cMAMI: Stronger evidence towards future scale up via a cluster RCT in Ethiopia

Key stakeholder meeting, Harar, Ethiopia

Monday,14th October, 2019

Internal Meeting Report

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Summary

A one-day meeting of key stakeholders in the upcoming research on community management of at-risk mothers and infants under six months (cMAMI) in Ethiopia was held Harar on October 14th, 2019 co-hosted by the London School of Hygiene and Tropical Medicine (LSHTM), Jimma University, GOAL, and the Emergency Nutrition Network (ENN). A series of presentations on the MAMI approach, the proposed research, the policy environment and the Ethiopian context set the scene for working groups and plenary discussion throughout the day. Participants identified barriers and opportunities related to the research implementation in Ethiopia and key considerations for the formative research phase.

1. Overview

MAMI vision

Every infant aged <6month, at every healthcare/community-level contact point, is nutritionally assessed and appropriately supported to survive and thrive.

In 2010, the ENN produced the MAMI Project Report highlighting a significant global burden of undernutrition in infants under six months of age, gaps in policy guidance, inconsistent and inadequate case management, and poorer programme outcomes than for older children[1]. This catalysed an informal collaboration amongst concerned programmers, policy makers and researchers to address these challenges. The ten years since has seen significant policy and programme shifts, including WHO guidance update to include community-based management for this age group[2], programming innovations and operational research. However, uptake of normative guidance by national governments has been hampered by lack of robust evidence on impact of interventions, scalability and sustainability. A nationally driven research programme was identified as a critical next step to address both national and international interests.

To address this, the London School of Hygiene and Tropical Medicine (LSHTM), Jimma University Clinical and Nutrition (JUCAN) Research Partnership, the Emergency Nutrition Network (ENN) and GOAL Ethiopia will embark on a four year research programme in Ethiopia, entitled "*Community management of at risk mothers and infants <6 months (cMAMI): Stronger evidence towards future scale up via a cluster RCT in Ethiopia"*. It is planned for Jimma Zone and Deder Woreda, East Hararghe Zone. This is funded by the Eleanor Crook Foundation (ECF) RISE (Research, Innovate, Scale, Establish) implementation research programme.

Between 6th and 13th October 2019, a series of key stakeholder meetings were convened by the research team in Addis, Jimma and Deder to secure early engagement and key inputs to help shape research plans, complement and leverage existing health and nutrition services, and so maximize project impact and chances of success and ensure These meetings mark the beginning of a one year period of formative research.

1.1 Objectives

The overall aim of the meeting was to engage with key stakeholders in the upcoming research on community management of at-risk mothers and infants under six months (cMAMI) in Ethiopia. The objectives were to:

1. Introduce key stakeholders to cMAMI, including the long-term vision and short-term plans for a randomised controlled trial (RCT)

[1] Refrence.
[2] WHO

2. the process of co-creating cMAMI details together with key stakeholders
3. Identify key challenges and opportunities for the RCT and long-term scale-up
4. Shape details of formative work to address the 'opportunities' identified

The morning session comprised a series of presentations setting the scene for working groups and discussion in the afternoon. Opportunities were identified and developed in plenary. The agenda is included in Annex 1.

The meeting was attended by 35 delegates from East Hararghe Zone, Haramaya University (CHAMPS Project), Deder Woreda, and partners in East Hararghe, together with the research team (LSHTM, Jimma University, GOAL) and ECF (the participant list in included in Annex 2).

Welcome remarks

The meeting was opened by Mr Abdulaziz Abdurehman, deputy head of East Hararghe Zonal Health Department who praised the longstanding commitment of GOAL Ethiopia to strengthen the health service delivery from the lowest health post to hospital level, with considerable nutrition achievements in the catchment area. Women in East Hararghe have multiple responsibilities that impact on the time for infant care and support. Nutritional screening and growth monitoring is poor at facility and community level. The proposed research will lead to evidence based interventions that will help fast track reductions in child mortality and morbidity. He concluded by extending thanks to GOAL Ethiopia and all the research partners for their commitment and dedication with the assurance that the Zonal Health Department will "stand with you for the success of the research.''

2. Context (Part 1)

Presentation: Marko Kerac, LSHTM

Title: *History of MAMI and cMAM guidelines in Ethiopia for infants u6m.*

Following the welcoming remarks, Marko Kerac presented brief details on the definition, historical development of the research, methodology and related attempts to integrate under 6 infants in guidelines. Clarifications were addressed in plenary as follows:

Question 1: Hossaena Hailemariam, Head of CARE East Ethiopia office

Even though I am not a technical person on Nutrition, I know focus [of CMAM programmes] is mostly on 6-59 months. Why does this research focus on under 6 months infants?

Answer*: Infants under 6 months have a number of needs in various ways. They need close follow up and evaluation of their development status, however, the current system ignores this fact and doesn't provide all the necessary attention and care. There is an unmet need as a result.*

Question 2: Dr. Nega Assefa, Researcher in Haramaya University, CHAMPS Project

The kebeles in Deder Woreda are adjacent to each other, how can you prevent risk of contamination among the cluster and other group?

Answer*: Even though we can't avoid contamination in the study, we will do our best to reduce it. For this reason, we will work closely with the health extension workers, who know the localities and the household members very well.*

Question 3: You said the research needs repeated follow up in the health facility and for this reason the mother should come to the health facility. How are you planning to compensate the financial cost of the mother?

***Answer**: So as to prevent lost to follow up and and strengthen the follow up, we have planned to provide the mothers with expenses that they use for transportation ((N.B. Details will be decided in the future in consultation with key staekeholders).*

Question 4: This research will be done in a health centre, using it as a cluster, and there will be additional extra burden on the health workers. How are you going to address this issue?

***Answer**: We have planned to add some incentive for the local health workers. The level of incentive will be decided by the economics officer after local consultation and common agreement is reached. In addition to this, we have planned to hire three data collection officers that will stay in Deder Woreda to follow day to day data collection process and support the existing local health workers.*

Question 3: Abdulaziz Abdurehman, Vice Head of EHZHD

Comments: It is important to critically examine the payment system that is designed for the study participants so as not to endanger the existing health system.

You describe that there will be integration between the health centre, the health post and the hospital. If you believe the integration of these three is important for the implementation of the research project, it is a must that you identify ways in which you can strengthen the system of linkage between these three health facilities.

Presentation: Hatty Barthorp, GOAL

Title: *MAMI in Ethiopia*

Hatty Barthorp discussed the experience of GOAL Ethiopia in cMAMI. GOAL has been in Gambella for 3 years with partners and has been making adaptations to maximize positive outcomes. Highlighted learning from these experiences are:

- MAMI is designed to focus on ‘’at risk’’ mother-infant pairs, so infants both before they become malnourished but are heading towards this outcome, as well as those already malnourished. This means it is both a preventive and curative intervention.
- To help identifying “at risk ‘ infants, GOAL use an **A,B,C,D** approach to identify cases: **A**nthropometry, **B**reastfeeding risk, **C**linical risk, **D**epression (anxiety mental health) risk.
- There is a progressive more away from using admission –discharge crtieria to enrolment with de-escalated follow up.
- MAMI should be nested within existing programmes, such as Maternal and Child health (MCH) services (or other) and use complementary services as additional points of identification, i.e. vaccination.

Presentation 3: Melkamu Berhane, Jimma University

Title; *Epidemiology of small /at risk in Ethiopia*

Melkamu Berhane showed that the global burden of acute malnutrition is not restricted to 6-59 month children but that it also affects infants under 6 months globally; an estimated 8.5 million infants under 6 months are wasted. Lack of attention on how to prevent and treat has contributed to this burden. Therefore, research as proposed in this RCT in Ethiopia is key to helping address this gap.

Presentation: Mubarek Abera

Title: *Thrive – Infants (Development & NCDs) and Thrive – Maternal (Mental health, Social).*

Mubarek Abera discussed the issue of maternal mental health; he elaborated on the definition, magnitude, contributing factor and the impact on the newborn. He also discussed the common causes of failure to thrive and the importance of the ‘1000 days’ window on infants surviving and thriving, the relationship of failure to thrive on national development

and significance for the improved societal wellbeing. Finally, he concluded that the MAMI apporach is an option to assess and intervene such community burden.

3. Barriers and opportunities for MAMI research

Working groups identified, presented and discussed in plenary the top three challenges (barriers) the research may face and the top three opportunities the research presents (Table 1). Long lists are included in Annexes 3 and 4.

Table 1: Top three barriers to and opportunities for the MAMI research

Barriers	Opportunities
Group 1	
1. Mothers livelihood situation 2. Benefit expectation/support for hand out or aid 3. Traditional practice may influence the new feeding practices.	1. Existing collaboration between district and zonal structure 2. GOAL's knowledge of the study setting and good relations with the locality. 3. Deder is a transform woreda
Group 2	
1. Incentives may create problem within existing system. 2. It will be good if it is based in the HP due to long distance 3. Burden for HC staff need focal person	1. Existing health system structure (Health post (HP), Health centre (HC)) 2. Existing nutrition related program (CMAM, IMNCI...) 3.Presence of women health development army (1-5 chain)
Group 3	
1. Acceptance of the program by the Society. 2.Distance and Economy of the family 3. Social, cultural and religious practices	1. Existing infrastructure (HP, HC, Hospitals) 2. Maternal and child health are priorities of the government. 3. Favourable research policy environment

Barriers to research – local experiences

The discussion noted that the research will have barriers that will affect the research process. Participants from Haramaya University (CHAMPS project) shared their experience in this regard. Some of the barriers they described were;

- There is difficulty of getting the mothers when needed.
- There will be high expectation from the local community members
- Linkage of HP-HC-Hospital is not strong.
- Health workers may perceive it as an additional burden
- Geographical barriers
- Failure of Kebele leaders to maintain their support for the project
- Limited skill of mid-level health workers to diagnose and treat mental health problems.

Opportunities – how can cMAMI help and how can we move forward?

Based on the discussions made by the group members, the following opportunities have been identified:

- The cMAMI approach will enable the under 6 months population to be screened easily
- It will help the infants with acute malnutrition to be identified and treated easily
- It will improve the mental health status of the mothers
- It will contribute to the governments' policy of decreasing infant and neonatal mortality and improve overall health of family.

Since this research approach is of paramount importance for the community, in the way forward, it should give focus on how to integrate the local health workers in the HCs, and on how to enable the community to understand the purpose and contribute to the research.

4. Key stakeholder mapping

Key stakeholders will be crucial to the smooth implementation of the research project. With this under consideration, key stakeholders to involve in the research process were identified as:

- Woreda health office (health workers and health extension workers)
- Religious leaders in the woreda
- Kebele leaders
- Elders in the community
- Aba Gedas and Aba Gendas
- Heads of tribe

The stakeholders who have been already involved include;

- Zonal and Woreda administration
- Zonal and Woreda child, women and youth affairs office
- Zonal and Woreda health office
- Partners in East Hararghe

5. Context (Part 2)

***Presentation: Mubarek Abera,* Jimma University**

Title: *Thrive (Infants development & non-communicable disease (NCD) and maternal mental and social issues)*

Mubarek Abera elaborated on his morning session, presenting his findings on infants wellbeing and maternal mental health and its associations with the health and wellbeing of the family. He discussed the infants growth and development pattern and stages of development. He described the implication of nutrition, emotional stimulation and play on the health wellbeing and development of infants and its contribution to the survival and thriving of infants. He also discussed the association with maternal mental and social health and wellbeing.

Presentation: *Mubarek Abera,* Jimma University

Title: *Key policies and to-date recommendations*

Mubarek Abera presented the existing policies, strategies and practice in the existing health system. This reflected that, so far, various activities have been tried to improve the survival and thriving of infants and improve the mental health status of mothers. However, initiatives have lacked evidence of sustained improvement and are not decentralized down to the community level, preventing them from identifying and treating at risk mothers and infants. Given this, it is recommended to integrate this research in to the wider health system.

Presentation: Kidus Yitbarek, Jimma University & Marko Kerac, Jimma University

Title; *cMAMI: Outline of MAMI research plans*

Kidus Yitbarek outlined the formative research work plan that comprises four major parts:

1. Stakeholder analysis and engagement and establishing a technical advisory group,
2. Qualitative study refining cMAMI tool and delivery plans,
3. Quantitative survey establishing caseload and study logistics
4. Secondary data analysis to define new MUAC/WAZ admission criteria.

Marco Kerac outlined the cMAMI randomised controlled trial plan (PICO):

Participants (P): Eligible infants under six months of age will be those who are 'small' defined as having one or more of the following: Low birth weight (<2500g) , Low weight-for-length <-3 z-scores (i.e. current WHO case definition), Low weight-for-age <-2 z-scores, Low MUAC (cut offs TBC during formative work). The cMAMI tool will also be used to help assess the condition of infant mother pair. The cRCT will be conducted using the health centres in Jimma Zone and Deder Woreda, East Hararghe Zone

Intervention, control (I,C): A total of 28 health centres will be divided in two and the resulting 14 vs 14 health centres will be allocated as an intervention cluster and control in Jimma Zone. The same is true in Deder Woreda where eight health facilities will be divided in to 4 vs 4 health centres (intervention and control. Staff training and capacity building

Outcome (O): The main cRCT will take a total of 9 months and outcome will be evaluated at 6 months, 12 months and 24 months after the initiation of the research**.**

6. Formative work – what are key questions to address and who should be involved?

Setting the scene for group work, Kidus Yitbarek described how under the formative phase, the research team will consider the following issues:

- Analysing the role and contribution of stake holders. Whom to involve?
- Whom to include in the qualitative work of the research?
- Determine the total case flow of cases in the under 5 clinic, EPI clinic and growth monitoring.
- The mechanisms to maintain the routine follow up of cases and reduce the lost to follow up.

Plenary discussion followed by a presentation on participatory inquiry, survey, policy options and other considerations was made to frame working groups considerations (see Table 1).

The group members stressed that it is important to discuss with various groups in the community during the formative phase. Key stakeholders should be drawn from Community leaders, Kebele leaders, religious leaders, Abbaa Gedas, Abbaa Gendas, health workers and attendants of patients. In addition, a community advisory board should be organized, to address any issues/misunderstandings that arise during the research planning and process.

In conclusion, the next step in the research process will be to visit Deder woreda to discuss the research with local health office head and experts, examine the health structure in the woreda and visit the health centres and health posts of the woreda. Ethical approval will be sought from Jimma University; once secured, the formative research will commence.

Table 1: Who to involve/areas to investigate in formative work

Formative work	Whom to involve/areas to investigate
Group 1	
Participatory inquiry	1.Religious leaders 2.Community mobilizers 3.Abbaa Gadas 4.Government staff
Survey	1.Health seeking behaviour of the community 2.Barrier analysis 3.Cultural norm study
Policy options	1.Policy analysis of research done before, check and consult 2.SBCC
Others	Using Media (FM, Radio)
Group 2	
Participatory inquiry	1. Community knowledge workshop for women, patients and attendants of NRU. 2.Religious leaders, community leaders, Abbaa Gandas, health workers, forming a general advisory body, develop interviewing guide
Survey	1.Health Care system 2.Status of Home delivery
Policy options	1.Health policy analysis 2.Analysis of IMNCI,ICCM,CBNC
Others	Identify resources
Group 3	
Participatory inquiry	1.Women(WDA) 2.Religious leaders 3.Village leaders(Abagenda) 4.Abageda 5.HEWs 6.Agricultural Agents 7.Administrative and political leaders
Survey	1.Rapid assessment of the health facility 2.Service load at the health facilities 3.Qualification and workload 4.Geospatial condition of the study area 5.Available resources 6.Other stakeholder working on the same topic
Policy options	1.Health policy 2.IYCF strategy 3.Essential nutrition action 4.Agricultural policy and strategy 5.BeMONC and EMONC

Others	1.Available opportunities for 2.community education 3.Information dissemination

7. Closing remarks

In closing, Marco Kerac, LSHTM reminded all that any new ideas that emerge from all attending following this meeting will be accepted and appreciated. He gratefully acknowledged the attendants for their active participation and feedback on the research proposal.

8. Meeting evaluation

Meeting feedback from participants was positive. All rated the meeting as good (13%), very good (44%) or excellent (44%). All were satisfied (69%) or extremely satisfied (31%) with the content. Highlights were an interactive meeting, valuable discussions with key stakeholders, practical experiences shared during group discussion, information shared regarding the situation of malnutrition among under 6 months children in Ethiopia and how it highlighted the need for evidence to influence national and international policies towards under 6 months infant malnutrition. Suggestions for future consultations include advance documentation, sharing experiences of stakeholders engaged in similar interventions in the area, more discussion team and quarterly progress meetings.

Annex 1: Agenda

Stronger evidence towards future scale up via a cluster RCT in Ethiopia

Monday October 14, 2019, Ras Hotel, Harar

AGENDA:

Time	Topic	Presenter
09:00 –09:20	Welcome / Opening Remarks	Anley Haile Abdulaziz Abduraman
09:20 –09:50	**Challenges:**	
	• *History of MAMI*	Marco Kerac
	• *cMAM guidelines in Ethiopia for infants u6m*	Marco Kerac
09:50 –10:35	**Opportunities:**	
	• *MAMI in Ethiopia*	Hatty Barthorp
	• *Paths to scale, learning & Building Bridges (cMAMI conceptual framework)*	Marko Kerac
	• *Survive – MAMI and child mortality*	Melkamu Berhane
	• *Thrive – Infants (Development & NCDs)*	Mubarek Abera
	• *Thrive – Maternal (Mental health, social)*	Mubarek Abera
10:35 –11:05	Coffee break	
11:05 –11:35	**Context / Landscape:**	
	• *Epidemiology of small/at risk in Ethiopia*	Melkamu Berhane
	• *Key policies and to-date recommendations*	Mubarek Abera
11:35 –12:05	**Research Plan:**	
	• *The cMAMI randomised controlled plan (PICO)*	Marko Kerac
	• *cMAMI formative work*	Kiddus Yitbarek
12:05 –12:35	**Stakeholder mapping (1):**	
	• *Who needs to get involved*	Group discussion
12:35 –13:35	Lunch	
13:35 –14:20	**Stakeholder mapping (2):**	
	• *What else is already happening?*	Group discussion
14:20 –15:05	**Barriers:**	
	• *Experiences and barriers to date*	Group discussion
15:05 –15:35	Coffee break	
15:35 –16:20	**Opportunities**	
	• *How might cMAMI help?*	Group discussion
	• *How can we move forward?*	
16:20 –17:00	**Formative work:**	
	• *What are the key questions to explore?*	Group discussion
	• *Who needs to be involved?*	
17:00 –17:15	• *Next steps and closing remarks*	Marko Kerac
18:00	GROUP DINNER	

Annex 2: Participants list

Name	Affiliation
1.Ketema Degefa	Haramaya University (CHAMPS Project)
2. Yosef Zegeye	GOAL Ethiopia
3.Helina Tufa	GOAL Ethiopia
4.Hiddus Yitbarek	Jimma University
5.Ahmed Aliyi	EHZHD-Family health -Nutrition Focal
6.Seble tsegaye	East Hararghe zone children, women and youth affairs
7.Hossaina Hailemariam	CARE Ethiopia
8.Desslegn Teffera	Deder WoHO family health
9.Sara Tamirat	GOAL Ethiopia
10.Mohammed Abrahim	Deder WoHO Head
11.Abdurehman Dima	Deder WoHO family health
12.Abdi Ahmed	Deder Woreda Administration
13.Ahmed Abubeker	Deder WoHO
14. Adem Bifa	Deder Woreda Administration
15.Ahmed Abibeker	Deder Woreda children, women and youth affairs
16.Fasika Tadesse	EHZHD -NCD officer
17.Abdissa Tesfaye	EHZHD-Medical Supply
18.Aliyi Yuya	John Snow International -Transform PHC East Hararghe
19.Shemshedin Yuya	EHZHD-Family health
20.Nega Assefa	Haramaya University(CHAMPS) project
21.Alice Burrel	GOAL Ethiopia
22.Desta Dugassa	Haramaya University(CHAMPS) project
23.Abdulaziz Abdurehman	EHZHD vice Head
24.Bedru Hussien	EHZHD-Health facility support team
25.Lola Madrid	Haramaya University (CHAMPS) project
26.Nahom Abate	GOAL Ethiopia
27.Melkamu Berhane	Jimma University
28.Aniley Haile	GOAL Ethiopia
29.Marco Kerac	LSHTM
30.Carlos Grijalva-Eternod	LSHTM
31.Hatty Barthorp	GOAL Ethiopia
32.Chytanya Kompala	Eleanor Crook Foundation
33.Alice Burrel	GOAL Ethiopia
34. Mubarek Abera	Jimma University
35. Nichola Connell	ECF

Annex 3: Challenges to MAMI research (working groups, long list)

Group 1
1. Traditional practice may influence the new feeding practices. 2.Mothers livelihood situation 3.Benefit expectation/support for hand out or aid 4. Health workers may perceive as additional burden. 5. Conflict of Interest among Health extension Workers. 6. Hygiene and Sanitation/availability influences the result. 7.Health seeking behaviour from traditional healers/private pharmacy 8.detecting/identifying mothers with mental health problem 9.limited skill to treat mental health problem
Group 2
1.Overlapping with existing HEW program 2.HEWs don't do MUAC screening for under 6 month olds 3.Burden for HC staff need focal person 4. Incentives may create problem within existing system. 5.Cultural barriers 6.It will be good if it is based in the HP 7.community expectation will be high
Group 3
1.Burden on HEWs and HWs 2.Logistics Problem 3.Difficulty of mothers to come to the HFs 4. Acceptance of the program by the Society. 5.Food Taboos and long-time of BF 6.Distance and Economy of the family 7. Community engagement. 8.Social, cultural and religious practices

Annex 4: Opportunities for MAMI research (long list, working groups)

Group 1
1.Existing health system and infrastructure
2.Existing collaboration between district and zonal structure
3. Existing collaboration between local government and NGOs/research institutions.
4.Conducive work environment and policies
5. GOAL's knowledge of the study setting and good relation with the locality.
6. Having nutrition focal person at every level.
7. Routine nutrition screening experience.
8. Availability of IYCF program.
9. Presence of General Hospital in the woreda.
10. Availability of academic and research institutions.
11.Availability of local Media
12. Deder is a transform woreda.
Group 2
1. Existing health system structure (HC&HPs)
2. Existing nutrition related program (CMAM, IMNCI...)
3.Presence of women health development army
4.Presence of National Nutrition program
5. Good administration and political commitment.
6. Nutrition guideline and policy options.
Group 3
1.Existing infrastructure (HP, HC, Hospitals)
2.Human resource at the grass root level
3.Women Health development army
4.Existing national and international NGOs
5. Maternal and child health are priorities of the government.
6.Clear identification of the problems
7.Existing National guidelines of malnutrition
8.There is a lot of experience in the community
9.Favorable research policy environment
10. If productive, very good environment to scale up.
11. Existing similar works at the ground.
12.Researchable problem
13.Potential for continuous work
14.Sectoral support
15. Women and child affairs issue.