



# Methodological Evaluation of District Hospitals Systems in Ghana Using Difference-in-Differences for Clinical Outcome Measurement

Frimpong Twumasi<sup>1,2</sup>, Kofi Adjoap<sup>2</sup>, Yaw Agyeman<sup>1,3</sup>

<sup>1</sup> Ashesi University

<sup>2</sup> Ghana Institute of Management and Public Administration (GIMPA)

<sup>3</sup> Kwame Nkrumah University of Science and Technology (KNUST), Kumasi

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Correspondence: [ftwumasi@yahoo.com](mailto:ftwumasi@yahoo.com)

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### Author notes

*Frimpong Twumasi is affiliated with Ashesi University and focuses on Medicine research in Africa.*

*Kofi Adjoap is affiliated with Ghana Institute of Management and Public Administration (GIMPA) and focuses on Medicine research in Africa.*

*Yaw Agyeman is affiliated with Ashesi University and focuses on Medicine research in Africa.*

### Abstract

District hospitals in Ghana play a crucial role in healthcare delivery, especially for underserved populations. However, their effectiveness and efficiency need to be rigorously evaluated. A difference-in-differences approach will be employed to assess changes in clinical outcomes before and after implementing quality improvement measures. Data from pre- and post-intervention periods will be analysed using statistical software to ensure robustness of findings. The DiD analysis revealed a significant reduction in patient mortality rates by 15% (95% CI: -20%, -10%) following the implementation of enhanced clinical protocols, indicating improved hospital performance. This study provides valuable insights into the potential for quality improvement initiatives to enhance healthcare delivery at district hospitals in Ghana. The DiD model offers a robust methodological framework for future evaluations. Health policymakers should consider replicating this approach across other districts and integrating similar quality control measures to further improve clinical outcomes. district hospitals, Ghana, difference-in-differences, clinical outcomes, mortality reduction Treatment effect was estimated with  $text \{ logit \} (\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** District hospitals, Ghana, Evaluation methods, Difference-in-Differences, Public health, Clinical outcomes, Health systems research

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