Innovations with IVR and SMS: Case Studies from West Africa, Haiti and Mozambique
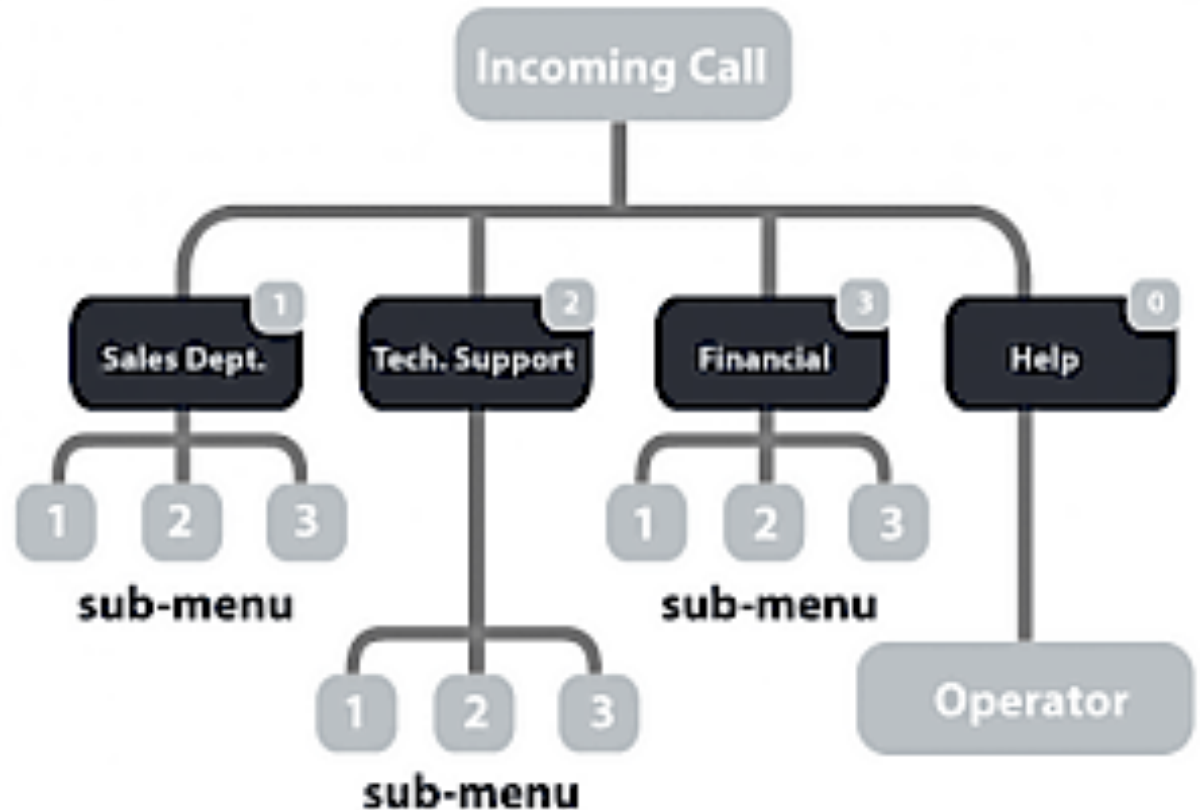
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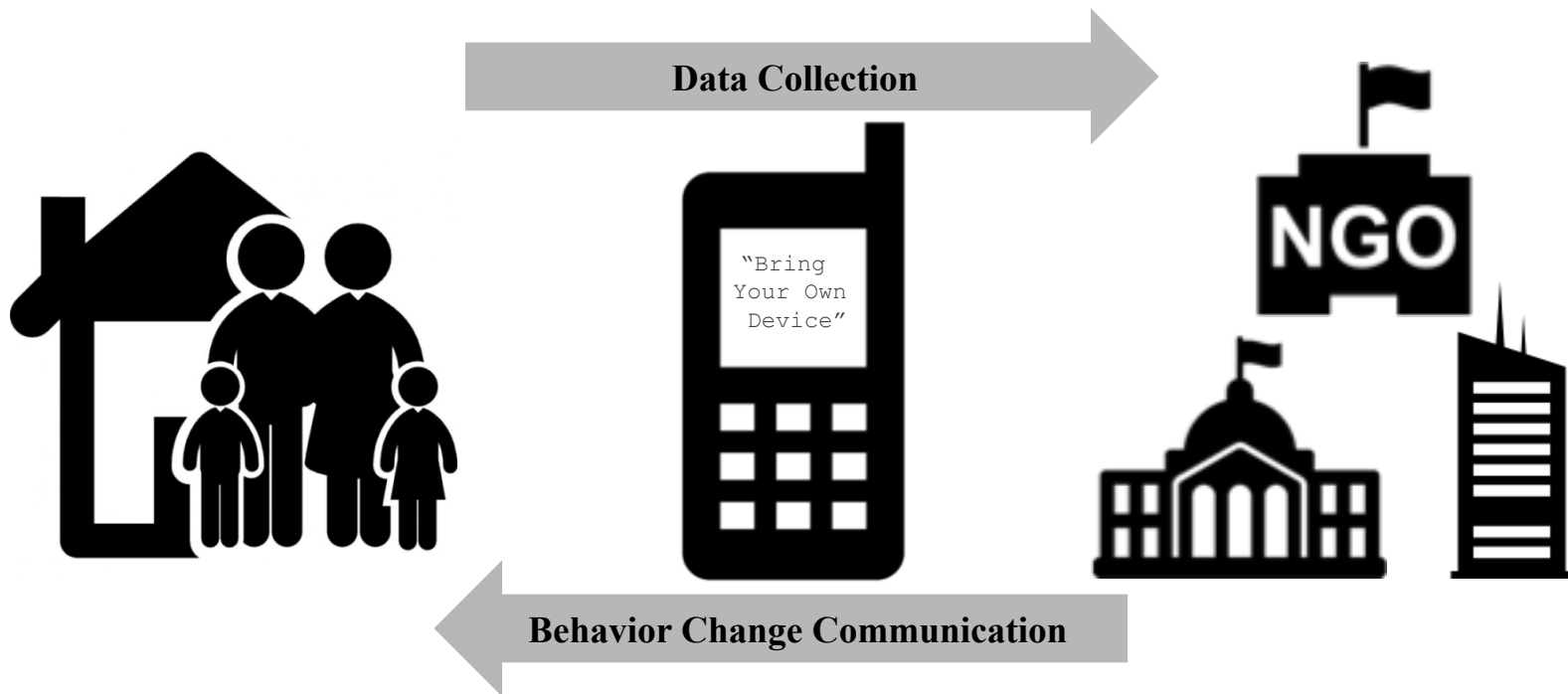JHU Center for Communication
Programs

What is IVR?

Interactive Voice Response (IVR) is a technology that allows a computer to interact with humans through the use of voice and DTMF tones input via keypad.

How can you use IVR?
Enable effective connections for better decision making

Data Collection

"Bring Your Own Device"
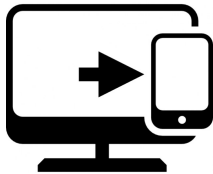
NGO

Behavior Change Communication

PUSH vs PULL Calls

Call originates from End User

Subscribers are empowered to seek information by calling paid or toll-free hotlines to access content, take surveys, report incidents etc.

Call originates from Platform

Subscribers receive content directly to their phones in the form of a phone call. Push content can be used for Random Digit Dialing surveys, marketing or advocacy campaigns, reminders, educative messages, longitudinal data collection etc.

Smart Client and Smart Couple

IVR FOR ENTERTAINMENT-EDUCATION

Background

- Women often lack the skills and confidence to communicate their needs, concerns and desires when visiting a family planning provider

  ➔ **Smart Client** aims to help women become *informed*, *empowered* and *confident* users of FP services and methods

- Men may think that they should not be involved throughout the process of adopting and continuing to use family planning

  ➔ **Smart Couple** aims to encourage women and men to be *informed*, *supportive* and *equally involved* in making decisions and taking actions related to the use of FP services and methods.

Background

- Smart Client/Smart Couple developed by the Family Planning team of the Health Communication Capacity Collaborative (HC3) project

- Content was pretested and tools prototype tested in Nigeria and Cote d'Ivoire

- Separate user studies were conducted in Kaduna, Nigeria to test the effects of the tools

Design

17 calls
- 1 introduction call
- 13 "episode" calls
- 3 quiz calls (interspersed)

Episode calls: multiple segments per call - some automatic, others optional
- Introduction, drama, testimonial, sample dialogue, friend-to-friend chat, quiz question
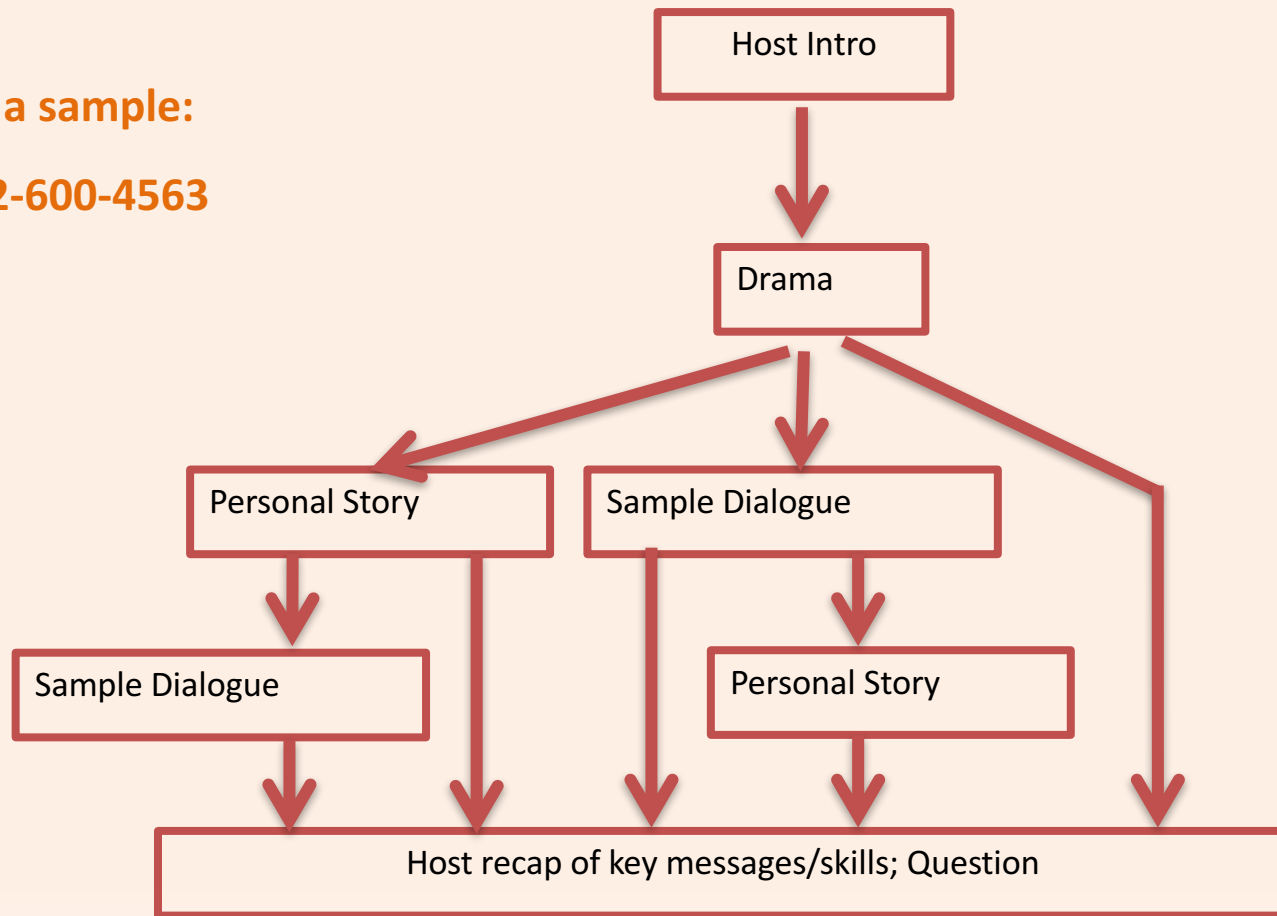- Smart Couple included additional segments for men

Quiz calls: 3-5 questions to test knowledge of key messages/themes

Supporting SMS after each episode call to reinforce key messages

Episode call structure

Hear a sample:

1-202-600-4563

```
                    ┌──────────────┐
                    │  Host Intro  │
                    └──────┬───────┘
                           │
                           ▼
                    ┌──────────────┐
                    │    Drama     │
                    └──────────────┘
```

- Host Intro → Drama
- Drama → Personal Story → Sample Dialogue → Host recap of key messages/skills; Question
- Drama → Sample Dialogue → Personal Story → Host recap of key messages/skills; Question
- Drama → Host recap of key messages/skills; Question

Personal Story

Sample Dialogue

Sample Dialogue

Personal Story

Host recap of key messages/skills; Question

Platform
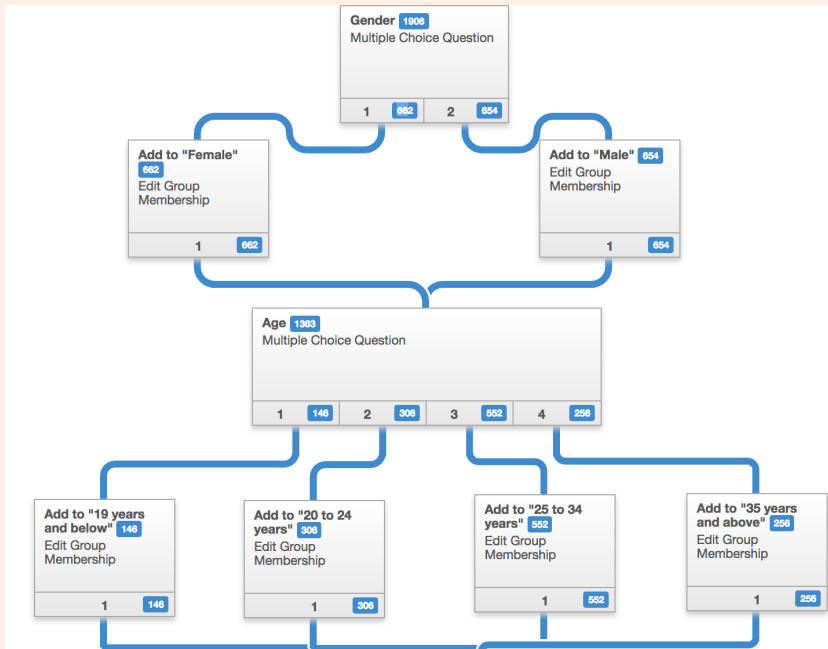
Easily built without technical knowledge

Built-in analytics and easily downloadable data

Were able to have multiple languages, multiple accounts (for each country) and multiple programs (for each tool) running at same time
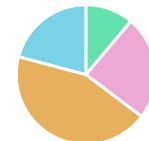
Results of User Studies

Smart Client: all 7 of the ideational and behavioral indicators assessed increased significantly in the intervention group while declining or remaining unchanged in the control group.

Smart Couple: 8 out of the 9 ideational and behavioral indicators assessed increased significantly between pre- and post-intervention surveys. Overall, exposure to the tool was associated with a significant increase in the score for ideation.

Both studies: participants had very positive opinions about the content and the user experience

Lessons learned
Developing content and tools

Need to provide clear instructions for recording content
- Identify "clips" in scripts

Double, triple check structure with scripts

Don't be afraid to ask for features/options that are not built into out-of-box platform, but be aware of potential bugs

Test, test, test
- All features/aspects
- With users who have all different mobile operators

Lessons learned
Use of tools

Length of calls
- ◦ Average listening time 4.5-6 minutes
- ◦ Some (not many) users did listen for 15+ minutes
- ◦ Most users did not make it past the drama segment – were not reaching the optional segments

Non-initiation and attrition throughout series of calls

Adding surveys at the end of calls and non-completion

Language of SMS

How does it work?
High quality step-by-step process

| Your Content | Mobile Optimized | Translated & Recorded | and Field Tested | Mass Mobile Engagement | Reports & Dashboards |

Data Collection:

Field Data Collection (activity reports, stock inventory, etc.)	MSI (Zambia)	• No more **paper**
Surveillance Systems (diseases, corruption, poaching, GBV, etc.)	CDC (Niger)	• No **loss** of data • Increased data **accuracy**
National Statistics (market study, project & policy design, etc.)	Facebook (10 countries)	• Increased **frequency** • **Whole-of-population** reach
Monitoring and Evaluation (baseline & endline, longitudinal study, etc.)	World Bank (6 countries)	• **Real-time** analysis

Behavior Change:

Staff Training (basic training, on-going training, knowledge retention)	NDI (Zambia)	• **Push & Pull** modes • **Individualised** experience • **Interactive** content • Share **information & money** • **Real-time** analysis • **Version** testing
Population Awareness Campaigns (health, agriculture, human rights, gender norms, etc.)	3-2-1 Service example	
Subscription Services (farmer calendars, maternal health information, etc.)	UNOPS (Ghana)	
Adherence (reminders, vouchers, incentives, etc.)	TextDirect (Sierra Leone)	

The 3-2-1 Service

Strategic partnership with a mobile network operator to offer information:

- On-demand
- National reach
- Multi-topic
- Free to listeners

"On-Demand Information" where there is no internet
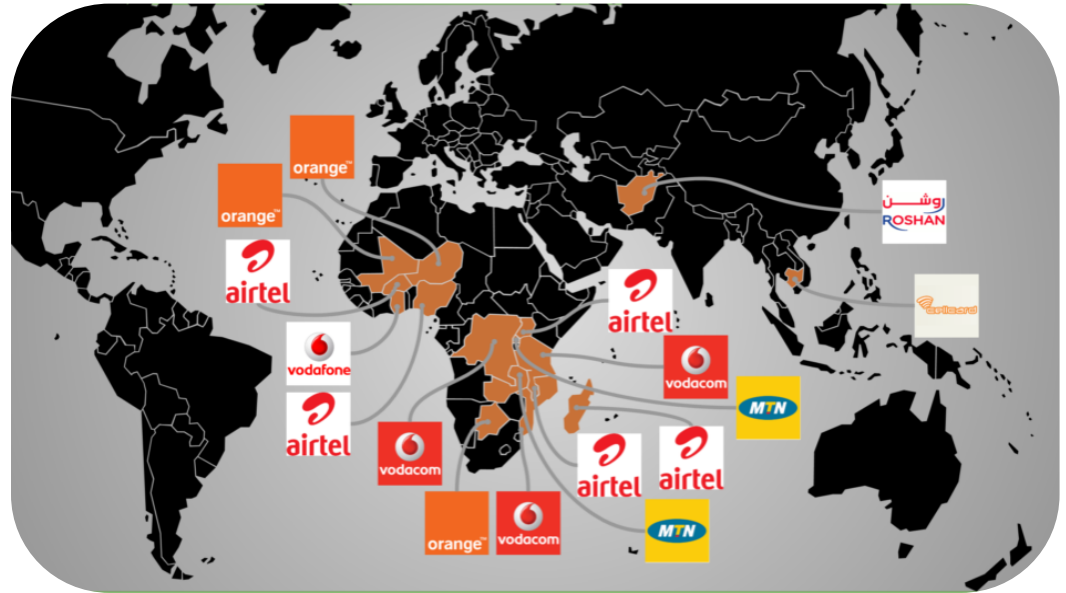
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Nutritional Knowledge: End-line vs baseline

Could you please answer the following questions for me?

N=End-line: 381, Baseline: 422– trial & repeat users only – % of right answer

Question	End-line	Baseline
What should a baby be eating in its first 6 months?	88%	78%
When should a mother start breastfeeding her baby?	86%	74%
How often should a mother breastfeed her baby in a day?	83%	53%
At what age can new foods be introduced to a young child?	79%	68%
Until what age should a baby or a young child be breastfed?	77%	71%
What vitamin supplement should a mother start taking soon after giving birth?	67%	45%
What vitamin supplement should a young child consume to prevent illness such as measles, diarrhoea and pneumonia?	52%	35%
At what age should a young child start getting vitamin A supplements?	46%	18%

- **Knowledge improved by 6% to 28% for all questions** in the end-line vs the baseline
- **Knowledge on vitamin A improved the most**

Nutritional Practices: End-line vs baseline

Can you tell me about nutritional practices in your house?

N=End-line: 381, Baseline: 422 – trial & repeat users only – % apply the right practices

Question	End-line	Baseline
What are babies younger than 6 months fed?	86%	51%
How soon after birth are babies in your family breastfed?	82%	68%
How often are babies in your family breastfed in a day?	86%	59%
At what age are new foods introduced to infants in your family?	75%	56%
Until what age are babies in your family breastfed?	77%	64%
What vitamin supplements do mothers in your family take soon after giving birth?	61%	41%
What vitamin supplements are given to young children in your family to prevent illnesses?	55%	37%
At what age do young children in your family receive vitamin A supplements?	50%	17%

- Nutritional practises have **improved by 11% to 35% for all questions** between the baseline and the end-line
- Both breastfeeding and vitamin A improved significantly
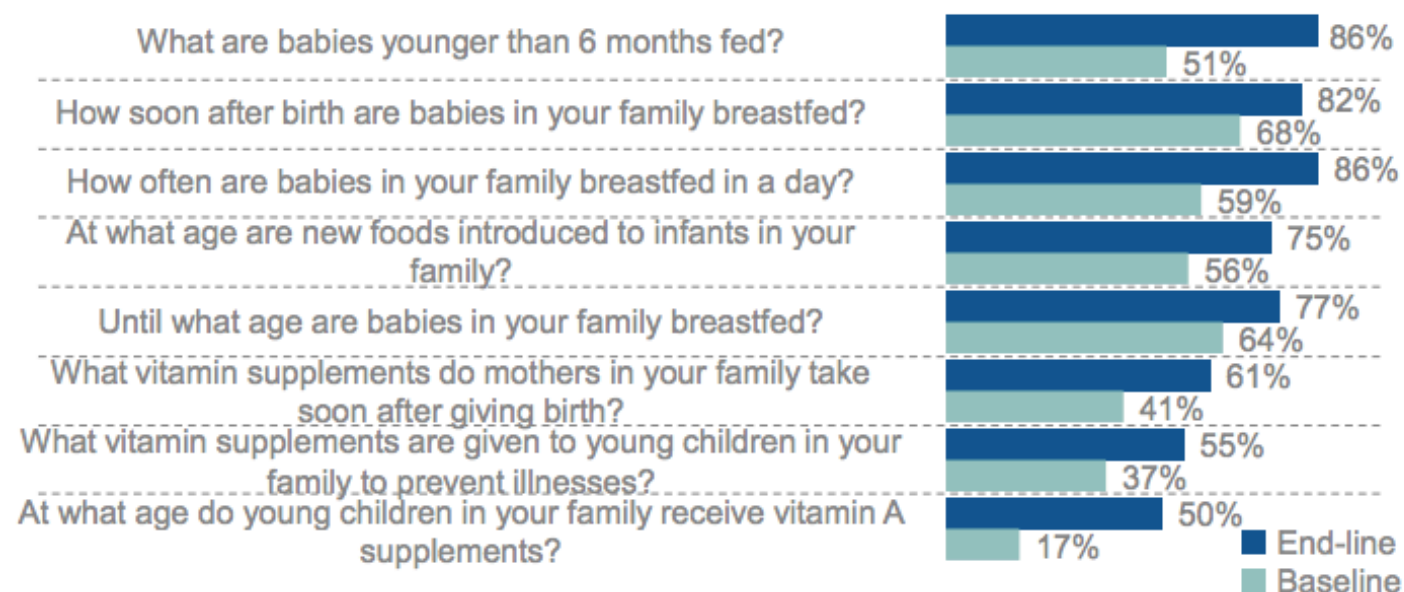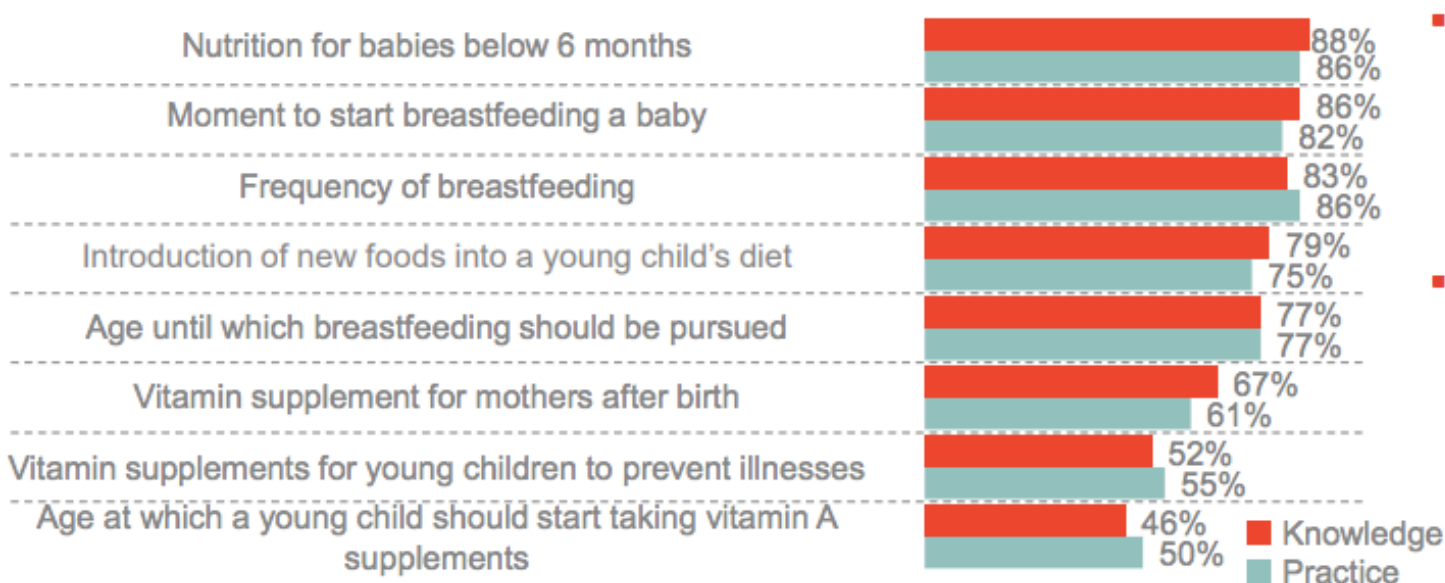
Nutritional Practices: Knowledge vs Practice

Could you please answer the following questions for me? (End-line)

N=381 – trial & repeat users only – % of right answer/application of the right practices

Question	Knowledge	Practice
Nutrition for babies below 6 months	88%	86%
Moment to start breastfeeding a baby	86%	82%
Frequency of breastfeeding	83%	86%
Introduction of new foods into a young child's diet	79%	75%
Age until which breastfeeding should be pursued	77%	77%
Vitamin supplement for mothers after birth	67%	61%
Vitamin supplements for young children to prevent illnesses	52%	55%
Age at which a young child should start taking vitamin A supplements	46%	50%

- **Nutritional practice matches nutritional knowledge** in almost all cases
- This is **a big improvement from the baseline,** where practise was significantly lower than knowledge