



A mobile data-driven intervention to increase immunization coverage in Northern Uganda: Impact and process evaluation of the 'Fifth Child' Project

**Comfort Olorunsaiye
Immunization Advisor, IRC**

Partners

- Implementation → International Rescue Committee
 - Edward Kumakech, Lilian Kiapi, Naoko Kozuki, Comfort Olorunsaiye, Justine Landegger
- Impact and Process Evaluation → London School of Hygiene and Tropical Medicine
 - Jane Bruce, Tracey Chantler, Jayne Webster
- Field work → Innovations for Poverty Action
 - Laura Schmucker



LONDON SCHOOL of HYGIENE & TROPICAL MEDICINE





Context

- Four in five (78%) children in Northern Uganda receive the third dose of DPT (diphtheria-pertussis-tetanus)-containing vaccine
- Only 65% of children receive all basic vaccinations
- Underserved communities (post-conflict areas such as in northern Uganda) and socially disadvantaged child (The Fifth Child)

The Fifth Child Project: Objectives

- Support DHTs (District Health Teams) and health facilities on government-defined package of services to reduce ‘missed opportunities’ for uptake of immunization
- Increase immunization coverage by 10%
 - Improve access to quality data on immunization status
 - Utilise community engagement to trace defaulters and optimize outreaches
- Theory of change → access, demand, quality, community voice

Intervention

- Supporting activities plus
- mReach data-informed community engagement
- Data-informed, 'smart' immunization outreaches

Control

- Supporting activities only, e.g.
 - Basic health system support
 - Monthly data review meetings
 - Village Health Team (VHT) supervision and support



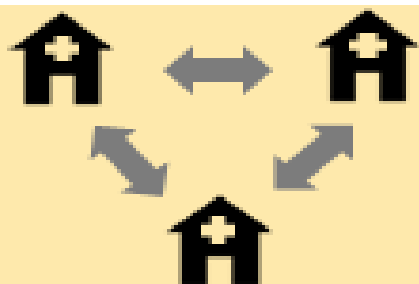
“The Fifth Child” Intervention



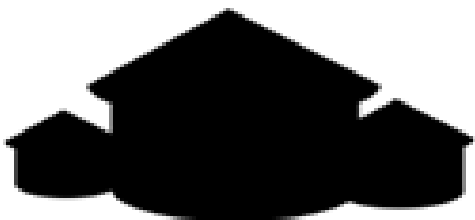
- **Tracks all children in the catchment area** to provide precise, localized coverage data to help tailor sub-district EPI approaches



- Health center staff can easily inform VHTs about children who are due for immunization and those who have missed or were never reached to **provide accurate information and referral to families**



- **Links child immunization status data across health centers** to provide better service when caregivers visit more than one site



- **Defaulter data easily sorted by village** for more targeted outreaches, mobilized with the support of community leaders, where results are integrated with the application and child register

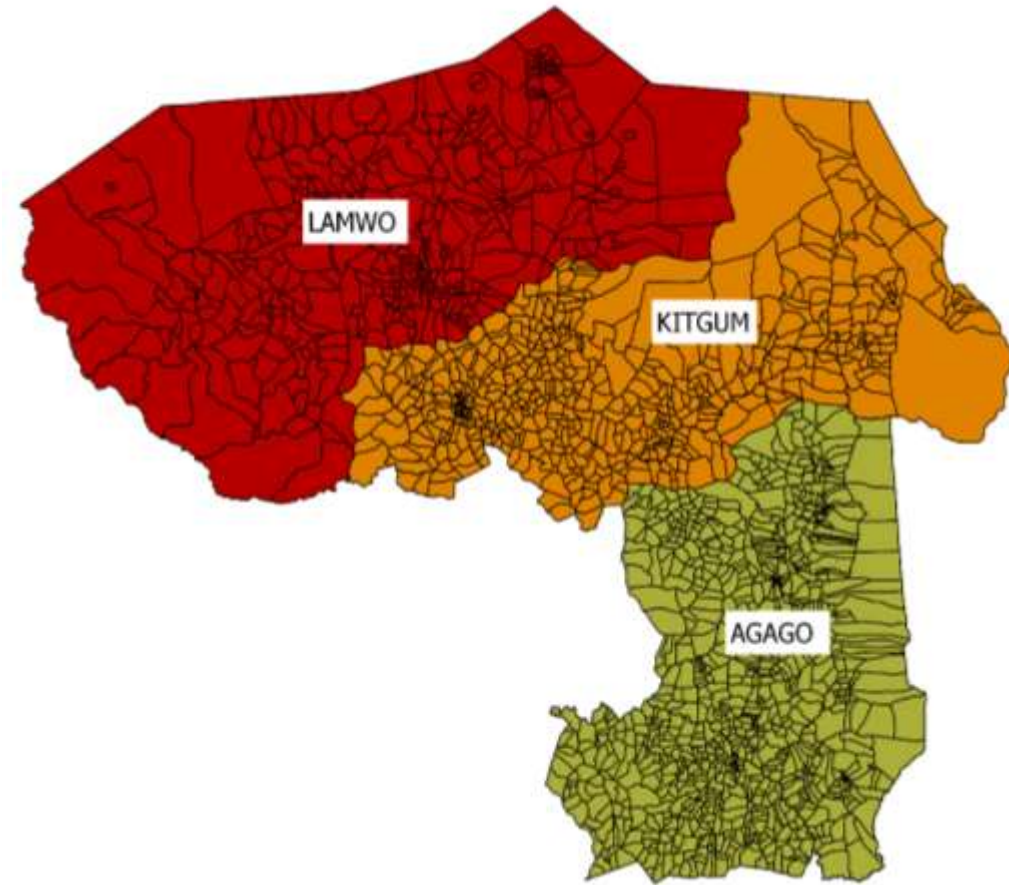
Aim of Evaluation & Trial Outcomes

To assess whether data-informed, community co-managed vaccination defaulter tracing:

- **Increases DPT3 & MCV vaccination coverage**
- Reduces immunization dropout rates
- Improves timeliness in the uptake of immunizations

Project Timeline and Location

- Three districts – Kitgum, Agago, Lamwo districts
- Implementation: 24 months (Jan 2016 – Dec 2017)
- Evaluation: 12 months (Sept 2016 – Sept 2017)
- Cluster-randomized controlled trial with 2 arms
- Unit of randomization: health facility catchment areas → 16 in each arm
- Population: 9-23 month old children



Objective of the Process Evaluation and Methods

To examine:

- The implementation of the intervention
- The mechanisms of impact of the intervention
- The context and how this interacts with the intervention
- Quarterly monitoring of trial activities and outputs e.g. # of VHT defaulter visits, defaulters completing vaccination, HCW meetings with VHTs, outreaches conducted
- Qualitative data collection at 4 intervention and 2 control sites 5 months after start of the trial

Key Findings

- Overall increase in DPT3 & MCV coverage → approximately 10%
- No difference between intervention and control clusters from baseline to endline
- Coverage similar across districts
- Increase in coverage of DPT3&MCV was not timely
- Drop-out rates similar from baseline to endline
- Inequity in coverage - lower coverage in poorest households in both control and intervention clusters



Change in Immunization Coverage

	Baseline		Endline		Δ Control	Δ Intervention
	Control	Intervention	Control	Intervention		
N	714	778	685	719		
	%	%	%	%	%	%
BCG	85.5	82.1	86.3	87.3	0.8	5.2
OPV0	83.8	81.7	84.7	84.8	0.9	3.1
DPT3	79.9	76.5	84.8	84	4.9	7.5
MCV	68.6	66.6	77.5	76.7	8.9	10.1
DPT3 & MCV	67.6	65.2	77.2	76.2	9.6	11

Mechanisms of Impact

1. Improved accessibility of immunisation

- Mainly facilitated by outreaches
- Reducing distance as a barrier

2. VHT motivation

- Monthly allowances
- *Social pressure to perform well*

3. Increased interaction between Health care workers (HCW) and VHT

- Forum for discussion immunization and planning activities

4. Drawing on community resources

- VHT network
- Community leaders involvement

“The people we relate with and share information with very well are the VHTs. They come and talk to us from within the community. They also encourage us mothers to immunize children.” (Caregiver, FGD, Lamwo Control)

Lessons Learned

- Some VHTs found referral forms complex
- Out-of-study-area vaccination tracking
- The mechanisms of impact identified were mainly due to supporting activities
- Investment in supportive activities may be driving the change in immunization coverage rates → more evidence needed
- Overall the effect of Fifth Child Project was beneficial
 - Interest in the intervention tools
 - Supportive activities
 - ToC

Recommendations

- Continue with supporting activities to strengthen the health system
- Encourage health worker monthly meeting with VHTs
- Simplify child vaccination referral form
- Focus on encouraging timely vaccination
- Further research to assess impact of supportive activities on improving immunization coverage

Thank you for your time!

Questions?



Photo credit: IRC Uganda