



Telehealth in Sierra Leone: Accessibility and Impact on Rural Populations

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Abstract

Telehealth services have emerged as a critical tool for improving healthcare accessibility in remote areas, particularly important in countries with limited infrastructure and resources. The research employed a mixed-methods approach combining quantitative data from surveys with qualitative insights gathered through focus group discussions. The sample included both urban and rural residents across different regions of the country. Telehealth services significantly improved access to healthcare for rural populations, with approximately 70% of respondents reporting an increase in consultations compared to traditional methods. However, challenges such as limited internet connectivity persisted. The findings suggest that while telehealth has enhanced accessibility, ongoing efforts are needed to address technological and infrastructural limitations. Policies should prioritise investment in telehealth infrastructure and training for healthcare providers to maximise the benefits of these services. Model estimation used $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} (y_i , f\theta (\xi)) + \lambda | \text{Vert} \theta | \text{Vert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Telehealth, Sub-Saharan Africa, Rural Health, E-health, Geographic Information Systems (GIS), Access Models, Community Health Outreach*

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