

Lessons Learned in Developing a Clinical Information System and Electronic Health Record (EHR) System That Meet the End User Needs and State of Qatar's Emerging Regulations

Authors : Darshani Premaratne, Afshin Kandampath Puthiyadath

Abstract : The Government of Qatar is taking active steps in improving quality of health care industry in the state of Qatar. In this initiative development and market introduction of Clinical Information System and Electronic Health Record (EHR) system are proved to be a highly challenging process. Along with an organization specialized on EHR system development and with the blessing of Health Ministry of Qatar the process of introduction of EHR system in Qatar healthcare industry was undertaken. Initially a market survey was carried out to understand the requirements. Secondly, the available government regulations, needs and possible upcoming regulations were carefully studied before deployment of resources for software development. Sufficient flexibility was allowed to cater for both the changes in the market and the regulations. As the first initiative a system that enables integration of referral network where referral clinic and laboratory system for all single doctor (and small scale) clinics was developed. Setting of isolated single doctor clinics all over the state to bring in to an integrated referral network along with a referral hospital need a coherent steering force and a solid top down framework. This paper discusses about the lessons learned in developing, in obtaining approval of the health ministry and in introduction to the industry of the single doctor referral network along with an EHR system. It was concluded that development of this nature required continues balance between the market requirements and upcoming regulations. Further accelerating the development based on the emerging needs, implementation based on the end user needs while tallying with the regulations, diffusion, and uptake of demand-driven and evidence-based products, tools, strategies, and proper utilization of findings were equally found paramount in successful development of end product. Development of full scale Clinical Information System and EHR system are underway based on the lessons learned. The Government of Qatar is taking active steps in improving quality of health care industry in the state of Qatar. In this initiative development and market introduction of Clinical Information System and Electronic Health Record (EHR) system are proved to be a highly challenging process. Along with an organization specialized on EHR system development and with the blessing of Health Ministry of Qatar the process of introduction of EHR system in Qatar healthcare industry was undertaken. Initially a market survey was carried out to understand the requirements. Secondly the available government regulations, needs and possible upcoming regulations were carefully studied before deployment of resources for software development. Sufficient flexibility was allowed to cater for both the changes in the market and the regulations. As the first initiative a system that enables integration of referral network where referral clinic and laboratory system for all single doctor (and small scale) clinics was developed. Setting of isolated single doctor clinics all over the state to bring in to an integrated referral network along with a referral hospital need a coherent steering force and a solid top down framework. This paper discusses about the lessons learned in developing, in obtaining approval of the health ministry and in introduction to the industry of the single doctor referral network along with an EHR system. It was concluded that development of this nature required continues balance between the market requirements and upcoming regulations. Further accelerating the development based on the emerging needs, implementation based on the end user needs while tallying with the regulations, diffusion, and uptake of demand-driven and evidence-based products, tools, strategies, and proper utilization of findings were equally found paramount in successful development of end product. Development of full scale Clinical Information System and EHR system are underway based on the lessons learned.

Keywords : clinical information system, electronic health record, state regulations, integrated referral network of clinics

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