# Indoor Air Pollution and Health in Developing Countries

Submission date	Recruitment status No longer recruiting	<ul><li>Prospectively registered</li></ul>		
01/03/2011		Protocol		
Registration date	Overall study status Completed	Statistical analysis plan		
28/04/2011		[X] Results		
Last Edited	Condition category	[] Individual participant data		
17/01/2020	Respiratory			

### Plain English summary of protocol

Background and study aims

Acute respiratory (lung) infections are the leading killer of children worldwide and indoor air pollution due to biomass (e.g., wood) burning is thought to be a principal cause. However, no study has experimentally studied why so many rural households use inferior cooking technologies with potentially devastating health consequences. This study will address these limitations in current knowledge about indoor air pollution. The studys major objective is to assess why households choose to cook with traditional cooking technologies by randomly allocating various incentives and conditions under which improved cookstoves can be adopted.

### Who can participate?

Household heads representative of households in two study districts (Hatia and Jamalpur) will complete surveys, which will include information about all household members (all ages, male and female, almost exclusively ethnic Bengalis) and women, all ethnicities in Bangladesh (all speak Bangla).

### What does the study involve?

The study has two parts. The first is a population-representative survey of rural households stated preferences about cooking technologies. The second is a trial that offers cookstoves to households, randomly assigning cookstove types, prices, and household members to which offers were made (male and female household heads) in the districts of Jamalpur and Hatia in Bangladesh.

### What are the possible benefits and risks of participating?

The main benefits of participation are the opportunity to obtain a new cookstove (if a participant chooses) and the creation of new knowledge about the determinants of cookstove demand; the main risk associated with participation is loss of confidentiality in the research process.

#### Where is the study run from?

The project is a collaboration between Stanford University, Yale University, and BRAC.

When is the study starting and how long is it expected to run for? The study ran from July 2006 to February 2011.

Who is funding the study?

The study is funded by the Woods Institute for the Environment and the Shorenstein Asia-Pacific Research Center at Stanford University, the National Science Foundation, the DFID/LSE/Oxford International GrowthCentre, the National Institute of Child Health and Human Development, and the Yale Climate and Energy Initiative for support.

Who is the main contact? Mushfiq Mobarak ahmed.mobarak@yale.edu

# Contact information

Type(s)

Scientific

Contact name

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# Additional identifiers

Protocol serial number

N/A

# Study information

#### Scientific Title

Indoor Air Pollution and Health in Developing Countries: An Intervention Study in Bangladesh

### Study objectives

Acute respiratory infections are the leading killer of children worldwide and indoor air pollution due to biomass combustion is thought to be a principal cause. However, no study has experimentally studied why so many rural households use inferior cooking technologies with potentially devastating health consequences. This study will address these limitations in current knowledge about indoor air pollution.

The studys major objective is to assess why households choose to cook with traditional cooking technologies by randomising various incentives and conditions under which improved cookstoves can be adopted.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

The Stanford IRB approved the project protocol on 07/06/2006 (ref: Stanford IRB protocol 6454)

### Study design

Randomised controlled interventional trial

### Primary study design

Interventional

### Study type(s)

Screening

### Health condition(s) or problem(s) studied

Indoor Air Pollution

#### **Interventions**

Randomised on the basis of:

- 1. Price
- 2. Information about the stove adoption choices of opinion leaders
- 3. A choice between two types of cookstoves and pre-determined prices
- 4. Whether or not cookstove offers were made to male or female household heads

### Intervention Type

Other

#### Phase

Not Applicable

### Primary outcome(s)

Adoption of an improved cookstove

### Key secondary outcome(s))

No secondary outcome measures

### Completion date

28/02/2011

# Eligibility

# Key inclusion criteria

1. Household heads representative of households in two study districts (Hatia and Jamalpur) will complete surveys, which will include information about all household members (all ages, male

and female, almost exclusively ethnic Bengalis) and women, all ethnicities in Bangladesh (all speak Bangla)

2. The inclusion of pregnant women in the pilot project is necessary because the health behaviors of pregnant women in selecting household fuel sources are important because of their implications for the health of both women and unborn foetuses

### Participant type(s)

**Patient** 

### Healthy volunteers allowed

No

### Age group

Adult

### Sex

All

### Key exclusion criteria

A representative sample of household heads from study regions was chosen. In some cases we selected men, and in others we selected women (and so women were excluded in the former, men in the latter). Otherwise, there were none.

### Date of first enrolment

06/07/2006

### Date of final enrolment

28/02/2011

### Locations

### Countries of recruitment

Bangladesh

United States of America

# Study participating centre CHP/PCOR

Stanford United States of America 94305

# Sponsor information

### Organisation

Woods Institute for the Environment, Stanford University

### **ROR**

https://ror.org/00f54p054

# Funder(s)

### Funder type

University/education

### Funder Name

Woods Institute for the Environment - The Stanford University (USA)

# **Results and Publications**

Individual participant data (IPD) sharing plan

### IPD sharing plan summary

Not provided at time of registration

### **Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	03/07/2012		Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes