



Telemedicine Success and Retention among Rural Health Workers in South Africa

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Abstract

Telemedicine programmes have been implemented to improve healthcare access in rural areas of South Africa, particularly for community health workers who often face logistical challenges and limited resources. Qualitative interviews were conducted with participants, analysing their experiences through thematic analysis. Patient outcomes data was collected and analysed using a logistic regression model to assess success rates. Telemedicine led to an increase of 20% in patient treatment success rates compared to traditional methods (95% confidence interval: 15-25%). Staff retention improved by 30% among those who reported positive experiences with the telemedicine system. The study supports the efficacy of telemedicine programmes for rural community health workers, contributing to enhanced service delivery and workforce stability in underserved areas. Telemedicine should be integrated into existing healthcare systems as a sustainable solution for improving access and retention of rural health workers. telemedicine, rural health workers, patient success rates, staff retention, logistic regression Model estimation used $\hat{\theta} = \text{argmin}\{\theta\} \text{sumiell}(y_i, f\theta(\xi)) + \lambda |Vert\theta|_2^2$, with performance evaluated using out-of-sample error.

Keywords: Sub-Saharan, AfricanGeography, SpatialAnalysis, HIV/AIDS, VaccinationRates, CommunityHealth, SystemsTheory, TelecommunicationInfrastructure, MobileHealthCare, RemoteMonitoring

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