HKI Senegal: Pilot Project

Dr. Codé Thiaw
Amy Cooper
RATIONALE FOR 6 MONTH CONTACT POINT

• Globally, an estimated 66% of children live in areas with Vitamin A deficiency.

• Children need to benefit from a dose of Vitamin A at 6 months because of:
  1. Increased exposure to infections as children learn to crawl
  2. Limits in the protective nutrients of breast milk
  3. Introduction of complementary foods at 6 months

• Vitamin A is most commonly distributed through mass supplementation campaigns to children 6-59 months.
  1. Only 8.3% of children receive their first dose at 6 months of age.
The systematic introduction of a 6-month VAS contact, established optimally within the routine immunization schedule, could reduce infant mortality by an additional 2.3%.

Currently piloted in 5 countries is sub-Saharan Africa.
VAS IN THE ROUTINE VACCINATION SCHEDULE

Le Calendrier vaccinal de l’enfant & Vitamine A

<table>
<thead>
<tr>
<th>Naissance</th>
<th>BCG + Polio 0</th>
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<tbody>
<tr>
<td></td>
<td>Tuberculose</td>
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<tr>
<td></td>
<td>Poliomyélite</td>
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<tr>
<td>6 semaines</td>
<td>Polio 1 + Penta 1</td>
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<tr>
<td></td>
<td>Poliomyélite</td>
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<td>Diphtherie</td>
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<td>Tétanos</td>
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<td></td>
<td>Coqueluche</td>
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<td>Hepatite B</td>
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<td>Infections à HIB</td>
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<td>10 semaines</td>
<td>Polio 2 + Penta 2</td>
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<tr>
<td></td>
<td>Poliomyélite</td>
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<td></td>
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<td></td>
<td>Hepatite B</td>
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<tr>
<td></td>
<td>Infections à HIB</td>
</tr>
<tr>
<td>14 semaines</td>
<td>Polio 3 + Penta 3</td>
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<tr>
<td></td>
<td>Poliomyélite</td>
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<tr>
<td></td>
<td>Diphtherie</td>
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<td>Hepatite B</td>
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<td></td>
<td>Infections à HIB</td>
</tr>
</tbody>
</table>

Dès 6 mois
Vitamine A

- Résistance aux infections
- Chances de survie
- Croissance
- Prévention cécité

9 mois
VAR + VAA

Protège contre
Rougeole
Fièvre Jaune
BENEFITS OF A 6-MONTH CONTACT POINT

Platform for the delivery of complementary high impact interventions

- Family Planning Counseling
- Improvements in hygiene practices
- Introduction of lipid based nutrient supplements
- Introduction of multiple micronutrient powders
- Infant and Young Child Feeding Counseling
WHEN DO CHILDREN FIRST RECEIVE VAS?

Receipt through mass supplementation campaigns:
- Data from seven sub-Saharan countries indicate that on average, infants are reached during mass campaign events at 9 months of age (SD 1.53)

Receipt through routine health system:

- 6 months
- WHO recommended age for first receipt of VAS
- 9 months
- Current specific first contact point for VAS receipt in the immunization schedule
PROJECT OBJECTIVE

1. Primary Objectives:
   - To establish Vitamin A services in the routine setting.
   - To improve coverage of VAS from 6 months of age.

2. Secondary Objectives:
   - To study the effectiveness of SMS monitoring and evaluation strategies in improving the service delivery of a proven nutritional intervention.
   - To study the impact of feedback loops on health post performance over the 4 months of the intervention.
PILOT STRATEGY

- **Improving Demand:**
  - Introduced new child health card
  - Programmed social mobilization activities
  - Communicated using posters, brochures and radio spots
  - Mobilized community health workers to do follow-up at the household level
  - ReminderSMS sent to family at 6 months of age

- **Improving Supply:**
  - Provided initial stock of capsules based on census data
  - Designed dynamic SMS reporting to add target children
  - Introduced monitoring of stock through weekly SMS reports
  - Assured availability of re-supply stock at district level
  - *SMS reports assure real-time feedback to reduce stock outages*
<table>
<thead>
<tr>
<th>AGE</th>
<th>VACCINS</th>
<th>Lot/Date</th>
<th>MALADIES</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dès la naissance</td>
<td>BCG, Polio 0</td>
<td></td>
<td>Tuberculose, Poliomyélite</td>
<td>si femme HBS + vacciner le nouveau-né contre l'hépatite</td>
</tr>
<tr>
<td>6 semaines</td>
<td>Pentavalent 1&lt;sup&gt;ère&lt;/sup&gt; dose, VPD 1&lt;sup&gt;ère&lt;/sup&gt; dose, Pneumocoque 1&lt;sup&gt;ère&lt;/sup&gt; dose, Rotavirus 1&lt;sup&gt;ère&lt;/sup&gt; dose</td>
<td></td>
<td>Coqueluche, Diphtérie, Tétanos, H1N1, Hépatite, Pneumocoque, Gastro entérites à Rotavirus</td>
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<tr>
<td>10 semaines</td>
<td>Pentavalent 2&lt;sup&gt;ème&lt;/sup&gt; dose, VPD 2&lt;sup&gt;ème&lt;/sup&gt; dose, Pneumocoque 2&lt;sup&gt;ème&lt;/sup&gt; dose, Rotavirus 2&lt;sup&gt;ème&lt;/sup&gt; dose</td>
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<tr>
<td>6 mois</td>
<td>Supplémentation vit A</td>
<td></td>
<td>Carence en vitamine A</td>
<td></td>
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<tr>
<td>9 mois</td>
<td>VAK (1&lt;sup&gt;ère&lt;/sup&gt; dose), Fièvre jaune</td>
<td></td>
<td>Rougeole, Fièvre jaune</td>
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<tr>
<td>Intervention District</td>
<td>Control District</td>
<td>Selection Criteria</td>
<td>Target Population</td>
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<tr>
<td>DAKAR OUEST (YOFF)</td>
<td>THIES</td>
<td>▪ WESTERN REGION</td>
<td>▪ 2,300 children targeted</td>
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<tr>
<td></td>
<td></td>
<td>▪ Urban zone</td>
<td>▪ 11 Health Posts</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>▪ Participant in community nutrition project</td>
<td>▪ 54 Community Health Workers</td>
<td></td>
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<tr>
<td>MBACKE</td>
<td>BAMBEY</td>
<td>▪ CENTRAL REGION</td>
<td>▪ 2,700 children targeted</td>
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<tr>
<td></td>
<td></td>
<td>▪ Semi Rural zone</td>
<td>▪ 21 Health Posts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Participant in community nutrition project</td>
<td>▪ 55 Community Health Workers</td>
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<tr>
<td>THIONCK ESSYL</td>
<td>DIOULOULOU</td>
<td>▪ SOUTHERN REGION</td>
<td>▪ 550 children targeted</td>
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<tr>
<td></td>
<td></td>
<td>▪ Rural Zone</td>
<td>▪ 16 Health Posts</td>
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<tr>
<td></td>
<td></td>
<td>▪ Districts are in conflict zones, and represent hard to reach children.</td>
<td>▪ 30 Community Health Workers</td>
<td></td>
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</table>
ORGANIZATIONAL HIERARCHY OF HEALTH WORKERS

• **District SMS Focus Point** (Local Champion) given access to the district account on Telerivet for local based management.
  - Collaborates with health workers to provide active data management to: improve data quality, monitor timeliness of reporting, provide real-time feedback.
  - Participant during monthly supervision of the district.

• **Head of Health Post** (Infirmier Chef de Poste)
  - Supervises community health workers, distributes health cards, and conducts VAS
  - Submits weekly reports on the stock levels of Vitamin A capsules using SMS

• **Community Health Worker** (Relais)
  - Promotes the mobilization of their community to come to their local health post from 6 months, sends Vitamin A supplementation reports by SMS.
  - Identifies hard to reach cases, and cases of non-residents and refusals.
METHODOLOGY

- Baseline Evaluation in 6 districts
  - Questionnaires administrated to mothers and caregivers of children aged 7 to 10 months to retrospectively determine VAS coverage
  - Survey evaluated awareness based on the following questions:
    1. Knowledge on the benefits of vitamin A
    2. Importance of VAS at 6 months
    3. Channels of communication that introduced vitamin A benefits or services

- Census of Intervention Districts
  - Targeted children who would reach 6 months during the intervention
  - Assured informed consent of all project participants
  - Collected two phone number contacts per child and precise address to facilitate household visits for follow up
SMS STRATEGIES

KEY INPUTS:

1. Reliable Cell Phone Network

2. Software
   • Telerivet acts as SMS platform

3. Contacts
   • Census used to collect phone numbers of children 0-6 months
   • Two contacts were collected for more than 60% of children

4. Hardware
   • Samsung Android Phone (used at district level)
   • Basic Samsung phone (provided for each health post).
   • Orange SIM Card
SMS STRATEGIES

SMS Software: Selection Criteria

IS ABLE TO:

1. Use simple mobile phones
2. Operate reliably in areas with limited cell phone reception
3. Send scheduled messages and receive SMS reports
4. Reimburse the cost of text messages received at central server
5. Grant entry to multiple users through a secure platform
6. Provide reliable technical support
7. Operate at a low service cost ($25 a week)
STRATEGIC SMS PLAN

MULTIPLE LEVELS OF SURVEILLANCE

- Monitoring from MoH, District Level, Regional Level HKI
- Stock SMS
- Strategies SMS
- Health Post
- Target Families
- Reminder SMS
- CHW follow up
# PROJECT INDICATORS

## Reminder SMS
1. **OVERALL VAS COVERAGE**
2. No. of confirmed SVA reports
3. No. of SMS sent per case
4. Age of supplementation (how many days after 6 mo.)
5. No. of cases of SVA resulting from SMS reminders.
6. No. of cases requiring follow up by CHW

## Stock SMS
1. Compliance with weekly reporting
2. No. of valid stock reports
3. No. of re-supplies of stock
4. No. of stock outages
5. Ability to request stock supplies for community health sites

## Feedback SMS
1. No. of messages of feedback or assistance resolved through active data management
2. No. of children added to the census during the intervention
3. No. of added children who where then contacted by SMS

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**CHANGE IN PERFORMANCE BASED ON MONTHLY EVALUATIONS OVER THE 4 MONTHS OF INTERVENTION**
LESSONS LEARNED

1. ADAPT TO THE LOCAL CONTEXT
   • Each region has its own unique challenges. One size does not fit all.
   • Listen to your local partners before making any concrete decisions.

2. START EARLY
   • Establishing a partnership with telecom providers takes time.
   • Setting up an SMS system requires a) detailed planning b) clear goals, c) technical capacity, d) trial and error and e) dynamic health workers.

3. USE THE DATA YOU COLLECT
   • Analyze the data so you can provide actionable performance reports.
   • Feedback loops are the best way to improve performance, engage stakeholders and allow for adaptive learning.

4. ENGAGE LOCAL CHAMPIONS
   • Local capacity is the first critical step to sustainability.
   • Project management needs local support from an actor who has computer literacy and understands the work flow of the district’s health system.
NEXT STEPS

1. **SHARE** communication model and results with the MoH of Senegal, the administration on Nutritional Services and Child Survival of Senegal (DANSE) and local level project partners.

2. **SHARE** the lessons of this intervention for scaling up and improve other projects within Helen Keller International.

3. **DEVELOP** a proposal to integrate VAS with the routine vaccine calendar using SMS reports and compliance monitoring.

4. **EVALUATE** cost-effectiveness, scalability and sustainability.

5. **PUBLISH** conclusions through a final report, scientific articles and presentations.
thank you for your attention