

Abstract Background and Objectives: Despite the innovative technology availability, however, the functionalities of usefulness are limited and not been explored in Saudi Arabian hospitals. This study aims to determine the extent and diffusion of Electronic Health Records (EHR) in public hospitals in Saudi Arabia and to explore the main obstacles, and problems of adopting EHR in these hospitals.

Methods: A comprehensive survey was developed and sent to the medium and large size hospital stakeholders to collect their opinions on the current status of the adoption and usage of EHR. Cluster random sampling has been used. The study has been conducted in the eastern province.

Results: Based on the 15 hospitals surveyed in the Eastern Province (EP), Saudi Arabia, a total of seven hospitals (46.6%) had an EHR system and the implementation is running. EHR is mostly used for order entry (51.11%) and chart review (41.11%) in the EP in Saudi Arabia with obstacles to be used for decision support, documentation functions, communication tools. Despite the “secured” EHR system, the results shows that security mechanism did not cover all threats.

Conclusion: The results suggest that more public hospitals are required to adopting more and more EHR and EHR functionalities. A periodic assessment of EHR status should be performed in addition to or part of an encouraging/ enforcing policies that can significantly increase the rate of adoption of EHR systems. Managers and policymakers can benefit from the study by facing obstacles and general challenges of problems like resistance to change from the medical staff in using the information technology, low and weak financing, and train technical supporting staff for adopting EHR.

Keywords: electronic health records, adopting EHR, information technology, Saudi Arabia

1. Introduction With a goal to achieve paperless or complete EHR, the adoption of EHR started in most countries around the world. Meanwhile, the work on adoption of EHR passes through stages and phases, and this resulted in differences in the adoption level from one country to another, and between private and public sectors, and among hospitals. The last fact is influenced by many technical, managerial, and financial factors and leads to a need for studies to evaluate and document the experience obtained along the journey toward full functioning EHR (Ferris, Shields, Ph, Rosenbaum, & Blumenthal, 2009). Moreover, such studies reveal different lessons that can be used to accelerate and enhance the pace of getting benefits from these systems (Catherine, Affairs, & Vol, 2015; Ferris et al., 2009; Middleton, Hammond, Brennan, & Cooper, 2005). Periodic progress reports on what is going on the EHR adoption scene in Saudi Arabia government sector, and how the process of adoption moves toward its goals is the concern of this work. From the available research work, it is clearly seen that despite the good understanding of the benefits of electronic health records among different healthcare providers (Birkhead, Klompas, & Shah, 2015), and a noticeable increase in the adoption of EHR by different health-care workers, the process of adoption of electronic health records, in general, still slower than expected or projected especially in rural and small hospitals (Catherine et al., 2015) and will have to accelerate above its current pace to achieve the goals of complete paperless EHR within the planned time frame (Adler-milstein et al., 2015; Jha et al., 2018) Starting from early years of the current century, many research works were carried out to evaluate the level and extent of EHR adoption in the US, where the emphasis is on what had been achieved and how to accelerate the adoption process (Middleton et al., 2005). Nowadays, and looking back to what was suggested and what was done during the last 15 years, it is clear that most of the recommendations of

earlier works found their way to real life of many hospitals in US. According to the Center for Medicare and Medicaid Services