

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 a patient and 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. This research will be the study of Malaysian Health systems and results will show that HMIS uses in hospitals. Moreover, results imply the support of the effects of technology that is depended on by hospitals.

Keywords: *Information Technology, Health systems, influenced, hospitals, IT*

I. INTRODUCTION

According to BayoIdowu et.al (2003), the burgeoning of Information and Communication Technology (ICT) has been taking roots in all life areas. Developing nations are seizing this chance in different sectors, included in which is 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. The society has grown into an age described as “The Computer Revolution,” “The Information Revolution,” and “The Binary Age;” all titles of which is now what is called “The Information Society” [1] The field of medicine is one of the fields that has reaped the many benefits of this modern age. According to multiple studies, it paved the way for improved research, diagnosis, and learning [2].

The HIS aims to gain ground in the present arrangement of healthcare through the change of the work process as far as its reportage. The methodology are meant to facilitate the health care situation directed under the HIS. In any case, various literary works recommended that specific barriers were experienced for the appropriation and execution of wellbeing data frameworks and advancements. Shefter and Black noticed a few qualities and shortcomings of the application. The usage of creative and perhaps compelling E-Health advances are clearing the world, however not without open cost. Such implementations require a huge piece of the national budget [3].

II. MANAGEMENT INFORMATION SYSTEMS IN HEALTHCARE

The primary factor that may contribute to the achievement of information systems is extent to healthcare organization has taken into consideration the information management strategies, understanding information systems role in meeting the strategic objectives [4]. Studies have shown that information management and implementation of information system is big problem of healthcare organizations because of the absence of strategic thinking [5].

Information management in a healthcare organization is development and usage of MIS. As stated by Choo (1998), information management defined as administration of system proceedings acquire, generate, organize, allocate, and usage of information. It includes rules, resources of information, and information technology. The six closely-related processes include (1) identification of information needs, (2) information acquisition, (3) information organization and storage, (4) development of information products and services, (5) information distribution and (6) information use [6]. Each act needs careful planning, organization, coordination, and control, in the management of information in a given healthcare organization [7].

Managers utilize information in decision-making related to everyday work; this includes planning, organization, and creation of staff, coordination, making of reports and budgets, and doing clinical management. In addition, this, managers in various units need information on hospital wards, human resource section, billing section, etc. Managers also operate at different levels of organization in terms of MIS – strategic, middle, or operational. Moreover, precious studies have observed that attitude, skills, knowledge, and background of managers play a significant role in the information needs and usage of information systems [8][9][10]. To illustrate this, managers who has hospital work experience are popularly accepted because they are not directly involved with patient care [11]. These managers tend to put more emphasis on non-

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financial data and support a more intuitive style in utilizing administration data frameworks. Rather than this, administrators with a foundation in organization use MIS for economic decision-making [12]. Finally, the investigations likewise demonstrate the requirement for instruction and preparing to enhance the utilization of data in medicinal services [13]. There is a limited number of literature available about management information systems in healthcare. It should be noted though that the function of management plays a crucial role in meeting the future challenges of efficiency, increasing needs and demands of patients, and the decreasing availability of staff resources. Information technology plays a pivotal role in information management in order improve the availability of information and its usage in the everyday decision-making process of health managers. Based on the gathered literature, utilization of data framework is extraordinarily influenced by attributes of clients, data framework, received data, and association. An all-encompassing methodology and thought of all viewpoints is required in the advancement of administration data frameworks in a medicinal services condition [13].

III. 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 in order to guide and oversee the implementation of healthcare informatics [14]. 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, technological-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 partnership for health to facilitate and support the people”[14][15]. MOH has the mission to create a partnership for health in order to facilitate and give support to the people to:

- Achieve full health potential.
- Give motivation in order appreciate health as a valuable asset.
- Create a positive act in order to enhance and maintain health standing in order to have a better life quality [16].

“Malaysia is an energetic and active country increase economic growth and political constancy day by day. Peoples are healthier, live long life, more creative as compared by other developing countries. The healthcare attained is the key measures of the achievement of nation. Great health empowers Malaysians to lead profitable and satisfying lives. Abnormal state of health pays to expanded thriving and social quality”[15].

The structure if HIMS of Malaysia is divided into four levels. These include the federal or national level, the regional level, and the district and smaller health unit levels which can be found in small towns [16][17].

The government level is entrusted to plan and execute strategies and come up with solutions. Be that as it may, it has a coordinated arrangement so as to help encourage the stream of information about well-being data among alternate levels. In 1996, the MSC Malaysia was made by the Malaysian government keeping in mind the end goal to change the country into a dynamic and quickly developing ICT-center point that is centered around arrangements, administrations, and research advancement [18]. In order to enhance the growth of the MSC, the creative flagship applications were made. They were initially focused in E-Government, My Kad, Smart School, Tele-Health, and Technopreneur Developments. However, a primary problem in Malaysia is the insufficient sharing of implicit medical information among the medical practitioners. Such information is deemed important in order to ensure that the MSC Tele-Health flagship application will be successful [19][20].

IV. METHODOLOGY

The main objective of the MSC Tele-Health lead application is to ensure that all Malaysians can approach data identified with medicinal services administration that is likewise open to specialists, attendants, and the patients themselves. Tele-Health plans to advance the sharing of medicinal information to the more prominent people; this incorporates general society, human services suppliers, government doctor's facilities, private doctor's facilities, centres, and pharmaceutical organizations. Having such a coordination could help enhance the decision-making process from the viewpoint of care. Having the Tele-Health flagship application can change the usual healthcare system and processes to something that fuelled by the information and communication based system and processes.

In MSC Malaysia 2003, there are only four government hospitals around the KlangValler that have enacted the Tele-Health in order to ensure that patient information is up-to-date and readily-available. The given figure has not changed since the time of the writing of this study. As per this year, patient information is inaccessible from government hospitals, clinics, and even private hospitals. To illustrate this, is a patient is admitted in Hospital A, be it private or government, but then decides to go to Hospital B for a second opinion, all of the records of that patient will have to be manually 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 process of a medical doctor, especially in emergency-related cases where prompt action is much-needed.

An entire nation could reap benefits on the off chance that patient medicinal records can be made electronically accessible and open to all healthcare providers, specialists, therapeutic understudies, and patients. The real worry inside the Malaysian human services framework is the nonattendance of data sharing among medicinal experts, therapeutic focuses, and restorative colleges. This has turned out to be obvious in the clinic visits done by the author. In spite of the ventures

made by the real clinics all through the country in Hospital Information Management System (HIMS), the system is being utilized only for administrative purposes and do 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.

IV. RESULT AND DISCUSSION

As we know that the whole country could receive rewards if understanding restorative records can be made electronically accessible and available to all medicinal services suppliers, specialists, therapeutic understudies, and patients. The real worry inside the Malaysian medicinal services framework is the nonappearance of data sharing among therapeutic experts, restorative focuses, and medicinal colleges. This has turned out to be obvious in the doctor's facility visits done by the essayist. In spite of the ventures made by the real doctor's facilities all through the country in Hospital Information Management System (HIMS), the framework is being used just for authoritative purposes and don't hold any correlated data about a patient. The vast majority of the HIMS exhibit in government and private Malaysian healing facilities do not have the workforce for the framework to be associated with each other. In that capacity, correlated data about a patient isn't recorded.

VI. CONCLUSIONS

There is a consistent rising trend in the increase of cost and investments in healthcare industries worldwide; this includes medical related hardware and infrastructure. 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, policy makers can subsidize partially in order to be self-sustainable in the long run. The study finishes up with the investigation and talk of the hypothetical establishments of associating human services administration and supporting innovation among the social insurance suppliers in Malaysia.

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Overview of Current Malaysian Health System

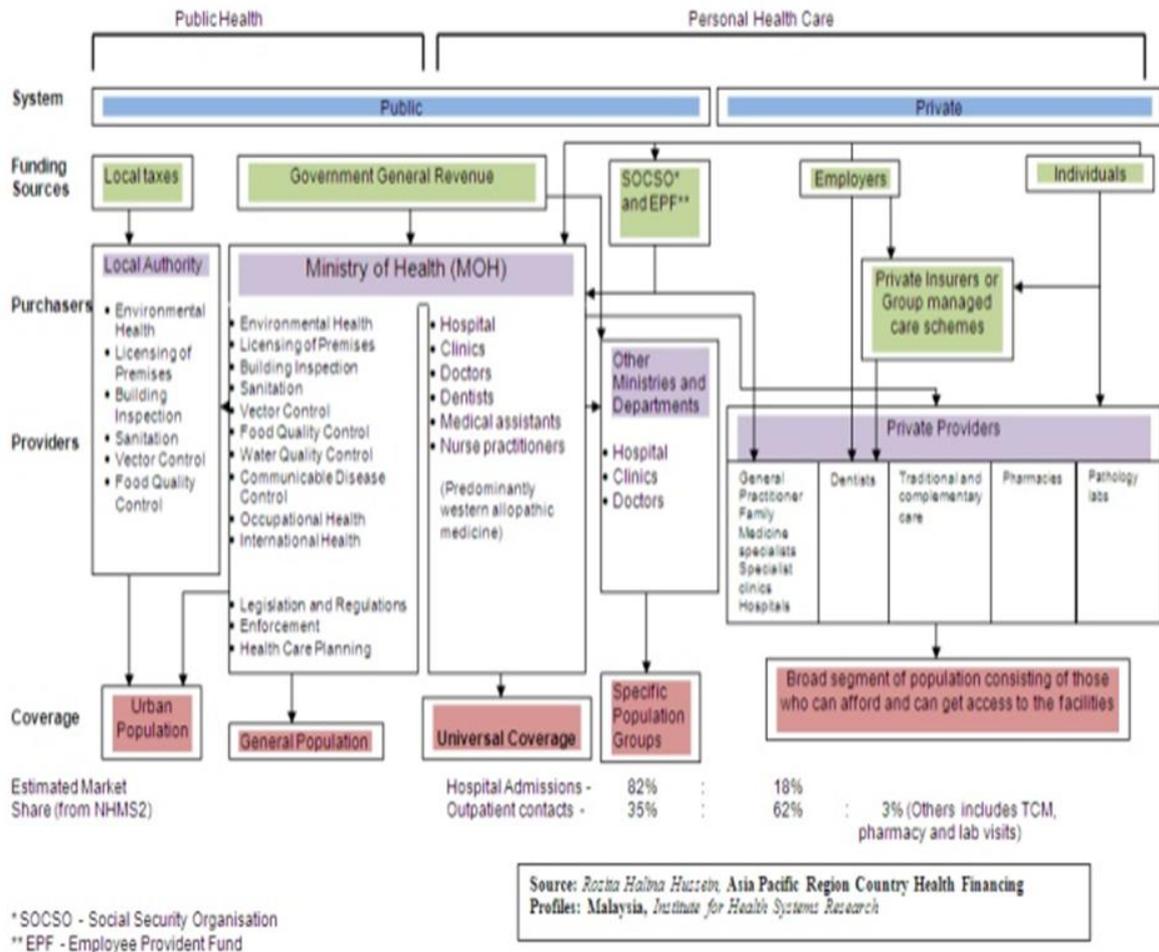


Figure.1: Malaysian Health Management System