Design and Implementation of an Affordable Electronic Medical Records in a Rural Healthcare Setting: A Qualitative Intrinsic Phenomenon Case Study

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Abstract : Introduction: An efficient Information System helps in improving the service delivery as well provides the foundation for policy and regulation of other building blocks of Health System. Health care organizations require an integrated working of its various sub-systems. An efficient EMR software boosts the teamwork amongst the various sub-systems thereby resulting in improved service delivery. Although there has been a huge impetus to EMR under the Digital India initiative, it has still not been mandated in India. It is generally implemented in huge funded public or private healthcare organizations only. Objective: The study was conducted to understand the factors that lead to the successful adoption of an affordable EMR in the low level healthcare organization. It intended to understand the design of the EMR and address the solutions to the challenges faced in adoption of the EMR. Methodology: The study was conducted in a non-profit registered Healthcare organization that has been providing healthcare facilities to more than 2500 villages including certain areas that are difficult to access. The data was collected with help of field notes, in-depth interviews and participant observation. A total of 16 participants using the EMR from different departments were enrolled via purposive sampling technique. The participants included in the study were working in the organization before the implementation of the EMR system. The study was conducted in one month period from 25 June-20 July 2018. The Ethical approval was taken from the institute along with prior approval of the participants. Data analysis: A word document of more than 4000 words was obtained after transcribing and translating the answers of respondents. It was further analyzed by focused coding, a line by line review of the transcripts, underlining words, phrases or sentences that might suggest themes to do thematic narrative analysis. Results: Based on the answers the results were thematically grouped under four headings: 1. governance of organization, 2. architecture and design of the software, 3. features of the software, 4. challenges faced in adoption and the solutions to address them. It was inferred that the successful implementation was attributed to the easy and comprehensive design of the system which has facilitated not only easy data storage and retrieval but contributes in constructing a decision support system for the staff. Portability has lead to increased acceptance by physicians. The proper division of labor, increased efficiency of staff, incorporation of auto-correction features and facilitation of task shifting has lead to increased acceptance amongst the users of various departments. Geographical inhibitions, low computer literacy and high patient load were the major challenges faced during its implementation. Despite of dual efforts made both by the architects and administrators to combat these challenges, there are still certain ongoing challenges faced by organization. Conclusion: Whenever any new technology is adopted there are certain innovators, early adopters, late adopters and laggards. The same pattern was followed in adoption of this software. He challenges were overcome with joint efforts of organization administrators and users as well. Thereby this case study provides a framework of implementing similar systems in public sector of countries that are struggling for digitizing the healthcare in presence of crunch of human and financial resources.

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