Chapter 44

Utilisation of Health Information Systems for Service Delivery in the Namibian Environment

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ABSTRACT

The use of Health Information Systems (HIS) is considered to be a major contributing factor to health-care service delivery. However, the utilisation of HIS which includes use and management is critically challenging in the public health sector in many developing countries. The manifestation of the challenges results in poor service delivery, which includes patient deaths. This is the main motivation for this study, to investigate how HIS can be used to improve service delivering in the hospitals from developing countries perspective. The study was carried out in Namibia, using two hospitals in the public healthcare. The study adopted the qualitative case study. The study revealed that the use of parallel systems, lack of systems integration, lack of portable devices and users' incompetency are some of the factors which impact the use and management of HIS in hospitals.

INTRODUCTION

Maximizing Healthcare delivery through technology integration is such an important topic worldwide as Healthcare is critically important to everyone's life. Healthcare concerns itself with the wellbeing or health of individuals within a community. As such ways in how healthcare service delivery can be improved has been trending globally. Today the incorporation and use of Health Information Systems (HIS) can aid in enhanced healthcare service delivery. Given this importance of healthcare quality, this chapter aimed to investigate the use of HIS in the Namibian public health sector. The objectives of the chapter in attaining the aim was to understand how HIS is utilised by medical practitioner' and administrator', the factors encountered in using the HIS and the impact that the use of HIS has on service delivery within the public health sector.

BACKGROUND

The essentiality of maximizing Healthcare quality cannot be over emphasized in our world at present. Kulkarni (2006, p. 8) defined Healthcare as "the prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services offered by the medical and allied health profession". The importance of healthcare continues to receive increasing attention particularly on the aspect of service delivery to the needy. Cline and Luiz (2013) argued that Healthcare service delivery could be improved by incorporating HIS into hospital processes and activities. Dalziel (2008) defines HIS as "a computer program that organizes clinical data through acquisition, storage and distribution of information" (p. 3). HIS functions involves the use of information technology (IT) which basically are the use of computers, telecommunications and other information processing technologies within healthcare organizations to automate the work processes (Kulkarni, 2006).

The need to improve and maintain healthcare service delivery is a global concern. The areas of improvement include hygiene and the production of health environments (Yen-Han, 2013). Healthcare is critical to every nation in that the economic growth and productivity can be negatively hampered should health conditions of communities deteriorate due to poor healthcare services (Vichianin, 2007). According to Xiao (2012), the U.S. government embarked on an effort to increase healthcare quality and minimize healthcare costs by incorporating technology, such as the use of HIS, into the existing healthcare system. Barrette (2011) argued that technology investment in healthcare is escalating, greatly believed to yield enhanced healthcare quality. The Institute of Medicine (IOM) defines healthcare quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Vichianin, 2007, p. 18).

However in developing countries there are many factors that could have an impact on the utilisation of HIS, more specifically in the public health sector. In Ghana for example there is minimal government contribution and support toward healthcare service delivery efforts (Melesse, 2010). Some other factors include under-resourced facilities or resistance by healthcare professionals to adopt the use of HIS which could be contributed by a lack of understanding about the positive outcomes attributed to the use of HIS within healthcare (Cline & Luiz, 2013). In Namibia, the national health information system (NHIS) was implemented in 1990, soon after the country had its independence. The primary purpose of the NHIS was to provide ample information on a large number of health indicators and to optimize healthcare service delivery (Haoses-Gorases, 2005). The NHIS had since undergone several improvements, in an effort to address the gaps and challenges it is confronted with, such as integration issues.

HIS enables and supports the automation of work processes and activities in hospitals and clinics which adopts practices, such as capturing of patient data electronically instead of the use of a paper-based system. According to Lorenzi and Riley (2004), HIS will allow for easier and faster retrieval and management of patient information when required. The authors further argued that prompt diagnosis will be possible as medical practitioners would have faster access to a patient' medical history which is a support base in determining diagnosis (Lorenzi & Riley, 2004).

The optimisation of functionalities such as the work flow processes using HIS within healthcare would ultimately improve the overall healthcare service delivery (Hersh, 2009). An example is the use of electronic health records (EHRs) in countries, such as the United States of America. Liong (2008) defines an EHR as "…a computerized clinical information system that stores and displays patient information in legible and organized ways, and facilitates the recording and retrieval of clinical information about patients" (p. 1).

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