

A conversation with Simon Cousens on October 28, 2014

Participants

- Professor Simon Cousens – Professor of Epidemiology and Medical Statistics, London School of Hygiene & Tropical Medicine (LSHTM)
- Timothy Telleen-Lawton – Research Analyst, GiveWell

Note: These notes were compiled by GiveWell and give an overview of the major points made by Professor Cousens.

Summary

GiveWell spoke with Professor Simon Cousens about the specifics of the RCT conducted by LSHTM to evaluate Development Media International's (DMI's) mass media campaign in Burkina Faso. Topics included the interaction between DMI broadcasting and broadcasts by another NGO, adjustments made to account for a discrepancy in baseline mortality, and selection criteria for the RCT population.

PMC broadcasts in DMI RCT zones

During the RCT of Development Media International's (DMI's) Burkina Faso program, another organization, Population Media Center (PMC), was broadcasting health messages on the radio. PMC messaging may have confounded the RCT results.

DMI and PMC arranged to exclude PMC broadcasts from the RCT control zones, though PMC broadcasts continued in the RCT treatment zones. Only a small amount of PMC broadcasting occurred in the treatment zones.

The exclusion of PMC broadcasting in the control zones may be problematic if the RCT is interpreted as a study of DMI's intervention alone. However, if the RCT is interpreted more broadly as a study of mass media interventions in public health, excluding PMC broadcasts from the control is not problematic.

Further analyses on the Burkina Faso RCT data

At baseline, there was a large imbalance in mortality between the treatment and control groups. Dr. Sophie Sarrasat adjusted the analysis to account for this discrepancy in baseline mortality. Three factors that may be associated with mortality were identified:

- Distance from Ouagadougou (as a proxy for development level)
- Distance to a health facility (as a proxy for access to health facilities)
- Percent of births occurring in a health facility (as a proxy for propensity to use health services)

An analysis was conducted to combine these three variables into a single confounder score. When the confounder score was included in the analysis of baseline mortality, it was extremely effective in explaining the difference in mortality between the control and intervention arms. Before adjusting with the confounder score, the difference between arms was about 30 deaths per 1,000. After adjustment, the difference was four deaths per 1,000.

This analysis was based entirely on baseline characteristics, because it was attempting to account for baseline differences.

Selecting the RCT populations

The LSHTM team obtained census data with Geographic Information System coordinates for each village from the Burkinabé National Bureau of Statistics. In one or two cases, the LSHTM team struggled to locate the village referenced in the database.

The following criteria were used for evaluating villages:

- Included villages had to be at least 5 km away from the radio transmitter.
- Included villages had to be smaller than 5,000 people at the time of the census.
- Each cluster needed a cumulative population of approximately 40,000.

The LSHTM team created a list of eligible villages, sorted by distance from the center of the cluster. Starting with those closest to the center of the cluster, LSHTM researchers then selected villages for inclusion until a cumulative population of 40,000 was reached.

If the effect of the intervention varies with distance, then the effect could be under- or over-estimated due to this selection procedure.

Centering zones

The five-kilometer exclusionary zone around the radio stations was not based on the exact coordinates of the radio station. Instead, it was based on the official coordinates for the town center in which the station is located, as recorded by the national database of statistics.

All GiveWell conversations are available at <http://www.givewell.org/conversations>