The Use of Technology in Saudi Arabian Health Care System

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**Introduction**

The advancement and proliferation of technology has changed the operations of almost every sector. The health sector is among the industries that have benefited from the use of technology. Incorporation of technology in the healthcare has been associated with various conveniences in the sector including the management of healthcare information, improvement of the quality of care offered to patens, as well facilitating the coordination of care. Some of the technology elements that have been adopted in the Saudi Arabia are Healthcare Information Technology (HIT), Information and Communication Technology (ICT), and the use technological equipment in care delivery. This paper will assess the use of technology in the Saudi Arabian healthcare sector, how technology has impacted the cost, quality and access, as well as how the vision 2030 has impacted the use of technology in the Saudi Arabian healthcare system.

**Analysis of Specific Healthcare System Development and Implementation of Technology**

The major technological incorporations in Saudi Arabia health system include use of technological devices and applications in the diagnosis, treatment and care, implementation of information and communication technology (ICT), as well as health information technology (HIT). According to Hasanain et al. (2014) The Electronic Medical Records (EMR) system was first introduced in to the Saudi Arabian healthcare system in the 1980s. This system was meant to facilitate the sharing of health information across various organizations. In 1993, the King Faisal Specialist Hospital and Research Centre (KFSH&RC) first introduced the HIS infrastructure. During the same year, the MOH introduced telemedicine and internet technology. In 2007, all the armed forces hospital in the country had adopted EMR systems. Generally, subsequent EMR rollouts have seen a slow progression. This situation has been attributed to lack of coordination in the initiatives meant for the implementation and enhancement of the EMRs. While the Saudi government has directed million of dollars to the improvement of healthcare, the implementation of various HITs including EMRs has been entirely placed on the hands of the private and public hospitals. Given that many patients have health records in various hospitals, it has become hard to incorporate the patients’ records, due to the lack of a standard national EMR system. This notwithstanding, some healthcare institutions have managed to implement successful and independent organizational EMR systems. For instance, the National Guars Health Affairs received an excellence award for being the best implementer of a fully computerized healthcare system among the Arab nations (Hasanain, 2014).

Just like the EHRs, the implementation of the other HIT technologies including computerized physician order entry, personal health records, and E-prescribing has not been implemented at the national level. In 2008, the government channeled one billion dollars to the development and implementation of e-health. In 2011, an ICT team was commissioned with the development of a ten-year E-health strategic plan, meant to enhance the country’s healthcare systems, and service delivery. In 2012, 22 MOH public hospitals had fully adopted E-health systems, while the implementation in 8 hospitals was in progress. The Saudi government supports the purchase of technological equipment to facilitate quality care (Hasanain, 2014).

**Technology Impact on Cost, Quality and Access**

According to Aljohani, Davis, Connolly (2015) the application of HIT is improving the quality of healthcare, as well as reducing the time and cost of delivery. For instance, the use of electronic medical record removes the need of transcription. This reduces the time that would be used for retrieval as well as the possibilities of duplicated tests. Furthermore, HIT prevents medical errors, enhances administrative efficacy, reduce paperwork, thus saving on time and enhancing quality of care. Alternatively, innovative technology in the diagnostic stage has facilitated prompt results to tests, and precise diagnosis; thus saving on time and enhancing the quality of care. In treatment and care technology promotes sophisticated treatment and care to illnesses such as cancer, surgeries, and organ transplants that were previously untreatable. This aspect has enhanced accessibility to care and quality of care. On the contrary, the use of sophisticated devices in diagnosis, treatment and care increases the cost of healthcare. Also, e-health systems enhance availability, management and coordination of clinical data, coordination of the patients’ welfare thus generally enhancing the accessibility and quality of care

**KAS Vision 2030 Impact on Technology**

Technological advancement is an integral part of the kas vision 2030. The KAS government aims at developing a digital economy and infrastructure, and supporting local investment in ICT, and adopting the emerging technologies from all over the world. In matters health, (KSA) 2030 goals are to form a vibrant society with strong roots, fulfilling lives, and strong foundations (KSA, n.d). Basically, in line with the KSA vision 2030, the Saudi government is “determined to optimize and better utilize the capacity of our hospitals and health care centers, and enhance the quality of our preventive and therapeutic health care services” (KSA, n.d). The government realizes the significant role of technology in this endeavor. As such, a decade after the introduction of HTR systems, the government has taken some initiative in order to promote incorporation of technology in the healthcare sector.

**Conclusion**

In conclusion, technology plays a major role in many sectors. In Saudi Arabian healthcare centre, technology has been employed in healthcare equipment, HIT, and ICT. All these laments have enhanced care delivery but reducing cost and time, while increasing accessibility. While the adoption of technology especially HIT has been slow, the government has established initiative to speed up this pace, because technology in healthcare is aligned to the KSA vision 2030 goals.

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