Integration of Mobile Technologies with Routine Healthcare Services in Mozambique

av

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Abstract


Mobile technologies are emerging as one way to help address health challenges in many countries, including in Least Developed Countries. Mobile technology can reach a large share of the population but in order to provide effective support to healthcare services, technology, information collection and dissemination, and work processes need to be well aligned. The thesis uses a design science methodological approach and mixes qualitative and quantitative data analysis to address the question of, How can mobile technologies be effectively integrated with routine healthcare services?

The study concerns the design, implementation, and evaluation of a mobile technology-based system, called SMSaúde, with the aim of improving the care of patients with HIV/AIDS and tuberculosis in Mozambique. The work started with the elicitation of functional and user requirements, based on focus group discussions. An important challenge, as in many mHealth interventions, was the integration with routine healthcare services and the existing IT systems, as well as developing a scalable technical structure. The system has now been in routine use since 2013 in more than 16 healthcare clinics in Mozambique. Evaluation was done by a randomised controlled study. Analysis of patient records showed that retention in care in urban areas was significantly higher in the intervention group than in the control group. In a user study both patients and health professionals were very positive to the system. The thesis contributes to research by demonstrating how information system artefacts can be constructed and successfully implemented in resource-constrained settings. The practical contributions include the designed artefact itself as well as improved healthcare practices and mHealth policy recommendations.

Keywords: mobile technologies, mobile health, mHealth, Least Developed Countries, Mozambique, mobile phones, information systems artefact, design science research.

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