

Methodological Evaluation of District Hospital Systems in South Africa

A Meta-Analysis of Quasi-Experimental Designs for Measuring Efficiency Gains

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ABSTRACT

Background: District hospitals are critical components of the healthcare system, yet robust evidence on the efficiency of systemic interventions remains fragmented. Quasi-experimental designs are frequently employed to evaluate such interventions, but their methodological application and rigour in this context require systematic assessment.

Purpose and objectives: This meta-analysis aims to methodologically evaluate quasi-experimental studies measuring efficiency gains in South African district hospital systems, assessing design quality, common analytical approaches, and the consistency of reported outcomes.

Keywords: *district hospitals, health systems efficiency, quasi-experimental designs, Sub-Saharan Africa, meta-analysis, health services research, South Africa*

Article Highlights

- 63% of 27 included studies exhibited a serious risk of bias, predominantly from confounding.
- Pooled estimate shows a 0.8-day reduction in length of stay from financial incentives.
- Substantial heterogeneity ($I^2=78\%$) and incomplete reporting limit comparability.
- Field requires more rigorous application and transparent reporting of designs.

Core Finding

The methodological quality of quasi-experimental studies on South African district hospital efficiency is frequently compromised, weakening the evidence base for policy.

This meta-analysis critically appraises the methods underpinning current evidence on health system efficiency.

ABSTRACT-ONLY PUBLICATION

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