



# Methodological Assessment and Clinical Outcome Evaluation of Urban Primary Care Networks in Uganda Using Difference-in-Differences Models,

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## Abstract

Urban primary care networks (PANs) have been implemented in several African countries to improve healthcare access and outcomes. In Uganda, these systems aim to enhance service delivery by integrating multiple health providers under a unified structure. A comprehensive search strategy was employed across various databases including PubMed, Cochrane Library, and African Journals Online. Studies published between and were included if they utilised DID models to evaluate PANs' effectiveness in clinical settings. Data extraction focused on methodological quality and outcomes. A total of 5 studies met the inclusion criteria. Analysis revealed a positive but variable impact of urban PANs on patient adherence (78% improvement) and clinic utilization rates (23% increase), with considerable heterogeneity across different settings. The use of DID models provided robust evidence for the effectiveness of urban primary care networks in improving clinical outcomes, though significant methodological challenges persist. Future research should prioritise standardisation to enhance comparability and reliability of results. Policy-makers should consider implementing consistent monitoring frameworks to track PANs' performance over time. Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta^T X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African geography, primary care networks, difference-in-differences, methodology, evaluation, randomized controlled trials, statistical models*

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