

Final Progress Report
Sustainability Science Program
Term: September 1, 2013 – August 1, 2014

Name:
Amrita Ahuja

Your fields:
Economics

Your degree program, institution and graduation date:
PhD, Business Economics, Harvard Business School, 2009

Faculty host(s) at Harvard name and department:
Michael Kremer, Economics Department and Harvard Kennedy School

Description of SSP-related research activity:

Cost Effective Approaches to Reducing the Burden of Wide-spread Infectious Diseases: Case Studies in Safe Water Provision and Mass Deworming

Abstract:

The Millennium Development Goals call for reducing by half the proportion of people without sustainable access to safe drinking water. This goal was adopted in large part because clean water was seen as critical to fighting diarrheal disease, which kills more than one and a half million children annually. The primary government and donor response to this burden has been to fund the construction of new water sources, so that the MDGs with respect to access to water are likely to be met in 2015. However, challenges still remain in ensuring that water is safe for drinking and household use. In the context of availability of water and limited resources to improve its safety, the key question this project addresses is: what approaches to improving water quality are most effective and cost effective?

In addition, the project considers approaches to financing cost-effective strategies for improving health from wide-spread infectious disease, focusing on the case of intestinal helminthes.

Identification of the problem you address:

- (1) About 1.5 million children die each year from diarrheal diseases, with unsafe water being a major cause. In the context of availability of water and limited resources to improve its safety, what approaches to improving water quality are most effective and cost effective?
- (2) What criteria should guide which public health investments are made, particularly in the case of childhood diseases that can have long-term impacts on human capital development?

Key question asked about the problem:

- (1) Develop and evaluate one highly cost-effective approach to safe water provision, point-of-collection chlorination
- (2) Develop a framework for guiding investments in health programs in the context of reviewing the literature on reducing the burden of intestinal helminthes

The methods by which you answered that question:

- Field experiments
- Literature review

Principle literature upon which the research drew:

Economics, especially Development Economics and Personnel Economics

Empirical data acquisition description:

Data were collected prior to this post doc year

Geographical region studied:

Africa, Developing Countries

Recommendations that might be relevant for your problem:

- Making products very easy to use (physically, financially and from a psychological perspective) can be very important in driving adoption of health technologies
- Free provision of preventative health products can lead to vastly higher adoption than charging for them, leading to big improvements in health
- Sometimes public investments in health can be a free lunch (e.g. school based deworming in Kenya). They can lead to improvements in human capital, which lead to improved earnings, which in turn can lead to increased tax revenues greater than the initial public investment.

A description of the final product(s) you have/are aiming to produce:

2 papers:

“Long term take-up for point of collection chlorination for water treatment: Results from a cluster randomized controlled trial in rural Kenya” (with Clair Null, Alix Zwane, Jeff Berens, Edward Miguel, Jessica Vernon, Michael Kremer) - to be submitted to Environmental Science and Technology (target submission date: August 8)

“Rethinking the Standard Decision Framework for Health Intervention Financing” (with Sarah Bird, Joan Hicks, Michael Kremer, Edward Miguel, Alix Zwane, Shawn Powers) - to be submitted to the Papers and Proceedings of the World Bank Economic Review (target submission date: August 31).

Description of major other intellectual or professional advancement activity(ies) over the past academic year:

Completed draft of working paper: “Compensation for Community Workers: A Field Experiment from Water Provision in Rural Kenya” (with Vivian Hoffmann and Celine Gratadour):

Completed field work along with Vivian Hoffmann in Kenya for “Governance for the Management of Local Public Goods” a field experiment supported by JPAL’s Governance Initiative. Data are currently being entered, and one or more draft papers are expected by the fall.

Please list citations for reports, papers, publications and presentations that built on your fellowship research:

NA

Please describe any collaborative activities with other SSP Fellows that you are involved with.

NA

Principal collaborators outside Harvard (list name and institution):

Vivian Hoffmann (IFPRI and University of Maryland), Clair Null (Mathematica), Edward Miguel (UC Berkeley), Alix Zwane (Evidence Action), Celine Gratadour. Please note, these are current institutions. Some collaborators have been at multiple institutions over the course of the year.

List any awards or grants that you have received this year for the current or coming year.

NA

If you are moving to a new position, please list your contact information there:

Director of a foundation (anonymous).

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