

Research proposal

Title: Can we do it? A survey of research professionals on the timeline and obstacles to eliminating malaria

Acronym: CWDI

PI and co-PI: Elisa Sicuri (PI), Joe Brew

Areas and/or Programs in which the proposal is framed:

Malaria, elimination

Summary

Background

The WHO GMP has acknowledged that it "needs to take an official position on how and under what timeline malaria eradication could be achieved". Such a position could inform policy, and plays a crucial role in the economic analysis of the expected value of malaria control interventions. Since no position has been taken, we propose using the "wisdom of [expert] crowds". Aggregated expert opinion enables estimation of the expected value of eradication.

Objectives

In a systematic survey of experts in the fields of neglected tropical diseases and malaria, we will query perceptions regarding the feasibility and time-frame of eradication, as well as the perceived gaps and chief areas that need attention in order for eradication to occur. We will report on aggregate results, and our analysis will be broken down by disease, researcher academic discipline, impact and years of experience.

Our **principal** objective is to measure the perceived likelihood/feasibility and time-frame of eradication of certain neglected tropical diseases and malaria among those who are professional researchers of those respective diseases, at a larger scale than any previous study. Our **secondary** objective is to examine the relationship between the perceived likelihood/feasibility of eradication of diseases with the respective attention allotted to them in both the popular and academic literature. Our **tertiary** objective is to establish which specific areas of knowledge are lacking through an examination of researcher characteristics (academic discipline, geography, etc.) insofar as those characteristics are associated with differential perceptions regarding time-to-eradication.

Methods and Design

We will "webscrape" from PubMed the authors, abstracts, and journal information of all articles related to disease X using standardized search terms. We will then send emails to all first, last, and corresponding authors (whose addresses can be located), asking 2 simple questions:

1. In your opinion, how many years will it be until disease X is eradicated? (0-99+)
2. Please rank the following ten areas in order of where attention is most needed in order to achieve eradication (10 = attention most needed; 1 = attention least needed).¹

These questions can also be answered via an online survey: <http://goo.gl/forms/lb80lwqwQY>

We will then compile a database which links researcher meta-information (% and number of publications in top-decile journals, publication quantity, geography of institution, geography of research focus, gender, academic discipline) with their surveyed attitudes regarding eradication (years-to-eradication and ordered ranking of factors).

The design of this study is typical, but this study is noteworthy in two areas: (1) its scale (by

¹ The ten options are: (1) Resources for research, (2) Resources for public health, (3) Partnerships, (4) Creation/improvement of pharmaceuticals, (5) Creation/improvement of vaccines, (6) Awareness and education, (7) Health systems infrastructure, (8) Knowledge sharing and translation, (9) Scaled up interventions, (10) International coordination.

using automated web-scraping, emailing, and surveying, we will reach the maximum number of experts), and (2) its democratic approach (we assume that the more experts' opinions reflected, the closer we are to approximating the "truth"). Our results will be of value not only to the scientific community, but also to policy-makers and public health practitioners. By gauging and synthesizing the "wisdom of (informed) crowds", we aim to establish a barometer of scientific opinion in a manner that is fully reproducible.

Evaluation criteria

1. What are the ethical considerations that need to be addressed and how will they be addressed?

We will not be collecting personal health information, or any biological samples. Nor will we be dealing in any way, shape or form with health outcomes or treatment data.

We will only contact researchers whose information is publicly available online.

The only potential area of "sensitive" information pertains to the disclosure of researchers' opinions. However, we will state clearly in both the "invitation to participate" email as well as in the online survey form that results will be made fully public; researchers who choose not to participate are free to do so, and will not be contacted thereafter.

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

None. Given the nature of this study, no human/animal ethics committees' review is necessary.

3. Describe the expertise required for the project and which member(s) of the research team will provide each area of expertise

Area expertise in malaria: Elisa Sicuri and Joe Brew

Computer programming (web-scraping, mail merge, data management): Joe Brew

4. How does the proposal fit in with ISGlobal's scientific agenda?

ISGlobal is a thought leader in malaria as well as the corresponding eradication movement. By using modern, technologically-oriented means to establish a "barometer" of international researcher consensus on the perceived feasibility and time-frame of eradication, ISGlobal would cement its position at the center of the ongoing international dialogue on the subject. Furthermore, given ISGlobal's stake in eradication campaigns, the results of this study could (a) inform which disciplines and diseases have the most "research gaps" to be filled in order to achieve eradication, (b) identify areas of consensus and discord between different disciplines, (c) provide (crowd-informed) estimates of the timeline to eradication.

Budget estimation and expected source of funding for this study

None. Given that this topic is directly relevant to the PhD-specific research of Joe Brew, no project-specific funding is required.

Other comments

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

SEE ATTACHED EXPANDED CONCEPT NOTE FOR FULL PROJECT DETAILS
