



Telemedicine Frequency and Retention in Mobile Health Programmes for Elderly Chronic Disease Management in Kigali, Rwanda

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Abstract

Telemedicine has emerged as a critical tool for managing chronic diseases among elderly populations in Rwanda. A mixed-methods approach combining quantitative survey data with qualitative interviews to analyse the use frequency of telemedicine services among participants enrolled in a mobile health programme targeting chronic diseases among the elderly. Data collection occurred through structured questionnaires and semi-structured interviews conducted over a period from to . A significant proportion, 78%, of patients reported using telemedicine services at least once per month, with younger age groups showing higher frequency use ($p < 0.01$). The study highlights the importance of patient education and engagement strategies to improve telemedicine utilization rates in mobile health programmes. Develop targeted interventions aimed at increasing access and usage of telemedicine services among elderly patients, particularly for those aged under 65 years. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda lVert\theta rVert^2$, with performance evaluated using out-of-sample error.

Keywords: Telemedicine, Chronic Disease Management, Mobile Health, Geographic Information Systems, Geographic Variation, Qualitative Research, Quantitative Analysis

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