HEALTH INFORMATION SYSTEM (HMIS) IN MALAYSIA

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Abstract

The wide reserves in Information Technology (IT) have contributed to its gradual importance. Societies have benefitted from its progress. Moreover, technology has greatly influenced the satisfaction of patients and the quality of hospitals. The influence of technology has given distinct benefits to IT, unique from other factors that can also contribute the organizational presentation. The benefits of technology may also be recognized in the long run by hospitals. The study gives suggestions on how to relate IT investments to performance and its effect when partnered with technology. The study also provides literature about healthcare management that can be combined with the appropriate control variables in the analyses. The results of the study provide support for the IT-connection observed after given time lags. Such a relation may not be present in cross-sectional or snapshot data analyses. Moreover, results imply the support of the effects of technology that is depended on by hospitals.

Keywords*:* HMIS, ICT & Healthcare.

1. Introduction

According to BayoIdowu et.al (2003), the bourgeoning of Information and Communication Technology (ICT) has been taking root in all life areas. Developing nations are seizing this chance in different sectors, including in the development of healthcare systems.

Information technology has crossed all parts of human life at present. There is a growing dependence on electronic information exchange infrastructure that has grown drastically with each millisecond. Society has grown into an age described as "The Computer Revolution," "The Information Revolution," and "The Binary Age;" all titles of what is now called "The Information Society" (Williams et al 1999 and Asmaet al., 2004). The field of medicine is one of the fields that has reaped the many benefits of this modern age. According to multiple studies, it has paved the way for improved research, diagnosis, and learning (Hayes, 2003; Trevino, 2003).

The HIS aims to create progress within the current system of care through the development of advancements in terms of its news. The procedures area unit is meant to ease the health care state of affairs conducted beneath the HIS. However, much of the literature advised that bound roadblocks were encountered for the adoption and implementation of health data systems and technologies. Shefter and Black noted some strengths and weaknesses of the application. The utilization of innovative and possibly effective eHealth technologies is sweeping the world, but not without public cost. Such implementations require a significant chunk of the national budget (Shefter,2006; Black et al ,2011).

1.1 Management Information Systems in Healthcare

The primary factor that may contribute to the achievement of information systems is the extent to which the healthcare organization has taken into consideration information

management strategies, understanding information systems' role in meeting strategic objectives (Wainwright et.al 2000; Bush et.al 2009; Waldman, 2007). Studies have shown that information management and implementation of information systems area big problem forhealth care organizations because of the absence of strategic thinking (Kalai et.al 2011; Carney 2004;Khatri et.al, 2006; Kivinen 2008;hanmintakan et.al 2009).

Information management in a healthcare organization is development and usage of MIS. As stated by Choo (1998), the administration of information management system reports obtain, create, organize, distribute, and use information. It also includes the policies, resources of information, and information technology. The six closely-related processes embrace (1) identification of data wants, (2) info acquisition, (3) info organization and storage, (4) development of data merchandise and services, (5) info distribution and (6) info use (C.W.Choo 1998, C.W.Choo 1998). Each act needs careful planning, organization, coordination, and control, in the management of information in each healthcare organization (Kalaiet.al 2011).

Managers utilize information in decision-making related to everyday work; this includes planning, organization, creation of staff, coordination, making of reports and budgets, and doing clinical management. In addition, managers in various units need information on hospital wards, human resources section, billing section, etc. Managers also operate at different levels of organization in terms of "MIS" – strategic, middle, or operational. Moreover, previous studies have observed that the attitude, skills, knowledge, and background of managers play a significant role in the information needs and usage of information systems (Lammintakanen et.al 2010; Bush et.al 2009; Niedzwiedzka 2003; Westra, 2008; Huryk 2010). To illustrate this, managers who have hospital work experience are popularly accepted because they are not directly involved with patient care (Vander Meijden et.al 2003).Lastly, the studies conjointly show the necessity for education and coaching to enhance the usage of knowledge in tending (Khatri, 2006; Bush et.al 2009;Huryk, 2010).

There is a limited amount of literature available about management information systems in healthcare. It should be noted, though, that the function of management plays a crucial role in the challenges of efficiency, increasing needs and demands of patients, and the decreasing availability of staff resources in the future. Information technology plays a pivotal role in information management in order to improve the availability of information and its usage in the everyday decision-making process of health managers. Based on the gathered literature, usage of information system is greatly affected by the characteristics of users, information system, received information, and organization. A holistic approach and consideration of all aspects is needed in the development of management information systems in a healthcare environment (Kalaiand Ratnam 2011).

2. Literature Review

At present ICT is used in almost every field of healthcare. Computers are used for handling the records of patients and the billing system of a hospital. Computers help in the diagnosis, such as the MRI, CT Scan, etc. Given that, telemedicine is one of the key areas that is aimed for intensive development. Much investment has been given to the development of technology for the benefit of healthcare practices. The Health Ministry of Malaysia put up the National Health Council back in 2004 to guide and oversee the implementation of healthcare informatics (Sani, 2004). According to Ministry of Health Malaysia (MOH) " Malaysia is to be a nation of healthy individuals, families and communities, through a health system that is equitable, affordable, efficient, technologically-appropriate, environmentally-adaptable and consumer-friendly, with emphasis on quality, innovation, health promotion and respect of human dignity and which promotes individual responsibility and community participation towards an enhanced quality of life", and "The mission of the MOH is to build partnerships for health to facilitate and support the people" (Malaysia's Health, 2004). MOH has the mission to create a partnership for health to facilitate and give support to the people to:

- Achieve full health potential.
- Give motivation in order to appreciate health as an asset.
- Create a positive act to enhance and maintain health standing in order to have better quality of life. (Malaysia's Health 2004)

"Malaysia is an energetic and active country, with increased economic growth and political constancy day by day. People are healthier, live longer lives, and are more creative as compared to other developing countries. The healthcare attained is the key measure of the achievement of a nation. Great health empowers Malaysians to lead profitable and satisfying lives. Abnormal state of health pays to expanded thriving and social quality" (Imran et.al, 2016).

The structure of HIMS of Malaysia is divided into four levels. These include the national level, the local level, and the district and the rural health centres which can be found in small towns.

The National level is tasked to frame policies and implement and come up with results. However, the integrated results help facilitate the information about health among all levels. In 1996, the Malaysian government developed "MSC Malaysia" to transform the nation into a dynamic and rapidly growing ICT-hub that is focused on results, services, and research development. (Kalai et al, 2011)

In Malaysia, the primary problem is the insufficient distribution of implicit health information between medical consultants. Such information is deemed important to ensure that the "MSC Tele-Health flagship" application will be successful (MSC Malaysia 2003).
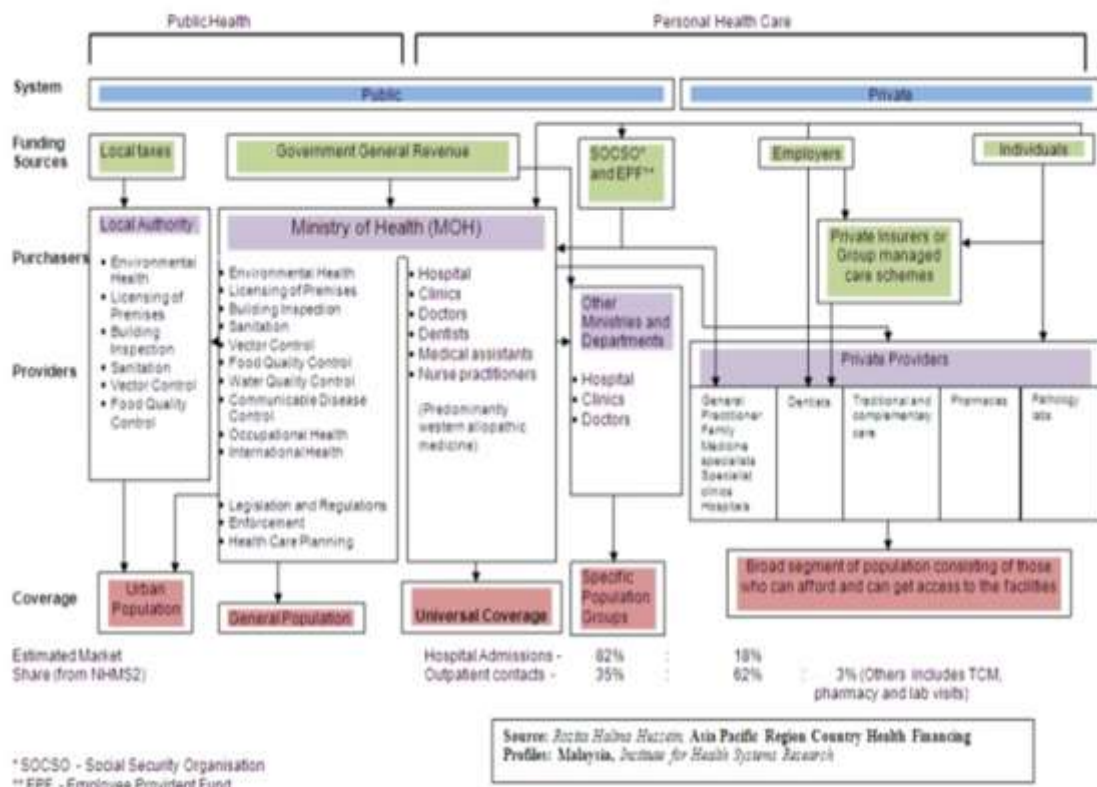

Figure 1. Malaysian Health System

The MSC objective of "Tele-Health flagship" requests to make sure that Malaysian nationals can have admittance to information about healthcare management that is also accessible to doctors, nurses, and the patients themselves. To promote the sharing of medical knowledge to the greater populace is the aim of Tele-Health; this includes the public, healthcare providers, hospitals both public and private, physicians' clinics, and pharmacies. Having such coordination could help enhance the decision-making process from the viewpoint of care. Having the "Tele-Health flagship" can change the usual healthcare system and processes to something that is fuelled by the information and communication-based system and processes.

In MSC Malaysia 2003, only 4 hospitalsin the public sector around the "Klang Valley" had enacted the "Tele-Health" to confirm the patient information is up-to-date. As per year 2017, patient information is inaccessible from government hospitals, clinics, and even private hospitals. If a patient is admitted in Hospital 1, be it private or government, but then selects Hospital 2 for opinion, all records of that patient will have to be physically searched through the records of a department before the records can be delivered to Hospital B. Such process of looking for the records takes up a lot of precious time and such a delay could affect the decision-making procedure of a physician, especially in emergency patients where prompt action is much needed.

An entire nation could reap benefits from electronically-available patient medical records made available to all healthcare providers, doctors, medical students, and patients. The major concern within the Malaysian healthcare system is the non-appearance of information distribution amongst medical professionals, medical centres, and medical universities. This has become evident in the hospital visits done by the writer. Despite the investments made by the major hospitals throughout the nation in Hospital Information Management System (HIMS), the system is being utilized only for administrative purposes and does not hold any pertinent information about a patient. Most of the HIMS present in government and private Malaysian hospitals lack the faculty for the system to be connected to each other. As such, pertinent information about a patient is not recorded (Kalai et al, 2011).

Conclusions

There is a consistent increase in cost and funding in healthcare industries worldwide; this includes hospital use hardware and organization. Given such, misunderstandings often crop up among policy makers, patients, and healthcare providers in relation to the sustainability of investments in technology among the healthcare providers. At the beginning stage, policymakers can subsidize partially to be self-sustainable in the long run. The study concludes with the analysis and discussion of the theoretical foundations of connecting healthcare governance and sustaining technology among healthcare providers in Malaysia.

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