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Methodological Evaluation of District Hospitals in Senegal: A Randomized Field Trial for Risk Reduction Assessment

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Abstract

District hospitals in Senegal are crucial for healthcare provision, but their effectiveness varies. A comprehensive evaluation is needed to identify areas needing improvement and measure risk reduction. A stratified random sampling method was employed to select hospitals for participation. Data collection involved standardised surveys, clinical assessments, and expert evaluations over a period of six months. Statistical models were used to analyse the collected data. There was an improvement in diagnostic accuracy by 15% across selected district hospitals compared to baseline levels (95% confidence interval: 8-23%). Patient compliance rates reached an average of 70%, up from 60% at baseline, with a significant reduction in medical errors. The randomized field trial demonstrated the potential for structured interventions to enhance hospital systems and patient outcomes. These findings could inform policy reforms aimed at improving healthcare delivery in Senegal. Continue monitoring and evaluating district hospitals to ensure sustained improvement. Implement standardised training programmes for staff and expand resources to support health initiatives. Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African Geography, District Hospitals, Health Systems, Randomized Trials, Risk Assessment, Public Health, Community-Based Intervention*