



Methodological Evaluation and Risk Reduction in Ghanaian District Hospital Systems

A Randomised Field Trial Review

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Author notes

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ABSTRACT

Background: District hospitals in Ghana face systemic challenges in patient safety and operational risk management. While randomised field trials (RFTs) are considered a gold standard for evaluating interventions, their methodological application in this complex, resource-constrained setting requires critical assessment to ensure validity and generalisability of findings.

Purpose and objectives: This review critically evaluates the methodological rigour of RFTs designed to measure risk reduction in Ghanaian district hospital systems. It aims to appraise trial design, implementation challenges, and the robustness of outcome measurement, providing a framework for future research.

Keywords: *District hospitals, Ghana, Randomised field trial, Patient safety, Risk management, Sub-Saharan Africa*

Article Highlights

- Methodological quality of randomised field trials in Ghanaian hospitals was highly variable.
- Compromised allocation concealment and blinding were identified as sources of potential performance bias.
- Structured team-based protocols demonstrated a significant pooled reduction in medication errors.
- Considerable heterogeneity ($I^2 = 68\%$) suggests contextual factors heavily influence outcomes.

Core Finding

Trials implementing structured team-based protocols showed a significant reduction in medication error rates (OR 0.65, 95% CI 0.52 to 0.81).

This review appraises trial design and implementation challenges specific to resource-constrained settings.

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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