



Implementing Community-Delivered Oral Rehydration Solutions to Reduce Diarrhea Mortality Rates in Ghana's Savannah Regions

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Abstract

Diarrhea is a leading cause of mortality in Ghana's Savannah regions, particularly among young children. A cluster-randomized controlled trial was conducted with 120 communities divided into intervention and control groups. The intervention group received monthly ORS distribution, while the control group continued standard healthcare practices. Community members reported a significant reduction ($p < 0.05$) in diarrhea incidence from 40% to 20%, with no adverse effects noted. The community-delivered ORS strategy effectively reduced diarrhea-related mortality rates, demonstrating a 30% decrease compared to the control group. To scale up this intervention, ongoing education and distribution logistics should be improved. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Sub-Saharan, African, Sprinkler, Randomized, Controlled, Intervention, Epidemiology

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