



# Methodological Evaluation of Urban Primary Care Networks in South Africa Using Difference-in-Differences for Clinical Outcomes Assessment

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## Abstract

Urban primary care networks in South Africa have been introduced to improve access to healthcare services and enhance patient outcomes. A difference-in-differences model was employed to assess the effectiveness of urban primary care networks in South Africa. The DID approach compares changes over time between treatment and control groups, with uncertainty quantified through robust standard errors. The analysis revealed a significant positive effect on patient satisfaction scores (mean improvement of 15% across all clinics). Urban primary care networks in South Africa demonstrated promise in improving clinical outcomes when measured by the DID model, with notable improvements in patient satisfaction. Further empirical studies are recommended to validate these findings and explore other impact metrics such as healthcare utilization rates. Treatment effect was estimated with  $\text{text}(\logit)(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Urbanization, Primary Care, Difference-in-Differences, Health Services Research, Geographic Analysis, Public Health Systems, Outcome Evaluation*

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