

Summary report on the
**Training of trainers
on the inpatient
management of severe
acute malnutrition with
medical complications**

Cairo, Egypt
24–28 August 2025



**World Health
Organization**

Eastern Mediterranean Region

Summary report on the

**Training of trainers on the inpatient
management of severe acute
malnutrition with medical
complications**

Cairo, Egypt
24–28 August 2025



**World Health
Organization**

Eastern Mediterranean Region

© World Health Organization 2025

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: “This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition”.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Training of trainers on the inpatient management of severe acute malnutrition with medical complications. Cairo: WHO Regional Office for the Eastern Mediterranean; 2025. Licence: CC BY-NC-SA 3.0 IGO.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Contents

1.	Introduction.....	1
2.	Summary of the training	2
3.	Key outcomes, strategic relevance and achievements	5
4.	Recommendations.....	7
5.	Conclusion	8
6.	Acknowledgments.....	9
	Annex 1. Participants attending in person by country/territory	10
	Annex 2. Pre- and post-test results.....	11

1. Introduction

A training of trainers course on the inpatient management of severe acute malnutrition (SAM) was held on 24–28 August 2025. The training was organized by the WHO Regional Office for the Eastern Mediterranean in collaboration with WHO headquarters and the National Nutrition Institute of Egypt, a WHO Collaborating Centre.

The course was organized in response to the urgent need to scale up high-quality inpatient care for children with SAM in the WHO Eastern Mediterranean Region, particularly in countries affected by conflict, displacement and fragile health systems. It builds on the 2023 WHO guideline on the prevention and management of wasting and nutritional oedema (acute malnutrition) in infants and children under 5 years, to expand technical capacity in countries and strengthen regional preparedness for emergencies.

The objectives of the training were to:

- disseminate and test the updated WHO generic training course on the inpatient management of SAM, with a focus on applying the new recommendations and best practice statements from the 2023 wasting guideline in real clinical and training settings;
- expand the regional roster of trainers with the capacity to cascade inpatient management of SAM within and across Member States;
- strengthen the technical capacity of national experts, particularly in countries facing conflict and humanitarian emergencies, to implement and transfer knowledge of the new recommendations;
- enhance regional preparedness and response by ensuring that the updated recommendations are integrated into inpatient care and that national trainers are fully equipped to adapt them in-country.

Participants from 13 countries and territories of the Eastern Mediterranean Region attended the training, with 27 participants attending in person and 16 joining virtually (see Annex 1).

The training was interactive and required all participants to complete eight modules under the close supervision of the facilitators. Two half-day field visits were organized for in-person participants as part of the training programme.

2. Summary of the training

Opening session

Dr Asmus Hammerich, Director of Noncommunicable Diseases and Mental Health, WHO Regional Office for the Eastern Mediterranean, opened the course, noting the importance of building institutional capacity and supporting health systems in countries facing crises.

Dr Abdul Baseer Qureshi, Regional Adviser on Nutrition, WHO Regional Office for the Eastern Mediterranean, delivered a welcoming speech, in which he emphasized the urgent need to expand the roster of trainers in the Region and ensure evidence-based, high-quality care reaches the children most at risk.

Dr Jaden Bendabenda, Technical Officer, Department of Nutrition and Food Safety, WHO headquarters, addressed participants on the key updates of the 2025 WHO generic training course, explaining their technical basis and practical implications for inpatient and outpatient care. His intervention reinforced the global support for the training.

Professor Ali Arabi, Course Director and Director General of Gaafar Ibnauf Children's Emergency Hospital, Sudan, welcomed participants and underlined the significance of the training as a milestone in operationalizing

the 2023 WHO guideline on the prevention and management of wasting and nutritional oedema. He encouraged participants to actively engage and take responsibility for cascading the knowledge at national level.

Professor Sahar Khairy, Director of the National Nutrition Institute of Egypt, addressed participants, welcoming them to Cairo and stressing the importance of linking training to practical skills and clinical practice in national institutions.

The opening session set the stage for five days of intensive technical and clinical work, underscoring the shared responsibility of Member States, WHO and partner institutions in scaling up inpatient care for SAM across the Region.

Training methodology, structure and content

The training was conducted through combined classroom teaching, clinical demonstrations, facilitated group work and peer-to-peer learning.

The course covered eight technical modules, aligned with the new WHO guidance. These were:

- introduction and principles of care;
- initial management of children with SAM and complications;
- feeding of children with SAM, including infants under 6 months;
- daily care and ward routines in inpatient therapeutic programmes;
- monitoring and improving the quality of care;
- involving mothers and caregivers in rehabilitation and psychosocial support;
- outpatient management of SAM and linkage with inpatient care;
- cross-cutting content, including food hygiene, diarrhoeal disease prevention and action planning.

The course also included two half-day field-visits to experience practical application of the course's content. The first was to the National Nutrition Institute. During the visit, participants observed anthropometric measurements and the screening of children under 5 for malnutrition. They also visited the kitchen where ready-to-use therapeutic food (RUTF) and therapeutic milks are prepared using local ingredients. The focus of the visit was on the nutritional screening of admitted children, clinical medical screening, counselling caregivers and conducting 24-hour dietary recall.

During the second visit to the Ahmed Maher Hospital, participants visited wards with patients admitted for treatment. Informed consent was obtained from caregivers in advance, and coordination was done with hospital management prior to the visits. The focus of the hospital visit was on admission criteria for children with SAM, use of the critical care pathway chart, application of the 24-hour feeding chart and daily care routines, and bedside observation of case management and ward practices.

Daily facilitator meetings reviewed progress and refined delivery. Pre- and post-training tests were conducted to evaluate knowledge improvement (see Annex 2).

Participants and group division

A total of 43 participants attended the training from 13 countries/territories of the WHO Eastern Mediterranean Region, including Afghanistan, Djibouti, Egypt, Iraq, Lebanon, Libya, the occupied Palestinian territory, Oman, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic and Yemen.

The training was conducted in a hybrid format, with 27 participants attending in person and 16 joining virtually (see Annex 1).

The participants were divided into the following four groups:

- Group 1 (TOT): 10 participants, supported by three facilitators;
- Group 2 (TOT): 10 participants, supported by three facilitators;
- Group 3 (standard case management): seven participants, supported by three facilitators;
- Group 4 (online group on initial case management): remote engagement, supported by one facilitator on a rotating basis.

This format ensured a balance between advanced trainers and case managers, while enabling remote participation. The diversity of participants enriched discussions with field experience from both stable and humanitarian settings. WHO staff participated as facilitators, technical advisors and managers.

3. Key outcomes, strategic relevance and achievements

Outcomes

By the end of the course, participants demonstrated considerable improvements in both knowledge and skills. Major outcomes included:

- enhanced facilitation capacity enabling participants to conduct and facilitate national-level training;
- improved ability to identify clinical and anthropometric signs of SAM;
- strengthened skills in the initial management of acute medical complications;
- proficiency in feeding protocols for children, including vulnerable infants < 6 months;
- improved ability to deliver daily ward care, and in problem-solving and patient monitoring;
- improved capacity to counsel caregivers and involve them in rehabilitation, ensuring continuity of care;

- practical exposure to the use of critical care pathway charts, feeding records and quality monitoring tools;
- development of country-specific action plans, which participants will adapt and implement at national and subnational levels.

Strategic relevance

The training contributed to addressing these urgent priorities in the Region:

- Humanitarian response: it strengthened the capacity of participants from countries facing emergencies.
- Health system integration: it reinforced the linkage of inpatient therapeutic care with outpatient and community-based services, in line with integrated management of child health.
- Sustainability: it expanded the pool of regional trainers who will cascade knowledge and ensure institutional memory in their countries.
- Guideline implementation: it supported the roll-out of the 2023 WHO guideline, ensuring alignment between global recommendations and regional practice.

Key achievements

- The eight technical modules comprehensively covered the principles of care, initial management, feeding, daily care, quality monitoring, caregiver involvement, outpatient linkage and cross-cutting issues.
- Two half days of practical clinical sessions at the National Nutrition Institute and Ahamed Maher Teaching Hospital reinforced screening, admission criteria, feeding protocols and caregiver counselling.
- The training covered both WHO and ministry of health staff who will support operationalization of the 2023 WHO guideline on the prevention and management of wasting and nutritional oedema at country level.

- The roster of regional trainers was expanded, enhancing the ability to cascade training at national level.
- The training enhanced technical and facilitation skills and equipped countries to deliver evidence-based inpatient care for SAM.
- Capacity was strengthened in countries/territories facing humanitarian emergencies, including Afghanistan, the occupied Palestinian territory, Somalia, Sudan, the Syria Arab Republic and Yemen.

These outcomes will improve national responses and strengthen preparedness for nutrition emergencies across the Region.

4. Recommendations

Based on feedback from participants and facilitators, the following recommendations are proposed.

Course duration

- A six-day format is required to provide sufficient time for practical sessions, role plays and in-depth case discussions. Future training should screen the profile of the participants to ensure an adequate number of days is allocated based on the skills of the participants.

Revision of training materials

- Continue updating all the videos and photos used in the course in line with global WHO recommendations.
- Expand the library of clinical videos, including those on supplementary suckling technique and appetite testing.

Support for cascade courses

- Provide technical and financial support to countries to conduct cascade training at national and subnational levels.

Practical learning

- Strengthen the role of group work, role plays and practical exercises in training delivery and ensure clinical videos are systematically used in both plenary and small group sessions.

Continuous update and feedback mechanism

- Establish a formal mechanism to collect and integrate feedback from participants and facilitators in each round of training.

Creating a virtual group of experts

- Maintain close contact between participants and staff from WHO headquarters and the Regional Office for the Eastern Mediterranean, and ensure trainers remain fully aligned with the latest updates.

5. Conclusion

The course successfully fulfilled its objectives. It equipped participants with advanced technical and facilitation skills to cascade inpatient SAM management training across countries/territories of the Eastern Mediterranean Region. The training strengthened the regional roster of trainers, improved the technical capacity of national experts and reinforced preparedness for humanitarian nutrition emergencies.

Following the training, a WhatsApp group was created with participants from the three levels of WHO, ensuring trainers stay connected and share updates on implementation in their respective countries, and facilitating cross-country experience sharing.

The initiative represents an important milestone in operationalizing the 2023 WHO guideline on wasting and nutritional oedema, ensuring that evidence-based care reaches the most vulnerable children across the Region.

6. Acknowledgments

The success of the training reflects the joint efforts of multiple partners and institutions, led by the WHO Regional Office team, including Dr Qureshi, with support from Dr Bendabenda and Dr Zita C. Weise Prinzo of WHO headquarters and course director Professor Ali Arabi, who coordinated the training. Special recognition goes to the dedicated facilitators and technical experts, including clinical instructors from Afghanistan, Egypt, Sudan and Yemen, who ensured high-quality delivery of all modules during the course, which was welcomed by participants. WHO is grateful to the National Nutrition Institute and Ahamed Maher Teaching Hospital for hosting the practical sessions and supporting hands-on learning.

Annex 1. Participants attending in person by country/territory

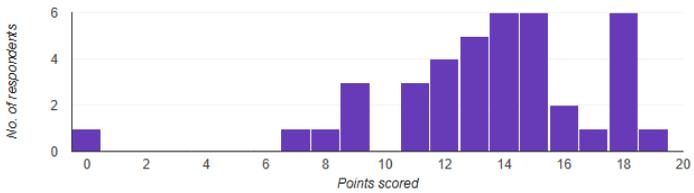
Country/territory	Number of participants	Percentage
Djibouti	1	4%
Egypt	5	19%
Libya	1	4%
Occupied Palestinian territory	3	11%
Somalia	2	7%
Sudan	3	11%
Yemen	1	4%
Total	27	100%

Annex 2. Pre- and post-test results

a) Pre-test results

Average 13.45/19 points	Median 14/19 points	Range 0-19 points
-----------------------------------	-------------------------------	-----------------------------

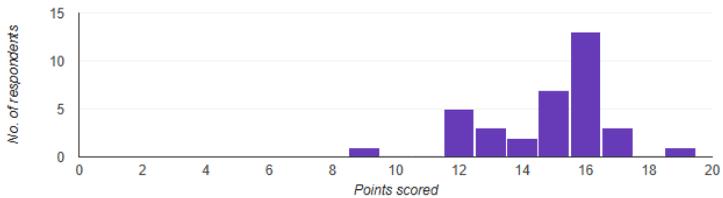
Total points distribution



b) Post-test results

Average 14.83/19 points	Median 15/19 points	Range 9-19 points
-----------------------------------	-------------------------------	-----------------------------

Total points distribution





World Health Organization
Regional Office for the Eastern Mediterranean
Monazamet El Seha El Alamia Street,
Extension of Abdel Razak El Sanhoury Street
P.O. Box 7608, Nasr City
Cairo 11371, Egypt
www.emro.who.int