

# Barriers to Implementing E-health Insurance in Saudi Arabia

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## Abstract

E-health insurance is a fairly new concept in some parts of the world, while some countries have made great progresses in this area, others fall behind owing to a variety of factors. Countries are in a different technological, economic, and professional state, hence they are bound to differ in the implementation of e-health insurance. This study recognizes that many people around the world are yet to acquire an insurance cover despite the continuing adoption of technologies that make the process easier, faster, and convenient. Therefore, e-health insurance is investigated from the perspective of the Saudi Arabian market. The key objectives included assessing the progress that Saudi Arabia has made in e-health; investigating the people's willingness to embrace e-health insurance, and determining the factors delaying proper implementation of e-health in the country. A qualitative methodology was utilized as it gives access to people's opinions, attitudes, or perceptions towards different issues of interest. A semi-structured interview was used to collect data from three groups of people that are involved in the implementation of e-health insurance; 10 public representatives, 10 healthcare practitioners, and 10 government representatives selected through purposive sampling. The study results indicated that e-health insurance was still at its developing stages in Saudi Arabia. A large part of the population is yet to embrace e-health insurance for reasons such as the lack of awareness. Many people still do not understand the insurance concept and the benefits associated with health insurance. Others barriers to the implementation of e-health insurance in Saudi Arabia include technological barriers, negative attitude, misconceptions about insurance, and religious beliefs. Awareness programs are recommended to solve some of the issues that make it hard for Saudi Arabians to embrace e-health insurance. The country also needs effective strategies to make e-health insurance more accessible to the masses.

**Keywords:** Technology adoption; E-health Insurance in KSA; e-health insurance system ; implementing e-health insurance; Developing Countries; e-health marketing

## 1.0 Introduction

### 1.1 Overview and Definitions of E-health Insurance

International organizations such as WHO and the EU have provided different but related definitions for e-health. WHO (2017) views e-health as the secure and cost-effective manner in which ICT is applied in different aspects of healthcare, including health, research, and service delivery. On the other hand, the EU categorizes the different aspects of e-health into four groups including clinical information systems, telemedicine/homecare, and integrated health information networks. The last group, NCSC non-clinical systems, incorporates educational matters for both healthcare practitioners and the public (O'Connor, 2016). Although such institutions are yet to agree on a specific definition for e-health, it is evident that modern information and communication technologies are involved. These technologies are believed to boost efficiency and effectiveness in the delivery of healthcare services. For example, the use of electronic medical systems is seen as a means for reducing healthcare costs, minimizing errors, and ensuring the provision of quality care (Gibbons, 2008; Menachemi & Collum, 2011; Berkowitz, 2016). Many people are also glad that they can access large amounts of medical information online, most of which is considered trustworthy. The definitions of e-health make it easy to understand what e-health insurance entails. Using the available technologies, people are able to obtain insurance coverage to cater for their medical expenses depending on the terms of the cover. The patients can seek for reimbursement directly from the insurer when they incur medical expenses or have the insurer pay directly to the healthcare provider. Whether applied online or otherwise, people around the world are highly encouraged to get a medical cover.

### 1.2 E-health Insurance in Developed Countries vs. Developing Countries

Many people from different regions around the world have to part with a large sum of money to provide for their medical needs. Some go to the extent of borrowing or selling their personal items. This is evident in a study conducted by Kruk, Goldmann and Galea (2009) in forty low income countries. The study results indicated that developing countries have failed to offer adequate protection to their citizens against the financial risks associated with the search for quality healthcare. Consequently, 25.9% of the families examined resulted to borrowing or selling their items. Such cases were most prevalent in households with the lowest income, and regions with under-developed health insurance systems. Han (2012) shares similar opinions, presenting the lack of financial protection as one of the major problems facing the healthcare sector in the developing countries. He acknowledges that many of these countries have initiated health reforms but some of them have been unsuccessful. According to O'Connor (2017), the economic risk in healthcare could be mitigated through the application of methods that have been successfully implemented in many developed countries. These include the

adoption of tax-based health financing and the provision of social insurance. Kruk et al. (2009) agree that many people in developing countries have to make large out-of-pocket payments for medical services because they do not have a health insurance cover. They argue that governments in these regions are limited in their ability to provide health insurance, hence the need to consider private insurance. Senthilkumar, et al. (2017) attributes high health expenditures in developing countries to the almost universal absence of health insurance. Evidently, much has to be done to ensure the adoption of e-health insurance or health insurance in general.

On the other hand, developed countries have made great progresses in ensuring that their people have health insurance covers. A Chen, Ellis and Luscombe (2014) comparison of health insurance systems in different high-income countries shows that most of them provide universal coverage for this people. In countries such as Canada and Japan, 100% of the people have an insurance cover, while the US has a lower 83%. Today, Canada provides universal health coverage for its citizens having introduced compulsory health insurance decades ago (Ridic, Gleason & Ridic, 2012). These are impressive figures compared to the developing countries where only a small part of the population is willing or able to get health insurance coverage; not to mention technological limitations that hinder the provision of insurance services via online platforms. However, it should be noted that health insurance systems vary from one developed country to the next.

### *1.3 Problem Statement*

The brief literature provided above shows that researchers have made attempts to investigate issues surrounding health insurance, in both developing and developed countries. Some have made comparisons between the health insurance situations in different countries, while others have made suggestions that suit the needs of the respective groups. However, there is little information the adoption of e-health insurance in semi-developed countries such as Saudi Arabia. Most researchers seem to focus on the incorporation of ICT in healthcare infrastructure, care provision, and not insurance, which is an essential part of healthcare. This study therefore addresses this gap in literature, examining the barriers facing the implementation of e-health in Saudi Arabia.

### *1.4 Objectives*

To fill the research gaps highlighted, this paper will seek to meet the following objectives.

- Explore the progress made by Saudi Arabia in the adoption of e-health
- Assess Saudi Arabian's willingness and ability to get e-health insurance coverage
- Determine the barriers to the adoption of e-health insurance in Saudi Arabia

## **2.0 Literature Review**

### *2.1 Importance of E-health Insurance from Marketing Perspective*

The importance of e-health insurance can be examined from two perspectives. First, there is the importance of the insurance cover, despite the process used to obtain it, then there are the added benefits that come with the application of ICT in this process. Health insurance coverage is seen as a convenient, safe, and less costly means of paying for healthcare services (Sapa, Phunde & Godbole, 2014). On the other hand, e-health insurance processes such as electronic claims submission save time for both the patient and the medical practitioner (AMA, 2013). Completing the process manually is likely to consume time that could be used for other important activities. The electronic system also minimizes errors as the claim fields can be automatically audited before they are sent to the insurer. In addition, the payer can receive all the claim details instantly and solve any issues that arise without a physical meeting with the patients. Costs for postage, mailing, and other related processes are eliminated (Senthilkumar et al., 2017; Fakhri et al., 2014). All parties involved are also able to track the progress of the claim online, which means no queues or meetings unless necessary. These people are notified as soon as the process is complete, allowing the patients to monitor their healthcare expenditure. Insurance providers are likely to market their products by making these benefits known to potential clients.

### *2.2 Is the Saudi Market Ready to Adopt E-health Insurance?*

The digitization of processes in different economic sectors continues to become popular in countries around the world. Every institution seeks to make initiatives that promise quality services and higher efficiency at a low cost. Saudi Arabia is no exception, with the incorporation of ICT in its healthcare sector termed as a developing initiative (Uluc & Ferman (2016). Although not fully implemented, the country recognizes that e-health is likely to bring great benefits. This issue has been discussed in conferences with emphasis on e-health policies, health insurance, and healthcare infrastructure. Projections made by the MOH showed that Saudi Arabia could save up to 12% of its annual health budget by implementing e-health. The implementation of e-health would also lead to an improvement in cooperate health insurance (Ahmad, 2016).

Evidently, e-health initiatives in Saudi Arabia are quite promising and should be pursued relentlessly. The fact that the government is willing to allocate millions of dollars to the implementation of e-health projects is an

indication that the country is ready for e-health insurance. Besides, the country has experienced changes in recent years due to the development of new technologies. People are spending more time on the internet than they did a few years ago. The older population may be a bit displeased with the continuing changes, but the younger population has openly embraced modern technologies. According to Simsim (2012) Saudi Arabia seeks to build a digital economy by embracing IT to boost the productivity of all economic sectors. Bah et al. (2011) also consider the development of e-health to be among the priorities of the Saudi Arabian government. Therefore, the Saudi Arabian market is ready to adopt e-health insurance.

### *2.3 Existing Obstacles in the Implementation of E-health Insurance in KSA*

Examining the barriers for the implementation of e-health in KSA give some insights into the factors that may make it difficult for Saudi Arabia's to seek e-health insurance. Khalifa (2013) investigated the adoption of Health Information Systems (HIT) in healthcare facilities within Saudi Arabia. His study showed that many people were not aware of the benefits of incorporating information and communication technologies into healthcare processes. Others did not know how to use the advanced systems, while some were not very knowledgeable in the use of computer applications. Hospitals also lacked the monetary resources required to initiate e-health processes.

Another investigation into e-health in Saudi Arabia by Alsulame, Khalifa and Househ (2015) linked the failure to embrace e-health to technological, financial, and professional limitations. People's rejection of e-health is also attributed to privacy and confidentiality concerns, absence of technological skills, and cost-related fears (Vance et al., 2015; Ajami & Bagheri-Tadi, 2013). Therefore, the factors delaying the implementation of e-health insurance in KSA include lack of awareness or misinformation about health insurance. Insurance covers a risk once it occurs, hence some people may not see the need to get insurance coverage for events that are not very frequent, based on their personal experiences. They would rather incur the expenses when need arises instead of making regular payments to the insurer. Additionally, adopting e-health insurance is difficult for people that are not familiar with the internet and modern technologies in general. Personal perceptions towards health insurance, family income, and distance from the relevant authorities also hinder the implementation of e-health insurance plans (Dror et al., 2016; Nosratnejad, Rashidian & Dror, 2016).

### *2.4 The Future of E-health Insurance in KSA*

The Saudi government is keen on making monetary allocations towards projects that seek to improve healthcare service delivery. Among these projects are e-health initiatives some of which have been implemented in the country. For example, some of the healthcare institutions have established electronic health/medical records (Alsulame et al., 2015). However, much more has to be done to reap the full benefits of e-health. The future of e-health insurance in the country goes hand-in-hand with that of the overall e-health initiatives. If e-health fails, then e-health insurance fails (Aldosari, 2016). In an e-health strategy published by the Saudi MOH, various ICT challenges in the healthcare sector identified. For instance, MOH acknowledges that modern information/communication technologies are not universally available throughout the country. Accurate and comprehensive information about patients is not readily available. There are also planning issues due to the increased numbers of visitors (Alyemeni, 2013). Such problems can be converted to opportunities for the improvement of healthcare. For example, by creating awareness and investing in modern technologies, the MOH can foster e-health, boosting the adoption of e-health insurance in the process. Establishing systems that make patient information easily accessible can also be very useful in promoting e-health insurance.

## **3.0 Methodology**

### *3.1 Research Method*

As earlier mentioned, this study seeks to determine the barriers to the implementation of e-health insurance in Saudi Arabia. To obtain the most reliable information, it is important to get information from the people that are directly involved or affected by e-health insurance. This makes the qualitative methodology the most suitable approach for this study. The qualitative research method has been used extensively to explain social phenomena (Charmaz, 2014 ; Williams, 2007). It gives access to people's opinions and attitudes towards different issues of interest, unearths the factors underlying the development of certain cultures, and gives insights into the impact of significant events in people's lives. A researcher can choose different approaches within the qualitative research design depending on the research needs. For example, one may conduct a qualitative study in the form of a case study; focusing on a particular institution, an individual, or any other single unit. Ethnography is another form of qualitative research that focuses on matters relating to culture, religion, and geographical location (Birks & Mills, 2015). Some of the issues that may be addressed by such studies are gender inequality within a particular community or the growth of a certain religion. Other qualitative studies can be phenomenology or be based on the grounded theory. Qualitative research goes past numbers and statistics to reveal hidden attitudes and feelings that are crucial in understanding different phenomena. Collecting information directly from the relevant parties

makes it possible to seek clarification.

### *3.2 Data Collection Tool*

All information required for this research is collected through interviews. Different researchers have provided tips for effective interviews, with Alshenqeeti (2014) arguing that interviews should be both illustrative and reflective. They should also be detailed and flow smoothly. For the current study, simple but well-thought-out questions are constructed to collect information from the different groups of interest. There are several types of interviews, with the most flexible being unstructured interviews where the interviewees has the freedom to elaborate or give explanations (Jamshed, 2014). However, there are chances of drifting from the main issue of concern or obtaining a lot of irrelevant data. On the other hand, structured interviews restrict the interviewees to the pre-formulated interview questions. The interviewee has little or no room for elaboration why the interviewer may not be able to interrupt or offer further explanation (Alsaawi, 2014). This indicates that data collected through structured interviewed is likely to lack richness. To tap into the strengths of both structured and unstructured interviews, while their weaknesses, this research relies on semi-structured interviews. Although semi-structured interviews have pre-planned questions, there is room for elaboration and explanation for both the interviewer and the interviewees. This way, the interview is conducted in a manner that is not so restrictive that it hinders the collection of essential information or so flexible that it causes the participants to deviate from the most important issues.

### *3.3 Sampling Technique*

The participants in this study were selected through purposive sampling, a technique that is widely used in qualitative research. This sampling method is highly useful where the researcher seeks to use minimal resources as it makes it possible to identify and select information-rich cases (Palinkas et al., 2015). The researcher selects people that are experienced in the area of study or are knowledgeable enough to respond to questions regarding a particular phenomenon. There are several purposive alternatives that researchers can apply when selecting participants. For example, purposive sampling may involve the selection of the stakeholders responsible for the design, or administration of the program under investigation. The researcher may also select people that meet a particular criterion; say age, gender, or profession. Negative case sampling, theory guided sampling, and typical case sampling are other forms of purposive sampling (Palys, 2008).

### *3.4 Data Collection Process*

This study began with the sampling process where a total of thirty participants were selected. There were three groups of people who could provide reliable information about e-health implementation in Saudi Arabia. The first group comprised of healthcare professionals who were directly involved with matters of e-health, understood the progress made, and could comment on matters of e-health insurance in the country. The second group was made up of government representatives in the healthcare sector who were at the head of promoting the acquisition of health insurance covers among Saudi Arabians. The last group comprised of members of the public, some of whom were yet to embrace e-health insurance. Purposive sampling was used to select ten willing representatives from each of these groups.

## **4.0 Findings**

The interview findings give insight into the implementation of e-health insurance in Saudi Arabia from the perspective of the public, the government, and that of healthcare professionals. All ten members of the public interviewed were aware of health insurance through their personal research; the training and awareness programs run by the government, as well as the advertisements made by both the government and insurers. However, only four had an active health insurance cover. The rest did not seem to understand the essence of an insurance cover. They had heard that acquiring such coverage would be very beneficial but had never made an effort to acquire one. The ten participants provided varying views concerning e-health. While some of them linked e-health to the use of internet to access medical services, others associated it with the use of modern technology in the healthcare sector. They hardly linked e-health with insurance, which shows that most of them did not know that they could use the internet to access all insurance services. They were not aware that online claim processing and related activities were faster and more convenient for persons seeking a health insurance cover. Therefore, one of the difficulties to the implementation of e-health insurance was the lack of awareness. Were the people aware of the existence of online insurance services, there are chances that more of them would have acquired the necessary coverage. This is especially likely because some of the interviewees claimed that they did not get any free time to visit insurers. Lack of funds was another hindrance mentioned by the participants. They did not have the funds to make regular payments for the insurance cover, hence would rather make off-the-pocket payments when they got sick. Others viewed insurance as some form of 'ponzi scheme' through which they would lose their money with little benefit, especially those that rarely visited hospitals.

The ten healthcare professionals seemed to be well-versed with the country's efforts to implement e-health. They acknowledged that e-health was gradually transforming the healthcare sector through the adoption of more effective and efficient systems. For example, one of the health practitioners mentioned that keeping patient records had been made much easier by the electronic recording systems introduced in some of the healthcare facilities. However, the health practitioners agreed that, while many Saudi Arabians knew about health insurance, they were not aware of the e-health insurance systems established. Insurance companies usually have marketing representatives that make their products known to the public and make efforts to win new clients. Therefore, through these representatives and advertisements made through different media outlets, a large section of the Saudi Arabian adult population had been informed about the available insurance services. According to the healthcare professionals, various factors make it difficult to implement e-health insurance in Saudi Arabia. First, many people are yet to understand the whole concept of insurance. One wonders why they have to make monthly contributions to cover a risk that may not occur in the near future. The amount of uncertainty that comes with insurance also cause concerns among the Saudi Arabian population because most of them subscribe to the Islam religion. Islam is against any business operations that arouse great uncertainty. Moreover, lack of familiarity with the existing technologies hinder the older population from accessing insurance services online. They are not willing to go physically to the insurance companies. In a positive light, the health professionals recognized that Saudi Arabia was beginning to feel the impact of e-health insurance. They suggested more awareness campaigns to ensure that the public understand what health insurance entails, its importance, and how they can receive better service in this area through the use of modern technologies.

The last group of interviewees, government officials, mainly provided views on e-health insurance and its implementation from the general perspective of the Saudi Arabian population. They were fewer personal views in the responses to the interview questions, compared to the other two groups of interviewees, healthcare professionals and the public representatives. All the ten government officials were well-versed with e-health, e-health insurance, and related concepts. All of them also had a healthcare insurance cover, as it was part of the requirement for the different positions they held in the healthcare sector. In fact, arrangements for a health insurance cover were made as soon as each of them was employed by the government. Aside from being a workplace required, the government representatives acknowledged the importance of seeking a health insurance coverage. While some people may be reluctant to make monthly contributions, it is known that people do not always have ready cash to make off-the-pocket payments in hospitals. This is especially true for emergency cases that require extensive medical procedures. People can alleviate the stress associated with such cases by acquiring an insurance cover. Being at the forefront of incorporating new technologies in healthcare, the government officials were quick to highlight the benefits of e-health insurance. They associated it with higher levels of efficiency, simplicity, and convenience compared to the traditional systems. To the officials, the process used to acquire the health coverage was of little significance. Of most importance was the acquisition of an insurance cover by means was available to an individual. The government officials were glad that modern technologies were changing insurance and other key sectors in Saudi Arabia. However, they associated the slow progress in the implementation of e-health insurance to lack of awareness, negative attitudes towards insurance, and the older population's unfamiliarity with modern technologies.

## 5.0 Discussion

All the interviews provided enough information that helps meet the objectives of this study: exploring the progress made by Saudi Arabia in the implementation of e-health, determining the people's willingness and ability to seek e-health insurance, and identifying the barriers to the implementation of e-health insurance in the country. First, it is evident that Saudi Arabia's e-health systems are still in their developing stages, as the masses are yet to understand what e-health entails. This are the same sentiments elicited by Qurban and Austria (2015) who term the incorporation of ICT in Saudi Arabia's healthcare sector a developing. They also concur that the parties responsible for the implementation of e-health initiatives are well-aware of the benefits it could bring to the country (Aldosari, 2016). Greater advancements in e-health would see a large part of the population understand how the different e-health systems work, and their contributions in the healthcare sector. It is undeniable that the government has made significant progress in incorporating advanced information and communication systems into Saudi Arabia's healthcare operations (Ahmad, 2016). However, the country can reap many more benefits by adopting better strategies to reach the masses.

Regarding people's willingness and ability to adopt e-health insurance, various issues arise. People's choice to seek a health insurance cover is influenced by their own views and perceptions, as well as external factors such as the government and the Islamic religion (Uluc & Ferman, 2016). The factors that influence people's willingness to embrace e-health insurance, are the very factors that affect the overall implementation of e-health insurance in Saudi Arabia. Take for example, religious beliefs. Every person that is strongly rooted in a particular religion seeks to align all actions and decisions to its teachings. This applies to all aspects of life including finance and business operation, making it necessary for the people to make religious considerations

when informed about insurance. Insurers sell uncertainty while the Islamic religion teaches against indulging businesses operations that are marred with uncertainty. For this reason, contention surrounding the provision of insurance services is inevitable. Most of the other factors that bar the Saudi Arabian population from seeking e-health insurance coverage point back to the lack of awareness (Alkrajji, 2016). With the lack of awareness comes the lack of knowledge which result in misconceptions about very important issues such as health insurance. As earlier mentioned, some members of the public consider insurance a ‘Ponzi scheme’. It is common knowledge that Ponzi schemes are operated by fraudsters who seek quick returns but this is not the case in insurance. While fully aware that Ponzi schemes could crop up within the insurance sector, any legally established and operated insurance firm delivers services in accordance to the set terms. Any contrary action could stir the fury of the insured causing them to take drastic measures, which include initiating court procedures. The public only view insurance as a Ponzi scheme when they do not fully understand the underlying concepts. They need to understand the need for regular payments together with the manner in which benefits are disbursed (Aldosari, 2016 ). They may also need to understand what makes an insurance cover a better alternative over out-of-the-pocket payments.

Some of the interviewees blamed their lack of a health insurance cover to the long queues that they are not willing to follow insurance companies. This issue too arises from the lack of awareness. With the increasing technological advancements, many insurance companies have established online systems through which any interested persons can apply for their insurance cover. Once the cover is in place, the insured are able to track their payments online, communicate with the insurer, and even follow up on all payments made in hospitals. The systems, as AMA (2013) notes, are convenient, safe, and affordable. The public no longer has to worry about long queues whenever they seek assistance for the insurance providers. The hospital staff also have an easier time filing reports to the insurance companies. The government should therefore put more effort in informing the public about the available e-health insurance services in the country. There are also seems to be great discrepancies in the manner in which the Saudi Arabian population is informed about e-health insurance and e-health in general. The elite and professional groups such as the healthcare practitioners are well-informed about matters of e-health while the larger population is yet to get much information about such services. This explains why all the healthcare practitioners interviewed had a health cover, compared to less than half of the public representatives. The government needs to reach the population that needs the information most.

Healthcare is among the most important sectors in any country so scholars have sought to investigate a variety of issues within this area. However, most of them have focused on medication, hospital equipment, and staffing. Little concern has been shown to health insurance and related concepts; not to mention e-health insurance which incorporates other technological aspects. Therefore, by looking into e-health insurance, this study makes an important contribution to the available literature. The study insights into an area that is yet to be fully exploited by researchers, opening many other opportunities for research in the future. Most people that are directly involved with e-health insurance are well-represented in the study: healthcare practitioners, the public, and government representatives. The study results are therefore a representation of the general perceptions and opinions towards e-health insurance in Saudi Arabia. They do not necessary represent the state of e-health insurance in other regions.

## 6.0 Conclusion

So far, the study has provided the main factors delaying the implementation of e-health insurance in Saudi Arabia. While some of the obstacles can be overcome through a personal change in attitude, others require swift intervention by the relevant governmental institutions. If the masses stop viewing insurance as ‘robbery’ or a ‘Ponzi scheme’, they are likely to embrace e-health insurance. They should be able to see how the benefits of e-health insurance supersede the existing costs and uncertainties. This can be achieved through research and a change in attitude. However, the highest responsibility lies with the government institutions that are tasked with the implementation of new systems in the healthcare sector. They are expected to ensure that the public knows and understand e-health insurance and its importance. The same institutions can come up better insurance strategies, ensuring that more of the locals acquire a health insurance cover.

The current study opens up numerous research opportunities for those interested in matters of healthcare and insurance. For instance, researchers can delve deeper into the attitudes and behaviors surrounding people’s failure to embrace e-health insurance. There could be other hidden factors that cause people to develop a negative attitude towards e-health insurance. Conducting such investigation would help the responsible parties devise strategies that are geared towards specific issues that affect the healthcare sector, instead of adopting general measures that may have little impact. Future research may also focus on the technological aspect of e-health insurance, which according to the available literature affects people’s ability to acquire e-health insurance. How can technological hindrances to the adoption of e-health insurance be eliminated? Which alternatives do the uneducated have in regards to e-health insurance? These are some of the questions that researchers should tackle in their future studies.

Researchers may also need to examine the implementation of e-health insurance in other countries. Such studies would add to the available research; make it possible to make comparisons between different regions, and allow the countries that have under-developed e-health systems to borrow ideas from countries whose systems are well-advanced. In addition, this research contributes to the conversation about e-health in Saudi Arabia. Insurance is only one of the many issues that comprise e-health. Therefore, researching on e-health insurance is likely to motivate people to explore the other issues including innovations in the treatment of chronic diseases, the creation of more effective medicine, and the development of high-performing hospital equipment.

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