



# Methodological Evaluation of District Hospitals Systems in Rwanda Using Difference-in-Differences Approach for Clinical Outcomes Analysis

Kabuga Byaruhumwe<sup>1</sup>, Ingabirajo Ngabo<sup>2,3</sup>

<sup>1</sup> Department of Pediatrics, Rwanda Environment Management Authority (REMA)

<sup>2</sup> African Leadership University (ALU), Kigali

<sup>3</sup> Department of Internal Medicine, Rwanda Environment Management Authority (REMA)

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**Correspondence:** [kbyaruhumwe@hotmail.com](mailto:kbyaruhumwe@hotmail.com)

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## Author notes

*Kabuga Byaruhumwe is affiliated with Department of Pediatrics, Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.*

*Ingabirajo Ngabo is affiliated with African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.*

## Abstract

District hospitals in Rwanda are critical for providing essential healthcare services to rural populations. However, their effectiveness varies, and there is a need to evaluate these systems systematically. The study will employ a difference-in-differences approach with data from Rwanda's Ministry of Health. The DiD model will be used to analyse clinical outcome measures such as mortality rates and patient recovery times. Findings indicate that the DiD model can effectively identify differences in clinical outcomes between districts, though specific proportions are yet to be determined due to ongoing analysis. The difference-in-differences method offers a robust framework for evaluating district hospital systems' performance and identifying areas needing improvement. Policy recommendations will focus on enhancing infrastructure and training programmes to improve clinical outcomes in Rwanda's rural health facilities. Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^* p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *District hospitals, Rwanda, African healthcare, Methodology, Comparative effectiveness, Difference-in-Differences, Clinical outcomes*

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