

# Introduction to this presentation

This presentation is based on materials developed by the London School of Hygiene and Tropical Medicine, Jimma University, GOAL, and the Emergency Nutrition Network as part of the [MAMI RISE Research Project in Ethiopia](#), funded by the Eleanor Crook Foundation with technical expertise provided by Save the Children (funded by USAID) as part of the Global Nutrition Cluster Technical Alliance. These materials were used to prepare health workers and programme managers to participate in interviews as part of a feasibility study on the [MAMI Care Pathway](#) approach in Ethiopia to inform research implementation planning. The orientation workshop took place over two days in Sept and Oct 2021. Please let us know how you use them, credit the authors and funders if these materials are used or adapted, and share your adapted versions with us at [mami@enonline.net](mailto:mami@enonline.net) so we can all learn from each other.





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**MAMI**  
Management of small  
& nutritionally At-risk  
Infants under six months  
& their Mothers

# Management of small and nutritionally At-risk Infants under six months and their Mothers (**MAMI**)

## *Orientation Workshop*



Resource development made possible by the generous support of the American people and the Eleanor Crook Foundation

July 2021

# AGENDA

## Day 1

Session	Time
Introductions & Objective	30 minutes
Small & nutritionally at-risk infants <6 months	40 minutes
Existing Care	60 minutes
Defining MAMI	5 minutes
Missed opportunities	10 minutes
Q&A	30 minutes
The MAMI Care Pathway Package	130 minutes



**MAMI**

Global Network

***Every small and nutritionally at-risk infant u6m and their mother is supported to survive and thrive***

# INTRODUCTIONS

1. What is your name?
2. What is your job?
3. Where do you work?

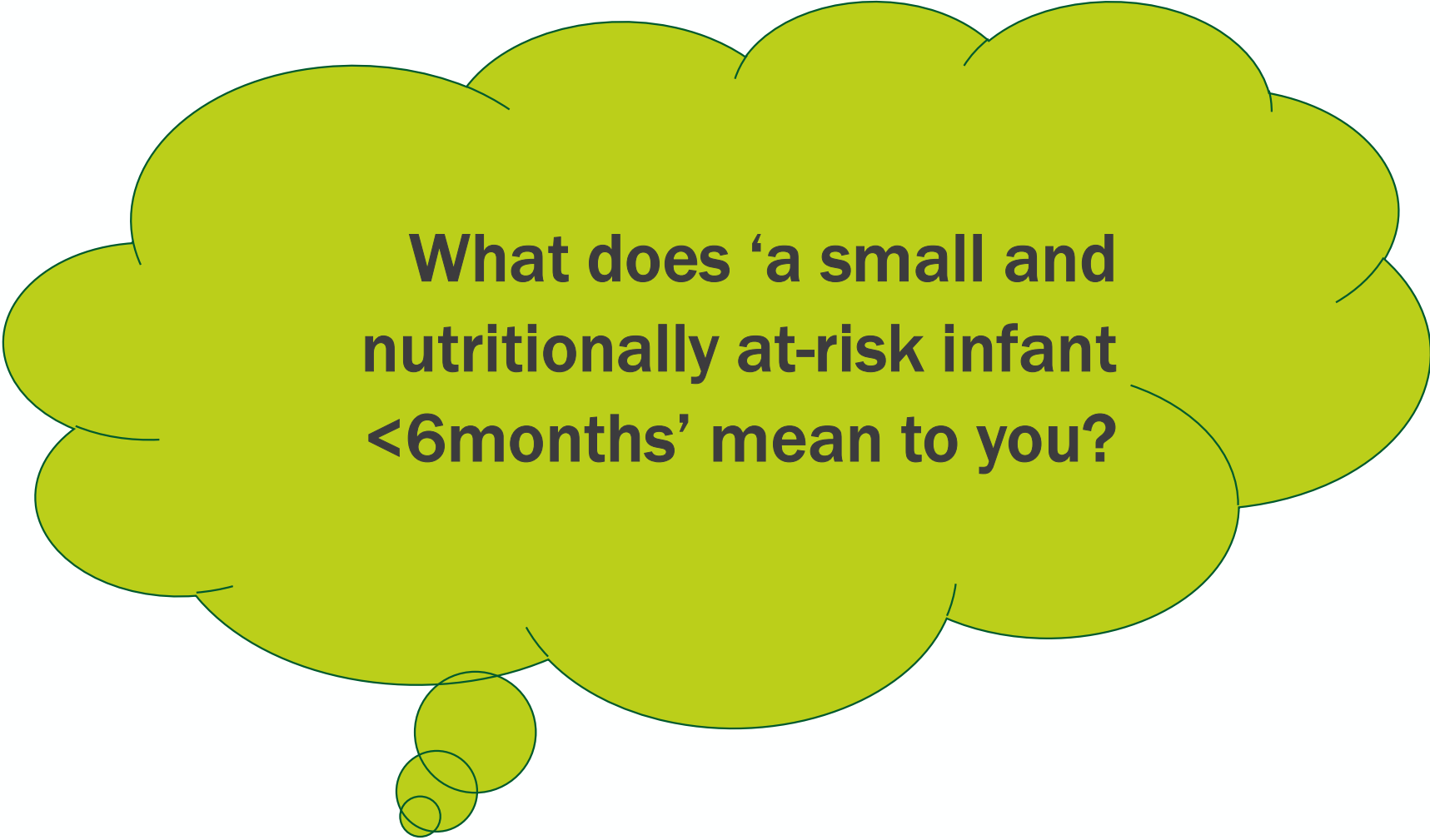


# OBJECTIVES

1. To familiarize you with the MAMI Care Pathway Package to prepare for feasibility study
2. To begin a process of refining the MAMI Care Pathway Package for use in a research trial in Ethiopia
3. To learn from you what skills/ training may be required for health workers to use the MAMI Care Pathway in the research trial

**WELCOME TO  
DAY 1**

# BRAINSTORM IN PAIRS



**What does 'a small and nutritionally at-risk infant <6months' mean to you?**



# GROUP WORK: EXISTING CARE

Read your group case scenario

- What support would the mother & infant receive in this scenario?
- What guidelines or resources would you use to guide their care?

GROUP 1: Scenario A

GROUP 2: Scenario B

GROUP 3: Scenario C

GROUP 4: Scenario D



# EXISTING NATIONAL GUIDELINES

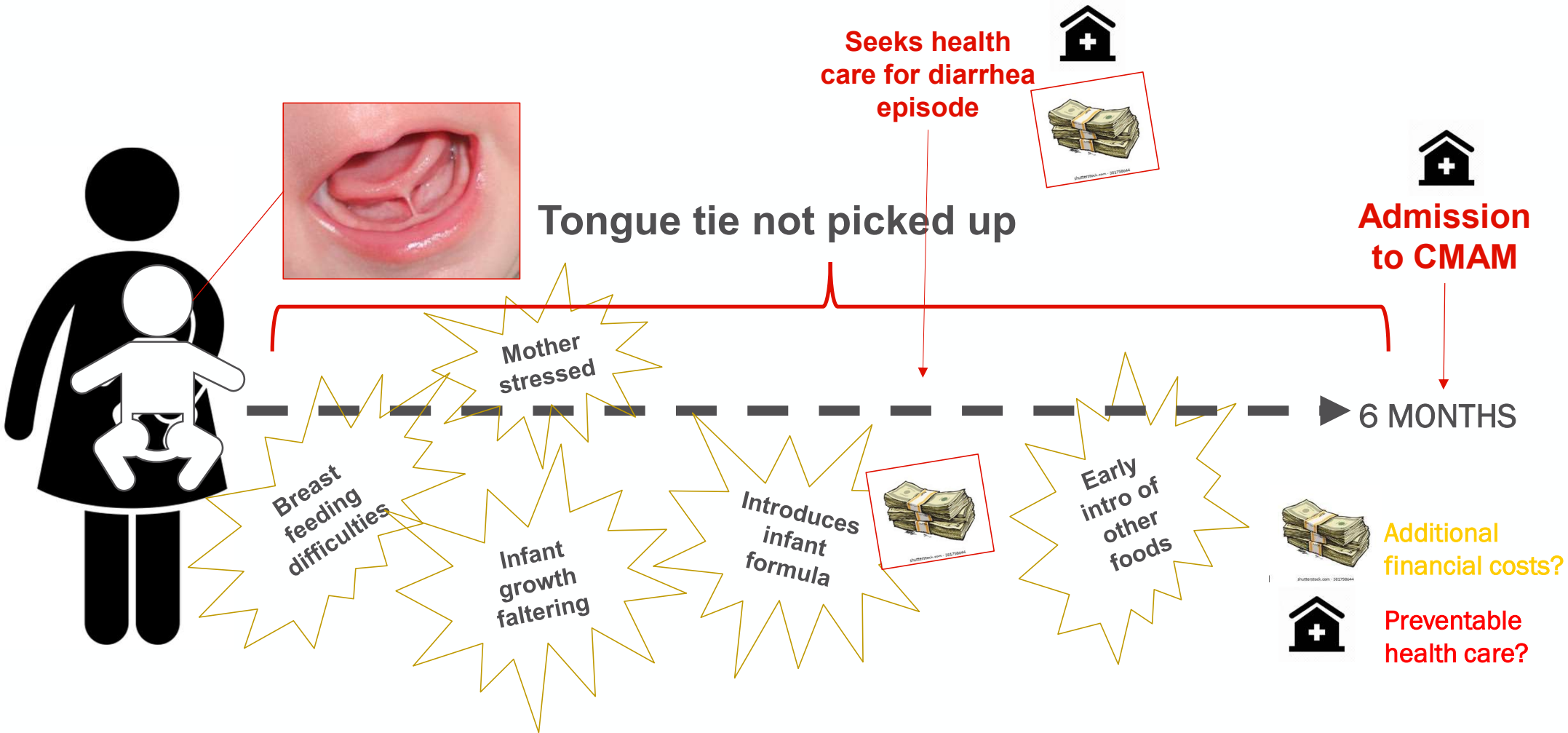


## WHAT IS MAMI?



**M**anagement of small & nutritionally  
**A**t-risk **I**nfants under 6-months &  
their **M**others

# MISSED OPPORTUNITIES

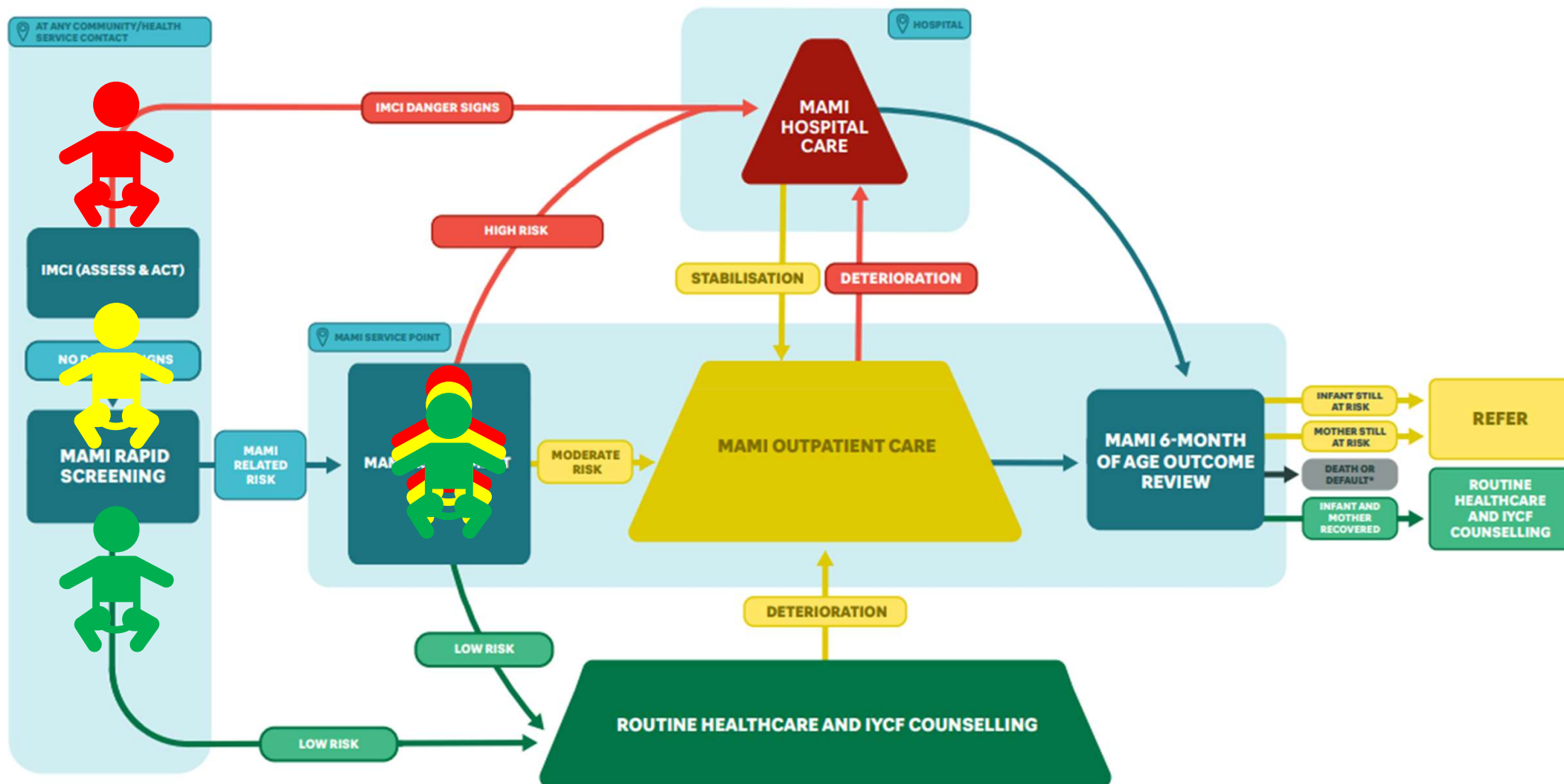




**MAMI**  
Management of small  
& nutritionally At-risk  
Infants under six months  
& their Mothers

## MAMI Care Pathway Package

# MAMI CARE PATHWAY 'FLOW'





# MAMI Care Pathway - who, what, where

Management of small & nutritionally at-risk infants under six months & their mothers

## SCREENING

### WHAT?

Screen and refer for assessment using:

IMCI and MAMI-specific danger signs checks



Anthropometry (mother & infant)



Feeding assessment



Maternal mental health assessment



### WHERE?

Refer to MAMI CP Design Checklist 1

### WHO?

### GUIDES & FORMS

MAMI Rapid Screening Guide

## ASSESSMENT

### WHAT?

IMCI and MAMI-specific clinical assessment



Anthropometry (mother & infant)



Feeding assessment



Maternal mental health assessment



### WHERE?

Refer to MAMI CP Design Checklist 1

### WHO?

### GUIDES & FORMS

- MAMI Assessment Guide & Form
- MAMI Feeding Assessment Guide & Form
- MAMI Maternal Mental Health Assessment Guide & Form
- MAMI Enrolment & Follow Up Form

## SUPPORT AND MANAGEMENT

### MAMI INPATIENT CARE

#### WHAT?

1. Clinical care to achieve clinical stabilisation.
2. Provide treatment for congenital conditions affecting feeding (e.g. tongue tie), feeding support, and maternal mental health support.
3. If child reaches 6 months of age in inpatient care, conduct 6 month of age outcome review from inpatient facility.

#### WHERE?

#### WHO?

#### GUIDES & FORMS

Refer to existing national guidance on inpatient treatment of infants under six months with wasting and clinical complications

### MAMI OUTPATIENT CARE

#### WHAT?

- Clinical care
- Tailored feeding counselling & support
- MHPSS for mothers
- Monitoring of progress of infant and mother pairs in the programme.
- Adjust follow up frequency as appropriate.

#### WHO?

- Clinical care:
- Tailored feeding counselling & support:
- MHPSS for mothers:
- Monitoring of progress:

#### WHERE?

Refer to MAMI CP Design Checklist 2

### REFERRAL TO OTHER AVAILABLE SUPPORT SERVICES

#### GUIDES & FORMS

- MAMI Enrolment & Follow Up Form
- MAMI Counselling Cards & Support Actions Booklet

## 6-MONTH OF AGE OUTCOME REVIEW

### WHAT?

Assessment at 6 months of age. Referral to support services for continued care if required.

IMCI and MAMI-specific clinical assessment



Anthropometry (mother & infant)



Feeding assessment



Maternal mental health assessment



### WHERE?

### WHO?

### CONTINUUM OF CARE

- Infant malnutrition ⊕ wasting treatment
- Feeding problems ⊕ IYCF
- Clinical issues ⊕ IMCI

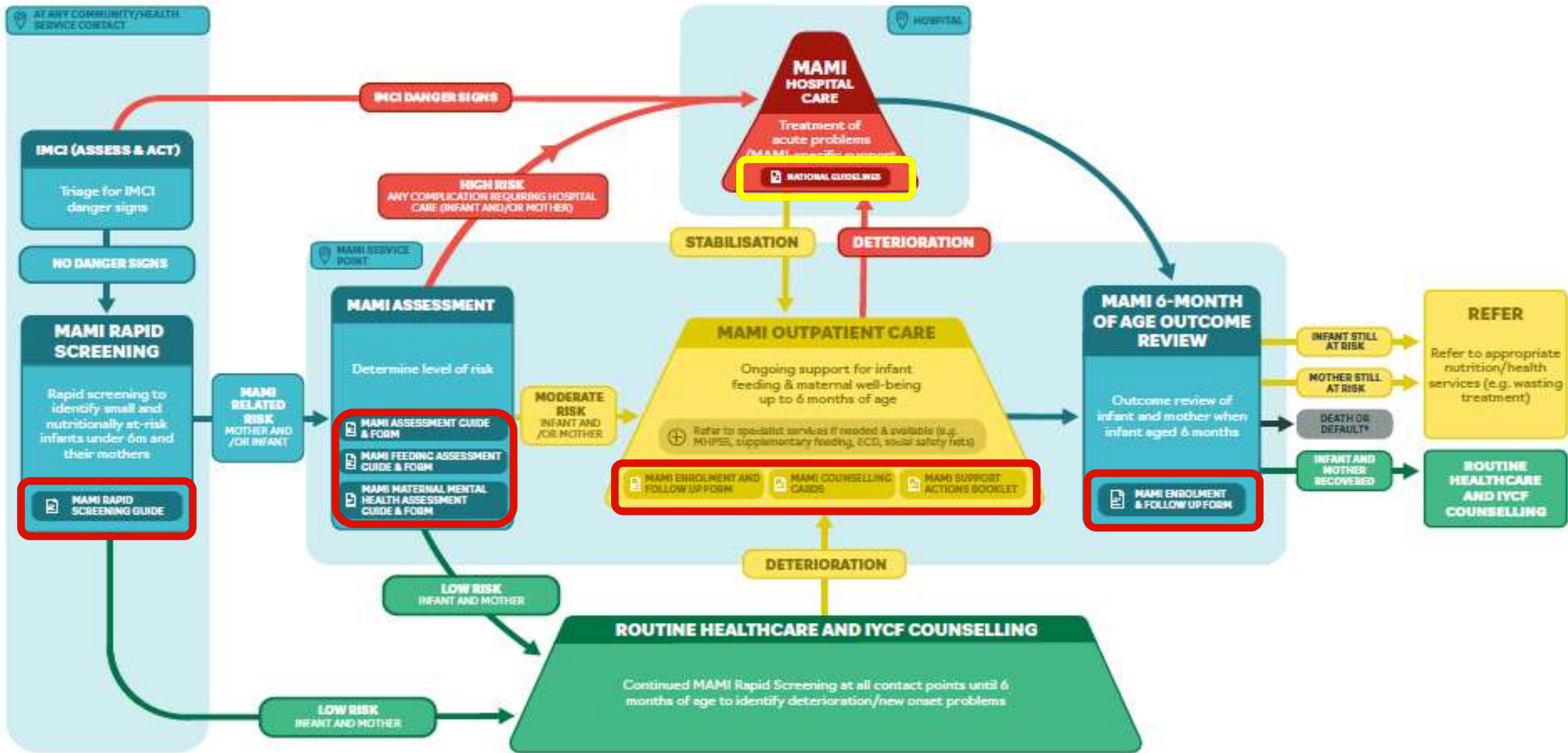
### GUIDES & FORMS

MAMI Enrolment & Follow Up Form

# Screening & Assessment

# Management & Support

# Review and Referral



\*Death or default may occur at any point in the pathway and requires further investigation.



# THE MAMI CARE PATHWAY PACKAGE

## User guides

ASSESS	SIGNS	CLASSIFY	ACT
<p><b>ASK:</b> Over the last two weeks, how often have you been bothered by the following problems?</p> <ol style="list-style-type: none"> <li>Little interest or pleasure in doing things?</li> <li>Feeling down, depressed or hopeless?</li> <li>Trouble falling or staying asleep? Or sleeping too much?</li> <li>Feeling tired or having little energy?</li> <li>Poor appetite? Or over-eating?</li> <li>Feeling bad about yourself? Or that you are a failure? Or have let yourself or your family down?</li> <li>Trouble concentrating on things, such as following a conversation with people?</li> <li>Moving or speaking so slowly that other people could have noticed? Or being so fidgety or restless that you have been moving around a lot more than usual?</li> <li>Thought that you would be better off dead or of hurting yourself in some way?</li> </ol>	<p><b>ANY ONE OR MORE OF THE FOLLOWING:</b></p> <ul style="list-style-type: none"> <li>Score of 15 or higher or</li> <li>'No' to question 9 (thoughts of self-harm)</li> </ul>	<p><b>HIGH RISK: URGENT MATERNAL MENTAL HEALTH CONCERN</b></p>	<p>Urgent consult with MHPSS specialised care (if accessible)*</p> <p><b>AND</b></p> <p>Enrol in MAMI Outpatient Care</p>
	<p><b>ALL OF THE FOLLOWING SIGNS:</b></p> <ul style="list-style-type: none"> <li>Score 10 - 14 and</li> <li>'No' to Question 9 (thoughts of self-harm)</li> </ul>	<p><b>MODERATE RISK</b> Mother would benefit from mental health and psychosocial support</p>	<p>Enrol in MAMI Outpatient Care</p>
	<p><b>ALL OF THE FOLLOWING SIGNS:</b></p> <ul style="list-style-type: none"> <li>Score 9 or less and</li> <li>'No' to Question 9 (thoughts of self-harm)</li> </ul>	<p><b>LOW RISK</b> No follow-up for maternal mental health required at this time</p>	<p>Praise &amp; reassure Provide or refer for routine health care &amp; maternal and IYCF counselling</p>

**CLASSIFY ALL MOTHERS AND INFANTS**

## Health Worker Support Materials

### MAMI ASSESSMENT FORM

#### Basic Information




Infant name (first & last name)					ID no.	
Sex	male	female	Infant age	___ months ___ weeks	Date of assessment	__/__/__
Primary caregiver name					Date of birth	__/__/__
Source of referral	community screening	outpatient clinic	inpatient care	self-referral	other:	Relationship to infant
						mother
						grandmother
						other:

**STEP 1 CHECK FOR DANGER SIGNS (infant)**

Unable to breastfeed / drink?	no	yes
Vomits everything?	no	yes

## Counselling Cards and Support Actions Booklet

### Card C5 Relaxation I

**Assess and Analyse**

Anxiety, fatigue, and emotional stress may affect the success of breastfeeding.

**Counselling and Support Actions**

Refer to 'Counselling and Communication Skills' for tips on communicating.

- Relaxation techniques help with stimulating milk flow and contribute to successful and continued breastfeeding. The more relaxed the mother is, the more the milk flow is stimulated.
- Different relaxation techniques exist. Examine these with the mother and discuss preferred method.

**Note:** It is helpful for the technique to have: 1) a repetitive stimulus (word, sound, or breathing), 2) relaxed muscles, and 3) a quiet environment.

**Deep breathing**

**Note:** It is natural to take long, deep breaths, when relaxed. However, during the fight-or-flight response, breathing becomes rapid and shallow. Deep breathing reverses this and sends messages to the brain to begin calming the body. Practice will make your body respond more efficiently to deep breathing in the future.

- Breathe in slowly.
- Count in your head and make sure the inhaled breath lasts at least 5 seconds.
- Pay attention to the feeling of the air filling your lungs.
- Hold your breath for 5 to 10 seconds (again, keep count).
- You do not want to feel uncomfortable, but it should last quite a bit longer than an ordinary breath.
- Breathe out very slowly for 5 to 10 seconds (count).
- Pretend like you are breathing through a straw to slow yourself down. Try using a real straw to practice.
- Repeat the breathing process until you feel calm.

# GROUP WORK: EXPLORING THE MAMI CARE PATHWAY PACKAGE



**MAMI Assessment Guide**  
Management of small & nutritionally at-risk infants under six months & their mothers

**ASSESS**

**GENERAL DANGER SIGNS:**  
Infant appears out of touch with reality or at risk of harming herself or infant; visible physical neglect (mother or infant); unable to breastfeed/drink?

**MAMI SPECIFIC DANGER SIGNS:**  
Infant appears out of touch with reality or at risk of harming herself or infant; visible physical neglect (mother or infant); unable to breastfeed/drink?

**IMPROVED SYMPTOMS:**  
Diarrhoea, vomiting, cough, fever, convulsions, severe malnutrition, severe anaemia, severe hypoxaemia, severe hypoglycaemia, severe hypocalcaemia, severe hypomagnesaemia, severe hypokalaemia, severe hyponatraemia, severe hypophosphataemia, severe hypocalcaemia, severe hypomagnesaemia, severe hypokalaemia, severe hyponatraemia, severe hypophosphataemia.

**CLASSIFY ALL THE INFANTS**

SIGN	CLASSIFY	ACT
ANY ONE OR MORE OF THE FOLLOWING SIGNS: - Not able to keep up with breastfeeding - Convulsions or seizures - Severe diarrhoea or vomiting - Severe cough or cold - Severe malnutrition (MUAC < 115mm or WAZ < -3.0 or WFLZ < -3.0) - Severe anaemia (Hb < 7g/dl or Hct < 21%) - Severe hypoxaemia (SpO2 < 90%) - Severe hypoglycaemia (Glucose < 2.6mmol/L)	<b>VERY SEVERE DISEASE (INFANT)</b>	Refer to a specialist health facility immediately
ANY ONE OR MORE OF THE FOLLOWING SIGNS: - Infant appears out of touch with reality or at risk of harming herself or infant - Visible physical neglect (mother or infant) - Unable to breastfeed/drink?	<b>HIGH RISK (INFANT)</b>	Refer to a specialist health facility immediately
ANY ONE OR MORE OF THE FOLLOWING SIGNS: - Infant appears out of touch with reality or at risk of harming herself or infant - Visible physical neglect (mother or infant) - Unable to breastfeed/drink?	<b>MODERATE RISK (INFANT)</b>	Monitor with close supervision or refer to a specialist health facility immediately
ANY ONE OR MORE OF THE FOLLOWING SIGNS: - Infant appears out of touch with reality or at risk of harming herself or infant - Visible physical neglect (mother or infant) - Unable to breastfeed/drink?	<b>MODERATE RISK (MOTHER)</b>	Refer to a specialist health facility immediately
ANY ONE OR MORE OF THE FOLLOWING SIGNS: - Infant appears out of touch with reality or at risk of harming herself or infant - Visible physical neglect (mother or infant) - Unable to breastfeed/drink?	<b>LOW RISK (INFANT AND MOTHER)</b>	Refer to a specialist health facility immediately

**MAMI ASSESSMENT FORM**

**Basic Information**

Infant name (first & last name): \_\_\_\_\_ ID no. \_\_\_\_\_  
 Sex: male female Infant age: \_\_\_\_\_ months \_\_\_\_\_ weeks \_\_\_\_\_ days Date of assessment: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 Primary caregiver name: \_\_\_\_\_ Date of birth: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 Source of referral: Community screening, Outpatient clinic, Inpatient care, Self referral, other: \_\_\_\_\_ Relationship to infant: Mother, Grandmother, other: \_\_\_\_\_

**STEP 1 CHECK FOR DANGER SIGNS (infant)**

**DANGER SIGNS**

Unable to breastfeed / drink? no yes  
 Mother appears out of touch with reality or at risk of harming herself or infant? no yes  
 Bilateral pitting oedema (++) or (+++)? no yes  
 Other IMCI danger signs? Specify: no yes  
**ACT IF ANY DANGER SIGN → refer URGENTLY to hospital**

**STEP 2 ASSESS CLINICAL SIGNS AND SYMPTOMS (infant)**

Classify according to IMCI

Symptom	None	Green	Yellow	Pink
Diarrhoea	none	mild/moderate	severe	severe
Fever	none	mild/moderate	severe	severe
Cough	none	mild/moderate	severe	severe
Severe pallor (anaemia)	none	severe	severe	severe

Classify according to IMCI

Other illness	None	Green	Yellow	Pink
Any other illness (refer to IMCI)	none	mild/moderate	severe	severe
Congenital condition/difficulty causing feeding difficulty (e.g. cleft lip, tongue tie)	none	yes	yes	yes

**STEP 3 ASSESS GROWTH (infant)**

MUAC: \_\_\_\_\_ mm Weight: \_\_\_\_\_ kg Birthweight: \_\_\_\_\_ kg  
 Length: \_\_\_\_\_ cm WAZ: \_\_\_\_\_ WFLZ: \_\_\_\_\_  
 Classify weight-for-age z-score (WAZ) or weight-for-length z-score (WFLZ) using infant growth charts.

MUAC	WAZ	WFLZ	Classification
MUAC less than 110mm	WAZ < -2.0	WFLZ < -3.0	no
MUAC less than 115mm (infants < 6 weeks)	no	no	yes
Recent weight loss or failure to gain adequate weight	no	yes (age < 6 weeks)	yes
Other - specify:	no	yes (age < 6 months)	yes

**STEP 4 ASSESS KEY MAMI RISK FACTORS (infant & mother)**

Mother absent or dead	no	absent or dead
Low birthweight (<2500g or less)	no	yes
Preterm	no	yes
Multiple birth	no	yes
Adolescent mother (under 19 years)	no	yes
Mother HIV+ with concerns	no	yes
Mother's MUAC	_____ mm	

Mother's MUAC less than 230mm	no	yes
Infant cries excessively / has sleep problems (reported)	no	yes
Any other concerns (e.g. maternal TB, other illness, colic)	no	yes
Specify other concern:		

**MAMI**  
Management of small & nutritionally at-risk infants under six months & their mothers

**MAMI Counselling Cards and Support Actions Booklet**

# Questions



**WELCOME TO  
DAY 2**

# AGENDA

## Day 2

Session	Time
Recap of Day 1	30 minutes
Review of the MAMI Care Pathway	30 minutes
Applying the Pathway	105 minutes
Benefits of the MAMI Care Pathway	60 minutes
Training & Skills Development	30 minutes
Key takeaways	20 minutes
Feedback	20 minutes
Close	10 minutes

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# RECAP OF DAY 1



*One thing you learned yesterday?*

# REVIEW OF THE MAMI CARE PATHWAY



# GROUP WORK: APPLYING THE PATHWAY



Revisit your group case scenario:

GROUP 1: Scenario A

GROUP 2: Scenario B

GROUP 3: Scenario C

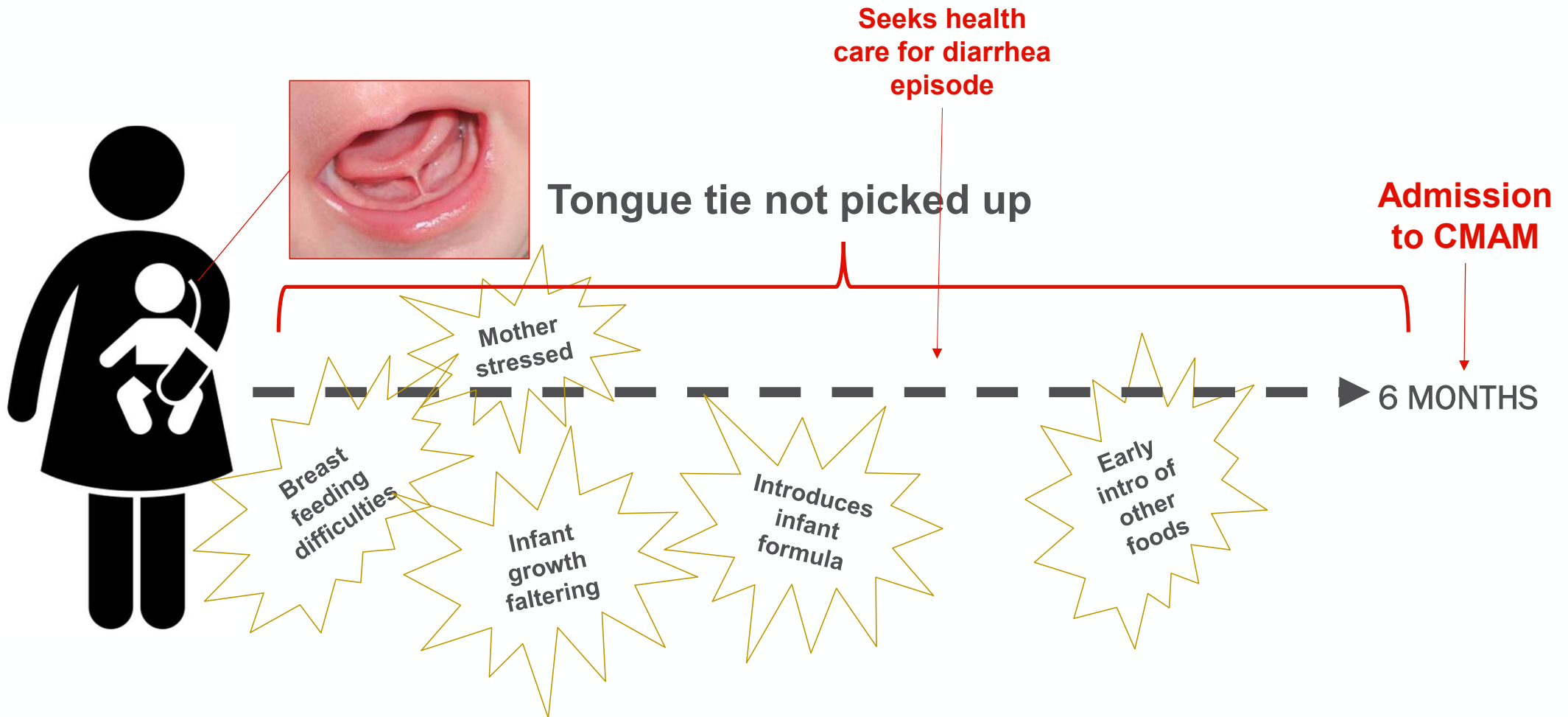
GROUP 4: Scenario D

Apply the MAMI materials to the cases and discuss the following:

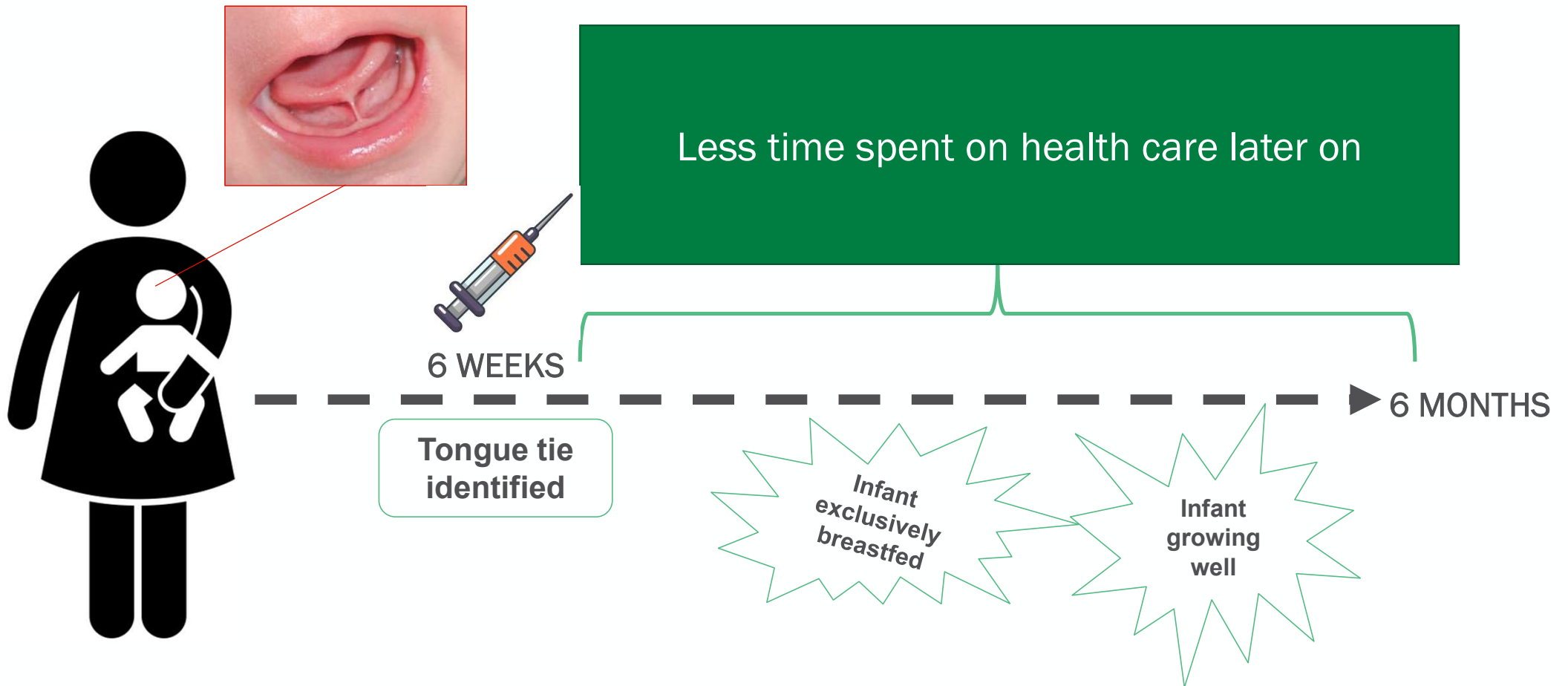
1. Is there anything different about the management plan and if so what?
2. Are you comfortable using the materials?
3. Did the materials and pathway help?
4. Is there any overlap between these materials and what you currently use? Any additional content in these materials that are not in your current



# Remember this mother and infant?



## The difference if we applied MAMI:



# GROUP WORK: FUTURE BENEFITS OF THE MAMI CARE PATHWAY



How can the MAMI Care Pathway  
benefit the following groups:

**Group 1:** Families (infants and carers)

**Group 2:** Health Workers

**Group 3:** Programme Managers

**Group 4:** Policy makers

*30 minutes*

# TRAINING AND SKILLS DEVELOPMENT

## **Brainstorm: Training required**



**Training and Skills  
required for MAMI?**

**Wrap up**

What are your  
key takeaway  
messages?

**Feedback**



*Thank you*

## Slide 33

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**BA85**

The information shared here will need to be cross checked with Marie/ the schedule for feasibility study before the workshop.

Burrell, Alice, 09/07/2021

# *Acknowledgements*

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<https://www.enonline.net/ourwork/research/mamiriseethiopia>

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