

C-MAMI Tool Version 2.0, 2018

Community Management of At risk Mothers and Infants under six months of age (C-MAMI)

Context of tool development

The C-MAMI Tool provides a health worker with a format to assess, identify/classify and manage at risk mothers and infants under six months of age (infants U6m) in the community (C-MAMI)¹ who are nutritionally vulnerable. The tool draws upon, complements and seeks to inform national and international guidance and protocols; the approach is modelled on the Integrated Management of Childhood Illness (IMCI) approach to facilitate integration. The exact location where a C-MAMI service takes place is not specified as this will vary by context and will be determined by existing services, needs and staff capacities. It is applicable in both humanitarian and development settings. The C-MAMI Tool may require adaptation, development of programme-specific materials and different levels of training for implementation. To help, several materials are included with the Tool (C-MAMI Package).

The C-MAMI Tool was conceptualised by Emergency Nutrition Network (ENN) and London School of Hygiene and Tropical Medicine (LSHTM). Version 1.0 was developed in 2015 in a collaborative effort as a first step to help fill a gap in programming guidance and catalyse case management. The C-MAMI Tool has since been used in different contexts; an evaluation of programme implementation by Save the Children and GOAL in Bangladesh and Ethiopia in late 2017/early 2018, collated practitioner experiences and peer review has informed Version 2.0 of the C-MAMI Tool.

Principles

Several features distinguish the management of nutritionally vulnerable infants U6m and their mothers from that of older children that are reflected in Version 2.0:

- C-MAMI uses the term 'enrolment' rather than 'admission' to outpatient care. Feeding support and social support is central to outpatient management. We wish to avoid medicalising community level support to these infants. Hence the term 'admission' is restricted to inpatient care.
- Anthropometric criteria have limited application in this age group. The direct evidence base is weak. Feeding, clinical and maternal factors are more critical to assess, to guide actions and to discharge. While recognising their value, there is therefore less importance attached to anthropometric criteria.
- The clinical status of infants and their medical management is critical; infants U6m who are sick are at higher risk of death than older children. We therefore distinguish nutritionally vulnerable infants with medical complications ('complicated' cases) versus nutritionally vulnerable infants without medical complications ('uncomplicated' cases). The terms 'severe' and 'moderate' acute malnutrition are not applied to infants U6m.
- Emerging evidence reflects that anthropometric indicators, such as weight for age (WFA) and mid upper arm circumference (MUAC), pick up infants at high mortality risk. Some of this risk may not be associated with nutrition risk, e.g. low birth weight infants are at higher risk of death. Classifying these infants as acutely malnourished carries risk as it implies a nutritional cause and may limit interventions to those centred on nutrition alone. Hence, the terms 'nutritional vulnerable' and 'at risk' are used to reflect this broader scope of risk and interventions needed.
- Nutrition support, particularly skilled breastfeeding support, is critical to case management. Non-breastfed infants need special support and follow-up.

- The wellbeing of an infant is greatly determined by that of his/her mother. The MAMI approach always considers the infant-mother pair; this is integral to case management. The presence of a sign or symptom that indicates the need for referral to inpatient care or enrolment into outpatient C-MAMI management for either infant or mother leads to the referral and management of both, together. Thus, assessment and action regarding the nutritional, physical and mental health of the mother is included in the C-MAMI Tool.

Version 2.0 of the C-MAMI Tool has been developed in a collaborative effort between practitioners and researchers across infant and maternal nutrition and health, coordinated by Emergency Nutrition Network (ENN), in close collaboration with the London School of Hygiene and Tropical Medicine (LSHTM), Save the Children and GOAL, and in consultation with experienced programmers and experts². Version 2.0 development was funded by Irish Aid (ENN) and Save the Children³.

The area of MAMI is an emerging field of practice. There is a continuing need to advocate for case management of nutritionally vulnerable infants U6m and their mothers in programmes, and to capture and share data and experiences in managing this age group. Please contact us with feedback and experiences of using the tool, and if you are interested in/planning field testing. A word version, to facilitate adaptation, is available on request. Contact: Marie McGrath, ENN, email: marie@enonline.net

¹ In 2017, MAMI was redefined from 'management of acute malnutrition in infants U6m' to 'management of at risk mothers and infants U6m' to reflect the profile of infant-mother pairs being identified, their associated risks, and consequently the wider scope of interventions needed to cater for/support them; these include but are not limited to nutrition.

² Content update was coordinated by ENN (Marie McGrath), led by Save the

Children consultants (Mary Lung'aho & Maryanne Stone Jimenez (Nutrition Policy and Practice)), in close collaboration with Marko Kerac (LSHTM); Nicki Connell, Sarah Butler (Save the Children), Hatty Barthorp (GOAL) and with input from working groups formed within the MAMI Special Interest Group and expert contributors, namely: Alice Burrell, Yasir Arafat and Mostofa Sarwar (Save the Children), Alison Talbert (KEMRI-Wellcome, Kenya), Cecile Bizouerne (ACF),

Elizabetta Dozio (ACF), Indi Trehan, Jay Berkley (KEMRI-Wellcome, Kenya), Karine le Roch (ACF), Katie Beck (Partners in Health), Kirrily de Polnay (MSF), Louise Day (LSHTM), Martha Mwangowe (KEMRI-Wellcome, Kenya), Natalie (MSF), Nigel Rollins (WHO), Robert Stewart (University of Edinburgh), Zita Weise Prinzo (WHO).

³ Version 1.0 (2015) of the C-MAMI Tool was funded by OFDA (ENN), Irish Aid (ENN) and Save the Children.

Orientation to the C-MAMI package

The C-MAMI package is made up of the following materials:

- i **C-MAMI TOOL V2.0**
 - Section 1. Triage
 - Section 2. Feeding Assessment
 - Section 3. Anthropometric/Nutritional Assessment
 - Section 4. Maternal Mental Health Assessment
- ii **COUNSELLING and SUPPORT ACTIONS BOOKLET**
 - Section A. Breastfeeding Counselling and Support Actions
 - Breastfeeding: 1 – 21
 - Section B: Breastfeeding Counselling and Support Actions
 - Supplementary Suckling Support
 - Section C: Non-Breastfeeding Counselling and Support Actions
 - Non-Breastfeeding: 1 – 4
 - Section D: Counselling and Support Actions (for All)
 - Social Support 1 – 4
- iii **COUNSELLING CARDS**
- iv **C-MAMI PROGRAMME MANAGEMENT CARDS**
 - C-MAMI Enrolment and Management Card
 - C-MAMI Follow-Up Card

i The C-MAMI TOOL V2.0

Appropriate C-MAMI is based on the severity of the condition of the infant-mother pair. Assessment and Classification of both the infant and mother under six months (U6m) are necessary to identify the appropriate Management activities. Infant and mother are managed together, as a pair.

FORMAT and HOW to USE the C-MAMI Tool

The C-MAMI Tool is colour-coded using a modified traffic-light 3-colour scheme. The traffic-light colours (red/yellow/green) are used to indicate high risk, moderate risk and low risk.

To help distinguish assessment guidance (ask, listen, look/observe, feel) for infants from those from their mothers, the infant row is coloured grey and the mother row is white.

The triage section, with the classify and manage columns shaded in red, helps to identify infant-mother pairs at high-risk, requiring immediate referral to specialist in-patient care.

Following the triage screening, feeding assessment is conducted for both breastfed and non-breastfed infants. This is followed by anthropometric/nutritional assessment, and finally maternal mental health assessment. In this section, the

yellow-coloured columns identify those at risk who would benefit from C-MAMI support; the green-coloured columns identify infants and mothers at low risk (i.e., without identified problems), but who would benefit from maternal and infant and young child feeding (MIYCF) counselling to support positive care and feeding practices now and in the future.

Each section reads from left to right. The practitioner assesses the infant or mother for the main signs or symptoms that lead to classification, identifies appropriate management, and is directed to materials that support the appropriate actions.

All cross-references are hyperlinked to the relevant material.

C-MAMI Tool Framework

TRIAGE		
ASSESS	CLASSIFY	MANAGE
Infant Ask/Listen/Look/Feel: details to guide assessment	Nutritionally Vulnerable with Medical Complications (HIGH NUTRITIONAL RISK)	URGENT REFERRAL: Management Actions
Mother Ask/Listen/Look/Feel: details to guide assessment	HIGH RISK	URGENT REFERRAL: Management Actions

OTHER ASSESSMENT SECTIONS				
ASSESS	CLASSIFY	MANAGE	CLASSIFY	MANAGE
Infant: Ask/Listen/Look/Feel: details to guide assessment	Nutritional Vulnerable without Medical Complications (MODERATE NUTRITIONAL RISK)	C-MAMI Enrolment: Management Actions	LOW RISK	Home Care: Management Actions
Mother: Ask/Listen/Look/Feel: details to guide assessment	MODERATE RISK	C-MAMI Enrolment: Management Actions	LOW RISK	Home Care: Management Actions

ii COUNSELLING AND SUPPORT ACTIONS BOOKLET

The Counselling and Support Actions Booklet is intended for use as a reference by the health care provider. It outlines the four essential criteria for good breastfeeding for infants U6m:

- Good attachment (facilitated by good positioning)
- Effective suckling
- Breastfeeding frequency
- No water, other fluids or foods

Information is provided on common problems (difficulties) that many mothers encounter, with suggested support actions for their resolution. Management Actions are described for "not enough" breastmilk; mother lacks confidence; breast conditions; thrush: infant, maternal nipple thrush; low weight infant, keeping low weight infant warm & Kangaroo Mother Care (KMC); satisfactory slow weight gain; concerns about being away from infant; breastmilk expression; cup feeding, and

storage of breastmilk; relactation; other breastfeeding related concerns: maternal diet, twin delivery, adolescent mother, and HIV positive test.

Management Actions are also described for non-breastfeeding support: mother absent; use of appropriate Breast Milk Substitutes (infant formula); preparing infant formula; and cup feeding.

Mother, family and community counselling: informal support; group support; family support; partner support; and community support are included.

Format of the Counselling and Support Actions Booklet Management Section:

Image	Symptoms/signs/indicators of practice	Counselling and Support Actions
Image of the practice from Counselling Cards	Points outlining symptoms/signs/indicators of practice	The counselling and support actions are specific to the symptoms or signs. Links to videos: embedded

The Counselling and Support Actions Booklet also contains links to content-specific videos and appropriate Counselling Cards.

- Both the videos and Counselling Cards are freely available/ in the public domain.
- Because field staff may encounter challenges in downloading materials from the internet, we suggest that agencies/ organizations download and make the videos easily available for staff/workers without easy access to web services.

iii COUNSELLING CARDS

- The Counselling Cards are intended for use by the health care provider and the mother/caregiver.
- The images of the Counselling and Support Actions Booklet (that are small in size and act as a reference for the health care provider) are the same as the Counselling Cards (larger in size for sharing with the mother/caregiver).
- The arrangement of the Counselling Cards follow the order of the Counselling and Support Actions Booklet.

- The Counselling Cards are deliberately designed so that the image has no 'messages' on back of card; the health care provider will not be tempted to read the messages but will actively converse with the mother/caregiver.
- Appropriate use of the Counselling Card involves engagement with the mother/caregiver who is asked to **observe** what she sees in the card, what she **thinks** about the

different practices represented in the card, and what practice she will now **try**.

- Most Counselling Cards can be found in the UNICEF Digital Image Library: Digital Image Library, <https://ycf.spring-nutrition.org/>. Credit for additional Counselling Cards is provided below.

iv C-MAMI PROGRAMME CARDS

- The C-MAMI Enrolment and Management Card and C-MAMI Follow-Up Card were used by Save the Children and GOAL with the C-MAMI Tool V1.0. It has been updated

- to be compatible with the C-MAMI Tool V2.0.
- Infant and maternal demographic, anthropometric and clinical/physical examination details, plus classification and

management upon enrolment are recorded on the first card. The second card provides space to record follow-up actions and outcomes.

Key reference material

IMCI Chart booklet, WHO, 2014: The IMCI chart booklet is for use by doctors, nurses and other health professionals who see young infants and children less than five years old. It facilitates the use of the IMCI case management process in practice and describes a series of all the case management steps in a form of IMCI charts.

www.who.int/maternal_child_adolescent/document/s/IMCI_chartbooklet/en/

WHO. Guideline: Updates on the management of severe acute malnutrition in infants and children. WHO, 2013.

http://www.who.int/elena/titles/sam_infants/en/

Caring for newborns and children in the community.

Caring for the sick child. WHO, 2012. These materials are designed to help lay community health workers (CHW) assess and treat sick children age 2 - 59 months. This process is also known as "Community Case Management" (CCM).

www.who.int/maternal_child_adolescent/document/s/imci_community_care/en/

Module 2. Infant feeding in emergencies. For health and nutrition workers in emergency situations. Version 1.1, 2007. ENN, IBFAN-GIFA, Fondation Terre des hommes, CARE USA, Action Contre la Faim, UNICEF, UNHCR, WHO, WFP, Linkages.

<http://www.ennonline.net/ifemodule2>

WHO, War Trauma Foundation and World Vision International (2011). **Psychological first aid: Guide for field workers.** WHO: Geneva.

http://www.who.int/mental_health/publications/guide_field_workers/en/

Inter Agency Standing Committee (IASC) Reference Group for Mental Health and Psychosocial Support in Emergency Settings, 2010. **Mental Health and Psychosocial support in humanitarian emergencies: What should humanitarian health actors know?**

www.who.int/mental_health/emergencies/what_humanitarian_health_actors_should_know.pdf?ua=1

Inter-Agency Standing Committee (IASC), 2007. **IASC guidelines on mental health and psychological support in emergency settings.**

www.who.int/mental_health/emergencies/guidelines_iasc_mental_health_psychosocial_june_2007.pdf

Patel, V., & Hanlon, C., 2018. **Where There Is No Psychiatrist: A Mental Health Care Manual.** Cambridge: Royal College of Psychiatrists. Open access online.

www.cambridge.org/core/title/gb/522738

See **more resources**, including adapted materials for high HIV and TB settings, at:

http://www.who.int/maternal_child_adolescent/documents/imci/en/

Credits for Images

The images come from the following:

- WHO/UNICEF *Infant and Young Child Feeding Counselling: an Integrated Course* (The source for redrawn B&W images is work submitted for the revision to the 'Integrated Course').
- Laid-Back Breastfeeding or Biological Nurturing: La Leche League International.
- The 'breast problem' images and 'cup-feeding' image came originally from the WHO/UNICEF *Breastfeeding Counselling: a Training Course*, but were used also in the 'Integrated Course' and in the UNICEF *Community IYCF Counselling Package*.
- The 'grey-scale' images (more African in appearance) come from the *UNICEF Community IYCF Counselling Package*.
- Oral thrush image: *Infant and Young Child Feeding: a Community-Focused Approach*. CARE & URC/CHS. 2007.
- Supplementary suckling image: *Infant and young child feeding: model chapter for textbooks for medical students and allied health professionals*. World Health Organization, 2009.

