

# A Randomised Field Trial Evaluating Primary Care Delivery Models and Clinical Outcomes in Rural South Africa.

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## ABSTRACT

**Background:** Rural primary healthcare delivery in sub-Saharan Africa faces systemic challenges, including workforce shortages and fragmented service models, which impact clinical outcomes. Evidence on the comparative effectiveness of different organisational structures within routine clinic settings remains limited.

**Purpose and objectives:** This study aimed to evaluate the impact of two distinct primary care delivery models—a decentralised, nurse-led model versus a standard, doctor-supervised model—on a composite measure of chronic disease control among adult patients in a rural setting.

**Keywords:** *Randomised controlled trial, Primary healthcare, Rural health services, Sub-Saharan Africa, Clinical outcomes, Health systems evaluation, Service delivery models*

### Article Highlights

- Nurse-led clinics showed significantly higher odds (aOR 1.48) of achieving disease control.
- Pragmatic trial design involved 24 matched clinics and over 2,400 adult patients.
- Findings support task-shifting and decentralisation in resource-constrained settings.
- Results indicate a viable model for improving hypertension and diabetes outcomes.

### Trial Design Note

A pragmatic, parallel-group randomised field trial comparing two organisational models within 24 routine rural clinics. Primary outcome was a composite measure of blood pressure and HbA1c control at 12 months.

*This study provides evidence for health system redesign in sub-Saharan Africa.*

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