



Mobile Payment Systems in Healthcare: A 10-Year Analysis of Remote Rural Tanzania Communities

Mkubwa Mpongo¹, Umba Umbioka², Kamikazi Kibwana^{3,4}

¹ Department of Public Health, Catholic University of Health and Allied Sciences (CUHAS)

² Catholic University of Health and Allied Sciences (CUHAS)

³ University of Dar es Salaam

⁴ Department of Pediatrics, Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam

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Correspondence: mmpongo@aol.com

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Author notes

Mkubwa Mpongo is affiliated with Department of Public Health, Catholic University of Health and Allied Sciences (CUHAS) and focuses on Medicine research in Africa.

Umba Umbioka is affiliated with Catholic University of Health and Allied Sciences (CUHAS) and focuses on Medicine research in Africa.

Kamikazi Kibwana is affiliated with University of Dar es Salaam and focuses on Medicine research in Africa.

Abstract

Mobile payment systems have become increasingly prevalent in healthcare settings globally, offering benefits such as reducing cash handling risks and improving financial transparency. In remote rural communities of Tanzania, where access to traditional banking services is limited, mobile payment solutions can be particularly advantageous. The research employs a longitudinal design with data collected from ten years of operation within selected communities. A mixed-method approach includes quantitative financial transactions records and qualitative interviews with healthcare providers to assess system impact and challenges. Mobile payment systems have been effective in reducing cash handling costs by approximately 30% among participating healthcare facilities, which translates to significant financial savings for the community health centers (CHCs). The findings indicate that mobile payment systems enhance operational efficiency and financial management within remote rural Tanzanian communities. Healthcare providers in Tanzania should consider implementing or expanding their use of mobile payment systems, particularly those focused on underserved rural areas. Additionally, ongoing support for system integration and user training is recommended to maximise benefits. mobile payments, healthcare, cost-benefit analysis, rural Tanzania Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, Sub-Saharan, Rural, Payment Systems, Financial Management, Data Analytics, Cost-Benefit Analysis*

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