A Systematic review of mHealth interventions for public healthcare in East Africa

TREO Talk Paper

Patrick Ndayizigamiye
University of KwaZulu-Natal
Ndayizip@ukzn.ac.za

Manoj Maharaj
University of KwaZulu-Natal
maharajms@ukzn.ac.za

Abstract

The use of mobile technologies to provide healthcare services (mHealth) has received much attention in developing countries. In Resource-Limited Countries (RLCs), there is a noticeable increase in the ownership of mobile devices (such as smartphones, tablets) coupled with an expansion of mobile technology infrastructure. Thus, mHealth interventions can reach a large portion of the population who would otherwise not have access to affordable healthcare. In this regard, mHealth interventions have often been hailed for being much more cost-effective compared to the conventional non-ICT led delivery of healthcare services. However, notwithstanding the potential and the demonstrated capabilities of mHealth to address healthcare issues in developing countries, there is a general agreement that there is a need for more evidence-based research to substantiate the call for scaling mHealth interventions. Such evidence-based research is also needed in order to identify best practices that led to the successful uptake of mHealth interventions, and the evidence of yielded benefits. These practices would assist implementers of mHealth interventions to make informed decisions pertaining to introducing these interventions into communities and avoid failures that have characterised a number of mHealth interventions that dissipated at the pilot stage. It is in this context that this paper provides a systematic review of mHealth interventions that demonstrated positive outcomes in the East African region. The paper highlights best practices that yielded positive outcomes and lessons learnt. The aim is to present an evidence-based of what should be taken into consideration for the successful introduction of mHealth interventions within the context of developing countries. This paper used the PRISMA guideline on systematic reviews. The identification phase of the PRISMA guideline yielded 760 papers, which were reduced to 42 after the initial screening phase. A further screening led to seven papers that presented evidence-based outcomes or lessons learnt. A review of the mHealth interventions presented in these seven papers revealed that partnership between private and public entities, users’ involvement in mHealth systems design phase, incentives and adequate telecommunications infrastructure contributed significantly to the successful implementation of mHealth interventions in the East African region. Particularly, fostering collaboration with local partners and designing interventions in a local or most spoken language have a significant impact on the success of mHealth interventions. Although the reviewed interventions were all in pilot phases, these initial observations provide valuable insights that could assist in the design and implementations of future mobile health interventions.