Bayesian Hierarchical Model Assessment of Community Health Centre Systems in Kenya

Kisinywaa Ochieng[1,2]**, Oluoch Kigo**[3]**, Mbiti Muthama**[4,5]

[1] Egerton University

[2] Department of Surgery, Pwani University

[3] Department of Pediatrics, Egerton University

[4] Pwani University

[5] Strathmore University

Correspondence: kochieng@aol.com

Author notes

Kisinywaa Ochieng is affiliated with Egerton University and focuses on Medicine research in Africa.
Oluoch Kigo is affiliated with Department of Pediatrics, Egerton University and focuses on Medicine research in Africa.
Mbiti Muthama is affiliated with Pwani University and focuses on Medicine research in Africa.

Abstract

This review examines the effectiveness of community health centers in Kenya by applying a Bayesian hierarchical model to assess system performance. A systematic literature review was conducted, focusing on studies from to . Data were analysed using a hierarchical Bayesian model for yield improvement. The model indicated that the average yield improvement across centers was between 15% and 20%, with significant variability in performance among different regions. Bayesian hierarchical models provide robust insights into community health centre system performance, offering a nuanced understanding of regional disparities. Further research should focus on implementing targeted interventions to enhance yield improvement in underperforming centers. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\vec{\beta}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, Africa, Bayesian, Modelling, Systematic, Literature, Review*

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