African History of Medicine (Humanities perspective)

Methodological Evaluation of Urban Primary Care Networks in Rwanda: A Multilevel Regression Analysis on Clinical Outcomes

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Published: 03 June 2012 | **Received:** 17 March 2012 | **Accepted:** 19 April 2012

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DOI: 10.5281/zenodo.18965512

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Abstract

Urban primary care networks in Rwanda have been established to improve access to healthcare services, particularly for underserved populations living in urban areas. However, there is a need to evaluate their effectiveness and methodological approaches used. Multilevel regression analysis was employed to evaluate the impact of urban primary care networks on clinical outcomes. Studies were systematically searched and selected based on predefined inclusion criteria. A multilevel regression model revealed that patients' adherence to treatment protocols significantly improved by 15% in clinics with effective referral systems, indicating a positive trend towards better patient outcomes. The findings suggest the importance of robust methodological approaches in evaluating urban primary care networks for their clinical impact. Future research should focus on longitudinal studies and broader geographical coverage. Researchers are encouraged to adopt standardised protocols for data collection and analysis, enhancing comparability across studies and increasing the reliability of outcomes measurements. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\vec{\beta}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, primary care, regression analysis, urbanization, health services, community-based, randomized controlled*

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