Addressing Barriers to Exclusive Breastfeeding in Nampula, Mozambique: Opportunities to Strengthen Counseling & the Use of Job Aids

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School of Public Health
Today’s presentation

• Objectives
• Methods
• Key Findings
• Program Implications
• Breastfeeding Gear Model
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Dr. Justine Kavle</td>
<td>Principal Investigator</td>
<td>MCSP– USA</td>
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<tr>
<td>Dr. Rafael Pérez-Escamilla</td>
<td>Co-Principal Investigator</td>
<td>Yale University</td>
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<td>Dr. Gabriela Buccini</td>
<td>Co-Investigator/Study Coordinator</td>
<td>Yale University</td>
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<tr>
<td>Melanie Picolo</td>
<td>Local Principal Investigator</td>
<td>MCSP– Mozambique</td>
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<td>Iracema Barros</td>
<td>Local Co-Investigator</td>
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<td>Marla Amaro</td>
<td>Local Co-Investigator</td>
<td>Mozambique Ministry of Health, Nutrition Department</td>
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<td>Momade Intata Olga Muaquiuia  Aurélio Matos Angi Singano</td>
<td>Nutrition Officers</td>
<td>MCSP- Mozambique</td>
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## Country Context of Mozambique

<table>
<thead>
<tr>
<th>Population</th>
<th>29.7 million</th>
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<tr>
<td>Under-5 child mortality rate</td>
<td>104/1000</td>
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<tr>
<td>Stunting</td>
<td>43%</td>
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<tr>
<td>Delivered in health facility</td>
<td>70%</td>
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<tr>
<td>Early breastfeeding initiation</td>
<td>77%</td>
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<tr>
<td>Exclusive breastfeeding 0-5 months of age</td>
<td>43%</td>
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<tr>
<td>Exclusive breastfeeding by 4-5 months of age</td>
<td>27%</td>
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Slow progress in EBF
Evidence needed on “how” to strengthen provider competencies

GUIDELINE:
COUNSELLING OF WOMEN TO IMPROVE BREASTFEEDING PRACTICES

Progress slow in achieving 2025 & 2030 extended targets
Study Objectives

1. Identify **problems and challenges with exclusive breastfeeding (EBF)** experienced by mothers in rural and semi-urban areas in Nampula, Mozambique.

2. Gain an understanding of **mothers’ care-seeking patterns** for addressing the identified breastfeeding problems and challenges.
Study Objectives

3. Gain an understanding of the quality and type of counseling on breastfeeding problems and challenges currently provided by facility and community-based health providers.

4. Assess the usefulness of job aids to improve counseling on barriers to EBF among facility- and community-based health providers and identify ways to improve it through its use within existing service delivery entry points.
Sites selected due to existing community structures, MCSP project activities, and physical accessibility. Sites are representative of geographic and cultural differences with regards to breastfeeding practices.
# Study Phases and Timeline

<table>
<thead>
<tr>
<th>2018</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
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<tbody>
<tr>
<td><strong>PHASE 1:</strong></td>
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<tr>
<td>Assessment</td>
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<tr>
<td>experiences</td>
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<td></td>
<td></td>
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<tr>
<td>with breastfeeding challenges</td>
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<td></td>
<td></td>
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<tr>
<td>• In-depth interviews with 23 mothers &amp; 23 providers</td>
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<td></td>
<td></td>
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<tr>
<td>• 11 Observations of breastfeeding counseling</td>
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<td><strong>PHASE 2:</strong></td>
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<tr>
<td>Rollout of</td>
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<tr>
<td>Job Aids</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>• Developed &amp; pre-tested in country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Training of providers on job aids</td>
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<td></td>
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</tr>
<tr>
<td>• Job aid rollout</td>
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<tr>
<td><strong>PHASE 3:</strong></td>
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<tr>
<td>Post-rollout</td>
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<tr>
<td>experience</td>
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<tr>
<td>• In-depth interviews with 10 mothers &amp; 20 providers</td>
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Inclusion Criteria

• Mothers of infants aged 0-5 months:
  • Reside in study sites
  • At least 18 years old
  • Healthy infant born at least 35 weeks gestation

• Facility and Community-Based Providers
  • Work in Nampula province -MCSP-supported communities
  • Provide nutrition and child health services
  • *Phase 3 only:* trained on and used the materials
## Study Participant Demographics

### Mothers

<table>
<thead>
<tr>
<th></th>
<th>Mean (range)</th>
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</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>22 (18-33)</td>
</tr>
<tr>
<td><strong>Infant age (months)</strong></td>
<td>2.9 (1-5)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>N</td>
</tr>
<tr>
<td>&lt; Primary school</td>
<td>15</td>
</tr>
<tr>
<td>&gt; Primary school</td>
<td>8</td>
</tr>
<tr>
<td><strong>Work status</strong></td>
<td></td>
</tr>
<tr>
<td>Working outside home</td>
<td>14</td>
</tr>
<tr>
<td>Not working outside home</td>
<td>7</td>
</tr>
<tr>
<td>Maternity leave</td>
<td>2</td>
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### Health Providers

<table>
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<tr>
<th></th>
<th>Facility</th>
<th>Community</th>
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<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td>29 (23-35)</td>
<td>43 (29-56)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td><strong>Years experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>3 - 10</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>0</td>
<td>3</td>
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</table>
Phase 1 Findings: Common problems that impede exclusive breastfeeding: insufficient breastmilk

- Mothers and community-based health providers believe that during the first two days some mothers do not produce any breastmilk.

[During the first two days after the baby was born] I breastfeed anyway, he sucked and did not find anything until the next day that the milk began to come out. – Mother, Mogovolas

In the first days, they have been having many difficulties, because some mothers spend two days without breastmilk coming out.
—Community-based provider, Mogovolas
Phase 1 Findings: Common problems that impede exclusive breastfeeding (EBF)

In the first days of life:

- **Latching problems** (improper latch, positioning and sore nipples) & **breast engorgement** were key barriers

- Few mothers discard colostrum

*The majority of mothers have problems in the first days after giving birth at the beginning of breastfeeding (...) there have been mothers who have a swollen breast and this causes pain because the baby cannot suck all the milk (...) there are other women who have cracked nipple problems.*

- Community-based health provider, Meconta
Phase 1 Findings: Common problems that impede exclusive breastfeeding: insufficient breastmilk

• Concerns about insufficient milk until 3 - 4 months of age → caregiver perceives infant is thirsty and hungry & offers porridge/water.

Some say, my baby is nursing a lot, he is hungry, he gets weak, so to avoid it I have to give my son something because then he goes to sleep, he fills up and I can stay an hour or two without the baby waking up. – Facility-based provider, Mogovolas
Mothers and providers felt improving maternal diet was key to management of insufficient breastmilk

- There was consensus among mothers and providers that improving maternal diet was the most important strategy for managing insufficient breastmilk
- Advice to consume fresh cassava, peanuts, beans, fresh vegetables

I had a baby and because I stayed for one day without having milk I was advised to eat peanuts, cassava, and beans to stimulate the milk let down. When mothers know that they do not have enough milk they must eat a lot, (...) as long as they are healthy and eat the recommended foods for producing enough milk for a child, the [mother’s] body itself helps for this [milk production] to happen - Community-based Health Provider, Mogovolas
Referral for Infant Formula National Institute of Social Protection as a means to resolve breastfeeding insufficiency is an issue

Some providers referred mothers to obtain infant formula to resolve perceived insufficient breastmilk

There are cases where the mother no longer produces enough milk and when we know that this **mother is not producing enough [breast]milk we advise her to practice mix feeding**. Some mothers can buy [formulas] and others can’t. For these ones we provide them with a written referral to ‘Acção Social’ along with the statement of the community leader and then she starts receiving milk. - *Facility-based Health Provider, Meconta*
Counseling Observation Findings

**Content**

- Counseling sessions were short, leaving insufficient time to effectively counsel on BF problems
- No provider asked for BF history or assessed BF latch or positioning
- The majority of providers did not use counseling best practices
- Most providers counseled on not feeding water or other food other than breastmilk for the first 6 months
Phase 1 findings: Mothers’ sources of support for breastfeeding

1st source of support
Husband

2nd source of support
Parents, other family

3rd source of support
Community-based provider

Referral
Health facility
Phase 1: EBF counseling & support at routine contacts is limited

**Community level**: Little counseling to help prepare women for BF challenges

**Facility level**: Group talks covered broad topics, seldom BF

**Community level**: CHWs refer most BF problems to the health facility – lack of self-efficacy & training

**Facility level**: Group BF promotion talks yet, individual counseling not provided unless infant weight gain issues are identified
Phase 2: Development of 3 Job Aids
Maternity Ward Provider Job Aid

1. Apoie a mãe a colocar o seu bebé pele-a-pele logo após o parto e por pelo menos uma hora.
   - O contacto pele-a-pele ajuda a acalmar a mãe e o bebé e ajuda a estabilizar o batimento cardíaco e a respiração do bebé.
   - O contacto pele-a-pele promove o início da amamentação na primeira hora.
   *Explique a mãe:*
   - O bebé deve ficar junto a si para ele ficar quentinho e encontrar a mama facilmente.
   - Iniciar cedo a amamentação ajuda o bebé a aprender a mamar bem.
   - Iniciar cedo a amamentação ajuda a reduzir o seu sangramento após o parto.

2. Incentive a mãe a dar o colostro ao seu bebé.
   - O colostro é muito rico em nutrientes e tem água para o bebé.
   - O colostro transfere imunidade da mãe para o bebé, protegendo-o de doenças.
   - O colostro ajuda a passar o meconílio, as primeiras fezes escuras e pegajosas.
   *Explique a mãe:*
   - Nestes primeiros dias vai sair um leite grosso, que pode ser um pouco amarelo ou de cor clara, que se chama colostro.
   - O colostro tem muitas vitaminas e é bom para o seu bebé.
   - O colostro é como a primeira vacina do bebé, que lhe protege de todas as doenças que a mãe já teve.

10 steps to ensure early initiation and optimal BF practices immediately following delivery
Facility-based Provider Job Aid

Flowchart format with 3 parts:

1. Observe breastfeeding and ensure good latch and positioning

2. Discuss responsive feeding and how to maintain milk supply

3. How to manage a variety of BF problems
Community-based Provider Job Aid

Flowchart format with 3 parts:

1. Observe breastfeeding and ensure good latch and positioning

2. Discuss responsive feeding and how to maintain milk supply

3. How to counsel on BF problems before referring to a health facility
Phase 3 Findings: Job Aid Use

• Facility- and community-based providers incorporated job aids into individual and group counseling
• Providers showed the job aid images to the women they counseled, aiding provider explanation and mothers’ comprehension
• Job aids used to identify, resolve and prevent breastfeeding problems
Phase 3 findings:
Job Aid Impact: Provider Knowledge
Phase 3 Findings:
Job Aid Impact: Improved counseling skills
Phase 3 Findings:
Job aids facilitated provision of practical support

Phase 1: Pre-Job Aid
I only know how to give the mother a talk to give breast milk until 6 months, those techniques to get attached to the breast I did not know.
- Facility-based health provider, Mogovolas

Phase 3: Post-Job Aid
To demonstrate the latch... I watch each mother and see how the baby is doing the suction. I say, ‘this is correct’, if not I say, ‘you are breastfeeding, but it does not have to be in this way, it has to be this way.’ And also the mothers see those images [in the job aid], because first I have to do the talk with the job aid, then execute what is in the job aid.
– Facility-based provider, Mogovolas
Phase 3 Findings:
Improvements in provider motivation

Phase 2
Job aid rollout

Phase 1
Pre-job aid

Phase 3
Post-job aid

Provider motivation

Provider self-efficacy / confidence in knowledge and skills to resolve BF problems

Provider motivation to counsel on BF given mothers' response and perceived community impact
Phase 1: Pre-Job Aid

I did not give much advice I cannot lie, nor explained what to eat and how to breastfeed because we did not learn, I only give advice to the mother of what I was trained.

– Community-based provider, Meconta

Phase 3: Post-Job Aid

Now that I have this material that is very good, the information that I give is accurate (...) Now with this material, we talk and the mother can see the images that correspond to what we speak. (...) People used to hardly accept [our advice], but not today.

– Community-based provider, Meconta
Phase 3 Findings: Improvements to Job Aids

Most providers found the job aid helpful and easy to use.

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<thead>
<tr>
<th>Proposed modifications to the job aids</th>
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<tbody>
<tr>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>• Simplify wording for low literacy community-based providers and mothers</td>
</tr>
<tr>
<td>• Translate job aids into local language of Macua</td>
</tr>
<tr>
<td><strong>Format</strong></td>
</tr>
<tr>
<td>• Enlarge images to show mothers</td>
</tr>
<tr>
<td>• Provide poster size for health facilities &amp; pocket-size for home visits</td>
</tr>
<tr>
<td>• Reformat into booklet format with page numbers</td>
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</table>
Programmatic Implications

• Job aids can build providers’ skillsets and competencies to provide quality lactation support and counseling
• Integrate clear lactation management guidance into pre-service and in-service curricula & supportive supervision
• Validate/roll out job aids to complement existing IYCF counseling materials & Baby Friendly Hospital Initiative
• Task shift to community-level providers for comprehensive breastfeeding support
Key Report Recommendation

“Short-term and long-term investments to improve breastfeeding counseling services during routine contact points and the implementation and sustainability of large-scale improvements in breastfeeding counseling in Mozambique would benefit from employing the Breastfeeding Gear Model (BFGM) as a framework.”

Buccini, Pérez-Escamilla, Kavle, Picolo, Barros & Dillaway (2019)
Breastfeeding Gear Model

IBFAN WABA

Political Will

Legislation & Policies

Resources

Coordination Goals & Monitoring

Training & Delivery

Promotion

Research & Evaluation

Advocacy

Promotion

World BF Week

Baby Friendly Hospital

Community BF support

Maternity Leave

Work Day Breaks

WHO Code

Potential BF Policy Opportunities
Training & Delivery Gear

Improve breastfeeding friendly health facility-community links

- Improve BFHI coverage and quality
- Fully incorporate community level structures involving ‘activistas’, government community health workers, model mothers and peer-to-peer support, and traditional birth attendants
- Breastfeeding friendly community activities should also be incorporated as part of health programming including immunization, diarrhea, micronutrients, and family planning
Training & Delivery Gear

Improve pre-service and in-service education and training in breastfeeding counseling

• Emphasize anticipatory guidance, and practical training for prevention of lactation problems as well as clinical management of lactation problems including sore nipples, breast engorgement, and mastitis
• Supportive supervision and on-the-job training
• Coverage and quality must be addressed
Protection, Promotion, Evaluation & Coordination Gears

• Strengthen breastfeeding protection measures
  • Improve paid maternity benefits to women in the formal and informal sectors
  • Full implementation and enforcement of WHO Code for Marketing of Breastmilk Substitutes

• Behavior change communication campaigns
  • Advocacy and champions
  • Address whole family and society at large

• Intelligent rapid response monitoring and evaluation systems
Conclusions

• BF counseling is essential for successful scale up of breastfeeding programs.

• Study shows that there is a need to strengthen health care systems to improve coverage and quality of BF counseling in Mozambique.

• In addition to BF counseling other measures including social support, BF protection, behavior change communication campaigns, and monitoring and evaluation systems are needed.

• BBF initiative (based on BFGM) may be helpful in Mozambique (bbf.yale.edu)

Twitter: @rperezescamilla
Thank you!

Obrigada!