

Evaluating Rural Clinic Systems in South Africa

A Difference-in-Differences Analysis of Clinical Outcomes, 2000–2026

Thandiwe Mokoena^{1,2}, Pieter van der Merwe^{3,4}

David Botha^{4,5}, Nokuthula Ndlovu^{1,6}

Human Sciences Research Council (HSRC) | University of Cape Town | Department of Pediatrics, University
of KwaZulu-Natal | Mintek | Department of Internal Medicine, University of Cape Town | Department of
Pediatrics, Mintek

Correspondence: tmokoena@gmail.com

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ABSTRACT

Background: Rural clinic systems are critical for healthcare delivery in sub-Saharan Africa, yet robust quantitative evaluations of their impact on clinical outcomes are scarce. Existing studies often lack rigorous counterfactual analysis, limiting causal inference.

Purpose and objectives: This study aims to quantify the causal effect of a systemic intervention in rural primary care clinics on key population health indicators, specifically maternal and child health outcomes.

Keywords: *sub-Saharan Africa, rural health services, clinical outcomes, difference-in-differences, health systems evaluation, South Africa*

Article Highlights

- Employs a quasi-experimental difference-in-differences design for robust causal inference.
- Finds a 12.3 pp increase in facility-based deliveries in treated districts.
- Provides a framework for evaluating phased, real-world health system interventions.
- Focuses on maternal and child health outcomes in rural primary care clinics.

Methodological Note

The analysis uses a difference-in-differences model with cluster-robust standard errors at the district level to estimate the causal effect of a phased clinic system intervention.

This study offers a rigorous quantitative evaluation of a systemic rural health intervention.

ABSTRACT-ONLY PUBLICATION

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