

# Technical guidance and evidence base for Nutrition Interventions for ill and vulnerable newborns and children

Nigel Rollins, World Health Organization, Geneva

# WHO Global recommendations for appropriate feeding of infants and young children, in brief, are:

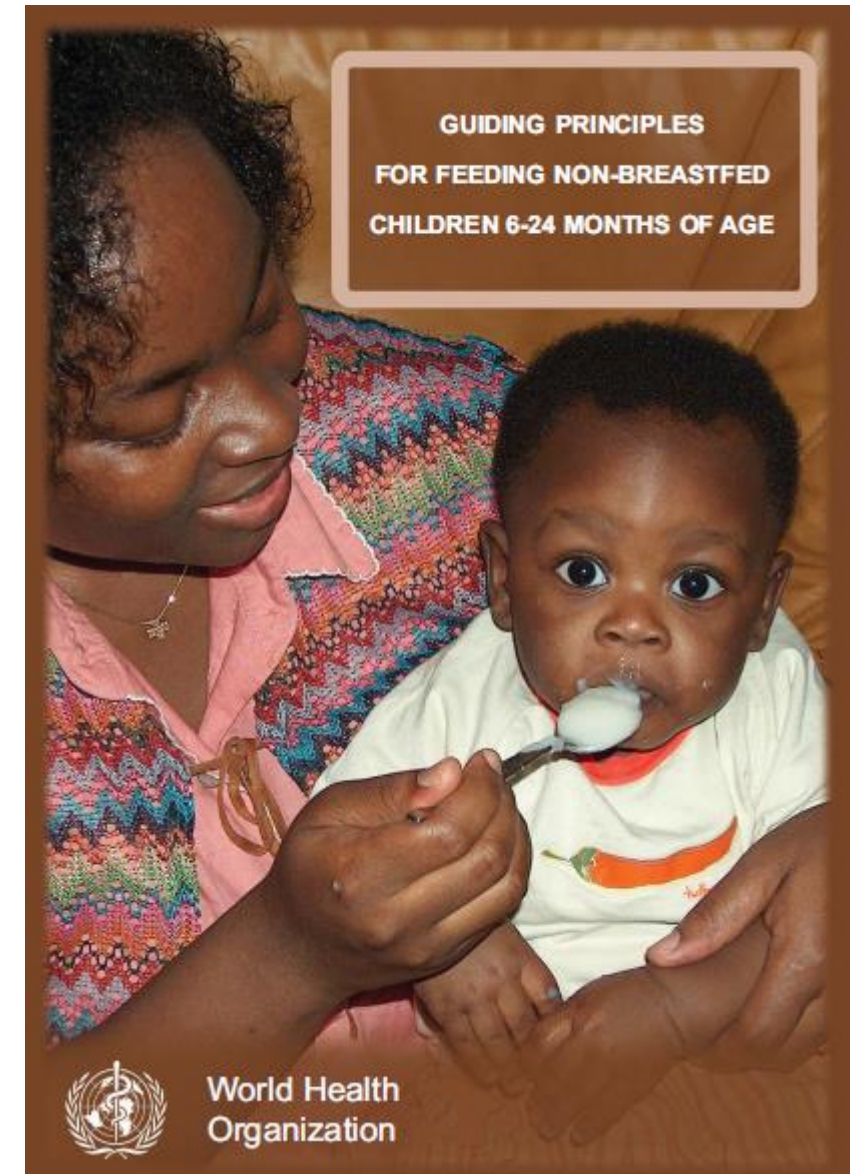
- Breastfeeding should start early, within one hour after birth.
- Breastfeeding should be exclusive for six months.
- Appropriate complementary feeding should start from the age of six months with continued breastfeeding up to two years or beyond.

## **Appropriate complementary feeding is:**

- *timely* – meaning that foods are introduced when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding;
- *adequate* – meaning that foods provide sufficient energy, protein, and micronutrients to meet a growing child's nutritional needs;
- *safe* – meaning that foods are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats;
- *properly fed* – meaning that foods are given consistent with a child's signals of appetite and satiety, and that meal frequency and feeding method – actively encouraging the child to consume sufficient food using fingers, spoon or self-feeding – are suitable for age.

# ... includes feeding during and after illness

- Increase fluid intake during illness and encourage the child to eat soft, varied, appetizing, favourite foods. After illness, give food more often than usual and encourage the child to eat more.
- Extra food is needed until the child has regained any weight lost and is growing well again.



# LBW and VLBW feeding until 6 months (2011)

- Which milk
- Supplements
- When and how to initiate
- Optimal duration of breastfeeding
- How to feed
- How frequently and how to increase volumes

**WHO aims to update over next 12-18 months to include management of the LBW .... Not only feeding**



# Ten steps to successful breastfeeding (2018)

## Critical management procedures

1. Facility policies:
  - a) Code of marketing
  - b) Breastfeeding policy
  - c) Internal monitoring
2. Staff competency

## Key clinical practices

3. Antenatal information
4. Immediate postnatal care
5. Support with breastfeeding
6. Supplementation
7. Rooming-in
8. Responsive feeding
9. Feeding bottles, teats and pacifiers
10. Care at discharge

**Includes specific reference to LBW and preterm**



# Guidelines on breastfeeding counselling (2018/2019)

Speaks to ...

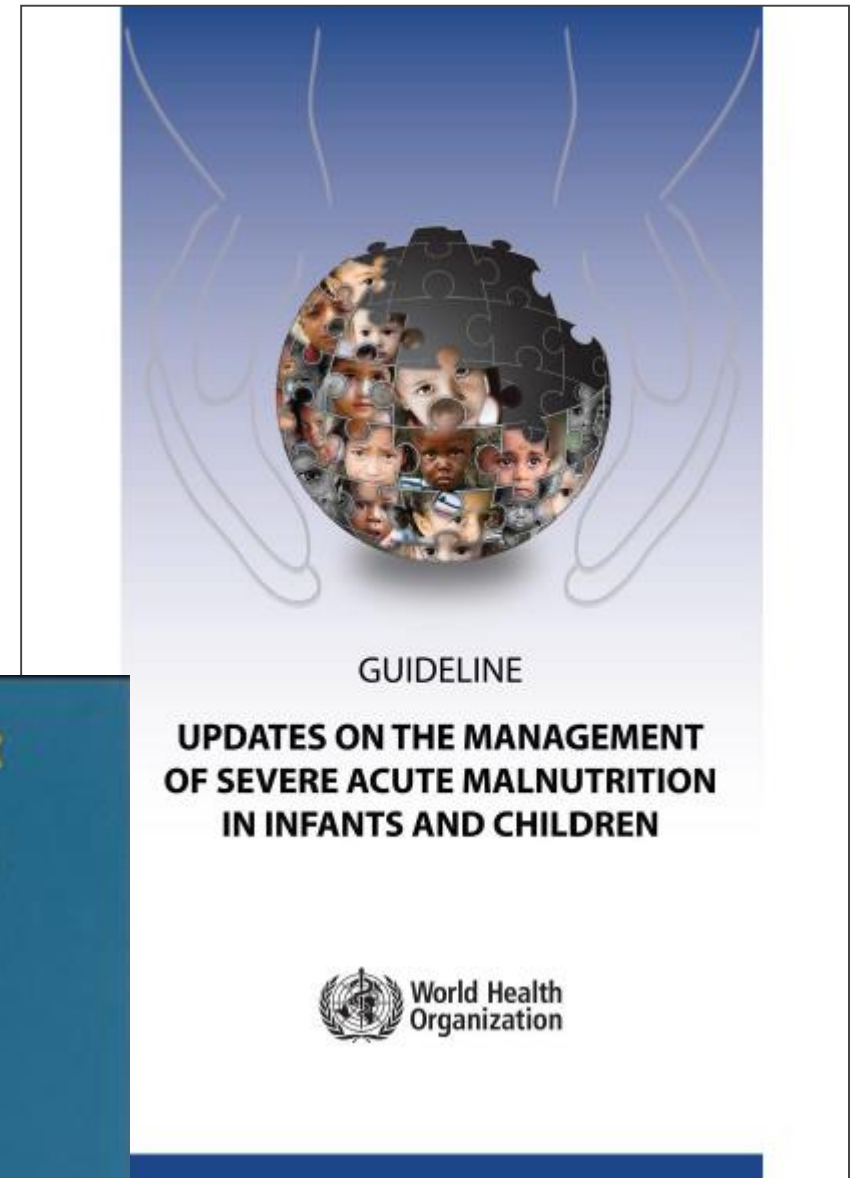
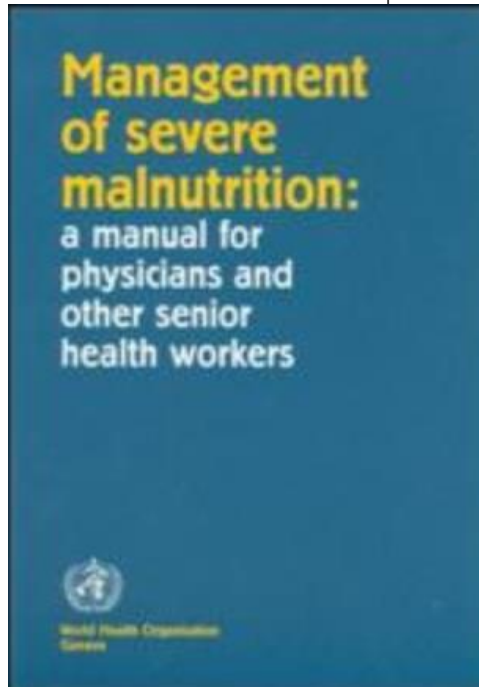
- When to counsel (A/N ... P/N)
- How often to counsel
- Who should counsel
  
- Breastfeeding counselling in emergencies



?

# Severe acute malnutrition

- In patient and community-based management of severe acute malnutrition
  - Triage – complicated and uncomplicated
  - Therapeutic foods
  - Antibiotics
  - Fluid management
  - HIV
  - Less than 6 month infants
  
- In addition to the Ten steps ....



2013

# A lesson learned ....

Research

BMJ Global Health

## Efficacy of three feeding regimens for home-based management of children with uncomplicated severe acute malnutrition: a randomised trial in India

Nita Bhandari,<sup>1</sup> Sanjana Brahmawar Mohan,<sup>1</sup> Anuradha Bose,<sup>2</sup> Sharad D Iyengar,<sup>3</sup> Sunita Taneja,<sup>1</sup> Samila Mazumder,<sup>1</sup> Ruby Angeline Pricilla,<sup>2</sup> Kirti Iyengar,<sup>3</sup> Harshpal Singh Sachdev,<sup>4</sup> Venkata Raghava Mohan,<sup>2</sup> Virendra Suhalka,<sup>3</sup> Sachiyo Yoshida,<sup>5</sup> Jose Martines,<sup>6</sup> Rajiv Bahl,<sup>5</sup> for the Study Group

2016

- |                                  | <u>8 weeks</u> | <u>16 weeks</u> |
|----------------------------------|----------------|-----------------|
| • Recovery at                    |                |                 |
| • Locally produced RUTF:         | 40.7%          | 56.9%           |
| • Centrally produced RUTF:       | 34.8%          | 47.5%           |
| • Augmented home prepared foods: | 26.6%          | 42.8%           |
- Impact of therapeutic food only evident when introduced care support (DOT)
  - Longer time needed for recovery compared to African studies



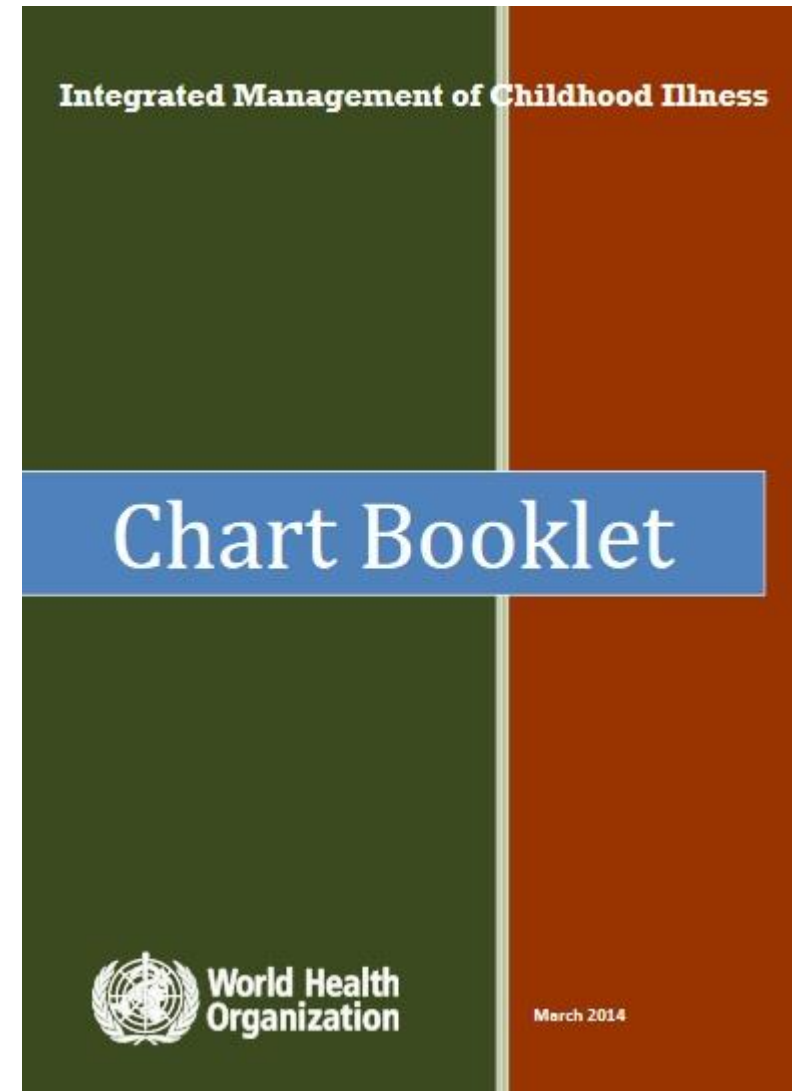
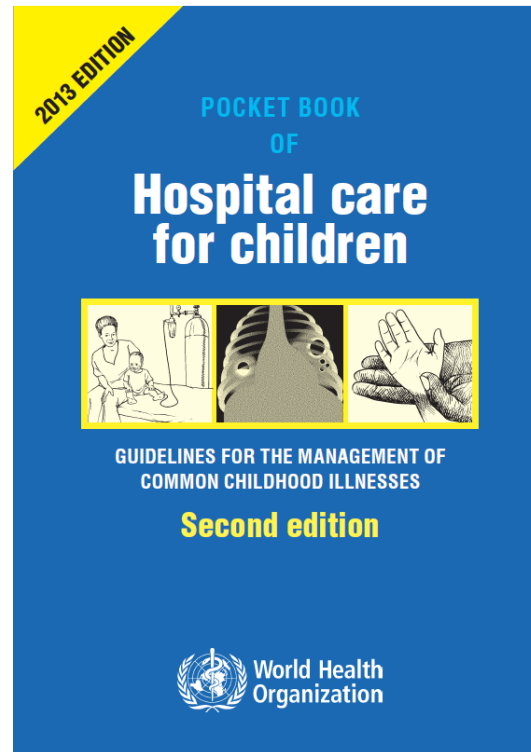
# Moderate wasting

- Management of nutrition in major emergencies (2000)
- Technical note on composition of therapeutic foods (2012)
- Essential Nutrition Actions (2013)
- Wasting Policy Brief (2014)

## BUT

- No guideline on the prevention or management of moderate wasting
  - Which children should receive supplementary foods
  - How much to give,
  - What to do if no response,
  - What to do if relapse,
  - Other care
  - Cost-effectiveness



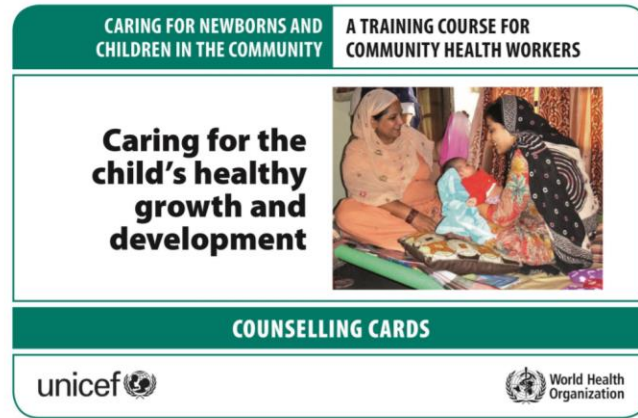


# Community Health Worker packages



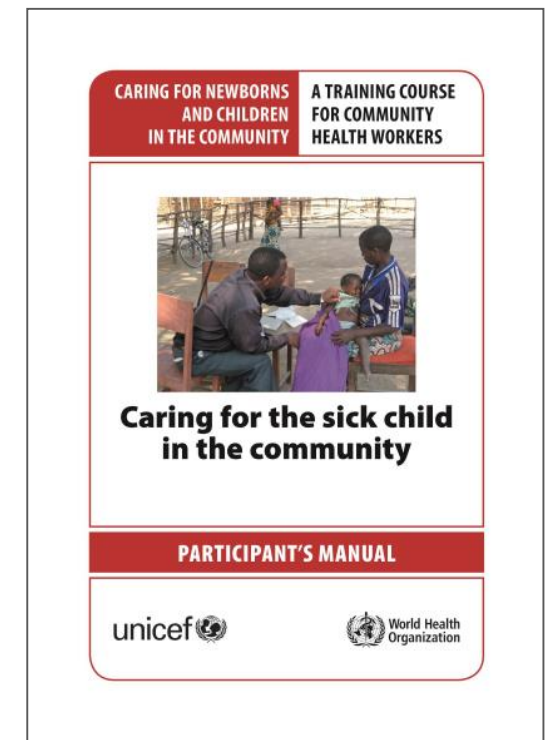
## Caring for the newborn at home

- Promotion of ANC and skilled care at birth
- Care in first week of life
- Recognition and referral of newborns with danger signs
- Special care for low-birth-weight babies



## Caring for the child's healthy growth and development

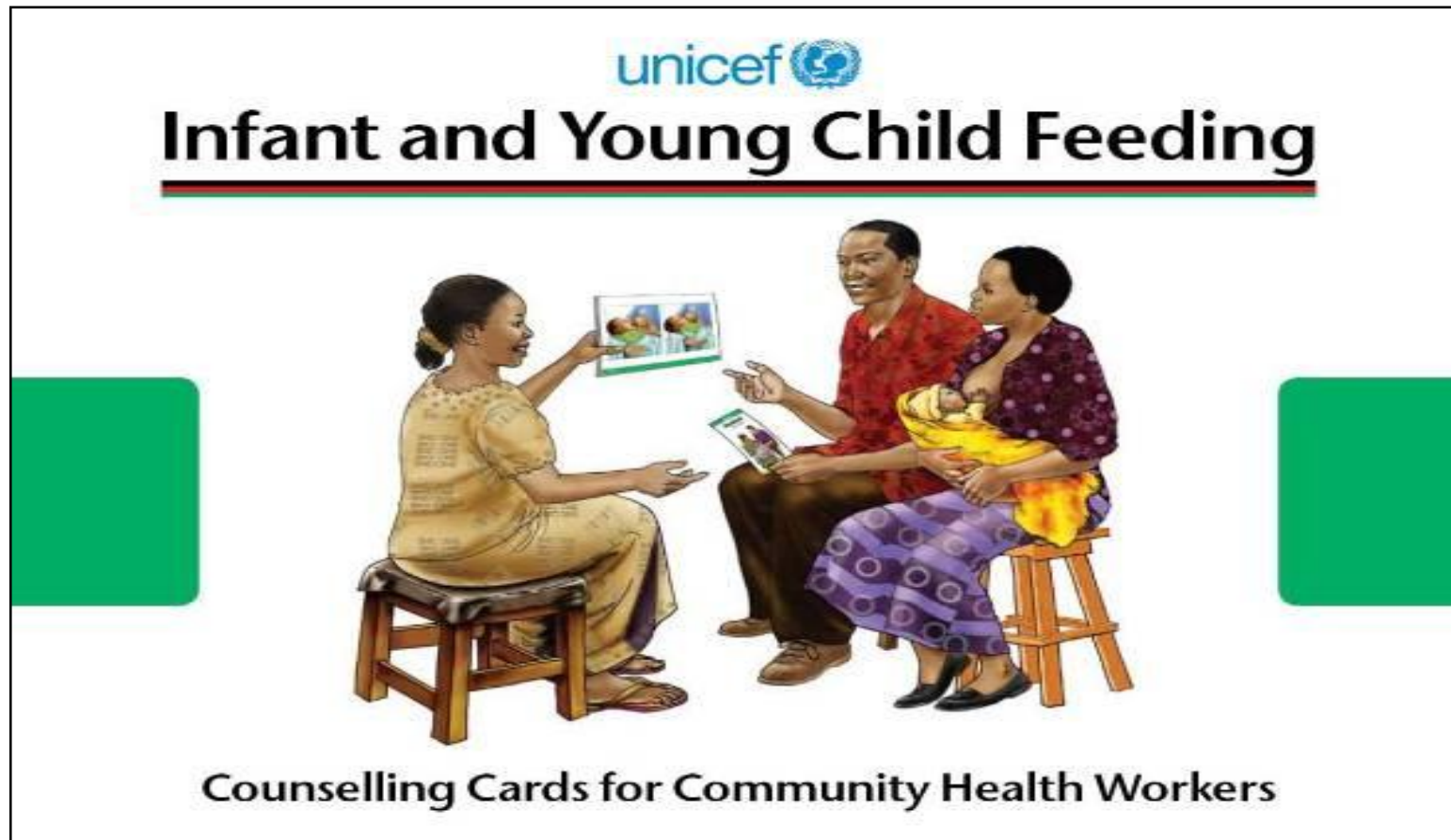
- Care-giving skills and support for child development
- Infant and young child feeding
- Prevention of illness
- Family response to child's illness



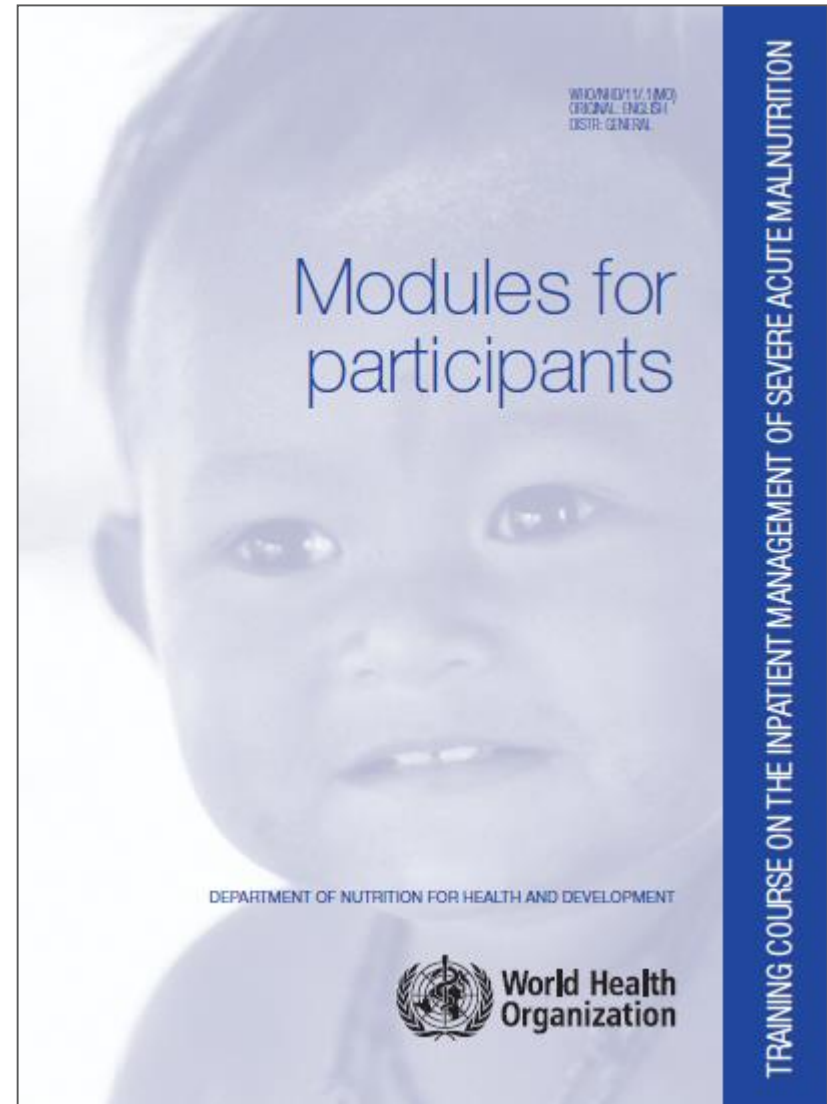
## Caring for the sick child in the community

- Referral of children with danger signs and severe acute malnutrition
- Treatment in the community
  - Diarrhoea
  - Fever (malaria)
  - Pneumonia

# The Community Infant and Young Child Feeding Counselling Package



Updated  
Implementation  
manual



# Training courses

- Breastfeeding
- IYCF
- IYCF and growth monitoring
- BFHI
- IMCI
- iCCM
- Essential Newborn Care
- Others ...

# Gaps

- Moderate wasting
- Expanded guideline on growth failure in infants <6 months
- Updated LBW
- KMC

## Research

### Inpatient management of children with severe acute malnutrition: a review of WHO guidelines

Kirkby D Tickell<sup>a</sup> & Donna M Denno<sup>b</sup>

**Objective** To understand how the World Health Organization's (WHO's) guidelines on the inpatient care of children with complicated severe acute malnutrition may be strengthened to improve outcomes.

**Methods** In December 2015, we searched Google scholar and WHO's website for WHO recommendations on severe acute malnutrition management and evaluated the history and cited evidence behind these recommendations. We systematically searched WHO International Clinical Trials Registry Platform, clinicaltrials.gov and the Controlled Trials metaRegister until 10 August 2015 for recently completed, ongoing, or pending trials.

**Findings** WHO's guidelines provide 33 recommendations on the topic. However, 16 (48.5%) of these recommendations were based solely on expert opinion – unsupported by published evidence. Another 11 (33.3%) of the recommendations were supported by the results of directly relevant research – i.e. either randomized trials (8) or observational studies (3). The other six recommendations (18.2%) were based on studies that were not conducted among children with complicated severe malnutrition or studies of treatment that were not identical to the recommended intervention. Trials registries included 20 studies related to the topic, including nine trials of alternative feeding regimens. Acute medical management and follow-up care studies were minimally represented.

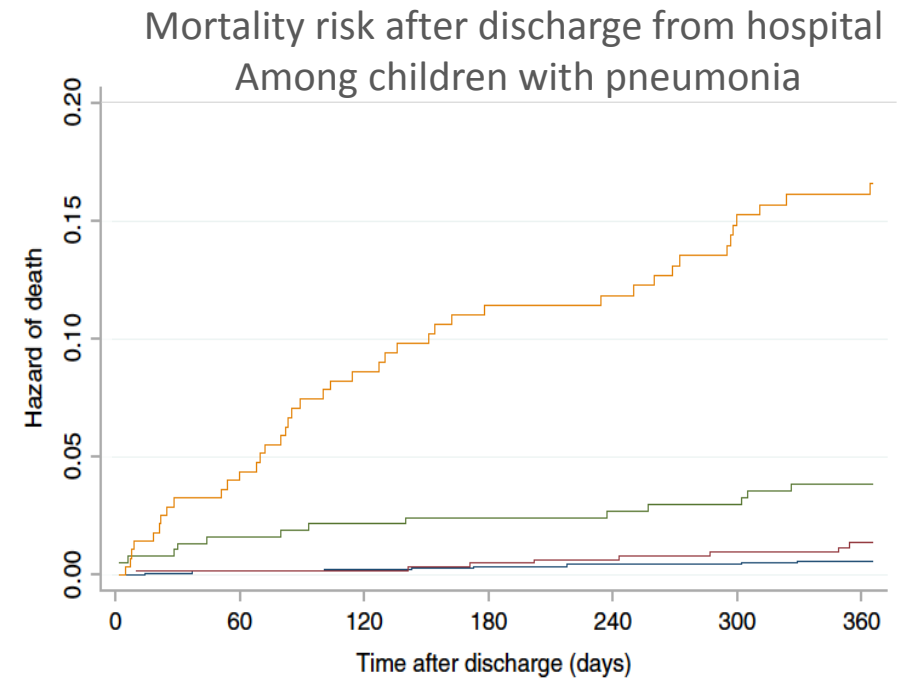
**Conclusion** WHO's guidelines on the topic have a weak evidence base and have undergone limited substantive adjustments over the past decades. More trials are needed to make that evidence base more robust. If the mortality associated with severe malnutrition is to be reduced, inpatient and post-discharge management trials, supported by studies on the causes of mortality, are needed.

Abstracts in [عربي](#), [中文](#), [Français](#), [Русский](#) and [Español](#) at the end of each article.

# If I had to bet my last few dollars!

## Even without any data! (including cost-effectiveness)

- Consider systems for longer term follow-up of LBW infants
- Explore community-based approaches for post-discharge follow-up of undernourished children admitted with complications
- Assess and intervene to improve mothers' mental and physical health as part of IYCF approaches
- Find ways to put knowledge and the skills into the hands of parents and families to feed their children during and after illnesses





# Care practices and nutrition outcomes

## 9. Stimulate emotional and sensorial development:

Loving care, play and stimulation

1. Provide tender loving care
2. Help and encourage mothers to comfort, feed, and play with their children
3. Give structured play when the child is well enough.

## WHO Guidelines on improving child development

Aisha Yousafzai 2018

- What is the effectiveness of integrated caregiving and nutrition programmes in the first three years of life on ECD and child growth outcomes?

