

PRELIMINARY: DO NOT CITE

Menstrual management & sanitation: a multi-site investigation

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What's the issue?

- 75% of urban, 63% of rural women aged 15-49 in developing countries menstruated past 6 weeks
 - Increasing with better nutrition, falling fertility
- Most use cloth, increasingly disposable pads
- Anecdotal evidence suggests menstrual materials are a major source of sewer blockages
- Little information on interactions of menstrual waste with non-piped sanitation systems

Possible bi-directional relationship

- Behavior → sanitation system → outcomes
 - Clogging of water-based systems
 - Faster filling of pits
 - Possible need for sorting in re-use systems
- Sanitation system → behavior → outcomes
 - Privacy for changing, disposing, washing, drying menstrual materials
 - Choice of menstrual management technology
 - Women's mobility, school attendance
 - Health impacts due to use of unclean, damp materials

Little, conflicting evidence on effects of menstruation, access to MMP

Menstrual cups in Nepal (Oster & Thornton AEJ, 2011)

- RCT, randomized at individual level within four schools, N =198
- menstruation has little effect on school attendance (0.4 days/year)
- Access to a menstrual cup has no impact on attendance

Pads in Ghana (Scott et al., 2009 working paper)

- RCT (pilot) – randomized at the village level, N=183, V=4
- Girls to whom sanitary pads *and* puberty education missed 9% of school days, down from 21%
- Pure education had similar effect

No rigorous evidence on health impacts



Lack of conclusive evidence not stopping efforts to provide pads

30 March 2006

Non-profit, Social cause

P&G helping Kenyan schoolgirls



In Kenya, **Procter & Gamble** has just launched a two-year programme that will supply over 600,000 underprivileged girls with sanitary towels to ensure they remain in class during menstruation. A large number of girls in rural Kenya skip school during their monthly period, because their families are too poor to buy sanitary towels. It's estimated that this causes an average girl to miss more than a month of school each year.

BUSINESS NEWS | WORLD NEWS

Zuma promises free towels for women

JAN 10, 2011 | ALEX MATLALA AND KINGDOM MABUZA | [783 COMMENTS](#)

THE government has acceded to demands to provide sanitary towels to poor women

LIONS-ROTARY & HEART (Health Education Africa Rescue Team)
SANITARY TOWEL PROJECT



www.sanitarypadsforafrica.org

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When this schoolgirl menstruates she stays at home. When she's older that's all she'll be qualified to do.

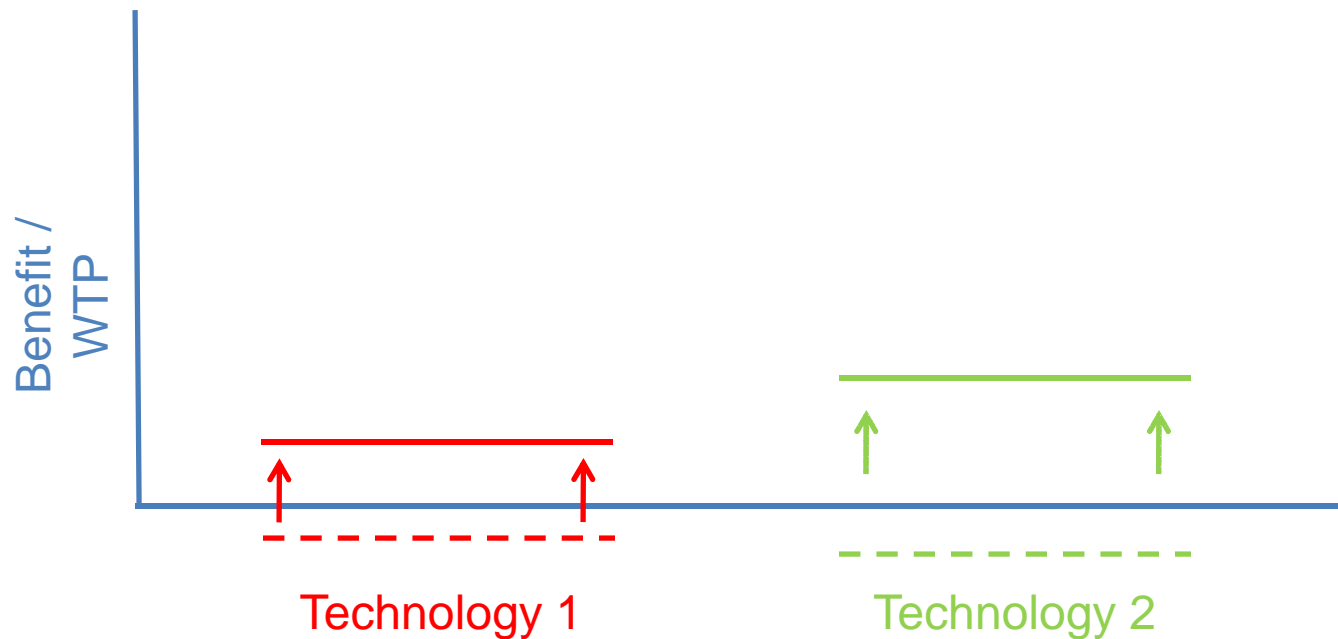
Contribution of this project

- Through detailed case studies, global review:
 - Investigate interactions between menstrual management and sanitation
 - do some products have negative externalities?
- Through RCT (~600 girls and women/ site) :
 - Understand adoption of menstrual products, formation of habits around disposal
 - Provide additional data on impact of menstrual management technologies on mobility.
 - Test for health impacts (menstrual cups)

Data collection in multiple sites

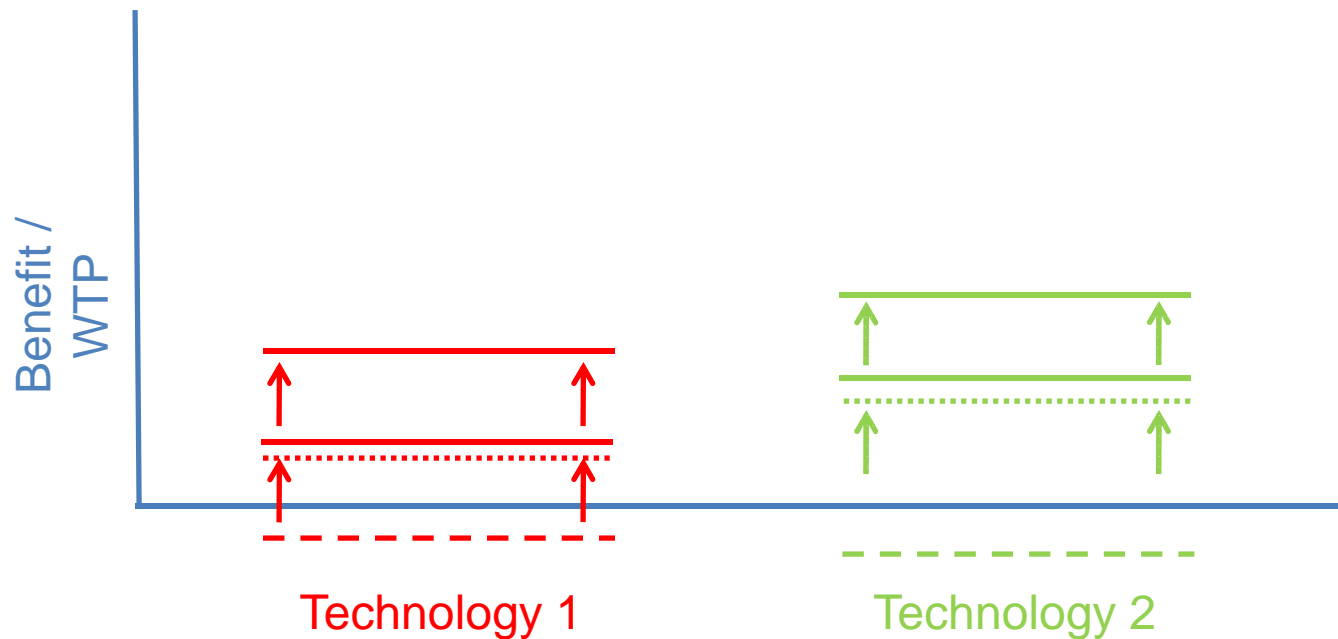
- 2-3 sanitation system case studies: South Africa, Kenya, Cambodia (tentative)
 - Analysis of maintenance and cost records
 - Interviews with system managers, engineers, users
 - Direct observation of operations and engineering practices
- Randomized product dissemination and demand trial in one African and one Asian site
- Menstrual cup clinical safety trial in one African site

Hypothesized effect of own experience on willingness to pay



- Experience with a good resolves uncertainty over benefit / eliminates “cost of experimenting”
- If try technology 1 first, may never move to technology 2

Hypothesized effect of others' experience on willingness to pay



- Others' experience can substitute for own experience
- Possibly create a norm of using a particular technology

Effect of own experience on WTP: study design

Population of interest

Menstruating women and girls who have not used modern menstrual products, are in school or work outside the home.

Treatment groups

- A) No product
- B) Pads
- C) Reusable product (pad or menstrual cup)

Procedures

- Free product provided for 2-3 cycles (12 cycles in menstrual cups trial)
- At conclusion of free trial, products offered for sale

Impact of others' experience

- Collect information on social contacts within study group at baseline, test for effects on WTP at endline
- Follow up with social contacts with no other exposure to study, e.g. sisters, cousins outside of school
- Possibly facilitate links between women across treatment groups

Disposal Message

- Randomized within disposable pads group
- Stress importance of properly disposing of menstrual products, provide can for this purpose

Budget permitting:

- Subset of cans have data loggers to validate self-reported disposal behavior
- Test for differential impact of providing information at time of technology adoption, vs. 6 months later, once habits are formed

Measuring valuation

- Becker-deGroot-Marschak mechanism
 - Would you rather have X or \$3.00?
 - Would you rather have X or \$2.50?
 - Would you rather have X or \$2.00?
 - Etc...
- One of the choices is then randomly drawn and implemented
- Advantages of this method:
 - Alleviates cash constraints (which could obscure treatment effects)
 - Elicits more information than single take it or leave it offer
- Disadvantage:
 - Likely upward bias relative to true market demand

Measuring outcomes

- Waste disposal – self reported, possibly validated with sensors
- School attendance – attendance records, spot checks, self reported
- Time use – self reported, diary
- Vaginal infections: rapid diagnostic tests at baseline and end-line
 - powered to detect effect of menstrual cups against pooled pads and control groups

Summary

- Disposal of menstrual waste is potentially important for sustainability of sanitation systems
- Degree to which systems facilitate menstrual hygiene management may influence use of system, impact welfare
- Order of introduction of products, disposal messaging could be important