

Implementation Strategy of New E-Health System

Mohammed Hassan Alharbi¹, Marwah A. Alharbi², Abdulaziz O. Alotaibi³

^{1,3}Senior Physical Therapists, ²Senior Clinical Dietitian
Health Affairs at the Ministry of National Guard

Abstract

The implementation of E-Health systems, particularly Telemedicine, is a crucial aspect of the National Transformation Program (NTP) in Saudi Arabia. This paper examines the strategic implementation of a new E-Health system, focusing on the Saudi Telemedicine Network (STN) and its potential to enhance healthcare delivery across urban and rural areas. E-Health encompasses a range of technologies designed to improve healthcare efficiency, quality, and accessibility. The paper outlines the goals of E-Health, including improving patient access, reducing wait times, and enhancing patient self-management. It also highlights the organizational benefits such as increased patient satisfaction and reduced operational costs. Despite its advantages, the paper identifies significant barriers to successful implementation, including technological, financial, and cultural challenges. Recommendations for overcoming these barriers are provided, emphasizing the need for a clear vision, robust financial planning, effective infrastructure, and comprehensive training. The paper concludes that while E-Health offers substantial benefits, its success depends on addressing both organizational and client-related challenges effectively.

Introduction

As per the National transformation Program (NTP), The Ministry of Health (MOH) facing a lot of pressure to meet the NTP goals by providing a high-quality healthcare system and to improve the services provided to all the population as it is a provider and legislator in particular in rural areas. In 2011, MOH started the first program named the Saudi Telemedicine Network (STN) that cover all healthcare facilities and launched a hotline number to communicate with the medical services 937 (Alaboudi et al., 2016).

Electronic Health (E-Health) is term used to describe a variety of ways utilizing electronic means such as telemedicine, videos conference, calls and others means to deliver direct health services, educational information offered by the organization to be utilized by the patient themselves or by the provider to view and follow patient progress or a combination between the providers and the end users. E-Health is aimed to be utilized to improve services efficiency and time to retrieve the data related to the patient as well as improve the quality of the services (Alsulame, Khalifa, & Househ, 2016). As per National Health Information Center (NHIC) "Telemedicine shall be defined as a remote medical practice using information and communication technology (ICT)" (National Health Information Center, 2018).

As to answer the call of the World Health Organization (WHO) to E-Health in developing countries in 2010 (Alsulame et al., 2016), the aim of this study to explain the benefits, goals, barriers and way to achieve the goals in our institution with recommendation to successfully implant the program.

Implementation Goals

The aim of this article is to show how Telemedicine will improve the services provided to the patient with the benefits our institution will gain.

From patient perspective, Telemedicine will allow us to reach for patient in different cities and overcome the proximity problems, and due to its user-friendly approach it is considered to be easy to be used by young and older population, it will improve the communication between the provider and the patients thus

improving the quality and the out-come. It has low impact on patient finance and it improves the patient self-awareness and self-monitoring giving the patient the power to help in managing the health condition and be up to date about his treatment(Menachemi & Collum, 2011). It will improve patients time management as it will reduce the waiting time and missed appointments as well as decrease the readmissions for minor reasons and improve patient adherence to medication as it is a well modality of education (Kruse et al., 2017)

From the institution perspective, it will improve patient satisfaction, reduce the load on the clinics and unutilized times by missed appointment, improve physician satisfaction and increase revenue (Menachemi & Collum, 2011), it has low cost of implementation and grant access to patient in different cities without the need to branch out, will improve the patient awareness and education and improve patient adherence to treatment (Kruse et al., 2017).

Barriers to Achieving Goals

Although the recent literature provides a growth of the benefits of the E-Health in general, there are some draw back and barriers either pre-implementation or after implementation. As most of the program cited as failed, 75% of failed programs was due to abandoning the idea and this percentage raise to up to 90% in developing countries (Alaboudi et al., 2016). This can be attributed to the lack of universal system that can accommodate all the healthcare systems in one module and the lack of financial structure(Menachemi & Collum, 2011). However, most organization are bound to face a common barriers and challenging with some degree of similarities and differences, but there will an induvialorganizational barriers that related to the client based, environmental and financial factors and it need to addressed once identified by key personal(Alaboudi et al., 2016).

We can divide the barriers into consumers barriers that mainly affect the client and their ability to utilized Telemedicine and organization barriers that will help in taking the decision of the worthiness of the program.

From Client perspective is the question of actually needing this program or not and wither it is related to their illness (Welch, Harvey, O'Connell, & McElligott, 2017), and wither or not the telemedicine will consider the patient cultural and religious beliefs (Alaboudi et al., 2016), privacy and information security also is an area of concern (Scott Kruse et al., 2018).

In the study performed by Kruse et al. in 2016 they have identified 11 unique barriers related to the patients. patient age and ability to learn to use telemedicine were in the range of 19% of total barriers identified, The computer literacy, bandwidth of the internet is about 14%, the lack of understanding what is telemedicine and the awareness about the services provided were also about 14%, The high expectation of users accounted for 7%(Scott Kruse et al., 2018).

From an Organization perspective there several factors that impact the decision makers plans before the implementation of the programs such as: the healthcare provider acceptance to the program, the human resources to implement, operate and maintain the program, the support of the stakeholders, the funding, the availability of infrastructures and program service quality(Alaboudi et al., 2016).

Message to the stakeholders

As every new program or initiative has its benefits and draw back, the implementation of the telemedicine in our organization will have more benefits if achieved correctly than drawback which can be minimized and dealt with along the way.

In their article, Alharbi et, al performed a case study to identify the decision makers perception about telemedicine and the found out that telemedicine will reduce the Information technology (IT) cost, will increase the collaboration between different healthcare organization, enhance business agility as well as provide more business opportunity(Alharbi, Atkins, & Stanier, 2017).

Recommendation to successful implementation

In a retrospective look in the literature, we will find that many telemedicine programs had fail to continue or provide a significance change to the community, by taking a deeper look we can identify some of the recommendation to avoid such result by properly structuring the program and introduce it to the public.

First and far most is to establish a vision for the program, a vision that will show what client want and when and where we can achieve it by making the program based on patient needs. Building a long-term financial plan and despite wither the program is non-profit or for-profit program, it is essential to have a clear picture for the future to be sustained(Brebner, Brebner, & Ruddick-Bracken, 2005).

Creating convenient and effective work environment starting by the providers and ending with the end-users that show a commitment from the organization to the client about and by providing the necessary equipment for both parties and make it part of the standard of practice(Mark Vanderwerf, n.d).

Establishing a standard of practice, policy, procedure and protocols, in addition to excellent staff training, good marketing and population awareness about the benefits of the program, suitable infrastructure and conducting continuous auditing and review of the program will assure the continuity of the program to provide for the community and fill the gap between the organization and our patient with proximity issues(Brebner et al., 2005).

Conclusion

In this paper we have discussed many advantages and disadvantages of initiating a tele-medicine program and for the program to be successful, it has to be patient oriented and looking for both the organization and patient benefits. The literature is rich of evidence about the usage of the E-Health approach;however, we need to be careful in implementing a new program without the proper preparation in human resource as we as preparing the infrastructure for the program to be successful.

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