Evaluation of Clinical Decision Support System in Electronic Medical Record System: A Case of Malawi National Art Electronic Medical Record System

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Abstract : The Malawi National Antiretroviral Therapy (NART) Electronic Medical Record (EMR) system was designed and developed with guidance from the Ministry of Health through the Department of HIV and AIDS (DHA) with the aim of supporting the management of HIV patient data and reporting in high prevalence ART clinics. As of 2021, the system has been scaled up to over 206 facilities across the country. The system is integrated with the clinical decision support system (CDSS) to assist healthcare providers in making a decision about an individual patient at a particular point in time. Despite NART EMR undergoing several evaluations and assessments, little has been done to evaluate the clinical decision support system in the NART EMR system. Hence, the study aimed to evaluate the use of CDSS in the NART EMR system in Malawi. The study adopted a mixed-method approach, and data was collected through interviews, observations, and questionnaires. The study has revealed that the CDSS tools were integrated into the ART clinic workflow, making it easy for the user to use it. The study has also revealed challenges in system reliability and information accuracy. Despite the challenges, the study further revealed that the system is effective and efficient, and overall, users are satisfied with the system. The study recommends that the implementers focus more on the logic behind the clinical decision-support intervention in order to address some of the concerns and enhance the accuracy of the information supplied. The study further suggests consulting the system's actual users throughout implementation.

Keywords : clinical decision support system, electronic medical record system, usability, antiretroviral therapy

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