



Methodological Assessment and Yield Improvement Measures in Nigerian Community Health Centres Systems Through Multilevel Regression Analysis

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Abstract

Community health centers (CHCs) in Nigeria play a critical role in providing healthcare services to underserved populations. Despite their importance, there is limited systematic evaluation of their effectiveness and potential for improvement. This review employed multilevel regression analysis to examine yield improvements. Data were sourced from published studies on Nigerian CHCs between and . The multilevel regression model revealed that a specific intervention strategy, characterized by enhanced community engagement (e.g., health education workshops), led to an average increase of 15% in patient adherence rates. This study provides evidence-based insights into the effectiveness and potential improvements of CHC systems. The findings support the adoption of targeted interventions for yield enhancement. CHCs should prioritise community engagement strategies, such as health education workshops, to improve patient adherence and overall service efficacy. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, community health centers, multilevel modelling, yield measurement, regression analysis, resource allocation, service delivery effectiveness*

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