



# Risk Reduction in District Hospitals Systems: A Randomized Field Trial in Rwanda

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## Abstract

District hospitals in Rwanda are crucial for healthcare services, but their efficiency varies significantly. A randomized controlled trial was conducted across ten district hospitals to measure risk reduction outcomes. Data collection included pre- and post-trial assessments, with statistical analysis using logistic regression models. The intervention significantly reduced the incidence of healthcare-associated infections by 25% (95% CI: -30% to -19%) in participating district hospitals. This randomized trial demonstrated a substantial reduction in operational risks, validating the effectiveness of targeted interventions for improving hospital efficiency. District health authorities should adopt and scale up these evidence-based risk mitigation strategies across all hospitals. district hospitals, Rwanda, randomized field trial, risk reduction, healthcare-associated infections Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Rwanda, District Hospitals, Health Systems, Randomized Control Trial, Methodology, Quality Improvement, Risk Assessment*

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