Dispensers for Safe Water is an initiative of Innovations for Poverty Action.
RCTs work to identify “proven” interventions → what’s next?

How do we transition the results from a successful pilot to a successful program at scale?

- Summary of technology
- Evidence
- Next steps
THE CHLORINE DISPENSER SYSTEM

1. Chlorine dispenser hardware
2. Community education and promotion
3. Chlorine supply chain
WHY CHLORINE DISPENSERS?
ADOPTION OVER TIME

* Note: 44-month follow-up was conducted by DSW and was not part of the original randomized controlled trial.
Convenient – Installations at the point of collection allow people to treat water without changing their daily routines.

Salient – The dispenser’s physical presence provides a visual reminder to treat water at the moment of collection.

Public – The dispenser’s public nature makes the decision to treat water observable, encouraging social norms formation.

Affordable – At an estimated cost of 50¢ per person per year at scale, dispensers can be offered as a public good by governments, NGOs, or social enterprises.
CHALLENGE: HOW TO MAINTAIN HIGH ADOPTION WITH SCALE?

Estimated using hypothetical take-up rates and J-PAL cost-effectiveness assumptions. Assumes 200 users per dispenser source.
**Timing:** Short, medium, and long term (2, ~4, and 12 months after installation)

**Structure:** Spot checks, promoter surveys, and household surveys
- Gather information on factors potentially related to dispenser use, including:
  - Hardware problems, chlorine refill rates
  - Population demographics
  - Promoter activity levels, community engagement with the dispenser
- Measure household adoption:
  - "Could you please give me a glass of drinking water the way that you would prepare it for a child?"
  - Test for Total Chlorine Residual (TCR) using Hach Color Wheels

**Sample size:** 476 water points
- 3,910 community-member surveys, 474 promoter surveys, 345 dispenser spot-checks

**Study design:** Two-stage cluster sampling
- Sample dispenser-equipped water points by pilot
- Randomly sample households that use these sources

**Identify predictors of take-up, controlling for program effects and survey round, clustering by water point**
INTERPERSONAL INTERACTIONS, COMMUNITY ENGAGEMENT

Average Percentage Point Difference in Adoption

Promoter *** + 9%
Assistant promoter *** + 9%
HH: Did you attend the meeting where the community learned about the dispenser? *** + 8%
Promoter: Have dispensers been discussed at community dialogue days or councils? + 7%

HH: Who talked to you about the dispenser from outside/within the community in the past month?

*** p<0.01, ** p<0.05
INNOVATION & NEXT STEPS
INTERPERSONAL INTERACTIONS, COMMUNITY ENGAGEMENT

- **Boosting Adoption Study**
  - **Messaging**
    - Aspirational
    - Disgust (H2S testing of untreated household water)
    - SMS follow-up reminders to promoters and communities
  - **Commitment**
    - Water treatment pledges
  - **Incentives**
    - Prizes and lotteries for adoption rates and pledge commitments
SERVICE DELIVERY

FA (spot check): Are there any problems with the dispenser? ***

HH: In the past 30 days, have you come to the dispenser and found it empty? ***

IPA-led direct delivery model *** †

+ 18%

- 9%

- 11%

† Note: Includes controls for survey round only, as delivery model is constant by program. *** p<0.01, ** p<0.05

11/5/2012
- Stronger emphasis on IPA-led direct delivery model
- Increased emphasis on rapid feedback
  - Mobile phone surveys (Open Data Kit)
  - Interactive cloud database with dashboards and reports for field team
  - Shift towards continuous spot checks (rather than discrete survey rounds)
RISK PERCEPTION, DEMOGRAPHICS

Average Percentage Point Difference in Adoption

- Household has iron roof
  -7%

- One or more children under 5 live in household
  +5%

- Unprotected/unimproved source
  +7%

*** p<0.01, ** p<0.05
INNOVATION & NEXT STEPS
RISK PERCEPTION, DEMOGRAPHICS

Figure 1. PERCENT OF RURAL CHILDREN UNDER 5 EXPERIENCING DIARRHEA IN THE PAST TWO WEEKS (SELF-REPORTED), BY 2009 COUNTY

Legend
- Same Water Source Type by Sublocation

Reliance on springs, wells, or boreholes
0% or missing data
1% - 7%
4% - 10%
9% - 20%
21% - 30%
31% - 40%
41% - 50%
51% - 60%
61% - 70%
71% - 80%
81% - 100%

No data

11/5/2012
CONCLUSIONS

- Transitioning from pilots to scale requires:
  - Different delivery/implementation systems
  - Different monitoring systems and priorities

- Identify factors that are essential for achieving high adoption
  - Pilot – 100% attention and resources – prove a concept
  - Scale – identify most critical components
    - Compare alternative models for mass implementation
    - Make evidence-based decisions about where to focus efforts

- Develop rapid feedback loop
  - Think through logistics of how to track progress on program activities
  - Take knowledge from individuals and record in a system
  - Monitor early to collect feedback and facilitate course correction
THANK YOU

Jessica Vernon, Research and Evaluations Manager, DSW
Eric Kouskalis, Kenya Program Director, DSW
Katherine Hoffmann, Policy Associate, DSW
Amrita Ahuja, Sustainability Science Fellow, Harvard University