (Almalki *et al*., 2011; Barakah and Alsaleh, 2011; Ishfaq *et al*., 2016). The CCHI's primary role has been to monitor the national health insurance strategy (Boulanouar and Alqahtani, 2016). The first phase involved implementing a cooperative health insurance scheme funding private-sector healthcare services for citizens and expatriates working in non-government sectors and

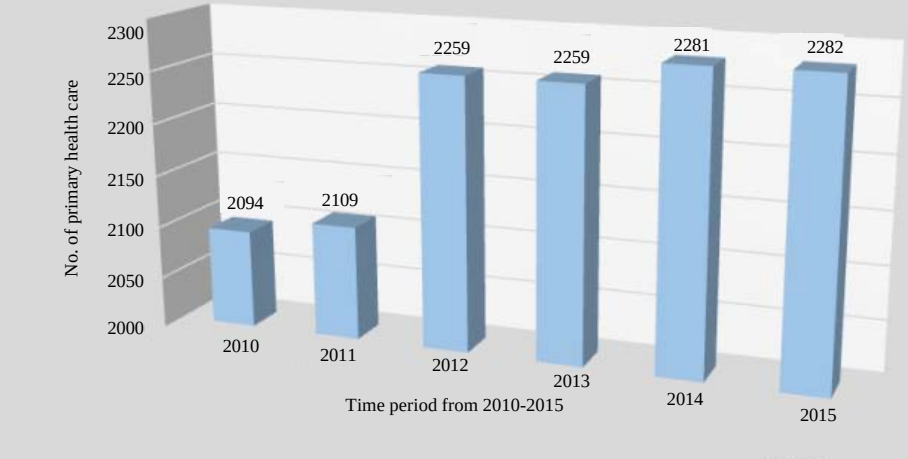

Fig. 5: Number of primary healthcare centres in Saudi Arabia (2010-2015) (MOH, 2011; Minstry of Health, 2012, 2010, 2014, 2015)

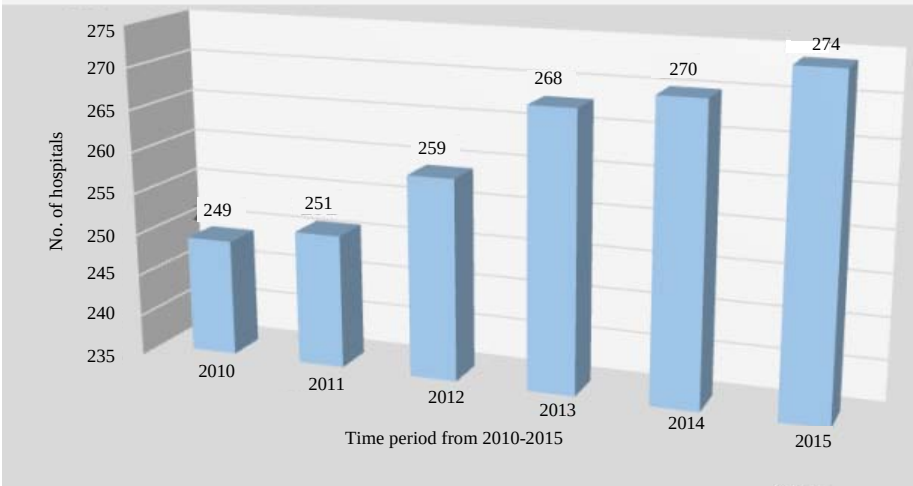

Fig. 6: Number of public hospitals in Saudi Arabia (2010-2015) (MOH, 2011; Ministry of Health, 2010, 2012, 2014, 2015)

institutions with more than 500 employees with their sponsors or employers paying the premiums (Ishfaq *et al*., 2016).

Alnaif (2006) stated that this health insurance scheme offers fixed, standard charges for consultations including treatment and medication as well as benefits for preventive care, maternity healthcare, vaccinations, parental care, radiology and laboratory tests in-patient services and operations and treatment of gum and tooth disease. Alsharif gave details of the second phase which covers citizens and expatriates working in the government sector with the government covering a major portion of the costs. The third stage covers groups residing in Saudi Arabia temporarily such as visiting pilgrims. Between adopting the strategy in 1999 and March 2001, the first phase of the health insurance plan was implemented, piloted on expatriates (Aboul-Enein, 2002). According by Almalki (2012), a major criticism of the scheme was that by 2012 only the first stage had been implemented with no sign of progress towards implementing the second and third phases.

Various literary sources have substantiated the positive effects of health insurance on healthcare quality in developing countries as best exemplified by the case of Vietnam (Wagstaff and Pradhan, 2005). However, a successful, thorough health insurance implementation has occurred in Saudi Arabia which has resulted in conflicting policy between healthcare sectors and a lack of

collaboration among healthcare providers and organisations. This has affected the Saudi health insurance scheme negatively and has led to a slow rate of uptake (Alhusaini, 2006; Almalki *et al*., 2011). Uptake of the initial private sector phase was hampered by substandard or missing, basic components of medical reimbursement systems such as a clinical coding schedule. This constituted a barrier to a complete implementation, particularly in the private sector to which the first phase of the project was applied (Bah *et al*., 2015).

Almalki *et al*. (2011) revealed that despite many attempts by the MOH to improve the public healthcare sector there is a perpetual shortage of healthcare professionals and the unresolved issue of the privatisation of public hospitals. However, there was a focus on developing the Health Information Technology (HIT) infrastructure to facilitate the integration of the cooperative health insurance scheme. Clearly, the current international conception of integrated health insurance requires the development of an infrastructure that includes a clinical coding classificatory schedule such as the Diagnosis-Related Groups (DRGs), supporting a medical billing system that automates reimbursement based on clinical categories defined by diagnoses and procedures. The DRGs which constitute a method of payments for healthcare, based on the International Classification of Diseases (ICD) coding system were included in the Saudi Arabian National Health Insurance (NHI) policy and the Australian refined, AR-DRG was selected as the model for the reimbursement system.

DRGs have effectively replaced the traditional reimbursement "cost plus percentage profit" structure by a "fixed case rate" structure, based on the patient's diagnostic group category. There is no change of rate for length of stay or number of procedures (Spragens, 2013). Some researchers such as Khouja (2013) have claimed that the CCHI in Saudi Arabia had motivated private healthcare providers and health insurers to implement clinical coding by 2014. At that time, the CCHI was providing training sessions to develop clinical coding and AR-DRG proficiency and had introduced a compulsory accreditation process in Saudi hospitals affiliated to the private sector. However, the most recent research shows that these fundamental health insurance scheme operational tools were not fully implemented. Bah *et al*. (2015) conducted a study at six private-sector healthcare centres in the Eastern Province of Saudi Arabia to assess the implementation status of AR-DRGs reimbursement coding. While one of the targeted centres had accreditation from the joint commission international and another from the central board for the accreditation of health institutions, the actual implementation of AR-DRGs in these centres still had a long way to go.

Studies assessing health insurance scheme progress in the private sector, reported similarly. Poor health insurance infrastructure, lacking efficiency in coding and AR-DRGs has hindered implementation of the second and third phases in the public healthcare sector. The CCHI is working to address this issue in hospitals affiliated to the private sector by promoting electronic communication to establish an information exchange between stakeholders.

A recent initiative has been the Saudi Health Insurance Bus Project which aims to equalize standards in the health insurance scheme sectors, to enable stakeholders to engage in health insurance transactions, electronically and securely (Khouja, 2013). Thus, analysts reinforce the notion that progress in the Saudi health insurance project would be dramatically improved by addressing the existing challenges facing its implementation.

CHALLENGES FACING HEALTHCARE PROVIDERS

Increased demand on healthcare services, due to population growth is recognised as a perennial challenge for healthcare providers worldwide (Nicholls, 2016). The sustained, above-average population growth rate in Saudi Arabia has added a load for healthcare providers. Expanding healthcare services necessitates increased healthcare funding which forces the Saudi government to rethink its policy on financing public healthcare (Yusuf, 2014). A large body of evidence from more recent healthcare studies has confirmed that although attempts have been made to engage in healthcare reforms, the existence of barriers impeding reform remain. AbouEl-Seoud concurred that efforts to mitigate the administrative burden impact on the Saudi public hospitals are often limited due to policy problems or lack its consistency which creates conflicts between reform measures and its implementation.

Studies by Almalki *et al*. (2011) and Ram (2014) have shown that despite the intensive efforts of Saudi healthcare providers to keep pace with global developments, inherent defects delay implementation of reforms. The status quo comprises increasing demand and escalating costs a growing shortage of qualified healthcare professionals and an underdeveloped HIT system. The combination of such defects has produced a compromised system and research force, lacking the

technology and skills required for a smooth transition to a more advanced integrated system, refined over decades in developed countries. Attempting the transition to such a system with an inadequate infrastructure at the start is self-defeating.

In examining the inadequate infrastructure, some researchers have also pointed to regional disparities in healthcare development. With context of training or education, one of the major challenges has facing by the Saudi public hospitals in their day-to-day practices includes unequal provide education programs among rural areas or cities. These challenges have a severe and adverse impact on the development of organizations towards achieving healthcare system improvements. The employees in this case will lose their confidence and skills which plays a significant role in performing effectively in a job. There was a lack of training in almost everywhere in the country but the health education programs bias between hospitals has revealed in the literature and therefore this leads to the lack of the productivity of the organisation as it will take a negative action against the implementation process any new system. Al-Hashem (2016) claimed that cities such as Jeddah, Dammam and Riyadh, received more health education programs than rural areas, indicating the uneven nature of healthcare service quality, across different regions, although such differentiation is common in many countries.

As long as the Saudi population keeps expanding, so will the burden on a compromised healthcare system, Regional studies have assessed the healthcare challenges facing the Gulf Cooperation Council (GCC) countries. Studies by Achoui (2009) and Alshamsan *et al.* (2017) identified rapid population growth and the resultant pressure on healthcare services as the dominant regional issue. There is regional concern that inherent structural challenges, continue to impede proposed GCC healthcare developments. Kumar (2016) noted that while GCC oil wealth makes access to healthcare funding relatively easier than in other developing countries, the acceleration of chronic disease in the Gulf population offsets developmental funding. Conversely, state-of-the-art technological innovations producing a more integrated national healthcare system would offer better healthcare which in turn should produce a healthier nation (Altuwaijri, 2008).

Many researchers have identified significant factors hindering Saudi healthcare system developments. Almalki *et al.* (2011) listed ongoing fundamental challenges as the lack of native Saudi health professionals, limitations on financial support for training and underdeveloped technology and technical support, particularly in MOH facilities. Alkraiji *et al.* (2014) reported that substandard interoperability in HIT Software, inadequate health information management and a shortage of Saudi health professionals as well as effective policies and procedures have imposed limitations on potential healthcare development for many years.

The rapid turnover of non-Saudi health professionals impacts adversely on the establishment of stable research relationships, team research and interpersonal communication as well as the reducing productivity in any research place (Almalki *et al.*, 2011; Dawoud *et al.*, 2016). Not with standing, the increased demand, yet comprised infrastructure and manpower, Saudi healthcare services must cope with the Hajj. The Saudi government traditionally offers free healthcare services to around 5 million pilgrims annually (Walston *et al.*, 2008). It has been suggested that the government should implement a seasonal Hajj health insurance to offset the financial burden (Almalki, 2012).

The sudden acquisition of massive sums of money has led to the downfall or destruction of many. Similarly, the sudden impact of oil wealth has had social consequences. Regrettably, Saudi Arabia has the highest road accident rate in the world, mainly due to the lack of deterrent action against the many drivers who violate traffic rules. Alshahrani (2017) noted that on average 20% of Saudi public hospitals beds are occupied by patients with injuries received in motor vehicle accidents, 81% of mortalities in Saudi public hospitals are a result of road accidents. Mansuri *et al.* (2015) reported 86,000 mortalities and 611,000 injuries, 7% of which led to permanent disability, caused by road accidents in the last two decades in Saudi Arabia. Similarly, Ageli and Zaidan (2013) attributed 39,000 injuries and 7,153 deaths to road accidents with nearly 80% of these cases resulting in treatments in MOH hospitals during 2013. Road accident injury costs have in recent years, averaged 7 billion Saudi Riyal (nearly US $1.9 billion) annually. Although, the high incidence of motor accidents receives considerable critical attention there has been no effective government intervention. Mansuri *et al.* (2015) found that 4.7% of Saudi Arabia's total mortalities are caused by motor accidents in Australia and the US, the rate is around 1.7%. While the rapid turnover of healthcare professionals and the burden of too many road accidents, mainly impact on human resources and costs of Saudi healthcare services, another longstanding challenge has been a poor HIT infrastructure. This has a profound effect on functionality by reducing service quality and administrative efficiency, often preventing application of technology designed for more advanced hospital environments. Uluc and Ferman (2016) asserted that the lack of health technology

infrastructure presents a fundamental barrier to improving healthcare in developing countries. Innovative technology and associated training is intended to reduce human resource levels.

Finally, poor coordination between health organisations, due to weak planning, represents a substantial challenge (Al-Rabeeah, 2003). Mufti (2000) remarked "there is unfortunately little coordination in planning among health agencies". Safi found that although healthcare in Saudi Arabia has improved substantially as demonstrated by its WHO ranking of 26th out of 190 countries, the shortage of qualified professionals and lack of coordination between health organisations, results in the underuse of sophisticated equipment in some healthcare facilities. This is tantamount to misuse of resources.

Enacting Saudi public healthcare reform: Globally, the cost and structuring of the clinical coding systems that support the administrative management of healthcare billing and reimbursement have been seen as a thorny issue (Baker *et al*., 2017). Carpentier (2012) contended that healthcare organisations, like any business, need to maintain profits to operate successfully in modern healthcare, this cannot be achieved without meeting the required standards of clinical coding. The researcher also pointed out that healthcare service organisations carry the burden of the costs clinical coding operations in order to collect payments from healthcare insurance companies. The global standard in healthcare reimbursement requires a Health Information Management (HIM) system, running the international statistical classification of diseases and related health problems, 10th revision (ICD-10) and A Diagnosis-Related Group (DRG) package to convert diagnoses and procedures into standardised codes for submission to health insurance organisations (Kimura *et al*., 2010; Timothy, 2011). Implementation of the ICD-10/DRGs combination is fundamental to improving the commercial aspect of healthcare claims management (Polyzos *et al*., 2013). There can be no argument as has been demonstrated clearly in global healthcare literature that efficient clinical coding using the appropriate software is a core component of the reimbursement process for healthcare services (Cascardo, 2014; Tran *et al*., 2013).

Collins stated that the healthcare reforms by suggesting the Council of Australian Governments included increasing the effectiveness of clinical coding and its research force as the government acknowledges their roles in reform healthcare system. Clinical coding or ICD-10 has been neglected in Saudi Arabia, impeding further healthcare developments. Some researchers have suggested that the overall healthcare financial demand on the Saudi government has caused to ignore what it perceives as lesser challenges. Alkadi (2016) concluded that incompatible electronic systems and extent of the low implementation rates of ICD-10 in public hospitals are the major obstacles for development.

Figure 3 shows how annual government funding of the public healthcare sector has grown progressively with expenditure in this sector increasing by 78% from 35,063,200 Saudi Riyal in 2010 to 62,342,539 in 2015. Khan (2016) and Thompson (2017) noted that the Saudi government has accepted the broad challenges facing the country and has prioritized healthcare among other essential sector reforms. Accordingly, the government unveiled a national strategy for a range of public reforms, described as a 'vision' for the country's future. Saudi Vision, 2030 focuses on the post-oil era and will introduce a series of national reforms, reducing dependence on oil revenue and government financial support. The funding of public healthcare system is a priority.

The previous study offered a detailed account of the challenges demanding the development of healthcare reform strategies, based on the assessment of healthcare researchers. Though several scholars have analysed Saudi healthcare challenges few have successfully identified workable solutions. A number have outlined a fundamental reform strategy to mitigate the cumulative challenges facing Saudi public healthcare sector which have arisen from increased demand on public healthcare services. The following paragraphs focus on relevant literature and determining the most appropriate solutions. Almalki (2012) proposed that a strategy of privatising Saudi public hospitals, completing the health insurance project and improving HIM and HIT infrastructure will provide a platform for reform and will ultimately reduce the financial burden.

Khaliq (2012) defined 'privatisation' in the context of Saudi public hospitals, under the proposed government legislation. Public hospitals will be sold to the private sector but while the MOH is likely to continue managing primary healthcare there is a lack of clarity on the process and operational details. Recently, the MOH revealed in its response to the consultative council (national legislature) some details regarding the privatization of public hospitals. Government-owned companies will be established to assume ownership of hospitals and takeover existing staff a step aimed at raising the quality and efficiency of healthcare as well as rationalizing costs (Hazzazi, 2018). However, questions have been raised regarding the meaning of the term 'privatisation' in shifting public hospitals from government administration to government companies. The MOH has not clarified the

funding and operational details of this transformation proposal nor defined the time-frame. The shift would require pre-implementation reforms, particularly improving HIM systems within the HIT infrastructure, fully functional ICD-10/DRGs to support reimbursements together with greater collaboration all challenges listed in the studies reviewed in previous study.

Conversely, Alkhamis (2017) observed a lack of evidence supporting the argument that privatising Saudi public hospitals is an appropriate solution. He noted that the first phase of the compulsory health insurance implementation for expatriates in the private sector, unexpectedly resulted in increased service demands in public provider. Alkhamis *et al.* (2014) produced statistics, showing that in 2008 expatriates in Saudi Arabia (excluding their families) comprised 30% of the total population. Thus, in offering this group private-sector treatment under the health insurance scheme, the private-sector contribution to healthcare funding should exceed 30% of total national health expenditure but amounted to 22% in 2008.

In line with this debate, Mugapish and Hasan (2016) and Walston *et al.* (2008) both asserted that keeping pace with global healthcare developments would help improve the Saudi Arabian public healthcare sector in that substantial upgrading is prerequisite to overcoming existing challenges. Rising costs, increased demand, shortage of health professionals, the need for technological improvements and the lack of reimbursement methods in healthcare organisations, continue to hinder Saudi healthcare, privatising public hospitals represents a solution to potentially increase funding but does not eliminate the need to examine and find solutions for each of the highlighted problems. Khaliq (2012) stated that increasing demand for healthcare services is the basis for the privatisation strategy as it would reduce the financial burden on the government, currently bearing the cost of healthcare in government institutions for citizens, most Foreign workers and pilgrims.

Solely funding healthcare services, let alone funding healthcare reforms has become a major government concern, attributable to oil price fluctuations that reverberate throughout the Saudi economy (Yazbeck *et al.*, 2017; Young, 2016). Basic funding, omitting the burden of reform and development costs has incurred the additional burden of the significant costs of healthcare for expatriates, currently representing nearly 37% of the population based on the latest census and an average of 5 million pilgrims annually. Jane (2017) maintains that reductions in global oil prices have a huge impact on the Gulf states, directly shocking their oil-based economies and restricting their potential for development in turn impacting on healthcare services and reducing general productivity. The global reduction in oil prices poses a continued threat to a number of Gulf States, including Saudi Arabia and indicates an urgent need to rethink financial and economic policy in these countries. Alkhamis (2017) contends that in restructuring the financing of healthcare, the potential gains from privatisation are complex and central to national development.

Almalki (2012) observed that with the government as sole funder, the option of privatising public hospitals had to be considered. This necessitated the need for a Saudi health insurance strategy to ensure funding for public healthcare providers while reducing the existing financial burden on the government. Frequent questions were raised about the privatisation of public hospitals in terms of the activation of proposed legislation to roll out health insurance across the county, adopting methods used in developed countries and diversifying healthcare funding sources. Marusie and Rupel (2016) emphasized that healthcare systems globally are subject to perpetual change as well as becoming progressively more complex. This demands reform as indicated by the experiences of successful countries. “A reform implies sustained, purposeful and fundamental changes” (Marusie and Rupel, 2016). The reform approach has been successful in some developing countries. The successful implementation of health insurance in Vietnam, indicates that reforms offer an effective approach to addressing healthcare complexities not only in developed nations (Wagstaff and Pradhan, 2005).

Marusie and Rupel (2016) pointed out that the complexity of challenges facing healthcare and the inability or lack of resources to alter the root causes, presents problems for reforms, establishing an efficient healthcare information system, a sufficiency of skilled healthcare professionals and committed, creative leadership are paramount to the reform process, though often costly. The MOH has made progress in the areas of HIM, electronic health, health insurance and in the creation of policies on which to reform Saudi healthcare in line with the short-term National Transformation Program 2020 which the Saudi cabinet has adopted to help achieve the long-term Saudi Vision, 2030 (“National Transformation Program, 2020”).

The MOH proposes to eventually implement mandatory healthcare insurance for all for citizens and expatriates as is the case in Australia. The Saudi health insurance scheme historically represents the first step of a healthcare reform process having commenced its first stage in 1999 (Barakah and Alsaleh, 2011). However, the

idea of obtaining additional funding for public healthcare by direct taxation as is the practice in the current Australian Model is unacceptable to the Saudi public. According to a study by Thompson (2017), the government should understand that Saudi Vision, 2030 must not impose a greater financial burden on citizens many of whom have low incomes. Despite this reaction in terms of the proposed privatization of 274 public hospitals in Saudi Arabia, a division of healthcare funding responsibilities between government and other sources with the government retaining ownership of the public healthcare sector, appears to be a feasible step toward healthcare system reform.

Tuohy (1999) maintains that in general there are four possible strategies for reforming healthcare systems. These comprise reducing access to services, policy changes or restructuring, shifting the costs of services and controlling or regulating costs. Hence, one potential strategy to reform Saudi Arabia's public healthcare service is to heed the example of developing countries which utilize health insurance to fund healthcare for their people by providing a broader base for the funding of healthcare in Saudi Arabia and move away from absolute reliance on the state. Australia's healthcare system is now regarded as an example of the benefits of diversifying funding sources in its effective funding by comprehensive health insurance. The basis of a reform proposal would include the establishment of policy ensuring diversification of public healthcare funding sources to cover MOH institutions, together with universal health insurance covering citizens, expatriates and pilgrims. Healthcare reform policy should be empirically based, integrating the successful reform solutions in practice in both developed and developing countries into a framework for reform adapted to the Saudi Arabian context.

AN OVERVIEW OF THE AUSTRALIAN HEALTHCARE SYSTEM

The Australian healthcare system is rated as one of the best in the world (Mustofa, 2016; Willis *et al*., 2016), taking fifth position after Japan, Sweden, Canada and France (Starfield, 2000). Historically, healthcare in Australia was administered by state and territory governments before the Federal Government expanded its role through policy and legislation covering pharmaceuticals, finance, coverage and the benefits of health institutions. This reform was based on the experience of the United Kingdom (UK) at the end of World War II (Palmer and Short, 2000; Willis, 2009). The Australian healthcare system thus bears some resemblance to the UK's National Health Service but the system was not implemented until 1972 due to the need for modifications in terms of authority and funding (Willis, 2009).

An Australian healthcare landmark occurred in 1984 with the introduction of medicare, a comprehensive healthcare insurance project covering all Australian citizens, New Zealand citizens resident in Australia, citizens of other countries which have signed a Reciprocal Health Care Agreement with Australia, Foreigners who have qualified as permanent residents as well as some applicants for permanent visas, under specific conditions those on a parent visa application are excluded. Medicare is financed by an additional tax called the medicare levy amounting to 1.5% of an individual's annual income or 2.5% per family. Those in higher income brackets who are eligible for medicare but do not have supplementary private health insurance for medical needs not covered by medicare, pay what is known as progressive taxation. The medicare levy has contributed to reducing the financial burden of healthcare services on the Australian government but contributes only 16% of total healthcare costs with the remainder drawn from the revenue of other forms of taxation (Miles *et al*., 2016; Willis, 2009).

The medicare national health insurance scheme aims to provide all eligible people with comprehensive healthcare. As Australian healthcare is provided by both public and private sector institutions, medicare offers three rates of reimbursement for healthcare services): 100% of healthcare costs in public healthcare organisations); 85% of healthcare costs for general practitioners in private clinics, based on the Medicare Benefits Schedule (MBS) with the balance covered by supplementary private health insurance or the patient); 75% of healthcare costs in private hospitals based on the MBS with the balance covered by supplementary private health insurance or the patient (Willis, 2009; Willis *et al*., 2016).

Medicare is complemented by the Pharmaceutical Benefits Scheme which was established to cover most of the costs of prescription medicines issued by the government and private hospitals (Willis, 2009). The overseas student health cover covers international students and their families in Australia under the MBS and is mandatory for all international students (Ong, 2009). The progress in Australian healthcare coverage prompted the introduction of the casemix funding system in healthcare organisations, based on clinical coding and DRG categories, rather than the traditional itemized billing for each individual case. Consequently, the need arose for an Australian National Standard of coding based on Australian healthcare

practice, leading to the establishment of a national organisation responsible for creating national coding standards this later became Australia's National Centre for Classification in Health (Roberts *et al*., 1998). The development of Australian healthcare funding over the last few decades has introduced a new era for its healthcare system. The Australian achievement, despite the country's status as a developed nation must serve as a pointer to the Saudi Arabian government that diversifying funding sources for the public healthcare sector, provides a clear solution to solely relying on state funding, especially in the context of fluctuations in national revenue.

CONCLUSION

This study studied the various theoretical, empirical strands by tying up with the outcomes of review of the literature to lead the aim of this study and provided a logical frame study for the best answers of those researches questions which this study was based. With the lack of a basis for privatization which is the reimbursement methods systems including ICD-10 in public hospitals, the proposed privatisation of public hospitals itself may not be a realistic solution in current time. Thus, the case of the Australian healthcare reform is presented as an example by this study in order to portray the positive aspect in the most challenge facing the Saudi's public healthcare system which is presented by the lack of diverse public health funding sources. Thus, the diverse public health funding sources have been identified as serious impediments to this financial reform and how to remedy the lack of long-term management planning and preparedness that healthcare expansion has not increased proportionally to population growth or that noncompliance with modern healthcare funding strategies leading to the failure to develop health insurance cover for 5 million visiting pilgrims annually would place additional strain on funding, requires a holistic approach, rather than a pack of separate solutions.

REFERENCES

Aboul-Enein, F.H., 2002. Personal contemporary observations of nursing care in Saudi Arabia. Intl. J. Nurs. Pract., 8: 228-230.

Achoui, M.M., 2009. Human resource development in Gulf countries: An analysis of the trends and challenges facing Saudi Arabia. Hum. Resour. Dev. Intl., 12: 35-46.

Ageli, M.M. and A.M. Zaidan, 2013. Road traffic accidents in Saudi Arabia: An ARDL approach and multivariate granger causality. J. Econ. Finance, 5:1-6.

Al-Ahmadi, H. and M. Roland, 2005. Quality of primary health care in Saudi Arabia: A comprehensive review. Intl. J. Qual. Health Care, 17: 331-346.

Al-Harthi, F., A. Alenad, H. Baitalmal and A. Alkhurashi, 1999. Health over a century. Ministry of Health, Riyadh, Saudi Arabia.

Al-Hashem, A., 2016. Health education in Saudi Arabia: Historical overview. Sultan Qaboos Univ. Med. J., 16: e286-e292.

Al-Rabeeah, A., 2003. The history of health care in the Kingdom of Saudi Arabia with emphasis on pediatric surgery. Saudi Med. J., 24: S9-S10.

Aldossary, A., A. While and L. Barriball, 2008. Health care and nursing in Saudi Arabia. Int. Nurs. Rev., 55: 125-128.

Alghamdi, M.G. and L.D. Urden, 2016. Transforming the nursing profession in Saudi Arabia. J. Nurs. Manage., 24: E95-E100.

Alhusaini, H.A., 2006. Obstacles to the efficiency and performance of Saudi nurses at the Ministry of Health, Riyadh Region: Analytical field study. Ministry of Health, Riyadh, Saudi Arabia.

Alkadi, S.H., 2016. The healthcare system in Saudi Arabia and its challenges: The case of diabetes care pathway. J. Health Inf. Dev. Countries, 10: 1-29.

Alkhamis, A., 2012. Health care system in Saudi Arabia: An overview. East. Mediterr. Health J., 18: 1078-1080.

Alkhamis, A., A. Hassan and P. Cosgrove, 2014. Financing healthcare in Gulf Cooperation Council countries: A focus on Saudi Arabia. Intl. J. Health Plann. Manage., 29: e64-e82.

Alkhamis, A.A., 2017. Critical analysis and review of the literature on healthcare privatization and its association with access to medical care in Saudi Arabia. J. Infect. Public Health, 10: 258-268.

Alkraiji, A., O. El-Hassan and F. Amin, 2014. Health informatics opportunities and challenges: Preliminary study in the cooperation council for the Arab States of the Gulf. J. Health Inf. Dev. Countries, Vol. 8,

Almalki, M., G. Fitzgerald and M. Clark, 2011. Health care system in Saudi Arabia: An overview. Eastern Mediterr. Health J., 17: 784-793.

Almalki, M.J., 2012. Quality of work life and turnover intention in primary healthcare organisations: A cross-sectional study of registered nurses in Saudi Arabia. Ph.D Thesis, Queensland University of Technology, Brisbane, Australia.

Almasabi, M., 2015. The impact of accreditation on quality of care in accredited public hospitals in Saudi Arabia: A mixed methods study. Ph.D Thesis, Faculty of Medicine, Nursing and Health Sciences, Monash University, Melbourne, Australia.

Alnaif, M.S., 2006. Physicians perception of health insurance in Saudi Arabia. Saudi Med. J., 27: 693-699.

Alshahrani, M.S., 2017. Effect of private versus emergency medical systems transportation in motor vehicle accident victims: Trauma Center Experience in Saudi Arabia. J. Family Commun. Med., 24: 30-33.

Alshamsan, R., H. Leslie, A. Majeed and M. Kruk, 2017. Financial hardship on the path to universal health coverage in the Gulf States. Health Policy, 121: 315-320.

Altuwaijri, M.M., 2008. Electronic-health in Saudi Arabia. Just around the corner? Saudi Med. J., 29: 171-178.

Al-Sharqi, O.Z. and M.T. Abdullah, 2013. Diagnosing Saudi health reforms: Is NHIS the right prescription?. Intl. J. Health Plann. Manage., 28: 308-319.

Anonymous, 2016. Key indicators. Central Department of Statistics and Information, Riyadh, Saudi Arabia.

Bah, S., H.H.A. Almutawa, N.F.M. Alassaf, M.S. Al-Hareky and A.S.M. Hashishi *et al*., 2015. Pilot study of reimbursement practices in private healthcare centers in the Eastern Province of Saudi Arabia: To what extent do they meet international best practices?. Perspect. Health Inf. Manage., 12: 1-7.

Baker, J.J., R.W. Baker and N.R. Dworkin, 2017. Health Care Finance. Jones & Bartlett Learning, Burlington, Massachusetts, USA., ISBN:9781284118216, Pages: 610.

Ballal, S.G., H.O. Ahmed and A.M. Sebiany, 2002. Occupational health in Saudi Arabia. Occup. Med., 17: 491-507.

Barakah, D.M. and S.A. Alsaleh, 2011. The cooperative insurance in Saudi Arabia: A nucleus to health reform policy. Proc. Intl. Conf. Inf. Finance, 1: 6-10.

Boulanouar, Z. and F. Alqahtani, 2016. IPO underpricing in the insurance industry and the effect of Sharia compliance: Evidence from Saudi Arabian market. Intl. J. Islamic Middle Eastern Finance Manage., 9: 314-332.

Bowen, W.H., 2014. The History of Saudi Arabia. 2nd Edn., Greenwood Publishing Group, Westport, Connecticut, USA., ISBN:978-1-61069-876-4, Pages: 197.

Carpentier, P.J., 2012. The risk of getting paid: Why ICD-10-CM may increase physician liability under the false claims act. Quinnipiac Health L. J., 16: 117-143.

Cascardo, D., 2014. Physician challenges in 2015. J. Med. Pract. Manage. MPM., 30: 395-398.

Dawoud, S.O., A.M.K. Ahmad, O.Z. Alsharqi and R.M. Al-Raddadi, 2016. Utilization of the emergency department and predicting factors associated with its use at the Saudi Ministry of Health General Hospitals. Global J. Health Sci., 8: 90-106.

Determann, M., 2010. A History of the Arabian Peninsula. In: Bulletin of the School of Oriental and African Studies, Al-Semmari, S.K. (Ed.). University of London, London, England, UK., pp: 318-319.

Gallagher, E.B., 2002. Modernization and Health Reform in Saudi Arabia. In: Health Care Reform Around the World, Twaddle, A.C. (Ed.). Auburn House Publisher, London, England, UK., pp: 181-197.

Hazzazi, H., 2018. Hospital privatization making headway. Saudi Gazette, Jeddah, Saudi Arabia. http://saudigazette.com.sa/article/526392/SAUDI-ARABIA/Hospital-privatization-makingsa-headway.

Ishfaq, M., F.A. Qadri, K.S.M. Abusaleem and M. Al-Zyood, 2016. Measuring quality of service from consumer's perspectives: A case of healthcare insurance in Saudi Arabia. Health Sci. J., 10: 1-11.

Jane, K., 2017. Vision 2030 and Saudi Arabia's social contract austerity and transformation. Chatham House, London, England, UK. https://www.chathamhouse.org/sites/files/chathamhouse/publications/research/2017-07-20-vision-2030-saudi-kinninmont.pdf.

Jannadi, B., H. Alshammari, A. Khan and R. Hussain, 2008. Current structure and future challenges for the healthcare system in Saudi Arabia. Asia Pacific J. Health Manage., 3: 43-50.

Khaliq, A.A., 2012. The Saudi health care system: A view from the minaret. World Health Popul., 13: 52-64.

Khan, M., 2016. Saudi Arabia's vision 2030. Defence J., 119: 36-42.

Khouja, T., 2013. Reform of financing healthcare services in the GCC: Focus on establishing health insurance system in KSA. Master Thesis, University of Pittsburgh, Pittsburgh, Pennsylvania.

Kimura, S., T. Sato, S. Ikeda, M. Noda and T. Nakayama, 2010. Development of a database of health insurance claims: Standardization of disease classifications and anonymous record linkage. J. Epidemiol., 20: 413-419.

Kose, M.R., B.B. Basara, C. Guler and G.K. Yentur, 2013. Health Statistical Yearbook. Republic of Turkey Ministry of Health General Directorate of Health Research, Ankara, Turkey, ISBN:978-975-590-509-9, Pages: 197.

Kumar, P.D., 2016. Politics and universal health coverage. New Engl. J. Med., 374: 494-494.

MOH, 2011. Health Statistical Year Book. Ministry of Health, Saudi Arabia.

Mansuri, F.A., A.H. Al-Zalabani, M.M. Zalat and R.I. Qabshawi, 2015. Road safety and road traffic accidents in Saudi Arabia: A systematic review of existing evidence. Saudi Med. J., 36: 418-424.

Marusic, D. and V.P. Rupel, 2016. Health care reforms. Slovenian J. Public Health, 55: 225-227.

McHale, T., 1980. A prospect of Saudi Arabia. Int. Affairs, 56: 622-647.

Miles, M., H. Latham and J. Biles, 2016. The Australian and New Z ealand Health Care Systems. In: Chronic Care Nursing: A Framework for Practice, Deravin-Malone, L. and J. Anderson (Eds.). Cambridge University Press, Cambridge, England, UK., ISBN:978-1-316-60074-0, pp: 64-76.

Ministry of Health, 2005. Health Statistical Yearbook. Ministry of Health, Riyadh, Saudi Arabia,.

Ministry of Health, 2010. Health Statistical Yearbook. Ministry of Health, Riyadh, Saudi Arabia,.

Ministry of Health, 2012. Health Statistical Yearbook. Ministry of Health, Riyadh, Saudi Arabia,.

Ministry of Health, 2014. Health Statistical Yearbook. Ministry of Health, Riyadh, Saudi Arabia,.

Ministry of Health, 2015. Health Statistical Yearbook. Ministry of Health, Riyadh, Saudi Arabia,.

Mufti, M.H., 2000. Healthcare Development Strategies in the Kingdom of Saudi Arabia. Springer, New York, USA., Pages: 137.

Mugapish, M. and A. Hasan, 2016. The success of health insurance for Saudis citizens: Hospital privatization in Saudi Arabia. Eur. J. Bus. Manage., 8: 183-192.

Mulla, A., 2001. Privatization of General Hospitals and its Applications in Saudi Arabia. King Fahad National Library, Riyadh.

Mustofa, A., 2016. Contesting welfare state: Health care system in Australia. J. Kajian Wilayah, 2: 2-18.

Niblock, T., 2004. Saudi Arabia: Power, Legitimacy and Survival. Routledge, Abingdon, England, UK., ISBN-13:978-0-415-30310-1,.

Nicholls, R., 2016. Capacity management in healthcare services. Med. Maestro Mag., 16: 2250-2253.

Ong, D., 2009. The International Students Handbook: Living and Studying in Australia. UNSW Press, Kensington, ISBN:978-1-92141-075-8, Pages: 260.

Palmer, G.R. and S.D. Short, 2000. Health Care and Public Policy: An Australian Analysis. 3rd Edn., Macmillan Publishers, London, England, UK., ISBN:978-0-7329-6340-8, Pages: 399.

Polyzos, N., H. Karanikas, E. Thireos, C. Kastanioti and N. Kontodimopoulos, 2013. Reforming reimbursement of public hospitals in Greece during the economic crisis: Implementation of a DRG system. Health Policy, 109: 14-22.

Ram, P., 2014. Management of healthcare in the Gulf Cooperation Council (GCC) countries with special reference to Saudi Arabia. Intl. J. Acad. Res. Bus. Soc. Sci., 4: 24-41.

Roberts, R.F., K.C. Innes and S.M. Walker, 1998. Introducing ICD-10-AM in Australian hospitals. Med. J. Aust., 169: S32-S35.

Saati, A., 2000. Principles of Hospital Management: Application in Saudi Arabia. King Fahad National Library, Riyadh.

Spragens, L., 2013. What are the Arguments that Show that Palliative Care is Beneficial to Hospitals?. In: Evidence-Based Practice in Palliative Medicine, Goldstein, N.E. and R.S. Morrison (Eds.). Elsevier, New York, USA., ISBN:978-1-4377-3796-7, pp: 407-415.

Starfield, B., 2000. Is US health really the best in the world? J. Am. Med. Associat., 284: 483-485.

Thompson, M.C., 2017. Saudi vision 2030: A viable response to youth aspirations and concerns?. Asian Affairs, 48: 205-221.

Timothy, M., 2011. The impact of healthcare reform on revenue-cycle management and claim coding. J. Health Life Sci. Law, 4: 159-180.

Tran, J., D. Cennimo, S. Chen and E.L. Altschuler, 2013. Teaching billing and coding to medical students: A pilot study. Med. Educ. Online, 18: 1-2.

Tuohy, C.H., 1999. Accidental Logics: The Dynamics of Change in the Health Care Arena in the United States, Britain and Canada. Oxford University Press, ýOxford, England, UK.,.

Uluc, C.I. and M. Ferman, 2016. A comparative analysis of user insights for e-health development challenges in Turkey, Kingdom of Saudi Arabia, Egypt and United Arab Emirates. J. Manage. Marketing logist., 3: 176-189.

WHO., 1978. Alma Ata Declaration. World Health Organization, Geneva, Switzerland,.

WHO., 2000. The World Health Report 2000: Health Systems; Improving Performance. World Health Organization, Geneva, Switzerland, Pages: 221.

Wagstaff, A. and M.P. Pradhan, 2005. Health Insurance Impacts on Health and Nonmedical Consumption in a Developing Country. World Bank, Washington, D.C., USA.,.

Walston, S., Y. Al-Harbi and B. Al-Omar, 2008. The changing face of healthcare in Saudi Arabia. Ann. Saudi Med., 28: 243-250.

Willis, E., 2009. The Australian Health Care System. In: Understanding the Australian Health Care System, Willis, E., L. Reynolds and H. Keleher (Eds.). Elsevier, New York, USA., ISBN:9780729538619, pp: 3-14.

Willis, E., L. Reynolds and H. Keleher, 2016. Understanding the Australian Health Care System. 3rd Edn., Elsevier, New York, USA., ISBN:9780729585460, Pages: 512.

Wynbrandt, J., 2010. A Brief History of Saudi Arabia. 2nd Edn., Infobase Publishing, New York, USA., ISBN:978-0-8160-7876-9, Pages: 364.

Yazbeck, A.S., T.S. Rabie and A. Pande, 2017. Health sector reform in the Middle East and North Africa: Prospects and experiences. Health Syst. Reform, 3: 1-6.

Young, K.E., 2016. Can the Saudi economy be reformed?. Curr. Hist., 115: 355-359.

Yusuf, N., 2014. Private and public healthcare in Saudi Arabia: Future challenges. Intl. J. Bus. Econ. Dev., 2: 114-118.