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Methodological Evaluation of Public Health Surveillance Systems in Ethiopia: A Randomized Field Trial on Adoption Rates

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Abstract

Public health surveillance systems are critical for monitoring disease outbreaks and managing public health in resource-limited settings such as Ethiopia. A randomized field trial was conducted to measure the adoption rates of a novel public health surveillance system among healthcare facilities and community health workers. The study employed a pre- and post-intervention design with a control group that did not receive the new system. In one region, the adoption rate of the new surveillance system reached an average of 75% within six months, indicating significant uptake despite initial skepticism among some participants. The randomized field trial demonstrated promising results in terms of system adoption rates and highlighted areas for further improvement to enhance coverage across Ethiopia's diverse regions. Future implementation strategies should focus on addressing the concerns raised by non-adopters, particularly regarding cost, training needs, and data management challenges. Treatment effect was estimated with $text\{logit\}(\pi) = beta0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Ethiopia, Geographic Information Systems, Public Health Surveillance, Randomized Controlled Trials, Data Quality Assurance, Community Engagement, Outcome Evaluation*

ABSTRACT-ONLY PUBLICATION

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