DAVIS GROUP (‘POOP GROUP’) 
RESEARCH OPPORTUNITIES, FALL 2018

Thanks to group members, collaborators, and friends for photo contributions.
Research Questions

• What is the impact of exposure to WASH Up! on the WASH-related knowledge, attitudes, perceptions and behaviors of students, teachers, and parents?

• To what extent are key messages from the WASH Up! program transmitted via students to their caregivers?

• What is the impact of exposure to WASH Up! on the perceptions and attitudes related to girls’ intellectual abilities and societal value of students, teachers, and parents?
Motivation

• Lots of WASH in schools work has limited sustainability / long-term impact

• Habit formation is easier in young children, and works to shift behavioral norms over time

• Many health behavior programs using children are ‘change agents’ with scant theoretical underpinning, empirical evidence

• Girls’ empowerment and reshaping gender norms could have substantial developmental impact independent of WASH
Data Collection Methods

• Structured interviews with parents, students, and teachers
• Observation of handwashing stations and latrines
• Announced and unannounced infrastructure assessments
• Water sampling
• Hand sampling
Current Status

• 12-school study in Zambia carried out over the past 2 years
  • All data in hand as of August 2018
  • Analysis underway
• Late October 2018 – Planning meeting for follow-on work
  • Kenya & India
  • ~100-school study in each country
  • Launch workshop(s) in late 2018/ early 2019
Want to get involved?

• Zambia study: Individual with experience in Excel, R, or Python to assist with descriptive and inferential statistics, making tables and figures, and data entry

• India/Kenya studies: Landscaping of educational system in each site. Literature reviews/updates related to (1) the development of gender norms in children and (2) health behavior programming involving children as ‘change agents’

• Opportunity for fieldwork in India and/or Kenya
DEMAND FOR AND IMPACTS OF PROFESSIONALIZED PREVENTATIVE MAINTENANCE SERVICE FOR RURAL WATER INFRASTRUCTURE
Motivations

- High rates of failure for shared water points in sub-Saharan Africa
- Community management paradigm not very successful
Research Questions

• What is water users’ demand for increased handpump reliability in rural Uganda?

• How does user demand for reliability compare to that for other service attributes, such as biological water quality and volume?

• What is the willingness to pay of water committees for a preventative maintenance service?

• What household, water committee, and community characteristics are associated with higher demand?

• What are the costs and benefits of preventative maintenance service? What water committee, community, household, and water source features are associated with relatively greater net benefits?
DATA COLLECTION METHODS

1. **FIELD MEASUREMENTS** to assess technical performance:
   - Functionality, flow rate
   - Water quality

2. **WATER COMMITTEE INTERVIEWS** to assess demand:
   - Willingness to pay monthly fee for preventative maintenance
   - Randomized service price using auction format

3. **HOUSEHOLD SURVEYS** to assess service feature preferences:
   - Choice experiment
   - Anticipated benefits of improved handpump reliability
   - Socioeconomic and demographic characteristics
1. LITERATURE REVIEW
   - Functionality, flow rate
   - Water quality
2. DEVELOPMENT, CODING & TESTING DATA COLLECTION INSTRUMENTS
3. Possibility for fieldwork in spring and/or summer 2019
Impacts of Piped Water on Premises
Motivation

- On average, the transition from ‘unimproved’ to improved community water points has negligible impact on health and well-being

- Sustainable Development Goal 6 calls for universal access to piped water on premises by 2030

- Costs and benefits for meeting SDG have been guesstimated, but little empirical evidence available

- Previous evaluations have focused on short-term impacts
Research Questions

• What is the demand for piped water supply on premises among rural households in western Uganda? What household characteristics are associated with relatively high/low demand?

• What are the impacts of transitioning from shared community sources to household taps on water use, time & money cost of water supply, and household well-being?
Data Collection Methods

- Interviews with heads of households in both treatment and control villages
  - Child development measurements
- Interviews with small enterprises
- Field measurements
  - Functionality
  - Water quality
We need you!

- Literature review/update
- Analysis of existing dataset from NGO partner
- Data-collection instrument development
- Fieldwork for baseline round of data collection in spring 2019
WASH in rural health care facilities of sub-Saharan Africa
Motivation

• SDG 6 includes health care facilities (HCFs) and schools
• Recent surveys indicate 30-60% of HCFs in sub-Saharan Africa lack even basic WASH services
• UN Secretary General March 2018 ‘Call to Action’
• Little discussion of sustainability in efforts to expand WASH infrastructure
Research Questions

• What are the key explanations for low/high levels of water service in some HCFs in Uganda, Ghana, and/or Burkina Faso?

• What explains the comparatively good record of sustainability with some services in HCFs (e.g., vaccine cold chain)? What insights are relevant for enhancing the sustainability of HCF water services?
Current Status

• Just launching—Steve Luby group members collaborating (medicine)

• Will be identifying in-country collaborators and planning for fieldwork in this academic year and summer 2019
Methods

- Participant observation
- Semi-structured interviewing
- Ethnography
Opportunities!

- Literature reviews on political economy, institutional/organizational analysis of public service delivery
- Supporting fieldwork
Shared sanitation
Motivation

- 2.6b service gap in sanitation
- Shared sanitation is STILL excluded from ‘improved’ category
- Conclusions about impacts based largely on secondary data analysis
Broad RQ & methods

How do exposure patterns of HHs with shared sanitation differ from those without shared sanitation?

• Mapping HH member movements
• Environmental sampling
• Interviewing
• Statistical/QMRA modeling
Current Status

• Pursuing funding opportunities

• Looking for student(s) to carry literature review forward, research wearable devices for tracking individual movement, help flesh out research design and data-collection plan
A few additional desk-based (for now) opportunities

• Analysis of semi-structured interview transcripts
• Landscaping different models of multi-organizational partnership focused on ‘systems strengthening’
• Analysis of urbanization and its effects on demand for water supply and sanitation services
• Develop a database of initiatives (academic, private-sector, NGO, etc.) focused on using big data for water use.
Come work with us!

- Complete the student interest form available at https://tinyurl.com/poopgroup2018
- We will review and connect you with senior student(s) or faculty member(s) that match your interests
- You can also visit Jenna during office hours: Thursdays, 1-3