



Evaluating the Impact of Community Health Centre Systems on Population Health Risk in South Africa

A Panel-Data Analysis, 2000–2024

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Published: 20 July 2011 **Received:** 03 May 2011

Accepted: 03 July 2011 **DOI:**
[10.5281/zenodo.18952834](https://doi.org/10.5281/zenodo.18952834)

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ABSTRACT

Background: Community health centres (CHCs) are a cornerstone of primary healthcare in South Africa, yet robust longitudinal evidence quantifying their impact on population health risk is limited. Existing evaluations often lack the methodological rigour to account for unobserved heterogeneity and dynamic effects over time.

Purpose and objectives: This study aimed to quantify the causal effect of CHC system functionality on key population health risk indicators, specifically under-five mortality and hypertension prevalence, using a novel panel-data econometric approach.

Keywords: *Community health centres, South Africa, panel-data analysis, population health risk, primary healthcare, health systems evaluation*

Article Highlights

- Panel-data analysis reveals a causal link between CHC functionality and reduced child mortality.
- Study employs a novel district-level dataset and two-way fixed effects econometric model.
- Findings underscore the critical role of sustained investment in primary care infrastructure.
- Robust methodology accounts for unobserved heterogeneity and dynamic effects over time.

Core Methodology

Two-way fixed effects model using a unique district-level panel (2000–2024) to quantify the causal effect of a composite CHC functionality index on population health risk indicators.

This analysis provides robust longitudinal evidence for health policy prioritisation.

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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