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Implementation of Electronic Patient Records in two Rural District Hospitals and one Urban University Hospital in Cameroon

G. Kouematchoua Tchuitcheu^{1,2}, A. Nguento¹, H. Luma³, MP. Halle^{3,4}, SP. Choukem^{3,4}, E. Manga⁵, M. Bouwa⁶, AU. Kemloh Wagoum^{1,7}, G. Kom Kenmegne¹, X. Scolard¹, VP Djientcheu^{2,8}

¹*Koegni-eHealth Innovation for Development*

²*Société Camerounaise d'Informatique Médicale*

³*General Hospital of Douala*

⁴*University of Buea*

⁵*District Hospital of Mfou*

⁶*Ad Lucem Hospital of Bandjoun*

⁷*Jülich Supercomputing Centre*

⁸*University of Yaounde I*

Background and objectives: The health system in Cameroon has to deal with several health problems which increasingly affect the economically active population (e.g. AIDS, Multidrug-resistant tuberculosis, increasing rate of diabetes, nephrology, cardiovascular and other chronic diseases). It is globally recognized that care processes of these health problems can be efficiently and effectively managed in care facilities with electronic patient records. In addition, the work of research organizations and strategic institutions such as the Ministry of Health and research or international institutions rely partly on the quality of data and the reports of locally operating facilities. Experience gathered on AIDS and tuberculosis in other developing countries has proven that innovative locally appropriate implementation of cost-effective electronic patient records (EPR) can lead to considerable improvement. For this reason, we implemented and evaluated an already validated innovative eHealth-based solution with EPR [1] in two rural district hospitals and one urban university hospital of Cameroon, in order to contribute to the improvement of the situation presented here, compare and evaluate implementation challenges (difference between rural and urban facilities), measure the impact on the local care process, and identify success and sustainability factors for future projects.

Methods: A review of the relevant research literature and project report has been performed. A Stakeholder analysis was conducted using qualitative methods. Process and infrastructure analysis were performed and key requirements identified. Based on these, an implementation plan and evaluation indicators were formulated. Agile methods (SCRUM and KANBAN) and quality management based on continuous improvement processes were applied for the project management (including software customization and change management).

Result and discussion: The 22 indicators evaluated indicated that 5 activities were realized within the planned timeslot, 14 activities have been partially realized with an average delay of about 7 months, and some activities were postponed for the second phase of the project. The qualitative evaluation conducted at the end of the first phase of this research project showed a clear satisfaction of the stakeholders with the achieved results and specially the agile methods approach. This enhanced the local ownership which is a key requirement for the project sustainability. The agile methods and the availability for unpaid experts however led often to an extension of the activities deadlines.

*Corresponding author: Postfach 763202, Hamburg, D-22071 Germany. Email: ghislain.k@koegni-ehealth.org, Tel: +49 151 50641182

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Reference

- [1] Kouematchoua Tchuitcheu G., Rienhoff O. Options for Diabetes Management in sub-saharan Africa with an electronic medical record system. *Methods Inf Med* 2011; 50:11-22