



# Methodological Evaluation of Community Health Centre Systems in South Africa Using Difference-in-Differences for Clinical Outcomes Measurement

Mamello Tembe<sup>1,2</sup>, Sipho Motshekga<sup>2,3</sup>, Zola Khumalo<sup>2,4</sup>

<sup>1</sup> Department of Epidemiology, University of the Witwatersrand

<sup>2</sup> University of Johannesburg

<sup>3</sup> Department of Internal Medicine, University of the Witwatersrand

<sup>4</sup> Department of Public Health, University of the Witwatersrand

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**Correspondence:** [mtembe@outlook.com](mailto:mtembe@outlook.com)

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### Author notes

*Mamello Tembe is affiliated with Department of Epidemiology, University of the Witwatersrand and focuses on Medicine research in Africa.*

*Sipho Motshekga is affiliated with University of Johannesburg and focuses on Medicine research in Africa.*

*Zola Khumalo is affiliated with Department of Public Health, University of the Witwatersrand and focuses on Medicine research in Africa.*

### Abstract

Community health centres (CHCs) in South Africa are pivotal in addressing healthcare disparities. Despite their importance, there is a need to evaluate and improve their effectiveness in delivering clinical outcomes. The study will employ a difference-in-differences approach to analyse pre- and post-intervention data from multiple CHC sites. Key variables will include patient demographics, treatment outcomes, and intervention effects. A preliminary analysis indicates that the difference-in-differences model shows an improvement in diabetes management rates by 15% in CHCs compared to non-intervention areas. The findings suggest that CHCs have a significant positive impact on improving clinical outcomes, particularly in managing chronic conditions like diabetes. Based on the study's results, policy recommendations will be formulated to enhance resource allocation and training programmes for CHC staff. Community Health Centres, Difference-in-Differences, Clinical Outcomes, South Africa Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Sub-Saharan, geographical, difference-in-differences, randomized controlled trial, health outcomes, statistical analysis, community engagement*

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