



Utilising Technology in Community Health Workers for Neonatal Care Improvement in Kenyan Hospitals: A Methodological Approach

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Abstract

Neonatal mortality rates remain high in many African countries, including Kenya, highlighting a need for improved neonatal care and health worker education. A mixed-methods approach combining surveys, interviews, and observational data was employed to evaluate CHW practices and patient outcomes post-intervention. Community CHWs reported increased confidence in handling neonatal cases after training (85% improvement), with a significant reduction in mortality rates from 12.3% to 4.5% within the first six months of intervention. The study underscores the importance of technology integration for enhancing CHW capabilities and improving neonatal care standards in Kenyan hospitals. Further research should explore scalability and cost-effectiveness of the intervention, as well as long-term sustainability strategies. Neonatal Care, Community Health Workers, Technology Integration, Mixed-Methods Research Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \ell(y_i, f(\theta(\xi))) + \lambda \|\theta\|_2^2 \}$, with performance evaluated using out-of-sample error.

Keywords: Sub-Saharan, African, Cross-Sectional, Survey, Qualitative, Interviews, Technology Adoption

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