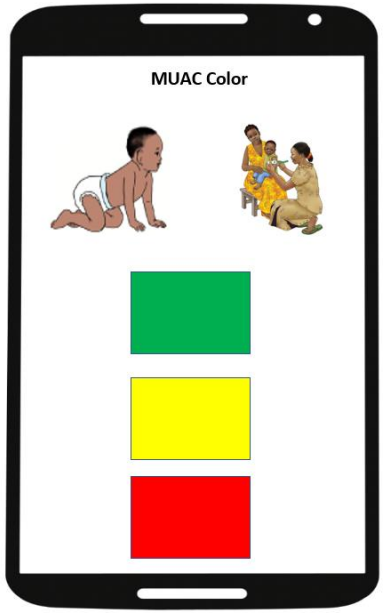
Improving Dietary and Health Data for Decision-Making in Agriculture and Nutrition Actions in Africa

IDRC Project Update



July 3, 2019

FANRPAN
IDRC CRDI
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INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

IDRC FANRPAN ILRI Update Agenda

July 3, 2019

Location: Mimosa Meeting Room, Mara House, ILRI Nairobi

Time: 10:30-12:45, lunch at ILRI to follow

Agenda

- Revisit project objectives, project workplan, and updates (15 min)
- Demo and discussion of the caregiver application (30 min)
- Demo and discussion of the community Health volunteer (CHV) application (30 min)
- Discuss implementation plan for the next 12 months (20 minutes)
- Additional topics, concerns, or suggestions (20 min)

Tool Summary

Community Health Volunteer Tool

Household registration (1-off)

Caregiver update (monthly)

Index child update (monthly)

Features:

- Household registration process
- Roster of CHV-specific households
- Displays household reports to flag important or emerging issues

Caregiver Tool

Caregiver update (at will, maximum of 1/day)

Index child update (at will, maximum of 1/day)

Features:

- Simplified navigation
- Cues & responses are icon and audio based
- Submission to the server is automated
- Stoplight-style information summary with audio

Project Summary

Challenge: Child (mal)nutrition is one of the most commonly used indicators for tracking SDG progress and the impacts of development interventions. Unfortunately, conventional methods for collecting child nutrition and health indicators require considerable training, are slow and difficult, and are expensive to collect accurately.

Proposed Solution: To develop a mobile-based platform by which households can easily collect, submit, and access information on their children's nutritional and health status in near-real time and at extremely low cost.

Value:

- The proposed platform will **free some data collection from home visits by enumerators and technicians**, one of the most difficult and expensive parts of collecting child health and nutrition data in remote regions.
- This work has the potential to **reduce the cost of each data point** very dramatically with implications for the frequency and extend to which nutrition and health can be tracked.
- The application will provide households with dashboards of information on their children's nutrition status, **improving their access to information related to nutrition decisions**.

Implementation Strategy

To compare caregiver-collected information to that of 2 other relevant sources of data to learn about cost, quality and value.

3 data sources:

1. **Caregiver-collected data:** Incentivize[1] households to collect data on consumption, young child nutrition, clinical symptoms expressed by the young child, and young child anthropometric each week using a smart phone[2] application.

2. **"Gold standard" data for validation**: Incentivize[2] CHVs to collect data from participating households monthly, using the same application[3].

3. **Real-world costs & impact estimates**: Partner with a nutrition-related intervention that has an M&E program and is operating in a region with trained CHVs.

Notes:

[1] We expect incentives to be a small cash token per submission.

[2] The project will provide phones and a means for charging to both participants and CHVs.

[3] We expect incentives to be a small monthly stipend.

What is the value of the proposed solution?

1. To what extent can digital platforms be used to accurately and cost-effectively collect diet and health data directly from households?
    - How accurate is the data collected by households and which types of data can they collect most accurately?
    - What is the data-collection burden placed on participating households when compared to standard methods?

2. What additional value does the tool provide?
    - To what extent does higher-frequency data add to our understanding and tracking of diet and health outcomes?
    - Does access to reliable information on nutritional topics change HHs knowledge, attitudes and behaviors regarding nutrition?

3. Which additional research opportunities does it open?
    - Which minimum set of dietary indicators best track health?
    - How well can we use alternative approaches to track infant health? (e.g., photos & machine learning)
    - Dynamics between seasonality of consumption, and health.

4 Year Workplan

Phase 1 (Pilot in 1 location)

- 0-6 months: Tool development and testing
- 7-12 months: Pre-pilot & further development
- 13-18 months: Pilot with CHVs and caregivers in Samburu County
- 19-24 months: Stakeholder (e.g., HH, CHV, nutrition experts) feedback and data analysis

Phase 2 (Scale into 3 new locations)

- 25-30 months: Identify and coordinate with partners from 3 locations (w/in & outside of Kenya)
- 31-36 months: Pre-pilot update tools (3 locations)
- 37-42 months: CHV, caregiver, and M&E data collection (3 locations)
- 43-48 months: Stakeholder (e.g., HH, CHV, intervention implementors, nutrition experts) feedback and data analysis

Month 1= September 2018

Pre-pilot Summary

Location: Central Samburu

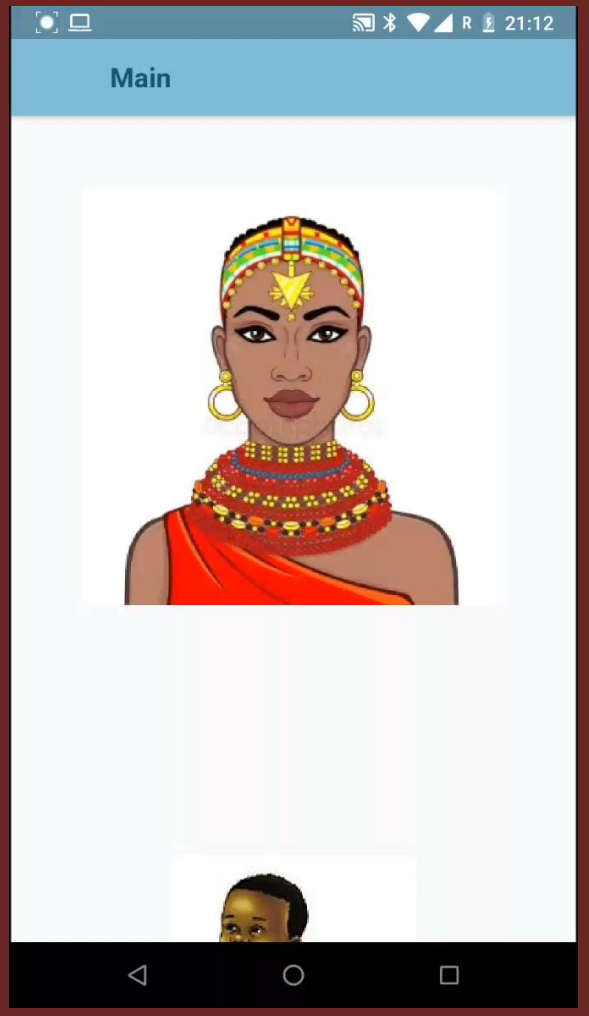
1. Train 4 CHVs and 12 caregivers on phones and their respective tools.
2. CHVs will register caregivers.
3. Caregivers will complete their updates daily from home.
4. CHVs will visit caregivers every few days to provide support and complete the CHV update.
5. We will repeated feedback sessions to identify opportunities to improve the application.

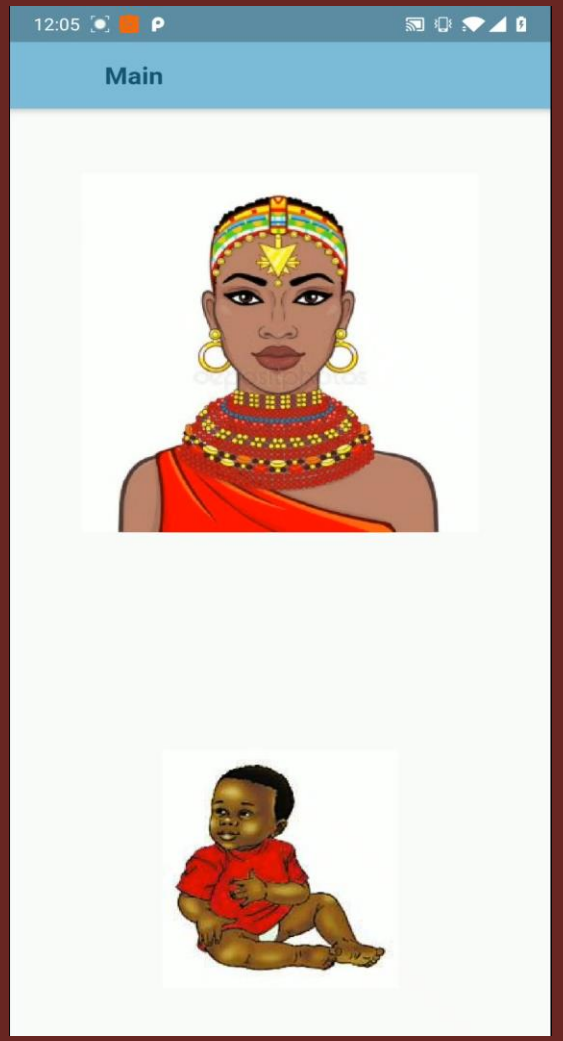
Pre-pilot Timeline

Activities	June																July							
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8
CHV registration, project summary, caregivers selection, CHVs phones allocation	X																								
Caregiver registration, project summary, phone allocation, CHVs slot allocation			X																						
CHVs training (CHV App and Survey)					X																				
Caregiver training (Caregiver App and Survey)						X																			
Mock: Caregivers and CHVs try to collect data using the Apps							X	X																	
Caregivers and CHVs provide feedback of the tools and process as a group in a central location									X								X								X
Data collection by Caregivers										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

If the tool is delayed, these activities will start on July 22nd.

Caregiver Tool Demo





Next Iteration of the Caregiver's Tool

One survey that can be completed a maximum of once every 24 hours, with a skip pattern conditional on time since last completion.

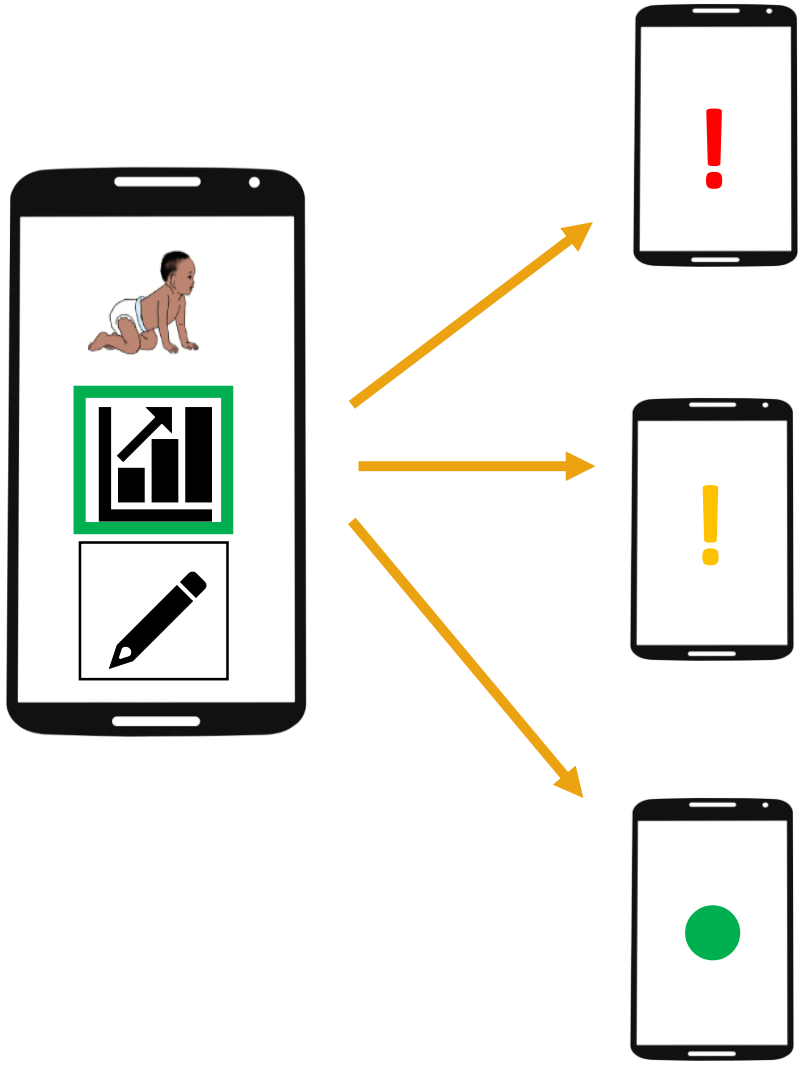
<u>24 hour recall &/or maximum daily</u>

- Consumption & Dietary diversity: 10 groups
  - Caregiver:
    - Women's Dietary Diversity Score
  - Child
    - Continued breastfeeding
    - Minimum dietary diversity
    - Minimum meal frequency
- Water sources and treatment (child)
- Clinical Symptoms
  - Fever, cough, diarrhea, vomiting
  - Health facility & diagnosis

<u>7-day recall &/or maximum once per 7-day</u>

- MUAC & edema (only child)
- rCSI

Monitoring Feedback for the Caregiver

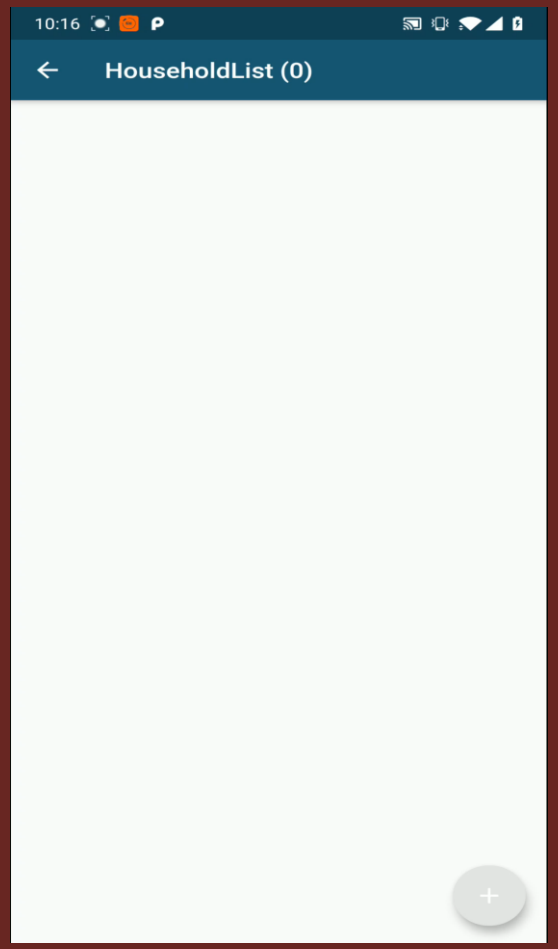


Audio message on issues and actions required
- *Referral*
- *Increase consumption of XYZ*
- *Mention of any longer-term illness*

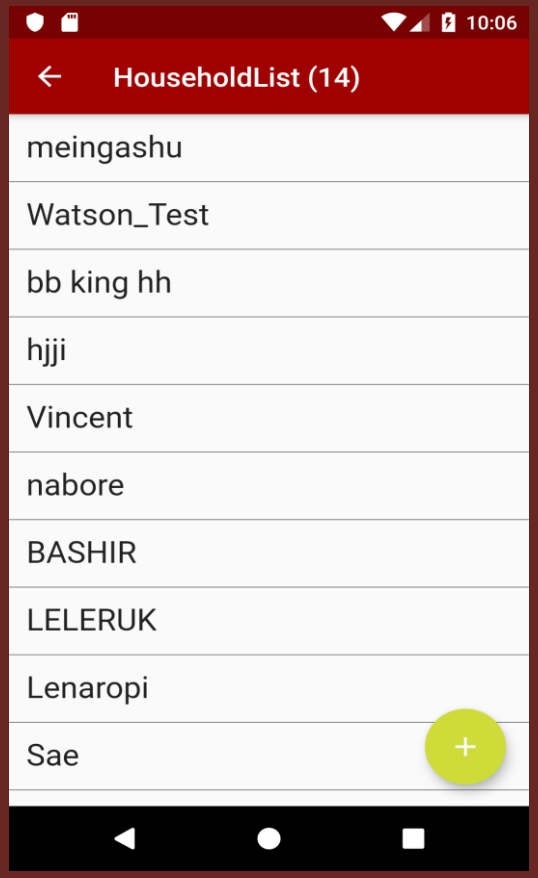
Audio message on issues and actions required
- *Increase consumption of XYZ*
- *Mention of any longer-term illness*
- *Mention good and negative trends*

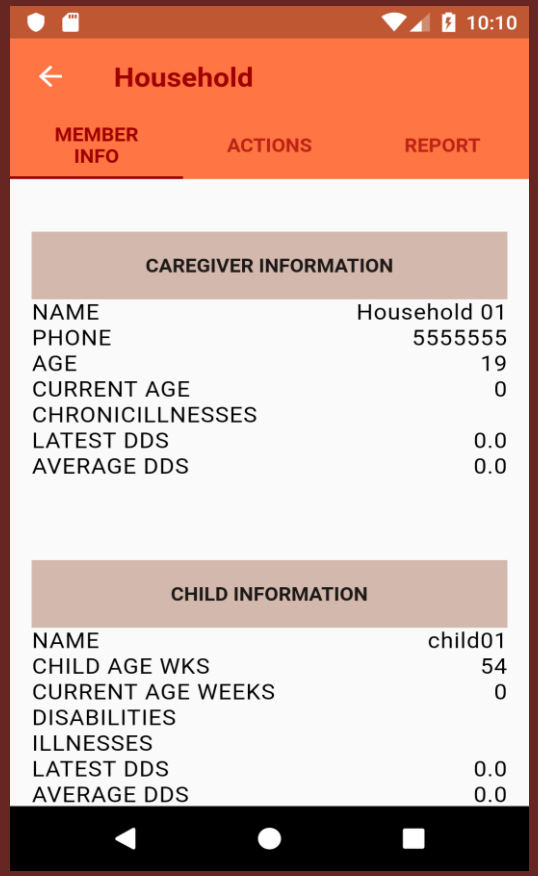
Audio message on issues and actions required
- *Mention which indicators are good*
- *Anything to pay attention to*
- *Trends*

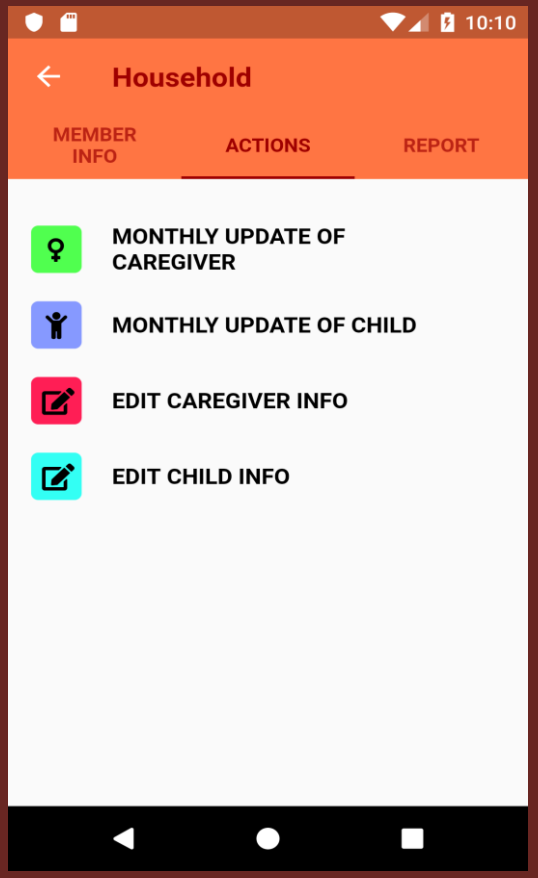
CHV Registration Tool Demo

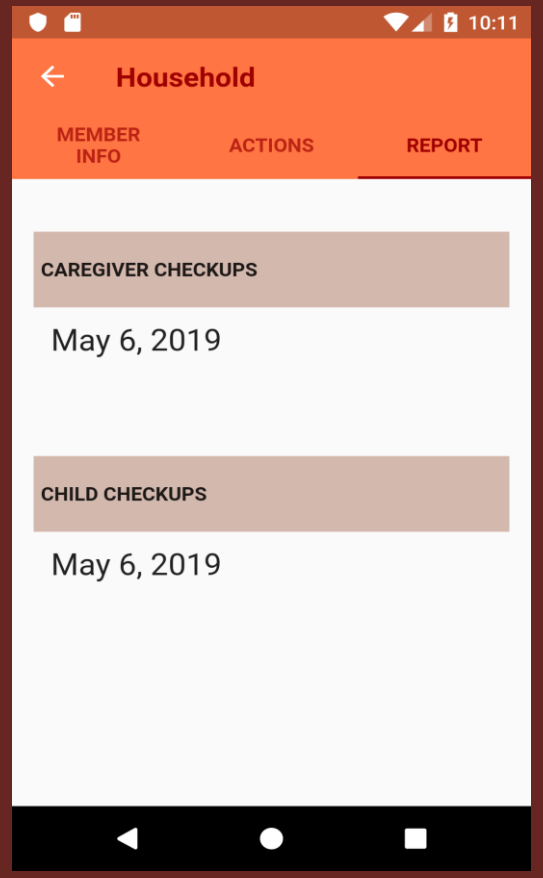


CHV Tool Demo









Next Iteration of the CHV Tool

One survey that can be completed a maximum of once every 28 days.

24 hour recall

- Consumption & Dietary diversity: 10 groups
  - Caregiver:
    - Women's Dietary Diversity Score
  - Child
    - Continued breastfeeding
    - Minimum dietary diversity
    - Minimum meal frequency
- Water sources and treatment (child)
- Clinical Symptoms
  - Fever, cough, diarrhea, vomiting
  - Health facility & diagnosis

7-day recall

- rCSI

Anthropometrics

- MUAC (child)
- Weight (child)
- Height (child)

External Advisory Committee

1st meeting was on June 14, 2019

Summary of takeaways:

- We would like to keep the caregiver survey as short and focused as possible
  - Inclusion of the 7-day recall questions (rCSI, water) may not be so valuable
  - We could experiment with short and long forms
- We will try to schedule a face to face meeting with the committee in 2020.
- Between now and then, I will be sending updates for their comments.
- I may try to visit John Hoddinott this summer in Ithaca

External Advisory Committee Members

- Edward Kutondo is a Nutrition Officer in the Program of Monitoring and Evaluation & Nutrition Information Systems at UNICEF
- Elizabeth Wangui Kamau is Senior Lecturer and Chair of Department at the Department of Human Nutrition, Egerton University
- John Hoddinott is the H.E. Babcock Professor of Food & Nutrition Economics and Policy, Cornell University
- Lucy Maina is a Nutrition Information Officer at UNICEF.
- Vivian Hoffman is a Research Fellow at IFPR

Other Updates

Ethics approval has been obtained from ILRI's IREC board. They are facilitating the approval from NACOSTI. This ethics approval is specifically in regards to the pre-pilot, I will immediately submit an amendment for the full Phase 1 implementation once pre-pilot approval is obtained.

Phase 1
Implementation:

- Samburu County.
  - We have personal contacts with the CHVs and CHEWs
  - Capacity among CHVs is fairly high, but variable
  - There is considerably amount of variation in remoteness among the communities (caregivers)
- Timeline for Phase 1 is to launch in September/October, which puts us at 12 months from the IDRC/FANRPAN contract and 7 months since the ILRI-FANRPAN contract was signed.

Sample Selection:

- We plan to select 20 CHV, and then 10 caregivers from each of their catchment areas.
- Literate and high quality CHVs will selected intentionally for geographic and infrastructural variation
- Caregivers will be selected randomly after stratification by access & remoteness. In the end this may be more of a semi-intentional selection as we think about logistics.