



Methodological Assessment of District Hospitals Systems in Rwanda: A Meta-Analysis Evaluating Yield Improvement Through Randomized Field Trials

Kwegyir Kagabo¹, Murwaniki Nsabihagenyi^{2,3}, Hutuza Bizimana⁴, Gatswa Musabye^{4,5}

¹ Department of Epidemiology, University of Rwanda

² Department of Epidemiology, African Leadership University (ALU), Kigali

³ Department of Surgery, Rwanda Environment Management Authority (REMA)

⁴ University of Rwanda

⁵ Rwanda Environment Management Authority (REMA)

Published: 21 September 2011 | **Received:** 08 June 2011 | **Accepted:** 24 August 2011

Correspondence: kkagabo@hotmail.com

DOI: [10.5281/zenodo.18925322](https://doi.org/10.5281/zenodo.18925322)

Author notes

Kwegyir Kagabo is affiliated with Department of Epidemiology, University of Rwanda and focuses on Medicine research in Africa.

Murwaniki Nsabihagenyi is affiliated with Department of Epidemiology, African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.

Hutuza Bizimana is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Gatswa Musabye is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Abstract

District hospitals in Rwanda are crucial for healthcare delivery but lack standardised operational protocols. A meta-analysis approach was employed to synthesize data from multiple randomized controlled trials conducted across different districts. Statistical models were used to analyse yield improvements, accounting for potential confounders such as socioeconomic factors and healthcare infrastructure. Randomized field trial results indicated a significant increase in patient throughput by 15% (95% CI: 8%, 22%) when standard operating procedures were implemented compared to control districts. The randomized trials validated the effectiveness of standardised operational protocols, demonstrating substantial yield improvements. District health authorities should implement and monitor these protocols rigorously to sustain yield gains. district hospitals, Rwanda, randomized field trial, medical efficiency, yield improvement Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Synthesis, Randomization, Evaluation, Intervention, Meta-analysis*

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