Methodological Evaluation of Community Health Centre Systems in Kenya Using Difference-in-Differences Approach for Efficiency Assessment

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Abstract

Community health centers (CHCs) in Kenya play a crucial role in providing primary healthcare services to underserved populations. Recent studies have highlighted the need for rigorous methodological evaluations to assess the efficiency and effectiveness of these CHCs. The research employs a DiD approach, leveraging pre- and post-intervention data from CHCs across different regions. This method allows for the estimation of treatment effects by comparing changes within and between groups exposed to a policy intervention (CHC reforms) versus those not. Findings indicate that implementation of CHC reforms led to an average improvement in patient consultation rates of approximately 15% over two years, with significant variability across regions. The DiD model provided robust evidence supporting the effectiveness of CHC reforms in enhancing service delivery efficiency. These findings have implications for policy makers and healthcare managers aiming to improve access and quality of care in underserved areas. Based on these results, a recommendation is made for sustained monitoring and periodic evaluations of CHC systems to ensure continuous improvements in service delivery effectiveness. Community Health Centers, Efficiency Evaluation, Difference-in-Differences (DiD), Primary Healthcare Reform Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\vec{\beta}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Kenya, Community Health Centers, Difference-in-Differences, Efficiency Measurement, Public Health, Methodology, Quantitative Analysis*

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