The Irrational Health Consumer: understanding and addressing underinvestment in preventative health

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April 12, 2014
What is “irrational” about health consumers?

• A “rational” economic agent invests in a health intervention if the discounted benefits outweigh the costs
  • Exceptions are public goods, eg treatment and prevention of infectious diseases should be subsidized as helps others

• The poor spend a lot of money on health, but much spending is on costly and/or ineffective acute care

• Many highly cost-effective prevention technologies are not universally taken up

• This is not just a developing country problem, same “irrational” behaviors in rich countries
  • Cost of the mistakes for the poor are huge
Underinvestment in preventative health

- Insecticide treated bednets cost $50 per DALY saved where malaria is endemic (D’Aessandro et al, 1995)
  - Only 39% of pregnant women, 27% of children in malarial endemic Africa sleep under ITN (van Eijk, 2013, Flaxman et al, 2010),

- Point of use chlorination of drinking water has estimated cost $53 per DALY saved (J-PAL, 2010)
  - One measure in Kenya suggests less than 10% households use (Kremer et al, 2010)

- Treatment for intestinal worms is estimated at $5 per DALY (J-PAL, 2012)
  - 870 million preschool and school aged children at risk
  - 35% of children at risk are treated (WHO, 2012)
Figure 1: Demand for Preventive Healthcare Products Based on Price

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Take up of iron fortification program in Rajasthan

% fortifying

Days since program started

- closest *chakki* is treatment
- nearby *chakki* is treatment
- no treatment *chakki* nearby

Banerjee, Duflo, Glennerster, 2011
**Figure 1:** Effect of the Incentive Amount on the Percentage Returning for HIV Results

Thornton, 2008
FIGURE 2: IMPACT OF DISTANCE TO CENTER ON RETURNING FOR HIV RESULTS

Thorstnton, 2008
Valuation of clean water in Kenya: stated vs revealed through walking

![Graph showing valuation of clean water in Kenya](image)

**Figure II**

Kremer, Leino, Miguel, Zwane, 2011
Consistently irrational in specific ways

- Greater willingness to spending on acute vs prevention
- Prevention demand is highly sensitive to small positive prices
- Small incentives have a large impact
- Demand also drops off with distance/less convenience
- May take preventative action when made salient but take up drops off over time
  - Even reminding people of what they already know can have brief impact
A model for behavior change

Benefit

Time

Today

Benefit

Time

Tomorrow
The chlorine dispenser

Berens et al, 2014
Chlorine take up from dispensers over time

Berens et al, 2014
RESOURCES

Kremer and Glennerster, in Handbook of Health Economics (edited by Pauly, McGuire and Barros)
www.povertyactionlab.org
www.runningres.com