

A Randomised Field Trial of a Systems Diagnostic Framework for Risk Reduction in Nigerian District Hospitals

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ABSTRACT

Background: District hospitals in Nigeria face systemic challenges affecting patient safety and clinical outcomes. Existing quality improvement approaches often lack a structured, holistic methodology to diagnose and prioritise systemic failures across interdependent operational domains.

Purpose and objectives: This study aimed to evaluate the efficacy of a novel Systems Diagnostic Framework (SDF) in reducing systemic risk within district hospitals, compared to a standard audit-and-feedback protocol.

Keywords: *District hospitals, Nigeria, Patient safety, Systems analysis, Randomised controlled trial, Quality improvement, Risk management*

Article Highlights

- SDF reduced composite risk scores significantly more than standard audit protocols.
- Identified 40% more critical interdependencies between operational domains.
- Provides first experimental evidence for structured systems diagnostics in hospitals.
- Demonstrates practical methodology for root-cause analysis in constrained settings.

Methodological Note

Parallel-group randomised trial with 24 Nigerian district hospitals comparing the novel Systems Diagnostic Framework against standard audit-and-feedback protocols.

This trial provides empirical evidence for systems-based approaches to hospital risk reduction.

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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