

PRELIMINARY: DO NOT CITE



PROGRESS REPORT: RAINWATER STORAGE DEVICE EVALUATION

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Background



- Relief International (RI) has developed a novel rainwater storage device (RSD)
- IPA has initiated a RCT evaluation designed to:
 - Study demand
 - Identify successful marketing strategies
 - Measure social impact in terms of:
 - Women's participation in the workforce
 - Child school attendance
 - Increases in household economic activity

The Device



Motivation



- Anecdotal and qualitative evidence suggests that the welfare costs of water collection are large. Causality has been difficult to establish.
- At the same time, people seem to place high value on time relative to health. The spring protection study indicates that it's difficult to get households to spend an extra 5 minutes to collect cleaner water.
- This is also an opportunity to study the relative importance of supply-side versus demand-side challenges in technology take-up.

Study Design



- Village Level Variation
 - Discount Vouchers
 - Marketing Strategies
 - Presence of Product Ambassador (two types)
 - Free Installation for the First Adopter
 - Geography
- Household Level Variation
 - Value of Discount Vouchers (100%, 66%, 33%, 0%)
 - Two Waves of Voucher Distribution (40:60)

Village Level Variation



		Village Level Variation (n = 81)	
		Receive Vouchers	
		Free Installation	No Free Installation
Promoter	16	15	
No Promoter	15	15	

Household Level Variation



Distribution of Discount Vouchers by Value (n = 40)

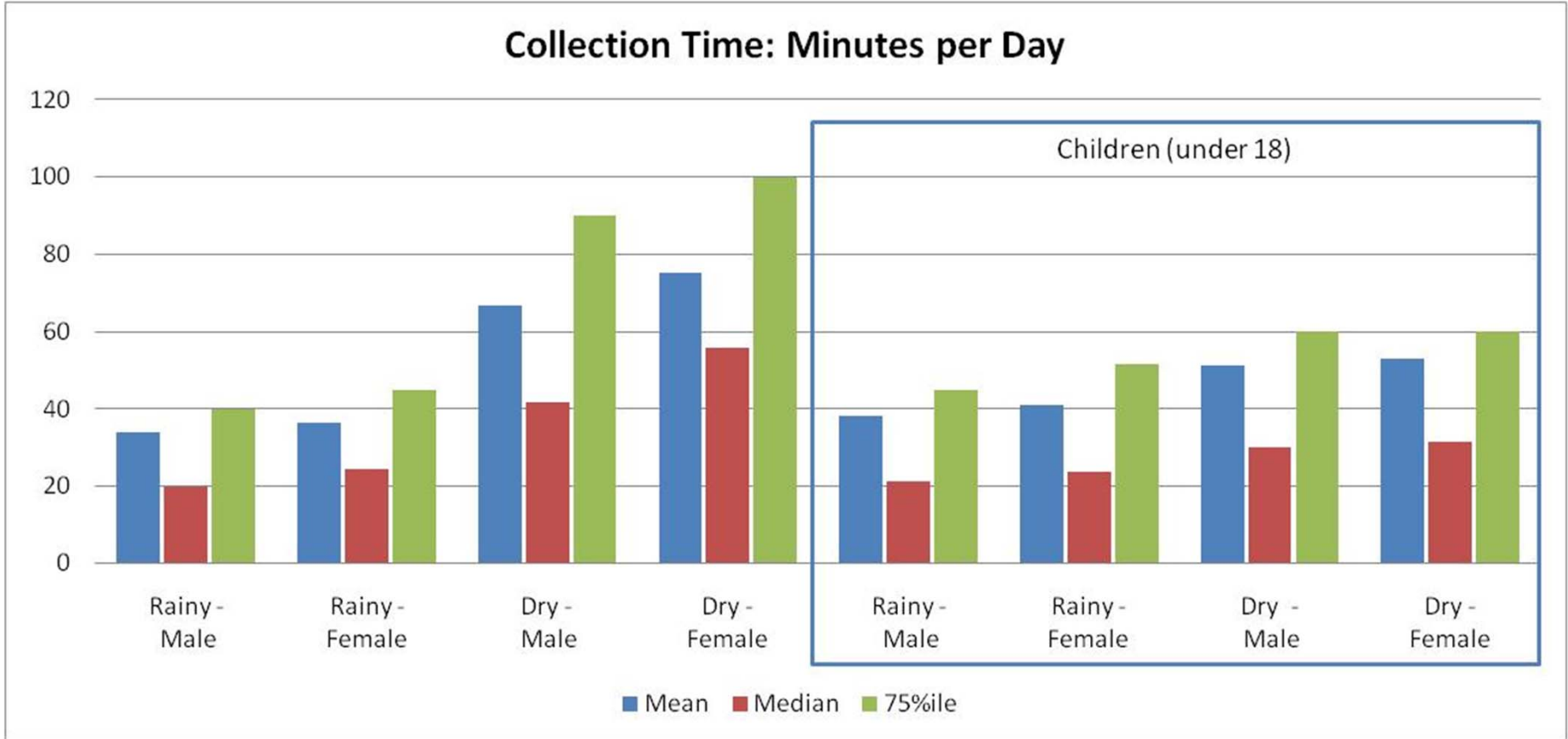
	100%	66%	33%	0%
Wave I (40%)	3.7	4.3	4.3	3.7
Wave II (60%)	5.5	6.5	6.5	5.5

Evaluation Timeline



- August: conducted a census of ~9,000 households in Kamwenge District
- September: random sampling of 3,240 households in 81 villages
- October: baseline survey
- January: prepared intervention protocols for commercial launch
- April: expected intervention

Findings – Water Collection



Findings – Work & School



Employment, Literacy & Enrollment		
Employment, Household Level	<i>Male</i>	<i>Female</i>
Employment Rates	75.1%	87.5%
Subsistence Farmer, Given Employed	55.2%	86.8%
Literacy Rate		
Adults	81.3%	58.9%
Secondary School Age	84.0%	88.0%
Primary School Age	30.6%	33.0%
School Attendance		
Primary School Age	88.3%	88.5%
Secondary School Age	83.0%	85.0%

Findings - Regressions



Collection Times on Work & School		
in Hours per Day		
The effect of collection time on:	<i>Rainy Season</i>	<i>Dry Season</i>
<u>Employment</u>		
Men	-0.0323**	-0.0263***
	-0.0152	-0.0081
Women	-0.0466***	0.0209***
	-0.0118	-0.0069
<u>Secondary School Attendance</u>		
Men	-0.0384**	0.0315***
	-0.0178	-0.0108
Women	-0.0011	-0.0134
	-0.0178	-0.0105
<u>Primary School Attendance</u>		
Men	-0.0006	-0.0019
	-0.0100	-0.0061
Women	0.0039	0.0012
	-0.0086	-0.0056

Summary of Correlations



- Dry Season Effect: Every group in our sample (women and men, boys and girls) spend significantly more time collecting water in the dry season.
- Both in the dry season and throughout the year, women spend significantly more time collecting water than men.
- Children collect more in the rainy season, adults in the dry season
- Women (compared to men) are significantly more likely to skip school/work to collect water
- People more likely to miss work rather than school to collect water.

Intervention



- March: initiated Panel Survey of Retail Stores
- April: waiting for delivery of Discount Vouchers
 - Wave I of Intervention
 - Recruiting Product Ambassadors
 - Public Lottery for Vouchers
 - Rewarding Free Installation for First Adopter
- June: count & survey of adopters in study villages
- September: introduce Wave II Interventions
- March 2012: endline (?)

Conclusions

