African Diving and Hyperbaric Medicine

Methodological Evaluation of Public Health Surveillance Systems in Ethiopia: A Randomized Field Trial for Cost-Effectiveness Assessment

Teshome Mamo[1], **Mulu Gebru**[2,3]

[1] Department of Clinical Research, Addis Ababa Science and Technology University (AASTU)

[2] Adama Science and Technology University (ASTU)

[3] Department of Surgery, Addis Ababa Science and Technology University (AASTU)

Published: 17 August 2002 | **Received:** 07 April 2002 | **Accepted:** 07 July 2002

Correspondence: tmamo@aol.com

DOI: 10.5281/zenodo.18739583

Author notes

Teshome Mamo is affiliated with Department of Clinical Research, Addis Ababa Science and Technology University (AASTU) and focuses on Medicine research in Africa.

Mulu Gebru is affiliated with Adama Science and Technology University (ASTU) and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems are crucial for monitoring disease outbreaks in resource-limited settings such as Ethiopia. However, their effectiveness and cost-effectiveness remain poorly understood. A randomized field trial was conducted to assess the performance metrics of existing surveillance systems. Data collection involved both quantitative and qualitative methods, including surveys and focus group discussions. During the trial, it was observed that public health workers in rural areas faced challenges with communication barriers and limited access to digital devices, which impacted data input accuracy. The evaluation highlighted significant interoperability issues between different surveillance systems used by local authorities. These findings suggest a need for standardised protocols and improved technology integration. Standardised training programmes should be developed for public health workers regarding the use of digital tools in surveillance processes, while also advocating for greater investment in infrastructure to enhance data collection and transmission efficiency. 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, Randomized Controlled Trials, Cost-Benefit Analysis, Surveillance Efficiency, Data Quality Assurance, Public Health Metrics*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ REQUEST FULL PAPER

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge