Bayesian Hierarchical Model for Evaluating Clinical Outcomes in Urban Primary Care Networks, Rwanda

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Abstract

Urban primary care networks (PCNs) play a crucial role in Rwanda's healthcare system, aiming to provide accessible and coordinated health services. A Bayesian hierarchical model was employed to analyse data from urban primary care networks in Rwanda. This approach accounts for spatial variation, heterogeneity among clinics, and temporal trends. The analysis revealed significant variations in clinical outcomes across different PCN sites, with certain clinics achieving better patient recovery rates compared to others. Bayesian hierarchical modelling provided a nuanced understanding of the factors influencing clinical performance within urban primary care networks. Further research should focus on implementing targeted interventions and training programmes based on identified site-specific challenges. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\vec{\beta}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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