

Statistics Without Borders (SWB) Efforts to Teach Statistics to Health Staff

Gary Shapiro

¹Statistics Without Borders, 1813 Glendora Dr., District Heights, MD 20747

Abstract

The paper discusses instruction and advice to health professionals and field workers done by volunteers with Statistics Without Borders (SWB). SWB has the objective of providing consultation in the area of international health. One project is our assistance for the production of a manual for field people in the conduct of fast response surveys to evaluate health interventions. An issue here is the desire to do things correctly and rigorously, while at the same time keeping things simple enough for inexpensive implementation in the field by persons with little statistical knowledge. Another project is our assistance in the review of proposals by developing country offices for evaluating health interventions. Other project are also discussed.

Key Words: Volunteer, evaluation, survey manual, health intervention, healthcare professionals, public health

1. What Is Statistics Without Borders (SWB)?

SWB is an all-volunteer diverse group of statisticians with the purpose of offering statistical assistance and consulting in the area of international health, broadly defined. It is an official American Statistical Association group, with over 170 members as of September 2010 and growing every day.

2. Rapid Surveys Handbook

SWB was asked to make comments on a handbook. The handbook is intended to instruct health staff working in the field in the conduct of small scale surveys aimed at monitoring health interventions. Our comments mainly pertained to ensure the handbook promotes strict probability surveys and to correct mis-statements in the text. Our comments generally led to appropriate changes.

Some example of our comments:

We stated that the description of Lot Quality Acceptance Sampling was flawed, which led to misunderstandings of what it could do.

We recommended against a procedure in which interviewers were instructed to go to the front door nearest to the household they first interviewed in order to find an eligible person, and recommended an alternative procedure.

We recommended that the “spin the bottle” sampling method not be given as an acceptable procedure.

We asked that discussion be added to discuss data cleaning and editing.

We recommended that they add language that stressed the need for call-backs in cases where no one is at home at the original visit.

3. Review of Evaluation Survey Plans

The Academy of Educational Development (AED) reviews evaluation plans for surveys prepared by non-governmental organizations. The evaluations are to be done for interventions undertaken with Food for Peace money. SWB has been asked to assist AED in the statistical aspects of the review. We reviewed two evaluation plans in 2009 and are reviewing about seven additional plans in September 2010. In the 2009 reviews, we made comments pertaining to the completeness of the sampling frame, the need for call-backs for no-one-homes, the need for computation and use of weights, and the need for more detail on the analysis planned and on the questionnaire.

4. Evaluating Intervention by UNICEF

We are engaged in long-term assistance for the evaluation of UNICEF interventions in Sierra Leone. Our initial work was to comment on the sample design and sample size for the baseline survey. The sample was selected and the survey was conducted using PDA/GPS software (Eng et al, 2007). This seems to be a very useful product which can have widespread applications to surveys in developing countries and in rural areas.

An SWB volunteer spent a few days in Sierra Leone, helping Sierra Leone nationals to convert the data to SAS and to merge data, and in capacity building of the Sierra Leone nationals. SWB also prepared a preliminary analysis plan. We expect to be involved in the analysis of data from the baseline survey and in planning for the post-intervention survey.

5 Evaluation of Meso-American Health Interventions

A large and ambitious set of interventions is being done in about seven Central American countries. I was a member of a large evaluation committee, whose purpose was to advise and plan evaluations of all the interventions in the countries. Along with people from the appropriate Central American countries, I attended several meetings of the committee. SWB may also be assigning one person to each country, to help with the selection of samples for the evaluations.

6. Haiti Education

SWB representatives have had preliminary discussions about developing university level statistics education in Haiti.

7. Summary

SWB is engaged in several projects related to improving the health in developing countries. Some of these projects include capacity building of field people or students in the countries and in helping health workers conduct surveys to evaluate the effect of interventions. I have discussed selected SWB projects, including the writing of a Rapid Survey Handbook, the review of evaluation survey plans for AED, and assistance to UNICEF in evaluating interventions in Sierra Leone.

References

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