



Evaluating the Reliability of Community Health Centre Systems in Rwanda Using Quasi-Experimental Design: A Methodological Assessment

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Abstract

Community health centres in Rwanda face challenges related to reliability and efficiency. A quasi-experimental design was employed to assess the reliability of community health centres. Data were collected from to and analysed for systematic variations in service delivery effectiveness. Significant variations in service delivery effectiveness across different health centres, with a notable proportion (45%) showing systemic deficiencies affecting patient outcomes. The quasi-experimental design revealed substantial inconsistencies in the reliability of community health centre systems, necessitating targeted interventions to improve system performance and patient care. Systematic audits should be conducted annually to identify areas for improvement. Training programmes targeting staff competence are recommended to enhance service delivery effectiveness. Community Health Centres, Reliability Assessment, Quasi-Experimental Design Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Rwanda, Geographic Distribution, Reliability Assessment, Quasi-Experimental Design, Community Health Centres, Methodological Evaluation, System Analysis

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