Electronic Prescription Systems in Rural Ethiopian Healthcare Facilities: Adoption and Effectiveness Analysis

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Abstract

The adoption of electronic prescription systems (EPS) in rural healthcare settings is crucial for improving patient care and reducing errors, particularly in resource-limited environments such as Ethiopia. The research employed mixed-methods including surveys and interviews with physicians and patients. Quantitative data were analysed using logistic regression models, accounting for potential confounders such as facility type and patient characteristics. A significant proportion of rural Ethiopian healthcare facilities (72%) adopted EPS, with a higher adoption rate among private clinics compared to government hospitals (85% vs. 60%). The study found that while EPS were effectively used in reducing prescription errors and improving patient outcomes, they faced challenges such as insufficient IT infrastructure and low staff training. Rural healthcare facilities should prioritise investment in technology upgrades and comprehensive training programmes for staff to maximise the benefits of EPS. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Ethiopia, Geographic Information Systems, Health Informatics, Electronic Medical Records, Telemedicine, Primary Healthcare, Adoption Models*

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