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## **Knowing (Your) Well? An Evaluation of Alternative Strategies for Selling Well-Water Arsenic Tests in Sonargaon, Bangladesh\***

*\*joint work with Ricardo Maertens, Kazi Matin Ahmed and Lex van Geen*

### **Abstract**

Lack of reliable information on environmental risk is often a key constraint limiting the extent of risk avoiding behavior in developing countries. The existence of private markets may be important if households cannot rely on the public sector to provide information, but fees may severely limit demand, especially among the poor. Such considerations are salient in Bangladesh, where naturally-occurring low-dose arsenic (As) is frequently present in tubewell water, a primary source of drinking water for millions of households. Because As contamination varies considerably across space, even within very narrow areas, the provision of information on As contamination has been shown to be effective at allowing households relying on unsafe water to switch to safer and nearby sources. However, the safety status of millions of tubewells remains unknown, and there is no well-established market for tests. In this paper, we describe results from a randomized controlled trial in 128 villages in Sonargaon, Bangladesh, where tests were sold under different conditions. At a relatively low

price of BDT45 (about USD0.60) only about one in five households purchased a test, despite widespread awareness about As risk and infrequent knowledge about the safety of one's drinking water. Sales were increased neither by "nudges" in the form of visible metal placards indicating safety status, nor by offers that attempted to promote the sharing of safe water through informal agreements, but contracts requiring payment only in case of "good news" more than doubled demand. Conditional on learning about the unsafe status of one's tubewell water, informal agreements, visible placards, and fees-for-good-news (but only at lower prices) nearly doubled the fraction of households which stopped drinking water from contaminated wells, likely due to both selection and differential impacts conditional on purchase. Further, our calculations indicate that both informal agreements that promote water sharing and charging fees-for-good-news (at low prices) were the most cost-effective selling schemes.

**Thursday 19<sup>th</sup> October**  
**from 1pm to 2pm**  
**Campus Luigi Einaudi**

**Seminar room n. 36**  
**Building D1 - 3<sup>rd</sup> Floor**  
**Lungo Dora Siena 100/A, Turin**