

Longitudinal Evaluation of Maternal Care Facility Systems and Clinical Outcomes in South Africa

A Randomised Field Trial

Pieter van der Merwe^{1,2}, Naledi Mokoena³, Anesh Govender^{1,4}

Thandiwe Nkosi³

Council for Geoscience | South African Institute for Medical Research (SAIMR) | Department of Surgery,
Council for Geoscience | Department of Internal Medicine, South African Institute for Medical Research (SAIMR)

Correspondence: pmerwe@yahoo.com

Received: 03 July 2008 | Accepted: 03 September 2008 | Published: 25 October 2008 | DOI:

[10.5281/zenodo.18948110](https://doi.org/10.5281/zenodo.18948110)

ABSTRACT

Background: Maternal healthcare facility systems in sub-Saharan Africa are complex, yet evidence linking specific system-level interventions directly to clinical outcomes from robust, longitudinal designs is scarce.

Purpose and objectives: This study aimed to evaluate the causal impact of a structured facility systems-strengthening intervention on maternal and neonatal clinical outcomes within a public health setting.

Keywords: *Maternal health, Health systems evaluation, Randomised controlled trial, Sub-Saharan Africa, Longitudinal study, Clinical outcomes*

Article Highlights

- Intervention linked to 24% reduction in composite adverse outcome (aOR 0.76).
- Most pronounced effect: 32% reduction in facility-acquired neonatal sepsis.
- Longitudinal cluster-randomised design across 42 public care facilities.
- Evidence supports integrating systems-strengthening into national programmes.

Primary Analysis Model

Generalised linear mixed model with cluster random effects:
 $\text{logit}(P(Y_{ij}=1)) = \beta_0 + \beta_1 T_j + \gamma X_{ij} + u_j$. Inference used robust standard errors.

This trial provides causal evidence linking health systems interventions to clinical endpoints.

ABSTRACT-ONLY PUBLICATION

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

REQUEST FULL PAPER

 **Email:** info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

 **Submit at:** app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge