

## Center for Equitable Growth Small Grant Proposal

**Title:** “Incentives for Preventive Health Care in India: Evidence from a Randomized Controlled Trial”

**Principal investigator:** Benjamin Handel, Asst. Professor of Economics, University of California, Berkeley

**Co-Investigator:** Edward Miguel, Professor of Economics, University of California, Berkeley

**Project Member:** Liang Bai, Ph.D. student, University of California, Berkeley

**Project Member:** Gautam Rao, Ph.D. student, University of California, Berkeley

Preventive care is widely considered to be an essential means of improving population health outcomes, while potentially also reducing overall health expenditures. Yet it is a stylized fact of health markets across a range of countries and contexts that use of preventive care is suboptimally low. In the US, scholars have identified the role of consumer information, treatment externalities, insurance market failures, and time inconsistency in causing an underuse of preventive care (Kenkel 2010). In developing countries, a variety of preventive care technologies such as vaccinations, anti-malarial bed nets, water purification and the management of chronic conditions are thought to be vastly underutilized (Dupas 2011).

Recent literature has identified the following three key reasons why consumers might underinvest in preventive care, even in the absence of market failures such as externalities: (i) Time inconsistency, also known as procrastination or present bias; (ii) a high price elasticity of demand for preventive care, such that even moderate increases in prices cause dramatic reductions in demand, and (iii) a lack of information or awareness on the part of consumers. All of these issues are thought to be particularly important for the poor, and thus may contribute to the well-known health disparities that exist between wealthy and poor households.

This project seeks to carefully identify the importance of these distinct mechanisms in the context of growing rates of diabetes and hypertension in rural India, and the health and economic impacts of investing in preventive health care services. With this in mind, we have designed a suite of interventions to rigorously evaluate the roles of procrastination and consumer price sensitivity in reducing take-up of two preventive health services (diabetes and pre-diabetes management, hypertension treatment and monitoring). They include three options: **costly commitment contracts**, in which respondents are given the opportunity to “commit” to preventive clinic visits by paying the full cost of the visits up front, plus a premium which they are paid back when they visit the doctor; **attractive commitment contracts**, in which the amount paid back exceeds the premium (thus giving them a net discount); and **price discounts (with and without deadlines)**, which allow the respondent to access preventive health services at 50% of the market rate.

Our research exploits a partnership with an innovative social enterprise in Punjab called Healthpoint Services India (HSI), which addresses the vast need for modern health care in rural India by building and operating community-scale clinics (“eHealthPoints”) and water treatment facilities (“Waterpoints”). The operating unit is a cluster of an eHealthPoint (EHP) clinic, which “brings” affordable modern health care to patients through telemedical consultations with qualified doctors (\$.80 per consultation), occasional visits by a qualified health specialist, diagnostic testing via a modern laboratory (average price/test: \$1), and qualified medicines via a licensed pharmacy at the village level; and a Waterpoint in a central village plus 3-4 Waterpoints in smaller, surrounding villages, which provide safe drinking water to subscribers on a monthly basis (\$1.50/month/household).

We will utilize the popular format of health camps, where doctors are physically present in each village, to provide consultations, monitoring and diagnostics to members of the community on pre-announced dates. Prior to launching the camps, we will identify households with individuals who are

either “at-risk” of, or already suffering from, diabetes and hypertension in the catchment area of each EHP clinic. We will randomly assign 1,300 of these eligible households to one of four treatment groups (as outlined above) and one control group (our counterfactual).

Comprehensive baseline survey data will be collected on household poverty status, education, demographics, assets, family health history and time preference prior to introducing our interventions; all households (including those in the control group) will receive information about health risks and preventive care options. Once all interventions are delivered, a series of twelve health camps will be held at each of the four EHP sites on a fortnightly basis, beginning with a general purpose camp that is free to everyone, to sensitize the community and build trust in EHP. Upon culmination of the twelve camps (over a period of six months), follow-up surveys will be administered to all 1,300 households to track health outcomes (including blood glucose levels, blood pressure levels, waist-hip ratio, BMI, and self-reported health behavior) as well as economic and social outcomes for respondents over time. Over ten months of data collection, we hope to:

- Identify replicable strategies for increasing take-up of chronic disease prevention and management programs (with a focus on diabetes and hypertension);
- Evaluate the effectiveness of commitment contracts and price discounts in increasing patient traffic;
- Evaluate the health and economic impacts of attending the camps;
- Examine how the impacts of these interventions differ by household poverty status and educational attainment, and discuss implications for health disparities in India.

This project is a good fit for the Center for Equitable Growth as it seeks to document the effects of interventions designed to increase access to (and demand for) preventive health services among the rural poor in Punjab. The lessons we learn in this setting will have significant policy relevance throughout the developing world, especially for rapidly growing countries such as India and China. But our findings also have implications outside the developing world, in countries like the US where diabetes and cardiovascular disease are major health challenges, especially for poor and ethnic minority populations. For all outcomes, we will estimate impacts by gender, poverty status and health status to examine the disproportionate impacts of our interventions across groups.

#### *Brief budget justification*

Partnership development and initial pilot work in India are currently being funded through a small private seed grant. Thus additional funding will be extremely useful to the project in 2012-13 for project management and graduate research assistance at UC Berkeley (since this is essentially unfunded through the existing small seed grant). The PI, project manager and one GSR will make trips to India in the summer and fall of 2012 meet with our local partners, Healthpoint Services India and J-PAL South Asia, and oversee baseline survey implementation. The total funding request is \$30,000, with the following breakdown:

#### Budget

<b>Project Activity / Expense</b>	<b>Projected cost</b>
Project Manager at UC Berkeley (50% time for 2 months, based at UC Berkeley)	\$14,000
Graduate Student Researchers (100% time for 3 months, based at UC Berkeley)	\$10,000
Round-trip U.S.-India travel for Project Manager, GSR, PI (3 trips)	\$6,000
<b>TOTAL FUNDING REQUEST</b>	<b>\$30,000</b>