Gaps in implementation guidance on the prevention and treatment of wasting: stakeholder survey report

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Design by Chris Woodrow

Gaps in implementation guidance on the prevention and treatment of wasting: stakeholder survey report

1.0 Introduction

The World Health Organization (WHO) Guideline on the Prevention and Management of Wasting and Nutritional Oedema (Acute Malnutrition)[1] update process is well underway and updated guidelines are expected in mid-2023. Guidance will be needed to support the implementation of the recommendations and good practice statements within this guideline. Implementation guidance may also be needed to address the technical gaps that do not fall within the scope of the WHO guidelines. Guidance may take different forms depending on the need and the end-user and it may be developed by different initiatives/collectives/groups depending on remit, capacity and resources.

To help to inform and align efforts and to maximise utility to user needs, ENN conducted an online survey that sought input from a range of stakeholders. We asked the respondents about the gaps they are experiencing in technical guidance and the types of tools needed. This report presents the results of this survey: Table 2 summarises the top 20 responses; Table 3 provides more detail. We also incorporate the gaps identified during the WHO Clinical Care in Crisis (formerly EM Care) app development[2] and through the Global Nutrition Cluster – Technical Alliance (GNC-TA) (Table 4).

This survey was initiated to inform the plans and actions of a recently formed UNICEF/WHO Technical Advisory Group on Wasting and Nutritional Oedema (Acute Malnutrition) (TAG). One of the TAG's functions will be to advise on and review the implementation guidance developed by UNICEF and WHO to support the wasting and nutritional oedema (acute malnutrition) guideline implementation.

The survey also has wider relevance, in particular regarding the outstanding gaps identified that may be beyond the scope/capacity of the TAG. Thus the findings will be shared widely, including through GNC-TA Global Thematic Working Groups (GTWG), and made publicly available.

2.0 Methods

ENN conducted an open online survey between 14th July and 14th September 2022. The link to the survey was shared via the ENN mailing list, ENN social media, the en-net forum[3], the GNC newsletter, WHO and UNICEF regional and country offices.

Much of the survey consisted of free-text response questions where the respondents were asked to highlight gap areas in the implementation guidance within six broad themes:

1. Inpatient care of severe acute malnutrition (SAM) or moderate acute malnutrition (MAM) (6-59 months)[4]
2. Outpatient care of SAM (6-59 months)
3. Outpatient care of MAM (6-59 months)
4. Care of infants less than 6 months with growth faltering[5]
5. Prevention of acute malnutrition/ wasting/growth faltering
6. Programme management

Themes 1 to 5 were derived to match the areas expected in the updated WHO wasting and nutritional oedema guidelines. Theme 6, programme management, was added as it is a key part of implementation guidance and not usually covered under WHO normative guidelines. During the analysis, responses within each theme were grouped into logical 'sub-themes' based on the responses received, except for programme management where the sub-themes were derived from the 'WHO Health System Building Block framework[6]'.

1 The terms 'acute malnutrition' and 'wasting and nutritional oedema' are considered equivalent and are used interchangeably through this document for consistency with their source.
2 https://www.who.int/tools/em-care
3 www.en-net.org
4 We use the terms moderate/severe wasting and SAM/MAM throughout since both terms are used by practitioners/in guidance. The survey referred to SAM and MAM. The WHO guidelines use the terms moderate/severe wasting and/or nutritional oedema as well as acute malnutrition.
5 The WHO guidelines include management of infants less than 6 months for which a broader framing is adopted. At the time of the survey, this was being referred to as growth faltering. This may refer to infants less than 6 months at risk of poor growth and development in the final guideline release.
6 WHO (2010). Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. World Health Organization. https://apps.who.int/iris/handle/10665/258734

3.0 **Results**

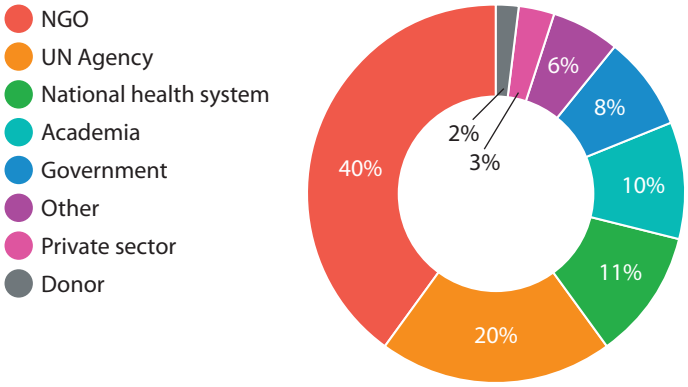
3.1 Survey respondents

The survey was completed by 193 people, amounting to 933 responses; 143 people completed the survey in English and 50 people completed the survey in French.

Types of organisations represented:

Of the 193 respondents, the majority (76 respondents, 40%) were from non-governmental organisations (NGOs). This was followed by UN agencies (39 respondents, 20%), national health providers (21 respondents, 11%) and academia (19 respondents, 10%). The remaining 19% of respondents were from government (8%), other (6%), private sector (3%) and donor (2%) organisations. Only two respondents did not disclose the type of organisation they were representing. These results are illustrated below (Figure 1).

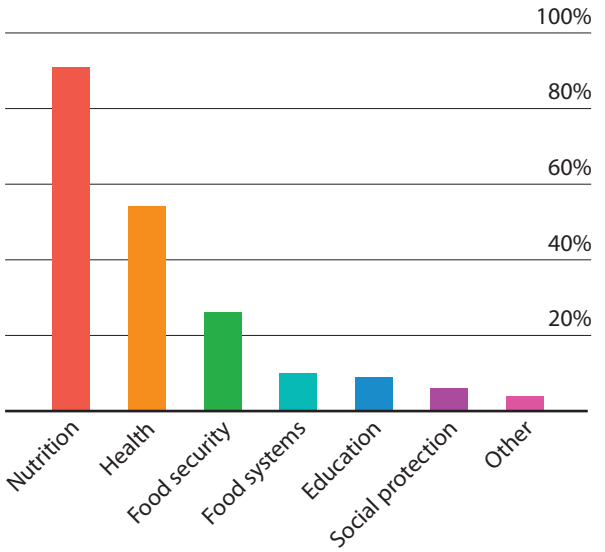
Figure 1: Types of organisations represented



Areas of work represented:

In terms of the areas of work the respondents represented, they could select multiple responses. The respondents reported working in a wide range of sectors that included nutrition (91%), health (54%), food security (26%), food systems (20%), education (9%), social protection (6%) and other sectors (4%). Nutrition was the most predominant area of work (Figure 2).

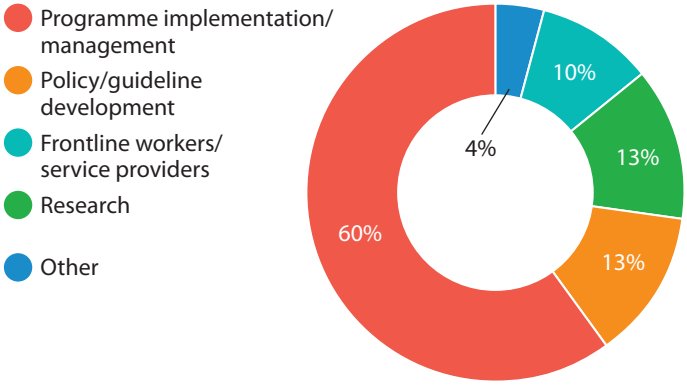
Figure 2: Areas of work represented



Type of work represented:

Most respondents worked in programme implementation/ management (60%), followed by policy/guideline development (13%), research/academia (13%) and front-line/direct service provision (10%) (Figure 3).

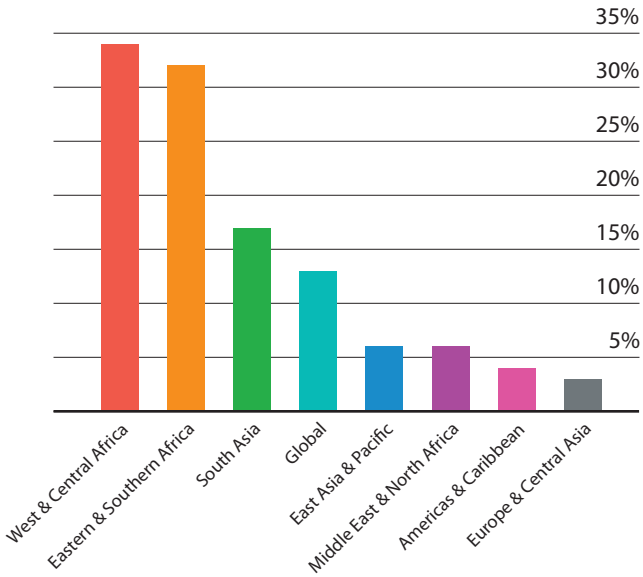
Figure 3: Types of work represented



Regions of the world represented:

The survey was completed by respondents across the globe (Figure 4). The highest percentage of respondents was from West and Central Africa (34%), followed by Eastern and Southern Africa (32%) and South Asia (17%). Approximately 13% of respondents represented global organisations. Contributions from other regions of the world included East Asia and Pacific (6%), the Middle East and North Africa (6%), America and the Caribbean (4%) and Europe and Central Asia (3%).

Figure 4: Regions of the world represented by survey respondents



3.2 Overview of responses across thematic areas

As mentioned above, the survey was divided into six thematic areas: inpatient care of SAM and MAM, outpatient care of SAM, outpatient care of MAM, care of infants less than 6 months (infants u6m) with growth faltering, the prevention of acute malnutrition/wasting/growth faltering and programme management.

There was an even spread of responses across all the thematic areas, however programme management had the most responses (n=181) and outpatient care of MAM had the least (n=115). The thematic areas of infants u6m, the prevention of acute malnutrition/wasting/growth faltering and inpatient care received a similar number of responses (169, 164 and 161 respectively). The last thematic area, outpatient care of SAM, received 143 responses (Figure 5).

Figure 5: Number of responses by thematic area

Within each thematic area, the responses were grouped into sub-themes. Themes, sub-themes and the number of responses by theme and sub-theme are detailed in Table 1 and summarised here.

Inpatient care of SAM and MAM

Within **inpatient care of SAM and MAM**, the largest proportion of responses was under the sub-theme, clinical management of complications (48%) and 26% of those were specific to MAM. Other sub-thematic areas included the routine management of inpatient care (12%), feeding protocols and products (10%), continuum of care, referral linkages, post-discharge care (7%), screening, admission, discharge and length of stay (7%), triage (initial vital sign checks etc) (5%) and integration with health services and other sectors (3%).

Outpatient care of SAM

Under the thematic area of **outpatient care of SAM**, the highest proportion of responses was within the sub-theme of routine management (29%), followed by continuum of care, referral linkages, post-discharge care (20%), broadening the nutrition service horizon (14%), feeding protocols and products (13%) and screening, admission, discharge and length of stay (13%), integration with health services and other sectors (7%) and lastly, management of children with disabilities or chronic illness (4%). No responses were received under the sub-thematic area of triage (initial vital sign checks etc).

Outpatient care of moderate wasting

Under the thematic area, **outpatient care of MAM**, the majority of the responses were clustered around feeding protocols and products and broadening the nutrition service horizon (23.5% in each area). This was followed by screening, admission, discharge and length of stay (21% approx.), routine management (12%), integration with health services and other sectors (9%), continuum of care, referral linkages, post-discharge care (7%) and the management of children with disabilities or chronic illness (4%). Similar to the outpatient care of SAM, no responses were received under the sub-thematic area of triage (initial vital sign checks etc).

Care of infants u6m with growth faltering

Under this theme, the sub-thematic areas of broadening the nutrition service horizon (22% of responses), feeding protocols and products (21%) and screening, admission, discharge and length of stay (21%) received the most responses. Routine management (17%) followed, then continuum of care, referral linkages, post-discharge care (7%) and integration with health services and other sectors (both 7%). Lastly, the sub-themes triage (initial vital sign checks etc) and the management of infants u6m with disabilities or chronic illness received the fewest responses (2% each).

Programme management

This thematic area was categorised into six sub-themes aligned with the WHO health system building blocks. The highest proportion of responses was received under the sub-theme service delivery (quality, monitoring and evaluation (M&E), coverage) and programming (30%) followed by supply chain management (25%), information management system (22%) and health workforce and staffing (19%). The sub-themes of financing and leadership, governance and stewardship received 3% and 2% of responses respectively.

Prevention of acute malnutrition/wasting/growth faltering

Under prevention, the sub-theme, family and community engagement received the highest proportion of responses (24%) followed by integration with health services and other sectors (22%). Other sub-thematic areas included infant and young child feeding (IYCF) (18%), food and nutrition commodities for prevention (13%), maternal-focused strategies (12%), growth monitoring and nutrition assessments (8%) and programming and design (4%).

Table 1: Matrix of responses by theme and sub-theme

Percentages show the proportion of responses under each theme (Shading codes: Dark >20% of responses, Medium 10-20% and Light <10%)

Inpatient Care n=161	Outpatient SAM n=143	Outpatient MAM n=115	Infants U6M n=169	Programme Management n=181	Prevention n=164
Clinical management of complications (77, **47.8%**) *MAM specific (26% of these, 20)*	Routine management (42, **29.4%**)	**Feeding protocols, products and supplies** (27, **23.5%**)	**Broadening the nutrition service horizon and focus on prevention** (37, **21.9%**)	**Service delivery (quality, M&E, coverage) and programming** (54, **29.8%**)	**Family and community engagement** (39, **23.8%**)
Routine management (20, **12.4%**)	Continuum of care, referral linkages, post-discharge care (29, **20.3%**)	Broadening the nutrition service horizon (27, **23.5%**)	Screening, admission, discharge and length of stay (36, **21.3%**)	Supply chain management (commodities, products, technologies (45, **24.9%**)	Integration with other sectors beyond nutrition (36, **22%**)
Feeding protocols and products (16, **9.9%**)	Broadening the nutrition service horizon (20, **13.9%**)	Screening, admission, discharge and length of stay (24, **20.9%**)	Feeding protocols, products and supplies (35, **20.7%**)	Information management system (tools, software, reporting) (39, **21.5%**)	IYCF (29, **17.7%**)
Continuum of care, referral linkages, post-discharge care (12, **7.4%**)	Therapeutic food protocols, products and supplies (19, **13.3%**)	Routine management (14, **12.1%**)	Routine management (29, **17.2%**)	Health workforce and staffing (including capacity building) (35, **19.3%**)	Food and nutrition commodities for prevention (21, **12.8%**)
Screening, admission, discharge and length of stay (12, **7.4%**)	Screening, admission, discharge and length of stay (18, **12.6%**)	Integration with health services and other sectors/ programmes (10, **8.7%**)	Continuum of care, referral linkages, post-discharge care (12, **7.1%**)	Financing (5, **2.8%**)	Maternal-focused strategies (20, **12.2%**)
Broadening the nutrition service horizon (11, **6.8%**)	Integration with health services and other sectors (10, **7%**)	Continuum of care, referral linkages, post-discharge care (8, **7%**)	Integration with health services and other sectors (12, **7.1%**)	Leadership, governance and stewardship (3, **1.7%**)	Growth monitoring and nutrition assessments (13, **7.9%**)
Triage (initial vital sign checks etc) (8, **5%**)	Management of children with disabilities or chronic illness (5, **3.5%**)	Management of children with disabilities or chronic illness (5, **4.4%**)	Management of infants u6m with disabilities or chronic illness (4, **2.4%**)		Programming and designing (6, **3.7%**)
Integration with health services and other sectors (5, **3.1%**)			Triage (4, **2.4%**)		

3.3 Prioritised responses by thematic area

To help to prioritise what is required to address the needs/gaps in the implementation guidance, the top 20 responses were extracted from the overall findings and these have been tabulated below (Table 2).

Six of the top 20 responses fall under the thematic area of programme management across a spectrum of issues including performance monitoring/M&E, supply chain management and another six are in the area of prevention of acute malnutrition/wasting/growth faltering. The remaining eight top responses were distributed among growth faltering in infants u6m (3/20 top responses) and outpatient care for SAM (3/20 top responses). Only one response under outpatient care for MAM made the top 20 list and one under the inpatient care thematic area. However, it is important to note that the latter was the second most frequent response of all and was on the topic of the management of complicated MAM.

Table 2: Top 20 responses across all thematic areas

Priority Rating	Response	Frequency (n=933)	Theme
1	Measuring programme quality including performance indicators and checklists	28	Programme management
2	Management of MAM cases with complications	20	Inpatient care
3	Stock/supply chain management (timely distribution, tracking, utilisation, digital tools)	20	Programme management
4	Anthropometric assessment of infants u6m	16	Infants u6m
5	Community-based health and nutrition promotion including support groups	15	Prevention
6	Specify capacities (minimum requirements) of the workforce including training	15	Programme management
7	Strengthening IYCF programmes for prevention	14	Prevention
8	Applying a caseload calculator to supply management	14	Programme management
9	Simplified, standardised progamme M&E tools	13	Programme management
10	Digital reporting and tools including hospital data	13	Programme management
11	Simplified, standardised programme M&E tools	13	Outpatient care – SAM
12	SAM treatment by community health workers	12	Outpatient care – SAM
13	Role of specialised nutritious foods/small quantity lipid-based nutrient supplements in prevention	11	Prevention
14	Maternal nutrition services including antenatal care and postnatal care especially for underweight mothers (prevention)	11	Prevention
15	Use of alternatives, including ready-to-use therapeutic food (RUTF), to treat MAM children where other options are not available	11	Outpatient care – MAM
16	Options/alternatives when no stock of RUTF, (possibility of using ready-to-use supplementary food, options for reduced dosage)	10	Outpatient care – SAM
17	Management of non-breastfed infants	10	Infants u6m
18	Protocol for management of infants u6m with growth faltering	9	Infants u6m
19	Cooking demonstrations, utilising local foods, contextualised according to the regions, for MAM treatment	9	Prevention
20	Use of family mid-upper-arm circumferance for the early detection of acute malnutrition	9	Prevention

3.4 Responses within thematic areas

The responses within the thematic areas are summarised below and detailed in Annexes 1 to 6.

Inpatient care of SAM and MAM

A total of 161 responses were captured under this theme. Inpatient care for MAM cases with complications (including malaria) attracted the most responses (20) followed by fluids/management for severely dehydrated (8 responses) and acutely malnourished child with chronic illnesses (liver, renal, cancer, HIV coronary heart disease (CHD) (8 responses). The respondents were also concerned with the review/upgrade of antibiotics and other routine medication (6 responses), therapeutic feeding protocol including milk preparation in the absence of infrastructure/electricity (5 responses), alternative nutritional products including local preparation/manufacture (5 responses) and admission and discharge criteria for SAM with complications, including a shift to an outpatient therapeutic programme (5 responses). Annex 1 provides details.

Outpatient care of SAM

The most prevalent responses (143 total) were the treatment of severe wasting by community health workers (CHWs) (12 responses), the options/alternatives when there is no stock of ready-to-use therapeutic food (RUTF)/possibility of using ready-to-use supplementary food (RUSF)/options for reduced dosage (10 responses) and nutrition social behaviour change communication (SBCC), IYCF, and dietary counselling (8 responses).

The respondents were also concerned about the early detection, screening and referral mechanisms in the community, including by CHWs, (6 responses), post-discharge support such as small quantity lipid-based nutrient supplements (SQ-LNS), tools for home visits (6 responses), and the discharge criteria for mid-upper-arm circumference (MUAC)-only programmes (5 responses). Annex 2 details the responses received.

Outpatient care of MAM

The most common responses (115 total) were regarding cooking demonstrations and utilising local foods, contextualised according to the regions (9 responses) and psycho-social stimulation/early child development (7 responses). Both fall under the sub-thematic area of broadening the nutrition service horizon.

Furthermore, the respondents were interested in knowing more about how to manage MAM with no products (6 responses), the admission and discharge criteria of uncomplicated MAM, including beyond anthropometry (6 responses) and low-cost locally made therapeutic food (composition and preparation) guidance and ideas (5 responses). See Annex 3 for all the responses in this area.

Care of infants less than 6 months with growth faltering

The respondents (169 total) were concerned about more clarity on the anthropometric assessment of infants u6m, e.g., weight-for-height/length, weight-for-age, MUAC, (16 responses), the management of non-breastfed infants, including orphans (10 responses), and the protocol for the management of infants u6m with growth faltering (9 responses).

In addition, more details regarding supplementary suckling techniques or other re-lactation methods (7 responses), optimal IYCF practices (6 responses)], particularly breastfeeding (mainly exclusive) (8 responses), and the nutritional intake, knowledge attitudes and practices of the mother (7 responses) were the areas that required more attention in upcoming implementation guidelines. Annex 4 includes all the responses received under this thematic area.

Prevention of acute malnutrition/wasting/growth faltering

The most common prevention guidance needs (from 181 total) were community-based health and nutrition promotion including support groups (15 responses), strengthening IYCF programmes for prevention (14 responses), maternal nutrition services including antenatal care/postnatal care, especially for underweight mothers (11 responses) and adolescent/preconception nutrition services (6 responses). Nine respondents viewed prevention as early detection – e.g., the use of Family MUAC for the early detection of acute malnutrition. Other major responses under prevention included exploring the role of specialised nutritious foods (SNFs)/SQ-LNS in prevention (11 responses) and integration with social security (cash)/how to use cash/vouchers for nutrition (6 responses). See Annex 5 for details.

Programme management

Programme management is a broad thematic area. Notable responses (164 total) under this thematic area included measuring programme quality including performance indicators and checklists (28 responses), stock/supply chain management (timely distribution, tracking, utilisation, digital tools) (20 responses), specify capacities (minimum requirements) of the workforce, including CHWs (15 responses) and applying a caseload calculator to supply management (RUTF, RUSF, F-100, F75 and antibiotics) (14 responses).

The respondents were also seeking guidance on simplified, standardised programme M&E tools (13) and digital reporting and tools, including hospital data (12), staff training tools including M&E reporting, stock management and the frequency of refresher training (9 responses). See Annex 6 for details.

Further details on the top responses by thematic area are presented in Table 3.

Table 3: Summary of emerging priorities by thematic area

**Bold italics indicates those attracting considerably more responses*

Thematic area	Emerging priorities (*highest response rates**)
Inpatient care of MAM and SAM	***1. Inpatient care of MAM cases with complications (including malaria)*** **2.** Fluids/management for severely dehydrated children **3.** Management of chronic illnesses (liver, renal, cancer, HIV CHD) **4.** Review/upgrade antibiotics and other routine medication
Outpatient care of SAM	***1. Treatment of SAM by CHWs*** ***2. Options for RUTF alternatives/reduced dosage when RUTF stock-outs*** **3.** Nutrition SBCC, IYCF, and dietary counselling **4.** Early detection, screening and referral mechanisms in community (including by CHWs) **5.** Post-discharge support (such as SQ-LNS, tools for home visits)
Outpatient care of MAM	**1.** Using local/contextualised foods for care management **2.** Psycho-social stimulation/early child development **3.** Management of MAM with no products **4.** Admission and discharge criteria of uncomplicated MAM, including beyond anthropometry
Care of infants u6m with growth faltering	***1. Anthropometric assessment of infants u6m*** **2.** Management of non-breastfed infants u6m **3.** Management of infants u6m with growth faltering **4.** Optimal breastfeeding (exclusive)
Prevention of acute malnutrition/ wasting /growth faltering	***1. Community-based health and nutrition promotion including support groups*** ***2. Strengthen IYCF programmes for prevention*** ***3. Maternal nutrition services including ANC/PNC, especially for underweight mothers*** ***4. Role of SNFs/SQ-LNS in prevention***
Programme management	***1. Measuring programme quality including performance indicators and checklists*** **2.** Stock/supply chain management **3.** Specify capacities (minimum requirements) of the workforce, including CHWs **4.** Applying a caseload calculator to supply management (RUTF, RUSF, F-100, F75 and antibiotics) **5.** Simplified, standardised programme M&E tools **6.** Digital reporting and tools, including hospital data

3.5 Additional comments from survey respondents

When asked for 'further comment', other areas suggested by the respondents included multi-sector action (food security and livelihoods, Water, sanitation and hygiene, agriculture, education to tackle malnutrition) (3 responses), the management of child obesity (2 responses) and gender considerations, taking into consideration men, and gender equality especially in the context of care practices and/or IYCF (2 responses)[7].

3.6 Types of tools

With regard to useful tools and formats needed for implementation guidance, nine different options with varied levels of priority were requested by the respondents. Of these nine, (detailed in Figure 6 below), a 'how-to' manual received the greatest number of responses with the highest priority (70%) followed by a training package (67%), M&E tools for the programme (61%), digital content e.g., a mobile app (55%), a flow chart for programme management (53%), and a flow chart for individual management (47%).

Other tools which included a policy brief, templates for patient records, and supervision tools for staff were graded as a lower priority by the majority of the respondents. Moreover, templates for patient records and policy briefs had the highest number of responses in terms of 'what exists is adequate' i.e., 34% and 22% respectively.

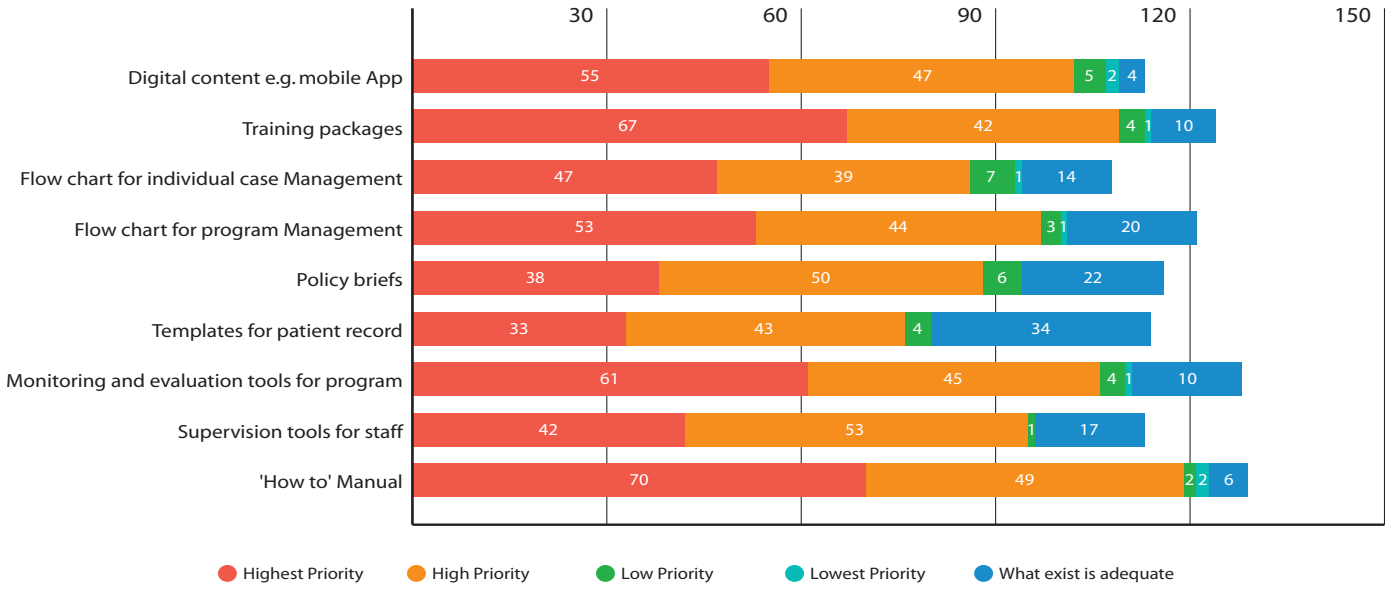
The survey data did not permit a full analysis of which type of tool was desirable for which implementation guidance request, further than those specified in the table.

3.7 Existing resources for reference

The respondents suggested the following existing resources that might be useful for review when creating new implementation guidance:

- MAMI Care Pathway Package https://www.ennonline.net/mamicarepathway
- Simplified Approaches Implementation Pack Save the Children's CMAM Toolkit Simplified Tools for Community-Level Treatment of Acute Malnutrition – State of Acute Malnutrition[8]
- CMAM Surge operational guidelines cmam_surge_operational_guide_0.pdf (concern.net)
- Em Care app Em Care (who.int) (pilot phase)
- USAID Advancing Nutrition – new counselling tool for Growth Monitoring and Promotion integrated with Early Childhood Development. (https://www.advancingnutrition.org/what-we-do/activities/strengthening-growth-monitoring-and-promotion-core-child-health-and-nutrition)
- MSF – standardised set-up guidance for stabilisation centres (internal document)

Figure 6: Most useful tools/formats needed for implementation guidance (% of responses)



7 In addition, the following topics were each mentioned by one respondent: management of children with both stunting and wasting, role of IGF2, hospital-acquired malnutrition, expanded MUAC only programming during emergencies e.g. COVID, climate change, protecting the environment, how mHealth/mobile solutions can be used to support prevention and treatment, food systems, food security, malnutrition in adolescents, CMAM surge, husband schools and analysis of community resilience to health disasters.

8 Note that the latest tools and resources on simplified approaches are now housed here: https://www.simplifiedapproaches.org/copy-of-tools-resources

3.8 Gaps in implementation guidance identified through other processes

During the development of the Em Care app by the WHO, a clinical reference group was convened to advise on the technical content to identify technical gaps and inconsistencies. In providing technical advice or facilitating the development of consensus-driven guidance, the GNC-TA Wasting GTWG identified outstanding gaps in the guidance. Table 4 categorises the questions that have been compiled from the GNC-TA Wasting GTWG baseline survey and the Em Care app process. All were also identified to varying degrees by the survey respondents. Gaps in the guidance identified during the WHO guidelines update process will be added to this compilation on its release in mid-2023.

Table 4: Gaps in guidance compiled from alternative processes

Question/gap	Source
Screening, assessment and management (inpatient and outpatient)	
What to do if age is unknown – proxies?	Em Care
Guidance on SNFs and micronutrient supplements	Em Care and GNC-TA GTWG
When to give albendazole – does there need to be a delay?	Em Care
Complications screening and management – TB? HIV? Cholera?	Em Care
Stock outs/absence of therapeutic foods – guidance when no RUTF/RUSF/F100/ReSoMol	Em Care and GNC-TA GTWG
Antibiotics – When? Which ones? How? Resistance and shortage considerations	Em Care
Guidance on the appetite test – necessity, false negatives	Em Care
Guidance on active case finding	Em Care
Identification and management of pregnant and lactating women	GNC-TA baseline survey
Therapeutic Supplementary Feeding Programmes	GNC-TA baseline
Different mid-upper-arm circumference (MUAC) cut-offs for pregnant and lactating women, infants under six months of age, and adolescents in different settings.	GNC-TA baseline
Contextual guidance on using MUAC only admission criteria to community management of acute malnutrition (CMAM) programmes	GNC-TA baseline
Standardisation of using MUAC	GNC-TA baseline
Implementation of mortality surveys	GNC-TA baseline
Contextualisation of outpatient discharge criteria for CMAM programmes	GNC-TA baseline
Alignment of national guidelines on the preparation of infant formula with global guidance	GNC-TA baseline
The utilisation of therapeutic foods in other age groups	GNC-TA baseline
Post-discharge and prevention	
Follow-up schedule	Em Care
Programme management	
Procedures for the assessment and identification of therapeutic foods that are unsafe to consume	GNC-TA baseline

4.0 **Conclusions and next steps**

This survey has identified clear gaps in the guidance for the prevention and management of acute malnutrition in infants and children under five years. The results reveal areas of consensus where guidance is lacking, in addition to some gaps in awareness of guidance that already exists. With regard to the gaps identified through the GNC-TA Wasting GTWG and the Em Care app process, all were identified to varying degrees by the survey respondents. Emerging priorities through these combined sources include inpatient care for MAM cases with complications, outpatient care by CHWs, the use of alternative products, approaches or locally available alternatives for the management of acute malnutrition, and anthropometric assessment and case management of growth faltering in infants u6m.

The management of outpatient MAM and infants u6m shared common high priorities – screening, admission and discharge, feeding protocols and products, and broadening the nutrition service horizon. The percentage was highest for outpatient MAM; the response numbers are higher for infants u6m. This is not an unexpected finding given there is much less guidance on MAM and infants u6m compared to SAM for children over six months, and there is no WHO guideline on complicated MAM management. Both the management of MAM and the management of infants u6m are included in the WHO wasting guideline update[9].

The majority of the top 20 guidance gaps fall under the areas of prevention and programme management. Guidance is sought on how to strengthen community-based nutrition and health promotion and services, including IYCF and maternal support. Guidance on improving the methods available to measure programme quality, strengthen supply chains and capacitate workforces is needed.

The type of resource/guidance needed includes training packages and a 'how-to' manual as priorities together with specific tools tailored for specific purposes.

Implementation guidance will be needed to help to put the WHO recommendations and good practice statements into practice and to address the outstanding gaps that have not been addressed. Guidance gaps may also spotlight evidence gaps to inform a research agenda. When the updated WHO wasting and nutritional oedema (acute malnutrition) guidelines are released, it will be necessary to cross-check the degree to which the gaps we have identified have been addressed, how best to address these, and who is best placed to do so. This will include the gaps in guidance identified early on within the WHO guidelines update process that were considered beyond the scope of the guideline update.

These findings will be presented to the UNICEF/WHO TAG on Wasting and Nutritional Oedema (Acute Malnutrition) to inform the prioritisation of and planning for the development of implementation guidance to support the uptake of the upcoming WHO guidelines, with the GNC-TA and relevant GTWGs, and made publicly available to inform other initiatives and help to identify the next steps.

9 The WHO guideline update PICO questions are here: https://www.childwasting.org/_files/ugd/2b7a06_0633477e3a56482abf37df0007f665b3.pdf

5.0 **Annexes**

Annex 1: Inpatient care of SAM and MAM

Inpatient care	**[Total 161 responses]**
Clinical Management of Complications	*Inpatient care for MAM cases with complications (inc malaria) [20], Chronic illnesses (liver, renal, cancer, HIV CHD) [8], Fluids/ management for severely dehydrated [8], Differentiated treatment protocols for kwashiorkor vs wasting [4], Assessment and management of anaemia for inpatients [4], Management of shock [4], Organisation of blood transfusions [3], Children with feeding difficulties [3], Diarrhoea and vomiting [2], Electrolyte deficiency/imbalance [2], Coma [2], Malnutrition [2], Hypothermia [1], Hypoglycaemia [1], Marasmic-kwashiorkor, danger signs [1], Convulsions [1], Children with disabilities [1], Cancer [1], Management in the first 24 hours [1], Oxygen administration [1], How to stabilise a child so they can be transferred from community detection to inpatient care [1], Marasmus with sickle cell disease [1], Managing and understanding the link between HIV and acute sceptic shock and hypovolemic shock [1], Dehydration in kwashiorkor [1], Management of respiratory distress [1], Management of cases with TB [1], Management of SAM and Noma [1]*
Routine Management -Inpatient	*Review/upgrade antibiotics and other routine medication [6], Alternative injectable medication for SAM [1], Inclusion of provision of injectable vitamin B12 [1], Use of anthropometry software for monitoring patients [1], Management/treatment of malnourished mothers/caretakers alongside admitted SAM child [1], Providence of mothers' kits with nutritious food items [1], How to build-in surge capacity to increase admissions during lean season/emergencies [1], Nutritional monitoring of hospitalised children [1], More guidance on management of non-response [1], Alternatives if certain drugs are out of stock [1], Use of thiamine [1], Use of the nasogastric tube (insertion, removal, contraindicators) [1], Management of pain (including for skincare in kwashiorkor) [1], Resuscitation and monitoring of paediatric vital signs [1], Troubleshooting if there is weight loss [1]*
Feeding Protocols and Products	*Therapeutic feeding protocol including milk preparation in the absence of infrastructure/electricity [5], Alternative nutritional products including local preparation/manufacture [5], Use of F100 VS RUTF in transition phase [2], Dilution of RUTF with water and given through an NG tube when F-75 or F-100 not available /RUTF refused [2], Cautious feeding [1], Transition from F75 to F100 [1]*
Triage (initial vital sign checks etc.)	*Assessment of medical complications [3], Triage procedure [1], Vital sign taking time (interval) [1], Assessment of underlying causes of wasting (e.g., due to TB, metabolic disorders) [1], How to do appetite test [1], Practical first aid procedures for emergencies and stabilisation before referral [1]*
Continuum of Care, Referral Linkages, Post-Discharge Care	*Continuum of care and linkages with other sectors, including community outreach [2], Follow up for relapse or death post-discharge [2], Post-discharge care (including home feeding advice) [2], Technical details for referrals [1], Following up on referral [1], Linkage between SAM and MAM management programmes [1], Useful patient follow-up sheets [1], What to do when families cannot afford inpatient care [1], Support families to accept to bring their child to treatment (consider opportunity cost: transportation, care of other children, loss of income, poverty…) [1]*
Admission, Discharge and Length of Stay	*Admission and discharge criteria for SAM with complications, including shift to OTP [5], minimum/maximum duration of admission for SAM (including non-cured) [3], Admission criteria after 59 months [1], Use of appetite (lack of) test as an admission criterion (consider MUAC >11.5 and no appetite) [1], Measuring or screening tools appropriate to different settings (e.g., consecutive measures vs single measures) [1], Details on how to do surveillance [1,*
Broadening the Nutrition Service Horizon	*Nutrition awareness sessions (dietary diversity, IYCF) for caregivers [4], Providing ECD/sensory stimulation [4], Provision of psycho-social support for caregivers [2], Maternal nutrition [1]*
Integration with Health Services	*How to integrate with IMNCI [1], how to integrate complicated SAM management protocols within existing paediatric care infrastructure [1], Ensure terminology use and operational management is aligned with all paediatric care [1], Integrate Kangaroo Mother Care [1], Wider capacity building advice for public health system [1]*

Annex 2: Outpatient care of severe wasting

Outpatient – SAM	**[Total 143 responses]**
Routine Management of Outpatient SAM Cases	*Treatment by CHWs [12], Health and nutrition education and counselling to mothers for community management of SAM/MAM without medical complications [4], Reiterate rationale and guidance for routine antibiotics (i.e., consider issues of resistance to antibiotics) [4], Follow-up frequency or any known risks of increasing the interval between follow-up beyond one week [3], Clarity around deworming (dosage) and reasons for its provision [3], Micronutrient supplementation inc. dosage (e.g., vitamin A and zinc) [2], Management of diarrhoea [1], Management of poor weight gain [1], Effective nutrition counselling for mother/caretaker [1], Whether it is advised to give F-100 to caretakers for home to prepare [1], Alternatives when there are stock-outs of routine drugs (e.g., certain antibiotics) [1], Approach for those who refuse care [1], Management/treatment of malnourished mothers/caretakers alongside SAM child [1], Care of SAM with mild anaemia and mild dehydration [1], Management of non-response to treatment [1], Guidance on how to calculate weight gain [1], Implementing OTP in nomadic communities [1], Management of low/no appetite [1], How to deal with the second twin when only one of them is malnourished [1], Management of acute malnutrition associated with asthma [1]*
Therapeutic Food Protocols, Products and Supplies	*Options/alternatives when no stock of RUTF, possibility of using RUSF, options for reduced dosage [10], Local recipes for therapeutic foods that can be made within the communities [3], Use of family foods in combination with RUTF [3], Guidance on multivitamins and zinc [1], Role of low iron foods (apart from RUTF) on mortality rates [1], Dosage calculations for RUTF [1]*
Management of Malnourished Children with Disabilities or Chronic Illness	*Outpatient management of SAM patients with disability or chronic illnesses (cerebral palsy) [3], Improve TB and HIV guidance [1], Screening for acute malnutrition in children with disabilities [1]*
Continuum of Care, Referral Linkages, Post-Discharge Care	*Early detection, screening and referral mechanisms in community (including by CHWs) [6], How to define, monitor and prevent relapse [4], Consideration for improving family MUAC (minimum standards for its accuracy, illiterate parents) [3], Clarify how to do referrals between programmes, including criteria for referral [3], How to limit defaulting/loss to follow-up [2], How to improve home environment [2], Integrated SAM and MAM care [2], Management of re-admissions [1]*
Admission, Discharge and Length of Stay	*Discharge criteria for MUAC only programmes [5], Admission criteria for children >5 years [3], Recommended two way diagnosis criteria MUAC and WFH/L [2], Minimum length of stay [2], Operationalisation of assessment criteria that better accounts for level of mortality risk [2], Different MUAC cut-off for 6-23, 24-59 months group for wasting [1], Adapting MUAC cut-offs by country [1], Admission and discharge criteria for OTP when there is no availability of TSFP for MAM management [1], Triage and rapid assessment of children [1]*
Broadening the Nutrition Service Horizon	*Nutrition SBCC, IYC, and dietary counselling [8], Psycho-social development /ECD [3], Psycho-social/mental health support for the caregiver [2], Health literacy among caregivers [1], Holistic family health practices [1], Vaccinations for the OTP admitted children [1], Protocol for undernutrition/wasting in adolescent [1], IYCF tools [1], Social protection for very impoverished families [1], Supporting family environment [1]*
Integration with Health Services and Other Sectors	*How to integrate with IMNCI [4], Linkages with other existing programmes and services [2], Integrate IYCF and maternal nutrition and WASH in CMAM [1], Delivering CMAM care through existing health delivery systems [1], Decision tool for when to integrate CMAM and when to deliver vertically [1], Utilisation of ICDS services [1]*

Annex 3: Outpatient care of moderate wasting

Outpatient MAM	[Total 115 responses]
Routine Management of MAM Cases	*Routine medicines for MAM e.g., vitamin A, deworming, etc. [2], Nutrition counselling methods/content [2], Protocol in case of non-response to treatment [2], Management of poor weight gain and MAM [2], Differentiated care for <2 years and >2 years [1], Treatment/management of MAM cases in different contexts e.g., food secure vs. food insecure, high vs. low GAM rates, product based vs. non-product based interventions [1], Management of diarrhoea and MAM [1], Use of traditional herbal remedies [1], How to maximise caregiver adherence to treatment [1], Role of CHWs in MAM treatment [1]*
Therapeutic/Supplementary Food Protocols, Products and Supplies	*Use of alternative, including RUTF, to treat MAM children where other options are not available [11], Management of MAM with no products [6], Low-cost locally-made therapeutic food (composition and preparation) guidance and ideas [5], MAM product specifications, dose, treatment modality [2], Clear guidance on what other foods should be eaten alongside 'supplemental' dose [1], RUTF doses based on metabolic dysfunctionalities, by individual case [1], Additional micronutrient supplementation based on RUTF doses and nutritional and energy requirements of malnourished children (especially iron, folic acid and vitamin A) [1], Tom Brown programme [1]*
Management of Malnourished Children with Disabilities or Critical Illness	*Management of MAM patients with disabilities [2], MAM and chronic illness (TB, HIV) [2], Management of those most at risk with MAM (under 2 years old or those that might have illnesses) [1]*
Continuum of Care, Referral Linkages, Post-Discharge Care	*Referral procedures/pathway [3], Follow up procedures at the community level/home visits [3], How to convince parents and guardians to remain in the programme with little or no motivation [1], How to monitor and prevent relapse inc. linkages with prevention services [1]*
Screening, Admission, Discharge and Length of Stay	*Admission and discharge criteria of uncomplicated MAM, including beyond anthropometry [6], Screening methods [4], Considerations around MUAC only admission criteria [3], Minimum/maximum length of stay [3], Use of Family MUAC [3], Early assessment of MAM at community level [2], Identifying MAM children at risk of SAM [1], Optimal duration of treatment [1], Recommendations about frequency of follow-up consultations [1]*
Broadening the Nutrition Service Horizon	*Cooking demonstrations, utilising local foods, contextualised according to the regions [9], Psycho-social stimulation/ECD [7], Complementary feeding advice/IYCF [3], Guidance on breastfeeding and MAM children [2], Role of strengthening food systems in addressing MAM in different contexts [1], Family and community empowerment [1], Community participation [1], Maternal psychosocial support [1], MAM management for adolescents [1], Approach PD/Hearth [1]*
Integration with Health Services and Other Sectors/Programmes	*Linkage with social protection programmes [4], Integrate with primary health care [3], Connections with GMP [1], How to integrate TSFP within IMCI [1], Links with reproductive health programmes [1]*

Annex 4: Care of infants u6m with growth faltering

Infant u6m	[Total 169 responses]
Management of Malnourished and Nutritionally At-Risk Infants (u6m) and Their Mothers	*Protocol for management of u6m with growth faltering [9], Counselling guidance for the mother [5], Protocol for mother/caregivers of u6m with growth faltering [2], Fluid management protocol for u6m [2], Routine medication, including antibiotic use [2], MAM children u6m [1], Management of growth faltering in 1st month of life [1], Management of concurrent illnesses [1], Management when mother is underweight [1], Guidance on interventions to prioritise based on impact and cost-effectiveness [1], Training on assessment and management for MAMI for health providers [1], Simplify the MAMI CP approach and provide tools for countries to unpack the MAMI elements [1], Recommend free formula milk for infants without possibility to breastfeed [1], Protocol for non-response in infants [1]*
Feeding Protocols, Products and Supplies	*Management of non-breastfed infants, including orphans [10], Details related to supplementary suckling technique or other re-lactation methods [7], Preparation and feed quantities, procedures, frequencies [4], best formula for catch-up growth/products for infant wasting besides breastmilk [2], Treatment/management of lactose intolerance [1], Re-initiate breastfeeding [1], Skilled lactation support [1], Starting time of complementary feeding, 4 or 6 months [1], Potential use of RUTF for <6 m olds [1], Alternative feeding options when F100 or formula is not available [1], Breastfeeding continuation while having breast conditions [1], Reduction of mixed feeding [1], Formula feeding hygiene [1], Use of infant initiation formulas [1], Management in pastoral areas where cows' milk is very available [1], Preparation and use of milk from goats, cows, camels, sheep [1]*
Management of Infants u6m with Wasting and Disabilities or Chronic Illness	*Feeding program for infants u6m with feeding difficulties due to disability [3], HIV-exposed infants [1]*
Continuum of Care, Referral Linkages, Post-Discharge Care	*Referral linkages/criteria [4], Periodicity of home visits and follow up, including long term follow up [3], Follow-up of infants without prospects of being breast fed [2], Guidance on collaboration between out-patient care facilities and in-patient care, including transition from post-natal care to MAMI care and identification of possible growth faltering during ANC [1], Training to improve parents' skills on MAMI [1], Adequate tools and job aids that could help CHWs to educate households on MAMI [1]*
Screening, Admission, Discharge and Length of Stay	*(Accurate) Anthropometric assessment of infants u6m (e.g., WFH/L, WFA, MUAC) [16], Community screening tools, interval [5], Admission criteria, including those used in community vs facility [4], How growth monitoring relates to admission criteria [3], Discharge criteria in this age group [2], Enhance ability of mothers to recognise growth faltering in infants u6m where MUAC may not be applicable [2], Entry and exit criteria for stunted infants [2], Should premature and low birth weight infants be defined as acutely malnourished [1], Expand admission criteria e.g., related to quality of breastfeeding and other mother-child binomial assessment [1]*
Triage	*Danger signs to identify children that need to be referred [1], Assessment of maternal health history [1], Decision tree to simplify identifying the cause of growth faltering [1], Sorting which cases can be managed at community level and which are to be referred to the facility [1]*
Broadening the Nutrition Service Horizon and Focus on Prevention	*Particularly breast feeding (exclusive) [8], Nutritional intake, knowledge attitudes and practices of the mother [7], Optimal Infant and young child feeding practices [6], Clear guidance on growth monitoring programming [4], Maternal mental health and social support [3], Management of stunting in infants u6m [3], Infant stimulation/ECD [2], Family planning advice [1], Nutrition and ANC during pregnancy [1], Integrated awareness techniques against growing unhealthy food and beverage companies and the culture of formula feeding [1], Community dietary practices and food taboos [1]*
Integration with Health Services and Other Sectors	*Links between MAMI and local health systems, including ANC and Under5 clinics [4], How to include MAMI in expanded IMNCI assessment and classification [3], Integrate screening with growth monitoring and promotion programmes [2], How to integrate MAMI with existing IYCF promotion programmes [1], Guidance on identifying at-risk infants during pregnancy [1], Include advice on impact of breastfeeding on gender dynamics and how women can be better supported [1]*

Annex 5: Prevention of wasting

Wasting prevention	[Total 164 responses]
Food and Nutrition Commodities for Prevention	*Role of SNFs/SQLNS in prevention [11], Role of MNP in prevention [3], Protocol for cooking demonstration activities in health centres [3], What is appropriate dietary diversity for prevention [1], Promotion of which local foods for prevention [1], Digital software that can guide individualised dietary advice [1], When and how to implement blanket feeding [1]*
Infant and Young Child Feeding	*Strengthen IYCF programmes for prevention [14], Improved nutrient-dense, how to support dietary diversity [5], Complementary recipes, locally adapted [3], Skilled lactation support/breastfeeding counselling [3], How to support exclusive breastfeeding [3], Age/sex adjusted diet and calories requirements for normal children and for acute and chronic malnourished children [1]*
Family and Community Engagement	*Community-based health and nutrition promotion including support groups [15], Use of Family MUAC for early detection of acute malnutrition [9], Educating community heads and religious leaders on prevention, IEC and SBCC materials including innovative methods (telenovela, theatre, songs, etc.) [5], Training for community health workers and other nutrition staff on counselling and behaviour change skill [3], PD/Hearth activities [3], Community sensitisation to address misconceptions and taboos [1], Early identification of at-risk households [1]*
Integration with Other Sectors Beyond Nutrition	*Practical guidance on areas/entry points for integration with key sectors [9], Integration with social security (cash)/how to use cash/vouchers for nutrition [6], Role of WASH in prevention (also "baby wash" approach) [6], Integration with agriculture (homestead gardening) [5], Support health facilities to prevent wasting in sick children [3], Integrate with health packages: vaccination and deworming, diarrhoeal diseases, malaria and respiratory infections [2], How to create healthy food environments [1], Role of family planning services [1], Pre-school, day-care and school feeding programmes for prevention [1], Integration with livelihoods programmes [1], How to prevent stunting [1], Role of family planning [1]*
Growth Monitoring and Nutrition Assessments	*Link growth monitoring with therapeutic programme [5], Guidance on nutrition screening strategies [2], Guidelines on management of weight faltering including home visits [2], Sensitising frontline workers on assessing nutritional status and plotting growth charts [1], Flow diagram showing screening to treatment in different scenarios [1], Consideration of stunting as a risk factor [1], Recommended frequency of weight monitoring [1]*
Maternal-focused Strategies	*Maternal nutrition services including ANC/PNC, especially for underweight mothers [11], Adolescent/preconception nutrition services [6], Maternal mental health support [1], Risk factors for child wasting in pregnant women [1], Strategies to prevent low birth weight [1]*
Programming and Designing	*How to design programmes that address context-specific risk factors for wasting [2], Delivering prevention programmes at scale [1], Delivering prevention strategies in humanitarian contexts [1], Motivation of community volunteers [1], Improve financing for prevention activities [1]*

Annex 6: Programme management

Programme management	[Total 181 responses]
Service Delivery (quality, M&E, coverage) and Programming	*Measuring programme quality including performance indicators and checklists [28], Specifications for minimum requirements of space for OTP and SC [3], Integration of CMAM surge/contingency planning into routine CMAM programme monitoring and planning [2], Tips for running an SC in low resource setting (lacks HR, not 24/7) [2], checklist for development and emergency set up [2], Management of SAM and MAM at the community level through home visits [1], Monitoring to ensure adherence to treatment [1], Complaints response mechanisms [1], Identify and exploit synergies with other programmes, e.g., immunisation, social safety nets, pre-school support [1], How to do coverage assessments [1], Consolidated guidance on when to use alternative treatment approaches (e.g., local foods for MAM during stock outs) [1], Integration of Covid guidance into routine programming where they are still useful [1], Laboratory support requirements for NRU [1], Agreement on programming in the absence of specialised nutrition foods [1], Implementation guidance on setting up CHW treatment for SAM (tools, training guidelines for CHWs, supply chain, monitoring, etc.) [1], Guidelines, tools, training and M&E framework for setting up an infant growth faltering programme including referral linkages [1], Guidance on how to make nutrition sites more child friendly [1], Promoting dignity in care [1], Medical waste management [1], Programme organisation when implemented by mobile teams [1], TSFP and NRU M&E indicators [1]*
Health Workforce and Staffing (including capacity building)	*Specify capacities (minimum requirements) of the workforce, including CHWs [15], Staff training tools including M&E reporting, stock management, frequency of refresher training [9], Protocols for monitoring and supervising staff [3], Use of CHWs to support the programme (delivery, mapping hotspots, follow-up) [2], Roles and responsibilities for different staff (doctors/nurses) [2], Recommended ratio of health workers per health centre according to the size of the population [2], Recommendation for female staff as part of team to support breastfeeding mothers [1]*
Supply Chain Management (commodities, products and technologies	*Stock/supply chain management (timely distribution, tracking, utilisation, digital tools) [20], Applying a caseload calculator to supply management (RUTF, RUSF, F-100, F75 and antibiotics) [14], List of routine medications/stock (including role of pharmacies, inclusion of blood glucometer) [4], Last-mile supply chain management [2], Procedure for dealing with stock outs [1], Methods to prevent RUTF leakages [1], Calculation of NRU beds needed according to the expected caseload and staff ratio [1], Standard stock cards [1], How to conduct stock inventories [1], Storage conditions for supplies [1]*
Financing	*Measurement of cost efficiency and effectiveness [4], More funds for community nutrition as opposed to main focus at health facilities [1]*
Information Management System (tools, software, reporting)	*Simplified, standardised programme M&E tools [13], Digital reporting and tools, including hospital data [12], Managing patient data, including transfers and double counting issues [4], Routine nutrition indicators to be included in DHIS2/HMIS [4], Use of android apps for measuring anthropometry [1], Reporting frequency for emergency (daily vs weekly) [1], Use of digital software for parents to monitor the growth of their own children [1], How to establish data feedback loops [1], Enrolment calculation for OTP beneficiaries [1], Patient information systems that facilitate post-discharge follow-up [1]*
Leadership, Governance and Stewardship	*How to strengthen the legality on stock management [2], Involvement of local authorities in CMAM management [1]*

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