INVESTIGATING CURRENT PRACTICES AND PERCEPTIONS OF THE UMBILICAL CORD AND ACCEPTABILITY OF ‘ARO FOITRA’

Antananarivo, Mahabo and Tsiroanomandidy
February 2013
General Objective, Timing and Budget

To collect information concerning the practice and perceptions around the umbilical cord and the care of the stump, and to determine the acceptability of use of AroFoitra, as well as the willingness to pay by the target groups.

The study was entirely funded by JHPIEGO.
Total budget was just under $8,000.
Data collection took place in early February 2013.
Specific Objectives

• To Determine:
  - Perceptions around the umbilical cord and the stump
  - Practices and care of the stump
  - Barriers and motivations in relation to use of AroFoitra
  - The target group preference between a gel and liquid presentation
  - The willingness to pay for AroFoitra
Methodology
Recruitment of Participants

- Close collaboration with midwives, BHC staff, Fokontany Presidents, mayors and CHWs
- Support from the JSI Mahefa staff in Mahabo

**Technical**

Consultation of the birth registers and ANC registers

Snowball technique (to recruit husbands and mothers/mothers-in-law)

NB. No members of the same family were interviewed, but women who had just delivered and weren’t included in the sample were asked to provide contact information for their husband or mother/in law
# Inclusion Criteria for Participants

<table>
<thead>
<tr>
<th>Persons</th>
<th>Criteria</th>
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</thead>
<tbody>
<tr>
<td>Women who have recently given birth</td>
<td>• Having a child less than six weeks old</td>
</tr>
<tr>
<td></td>
<td>• At least 18 years</td>
</tr>
<tr>
<td></td>
<td>• Lives in the site</td>
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<tr>
<td></td>
<td>• Willing to participate in the study</td>
</tr>
<tr>
<td>Husbands of women who have just given birth</td>
<td>• Having a child less than six weeks old</td>
</tr>
<tr>
<td></td>
<td>• At least 18 years</td>
</tr>
<tr>
<td></td>
<td>• Lives in the site</td>
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<tr>
<td></td>
<td>• Willing to participate in the study</td>
</tr>
<tr>
<td>Mothers / mothers in law of women who have just given birth</td>
<td>• With at least 1 grandchild less than 6 weeks</td>
</tr>
<tr>
<td></td>
<td>• Lives in the site</td>
</tr>
<tr>
<td></td>
<td>• Willing to participate in the study</td>
</tr>
<tr>
<td>Matrons (TBA)</td>
<td>• Works actively as a TBA</td>
</tr>
<tr>
<td></td>
<td>• Lives in the site</td>
</tr>
<tr>
<td></td>
<td>• Willing to participate in the study</td>
</tr>
</tbody>
</table>
Study Areas

- Antananarivo rural (around the capital city) (Tana)
- Tsiroanomandidy (rural, highlands) (TDD)
- Mahabo (rural, coastal and site of the CHX pilot) (MHB)

Additional criteria for selection: Using the results of the study on cord care practices that was done by the JSI/Mahefa project (September 2012), the sites represent sites with a more elevated percentage of live births during the last two years preceding the survey who had a substance applied to the stump (depending on the type of substance). Time and budget constraints also played a role.
Study Approaches

- Focus group discussions (09)
- Product demonstration and observation
- TBAs (7)
- Mothers (40)
- Fathers (18)
- Mothers or mothers-in-law (22)

Focus group discussions (09)
Product demonstration & observation
Presentation Plan

Part I: Perceptions and beliefs around the umbilical cord and the stump

Part II: Practical care of the stump

Part III: Acceptability and willingness to pay for AroFoitra

General findings and recommendations
FINDINGS
Part 1 - Perceptions and beliefs around the umbilical cord and stump
Places of birth

1) Hospital / BHC / Private Practice (Majority)
- Instructions of medical personnel and parents
  - Availability of staff and equipment
    - In case of a difficult delivery
      - Medical follow up
      - Feeling secure

2) At home, with a TBA (Minority)
- Unexpected/early delivery
- Lack of financial resources
  - Uncomplicated delivery
    - Proximity of the TBA
  - Remoteness of health centers
  - Difficulty of transportation to health centers

3) Nature (minute number)
• Unexpected delivery
The materials used to cut the umbilical cord

**Hospital Settings**
- Alcohol
- Gloves
- Compress
- Bandage
- Pair of scissors
- Pliers
- String

**Home (with midwife)**
- Alcohol
- Gloves
- Compress
- Bandage
- Pair of scissors
- Pliers
- Thread

**Home with TBA**
- Alcohol (craft)
- Cloth
- Sewing thread (white)
- Compress (TNR, TDD)
- Bandage (TNR, TDD)
- Gloves (TNR)
- Pairs of scissors (TNR)

Cutting the umbilical cord is done by the person who delivers the baby (midwife, TBA, family member)
Perceptions of the umbilical cord

**Name**

**Umbilical cord:**
"Tadim-Poitra", "Foitra", "Zokiny", "Tadin-boko", "Foitse" (spec MHB)

**Stump:**
"Tadim-Poitra", "Kobo", "Foitra" navel:
"Foitra", "Kobon-jaza" (spec MHB)

**Role/importance of the umbilical cord:**
An emotional lifeline

**Role/importance of the stump:**
Where the baby's life is seated (hence: careful handling, care)
Indicator of the health of the baby
Weak/fragile point of the baby
What happens to the stump once it has fallen… and why…

- Keep (place it in a box, under a mat ...)
- Give to the zebu (sign of wealth)
- Repatriate to the birthplace of the mother,
- Throw in a stream, estuary, sea ... (Mahabo)
- Bury (Mahabo)

- Avoid memory loss in the child
- Avoid witchcraft
- Respect for the homeland
Key moments and their significance

- **Cutting of the cord**
  - Time of vigilance
  - Moment of joy
  - Symbol of the independence of baby
  - Mild pain

- **After the umbilical cord is cut**
  - Moment of joy
  - Beginning of the autonomy of baby
  - End of the gestation period
  - Mother has completed the delivery process

- **Before the stump falls off**
  - Moment of anguish
  - Fragility of the baby (need to be cautious)
  - Care and protection of the baby

- **After the stump falls off**
  - Moment of joy
  - Healing of the baby
Fears and concerns over the stump

- **Bloating / Air coming in** (All)
- **Trauma / shock** (Majority)
- **Cold, humidity**
- **Swelling** (majority)
Recommendations received by women for the care of the stump

**Principles:**
Modern medicine
Customs and traditions

**Recommendations**

**TBAs and grandmothers:**
- Ensure a dressing with alcohol (**majority**)
- Respect the hygiene of the infant (**majority**)
- Bandage the stump (**almost-majority**)
- Avoid full baths before the fall of the stump (**majority**)
- Avoid excessive crying of the baby (**almost-majority**)
- Avoid ‘shocks’/trauma (**majority**)
- Consult adequate persons in case of infection (**majority**)
- Avoid to bring out the child before the fall of the stump (TTD)

**Recommendations**

**Health personnel:**
- Ensure a dressing with alcohol (**majority**)
- Practice good infant hygiene (**majority**) (NB. also mentioned was hand washing of the person handling the infant)
- Do not bandage the stump (**minority**)
- Bandage the stump (**majority**)
- Avoid trauma/’shocks’ (**majority**)
- Consult health workers in case of infection (**majority**)

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"PSI"
Part 2 - Practices and Care of the Stump
PRESENTATION PLAN

1) Stump care practice during normal times and in case of infection

2) Perception of the recommendation not to bandage the stump
# Care practices under normal circumstances

<table>
<thead>
<tr>
<th>Advisors</th>
<th>§ Health staff</th>
<th>§ Mothers/mothers-in-law</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>§ Community practices</td>
<td>§ TBA</td>
</tr>
<tr>
<td>Decision-maker</td>
<td>§ Mother/mother-in-law</td>
<td>§ Woman</td>
</tr>
<tr>
<td></td>
<td>§ Woman</td>
<td>§ Couple</td>
</tr>
</tbody>
</table>
Substances applied to the stump of normal infant care (NB. Circles not in proportion to the number of times they were mentioned)

- Moldy wood powder
- Luke warm water
- Talc + alcohol
- Toaka gasy (local alcohol)
- Bétadine + alcohol
- Alcohol (majority)
Knowledge of infection of the stump

- blood with suppuration
- swelling
- bad odor
- late healing
- redness
- stump wet
- buttons on the stump
- unusual crying

Known signs

Risk

- late detachment of the stump (> 1 week)
- bleeding
- swelling
Treatment in case of infection

**Use of medicine (Almost all)**

- Alcohol
- Betadine (*TDD*)

**Traditional**

- Bamboo leaves (MHB)
- Moldy wood powder (TDD)
- Medicinal plant (mananitsa) (TDD)
- Luke warm water (TNR)
- Talc (TDD)
- Breastmilk (TNR)
- Menak'omby /zebu grease (MHB)
Perceptions around non dressing of the stump
# Perceptions of non dressing

<table>
<thead>
<tr>
<th>Positive points (min)</th>
<th>Negative points (maj)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will follow if that’s the medical advice / instructions given</td>
<td>Fear of air coming in / gas</td>
</tr>
<tr>
<td>Practical in warm places</td>
<td>Late healing</td>
</tr>
<tr>
<td>Effective (experience)</td>
<td>Unusual practice</td>
</tr>
<tr>
<td>Rapid healing</td>
<td>Strict instruction for 3 months after the birth (TBAs)</td>
</tr>
<tr>
<td>Facilitates the task of the mother (TBAs)</td>
<td>Need precautionary hygiene (TBAs)</td>
</tr>
<tr>
<td>New recommendation (TBAs)</td>
<td>Risk of contamination and shock</td>
</tr>
<tr>
<td>Anticipation of some new drug/product that will come with this recommendation (TNR)</td>
<td></td>
</tr>
</tbody>
</table>
Apprehension about not dressing

Irritation through rubbing (of cloths), shock
Late healing
Air coming in/gas
Risk of infection
Displacement of the stump
Unusual practice
Part 3: Acceptability and willingness to pay for Aro Foitra
Acceptability of Arofoitra
Presentation Plan

1. Perceptions of Aro Foitra

2. Motivations and barriers regarding the use of Aro Foitra

3. Willingness to pay
Perceptions of *Aro Foitra*

### Positives

- **Product in general:**
  - Replacing alcohol / dressing
  - Unusual
  - The name annotates efficiency

- **Application:**
  - Easy/practical
  - Less time consuming

- **Texture of the gel:**
  - Effective (thick, greasy, will provide high penetration and shielding)
  - Smell agreeable
  - Neutral color signifies effectiveness

- **Tube:**
  - Provides reassurance and security (hermetic, protection)

### Negatives

- New product (doubtful of its effectiveness) (MHB)

- Bandage/wrapping required for 3 months (TNR) NB. This is contradictory to other statements regarding the + of the product

- Tube difficult to open (MHB)

- Pungent odor / nausea (MHB, husbands)
Who should be the person to apply *Aro Foitra*?

The person who delivered the baby: (almost all):
- Medical staff
- TBA

Other:
- Mother/in law (MHB)
- Father (TDD)
Motivations and barriers for the use of Aro foitra
Motivation to use *Aro Foitra*

- Efficiency (proven product; viscosity)
- Convenience
- Reduction of expenditure & saving time
- Respect of infant hygiene and no need to wrap/brand (MHB)
- Protection of infant health (air coming in, infection)
- Color and texture of the gel

Remarks:
- Confidence of the majority of target groups to ask those who deliver the baby to use *Aro foitra* (Condition: the health staff has already been informed about *Aro foitra*)
- Participants think to acquire the product before the delivery or on the day of delivery
Barriers to the use of Aro Foitra

- Ineffective due to the single application
- Lack of information about the product
- Apprehension of late healing of the stump
- High cost of product  
  NB. This was a spontaneous perception based on their perception of the quality of the product. Target groups had not been informed of any pricing related to the product

Specific for Mahabo:
- Need for strict hand washing/hygiene of the hands
- New product (doubt concerning its effectiveness)

Specific Tsiroanimandidy:
- Risk of air coming in
- Apprehension that stump gets glued on
- Used to alcohol
- Difficulty in opening the tube
### Presentation of gel compared to liquid

<table>
<thead>
<tr>
<th>Preference</th>
<th>Gel</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity of the product</td>
<td></td>
<td>No need for hand washing (MHB)</td>
</tr>
<tr>
<td>Assurance of a high penetration/shielding</td>
<td></td>
<td>No need to touch the stump (MHB)</td>
</tr>
<tr>
<td>Perception of effectiveness</td>
<td></td>
<td>No spray (TDD)</td>
</tr>
<tr>
<td>Less expensive</td>
<td></td>
<td>Unbreakable bottle (TDD)</td>
</tr>
<tr>
<td>Impermeability (TNR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility of the product when applied (TDD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for hand washing (MHB)</td>
<td></td>
<td>Moistens the stump</td>
</tr>
<tr>
<td>Rejection</td>
<td></td>
<td>Delays stump detaching</td>
</tr>
<tr>
<td>Need for a compress / cotton / band</td>
<td></td>
<td>Need for a compress / cotton / band</td>
</tr>
<tr>
<td>Uncontrolled flow</td>
<td></td>
<td>Uncontrolled flow</td>
</tr>
<tr>
<td>Simple sanitizing product (TDD)</td>
<td></td>
<td>Simple sanitizing product (TDD)</td>
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</tbody>
</table>
Willingness to Pay
Willingness to pay for *Aro Foitra*

**Price estimate (spontaneous)**
- 2,000 Ar (Majority) *NB. Based on perception of quality*
- Minority:
  - [500-700] Ar
  - [1,500-2,500] Ar
  - More than 3,000 Ar

**Willing to pay**
- [500-1,000] Ar (Majority)
- *NB. They based this on what they currently pay for alcohol, compress etc at a health facility*
- Minority:
  - [1,500-3,000] Ar
Supply sources and promotion of *Aro Foitra*
Supply sources (where would the target groups like to get the product?)

- BHC
- Pharmacies
- Midwives
- TBAs
- CHWs
For the promotion of the product

Format

- Awareness (speakers who used it to give testimony; community mobilization; home visits)
- Training (midwife, health staff, TBA)
- Mass media (poster, radio spot)

Arguments for advocacy within the community:

- Product benefits (efficiency, gain in time, less expensive, no need to wrap/band)
- Novelty/new product

TBAs specifically requested support for the use of the product:

- Raising awareness among mothers and mothers-to-be about the existence of the product
- Training
- Availability of the product (for TBAs, who are not officially recognized by the MOH)
Conclusion and Recommendations
The perception of the umbilical cord and care of the stump

<table>
<thead>
<tr>
<th>Conclusion</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The umbilical cord does not carry more meaning other than the stump, which is perceived as the source of life of the newborn</td>
<td>Focus awareness of the target groups on appropriate care of the stump given its symbolic importance for the infant's life</td>
</tr>
<tr>
<td>The person who delivers the baby is a very influential player for the care of the stump</td>
<td>Build partnerships with the different types of persons who provide delivery care, to advocate for the care of the stump</td>
</tr>
</tbody>
</table>
### Perceptions of the umbilical cord and stump

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<thead>
<tr>
<th>Conclusion</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The different moments of care of the stump have emotional meanings for the target groups</td>
<td>Use the emotional aspects for the promotion of cord and stump care, and for the promotion of <em>Aro Foitra</em>.</td>
</tr>
<tr>
<td>For the target group, bandaging the stump is still a very important advice target groups receive</td>
<td>Information and awareness raising about this new recommendation during ANC and during the introduction of <em>Aro Foitra</em> in the community</td>
</tr>
<tr>
<td>Apprehension of the majority of participants on not bandaging the stump due to the fact that this is new and unusual</td>
<td></td>
</tr>
<tr>
<td>Belief in the entry of air / gas is predominant and real</td>
<td>Clarify and address these beliefs in communications on stump care</td>
</tr>
<tr>
<td>Perception that a wet stump will swell to a huge size</td>
<td>Correct these beliefs in the training of TBAs and CHWs, and during community sensitization regarding the care of the stump</td>
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## Practice and care of the stump

<table>
<thead>
<tr>
<th>Conclusions</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The majority of deliveries in Mahabo take place at home given the remoteness of health facilities</td>
<td>Conduct training / retraining of TBAs</td>
</tr>
<tr>
<td>A tiny minority of participants use traditional substances that are applied on the stump</td>
<td>Educate mothers / future mothers during the ANC about stump care</td>
</tr>
<tr>
<td>Strong involvement of mothers of the woman who gives birth in newborn care including care for the stump</td>
<td>Educate mothers to come for a medical consultation in case of an anomaly of the stump</td>
</tr>
<tr>
<td></td>
<td>Integrate mothers and mothers-in-law as targets for mass media sensitization and IEC regarding the care of the stump</td>
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</tbody>
</table>
## Acceptability of *Aro Foitra*

<table>
<thead>
<tr>
<th>Findings</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very positive perception from the target group on the product, tube presentation, the texture, the smell of gel and the unique application of the product which is easy and practical</td>
<td>Use these attributes to promote and convince women (pregnant women) to use <em>Aro Foitra</em></td>
</tr>
<tr>
<td>The quasi-totality of the target groups prefer a single application, a small minority prefer repeated applications after three days</td>
<td>Emphasize during training and sensibilisation that a single application of <em>Aro Foitra</em> guarantees an effective prevention of infection of the stump</td>
</tr>
<tr>
<td>NB. <em>Researchers explained about single use but did ask if repeated use would be preferred</em></td>
<td>Prioritize training and information of medical staff so that they will substitute <em>Aro Foitra</em> for alcohol. If this is done well, target group members will be (more) easily convinced</td>
</tr>
<tr>
<td>Target group members were clear that knowledge of <em>Aro Foitra</em> among those who do deliveries will be the determining factor in the adoption of the product, as a substitute to alcohol and other substances used</td>
<td></td>
</tr>
</tbody>
</table>
## Acceptability of *Aro Foitra*

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>The target group suggested the availability of <em>Aro Foitra</em> especially at BHC level</td>
<td>Ensure the continuous availability of <em>Aro Foitra</em> at BHCs</td>
</tr>
<tr>
<td>Almost the quasi-totality of target group members preferred the gel over the liquid presentation, as to them the gel formulation represented more effectiveness</td>
<td>Adopt the gel for Madagascar</td>
</tr>
<tr>
<td>For <em>Aro Foitra</em> promotion, the target group suggested that community sensibilisation be done through testimonies who especially discuss the effectiveness of <em>Aro Foitra</em>, to make the messages more convincing</td>
<td>Optimize the use of testimonials and discussions on the evidence that <em>Aro Foitra</em> is effective to convince target group members to adopt new behaviors. In parallel, train those who conduct deliveries on how to use the product</td>
</tr>
</tbody>
</table>