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Research proposal

Title: Discrete choice experiment for the identification of malaria intervention community preferences in southern Mozambique

Acronym: DCE

PI and co-PI: Elisa Sicuri and Joe Brew

Areas and/or Programs in which the proposal is framed: Malaria, elimination, CISM

Summary

Background (maximum 5 lines)

Human preference and choice determine the effectiveness of public health interventions. Malaria eradication will require that interventions be matched to the preferences of communities. Whereas studies of "revealed preference" (through observation of behavior) are useful, novel methods for malaria control (vaccination and mass drug administration) require an assessment of *hypothetical* preferences, which can be measured through discrete choice experimentation.

Objectives (maximum 15 lines)

Primary objective

This project has one primary objective: to elicit, quantify and rank community preferences, acceptance and aversion to two malaria control approaches (vaccination and mass drug administration) in the districts of Manhiça and Magude, Mozambique.

Secondary objectives

Secondary objectives include:

- Quantify and account for the social and demographic confounders to preferences.
- Estimate the role of hypothetical disease burden on preferences, thereby enabling the prediction the impact of the epidemiologic transition on malaria control preferences.
- Understand the effect of MALTEM's campaign, particularly the community experience of mass drug administration, on community preference regarding both drugs and vaccination.

Methods and Design (maximum 15 lines)

Briefly explain the study as you would to a reviewer who is not a specialist in your area of expertise

Discrete choice experiments consist of asking a participant to choose between two different "alternatives", repeatedly, with different "attributes" (ie, other factors). Here is an example of one choice-set:

Which of the following three choices do you prefer for you and your community?

Choice A	Choice B	Choice C
Mass drug administration	Vaccination	Neither
50% effectiveness	75% effectiveness	
No side effects	Severe side effects	
Anti-malarial effect of 1 month	Anti-malarial effect of 1 year	
$5	free	
30% incidence	60% incidence	

By keeping constant the "alternatives" (row 1) while varying the attributes (other rows), one can then model (a) which of the alternatives if preferred by the population, (b) which attributes affect that preference (ie, a cost-threshold at which preference changes, etc.), (c) which extra-survey

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confounders affect preference (ie, sociodemographic's effect on preference).

Evaluation criteria

1. What are the ethical considerations that need to be addressed and how will they be addressed? (Maximum 10 lines)

This will be a survey-only experiment. It will deal with stated preferences, as reported by participants. Particpants will be randomly selected from existing CISM DSS (the census). Data collected from this project will be merged with census data, albeit anonymously.

2. **List the ethics committees (both human and/or animal) which either have reviewed or will review this proposal**

We are submitting the protocol to both the ISGlobal ISC, as well as the ISC of the CISM. In regards to ethical approval, we are not carrying out an intervention and would like to request exemption from review by an ethical board. However, on the matter of exemption, we see the ISC's input (whether we will be exempt, or whether we should submit to ethical boards).

3. Describe the expertise required for the project and which member(s) of the research team will provide each area of expertise (maximum 10 lines) [Example: Epidemiology , including study design and analysis: Wolfgang Mozart, Laboratory Analysis of Samples: Pablo Picasso, Field collection and identification of mosquitoes: Miguel de Cervantes Saavedra, Spatial modeling and mapping analysis: Juan Sebastian de Elcano, etc.]

Elisa Sicuri has experience in economic analyses pertaining to malaria in developing countries. Joe Brew will contribute with the data management and analysis, using multinomial models (an area in which he has a great deal of familiarity).

4. How does the proposal fit in with ISGlobal's scientific agenda? (Maximum 10 lines) [Select an established area or program of ISGlobal research and describe how the study fits in the selected area or program, or describe a new line of research]

This project fits in with ISGlobal's scientific agenda in the following ways:

- Strengthens collaborations with the CISM
- Increases international presence and clout
- Adds to research production and knowledge generation in a field in which ISGlobal is already a thought leader (malaria control / elimination), while supplementing with novel approaches (discrete choice experimentation)

Budget estimation and expected source of funding for this study (Maximum 3 lines)

$8,100 of already available funds. No new funding required from ISGlobal.

Other comments

- **Have all co-investigators read and approved this proposal? YES (Brew + Sicuri)**
- **Do you expect to handle samples of human origin in the study? NO**
- **Do you expect to handle personal information in the study? YES.**

PLEASE SEE FULL PROTOCOL (APPENDIX)

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