

# A REVIEW OF EN-NET CONTENT 2019-2021 TO IDENTIFY ONGOING AND EMERGING TECHNICAL NEEDS

## Key messages

This report provides a review of en-net content over the last three years in order to identify ongoing and emerging technical needs and guidance gaps. The report builds on a previous 2018 baseline report which, among other lines of analysis, captured some of the key reflections and technical needs highlighted on the en-net platform.

Key topics emerging from across en-net's thematic forum areas include survey challenges, nutritional products, anthropometric considerations, simplified approaches, Community-based Management of Acute Malnutrition (CMAM) and Therapeutic Supplementary Feeding Programmes. This review also identified several potential areas of need within each of these topic areas which may be due to difficulties with adapting guidelines to a specific context and the need for more sharing of implementation experiences, gaps in technical guidance or consensus, a lack of awareness of available guidance, or the need for further research. These potential areas of need included but were not limited to:

- Identification and management of pregnant and lactating women.
- Therapeutic Supplementary Feeding Programmes.
- Different mid-upper-arm circumference (MUAC) cut-offs for pregnant and lactating women, infants under six months of age, and adolescents in different settings.
- Contextual guidance on using MUAC only admission criteria to CMAM programmes.
- Standardisation of using MUAC.
- Implementation of mortality surveys.
- Contextualisation of outpatient discharge criteria for CMAM programmes.
- Procedures for the assessment and identification of therapeutic foods that are unsafe to consume.
- Alignment of national guidelines on the preparation of infant formula with global guidance.
- Procedures in the absence of therapeutic foods.
- The utilisation of therapeutic foods in other age groups.

## Acknowledgement

This report was developed by ENN (Eilise Brennan in consultation with Tanya Khara, Natalie Sessions and Tamsin Walters) on behalf of the GNC Technical Alliance.

## Background

The Global Nutrition Cluster Technical Alliance (GNC-Technical Alliance, previously the Global Technical Assistance Mechanism for Nutrition (GTAM)) is a global mechanism, established in 2017, which aims to provide predictable, timely and coordinated nutrition technical assistance to meet the nutrition needs of people affected by and at risk of emergencies. It is led by the United Nations Children's Fund (UNICEF) with World Vision International (WVI) as co-lead. The Alliance's primary function is to provide technical advice; facilitate rapid, consensus-driven stop-gap guidance in the absence of established normative guidance; and provide specialised technical expertise<sup>1</sup>.

Emergency Nutrition Network's (ENN) en-net platform is a free, open online space for informal technical discussions, where people can pose questions, share experiences, challenges faced and offer potential solutions. As part of a larger baseline assessment conducted to identify key existing technical areas and gaps experienced at field level for the Alliance to focus on, the Technical Rapid Response Team (now a part of the Alliance's Technical Support Team) and ENN undertook a review of en-net in 2018.

A total of 984 questions posted on en-net between 2009 and 2018 under the four most commonly used thematic forum areas: "Assessment"; "Prevention and Treatment of Severe Acute Malnutrition (SAM)"; "Prevention and Treatment of Moderate Acute Malnutrition (MAM)"; and "Infant and Young Child Feeding in Emergencies (IYCF-E)" were reviewed. Each thematic forum area was analysed separately, with a range of technical gaps identified in each including: contextualisation of survey guidance; procedures in the absence of therapeutic food; issues around aligning severe and moderate wasting programmes; lack of global guidance on moderate wasting; the need for support in standardising and updating national Community-based Acute Malnutrition (CMAM) guidelines; monitoring and evaluation of IYCF-E; and the management of non-breastfed infants.

The 2018 en-net review, together with assessments/surveys of technical needs conducted with country level cluster coordinators, country technical working groups and the Alliance's global partners was compiled into a baseline assessment report<sup>2</sup> which was used to guide the initial work of the Global Thematic Working Groups (GTWGs).

Since this baseline report, there have been a number of shifts in the technical needs of practitioners. For example, the COVID-19 pandemic has not only increased but changed to some extent, the nature of the technical guidance requested. To help the Alliance evolve with changing needs, the leadership team has implemented monthly learning review meetings to reflect on technical guidance, and learning gaps emerging from the questions and support needs raised by field actors through en-net, the Alliance's helpdesks and dashboard<sup>3</sup>. Given these shifts and to further inform the learning review meetings and the work of the GTWGs in filling technical guidance gaps, it is timely to now conduct a further review of en-net questions highlighted on the platform since the beginning of 2019. To support the identification of technical guidance gaps, this review also aims to identify topics that emerge across all en-net's thematic forum areas.

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<sup>1</sup> Global Nutrition Cluster Technical Alliance. (2021). Strategic intent document. Available at: <https://ta.nutritioncluster.net/about>

<sup>2</sup> Global Technical Assistance Mechanism for Nutrition. (2019). Baseline Technical Needs Assessment Report. Available at: <https://www.enonline.net/resource/baselinettechnicalneeds2019>.

<sup>3</sup>The dashboard is an IT platform where all technical requests submitted to the Alliance are housed.

## Objective

The aim of this review is to summarise the discussions on en-net from 1<sup>st</sup> of January 2019 to the 13<sup>th</sup> of July 2021 (date when the analysis began) to identify key needs in terms of technical guidance, experience sharing and research that practitioners are bringing to the forum areas.

## Methods

All en-net thematic forum areas were reviewed: "Management of Wasting/Acute Malnutrition"; "Assessment and Surveillance"; "Infant and Young Child Feeding (IYCF) Interventions"; "Management of small and nutritionally At-risk Infants under six months and their Mothers (MAMI)"; "Simplified Approaches for the Management of Acute Malnutrition"; "Adolescent Nutrition"; "Multi-sectoral Programming"; "Prevention and Management of Stunting"; "Partnerships for Research"; "Food Assistance"; "Coverage Assessment"; "Scaling Up Nutrition (SUN)"; "Micronutrition"; "Cross-cutting Issues"; "Other Thematic Areas"; "COVID-19 and Nutrition Programming"; "Announcements and Nutritionist Needed"; and "Upcoming Trainings". "Announcements and Nutritionist Needed" and "Upcoming Trainings" forum areas were excluded from several of the analyses as only announcements are posted in these forum areas. Similarly, the "COVID-19 and Nutrition Programming" forum area was excluded from several of the analyses, and topics emerging from this forum area were analysed separately as current COVID-19 related questions are now integrated across the other thematic forum areas.

Questions were exported into excel and analysed in each thematic forum area by target group, location, number of replies, number of views, if the question was answered, how the question was answered and if there was any discord. Questions were coded as answered if a solution to the question was provided, either through the sharing of personal experience, the provision of specific guidance material or advice from a technical expert. For this review, technical experts are en-net users that have been assigned the role of technical expert, and thus have a banner distinguishing them from general en-net users. Answers posted between 2019 and 2020 were extracted and analysed to identify if discussions were happening in posts pre-2019. Different types of posts were identified, and groups were developed (**Box 1**) to define the different needs. Topics that emerged across thematic forum areas were then identified alongside key needs for practitioners using the en-net platform.

### Box 1: Types of posts

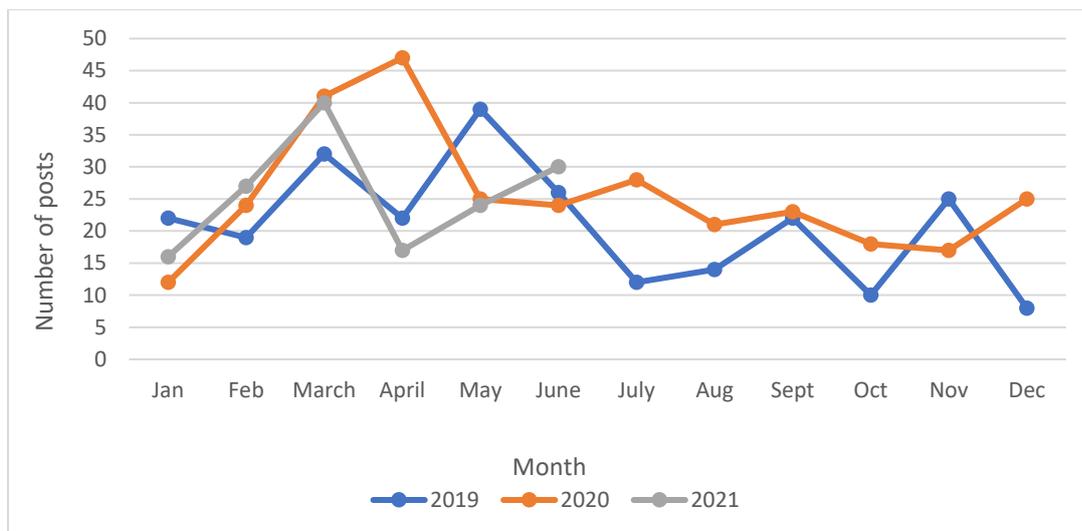
- **Announcements:** Information is shared but no response is required.
- **Guidance:** Author is looking for guidance on a topic, can be technical guidance and/or a guidance document request.
- **Tool:** Author is requesting a tool.
- **Shared experience:** Author is looking to gain insights into other people's experiences on a particular topic.
- **Seeking inputs:** Author is asking for inputs from en-net users but is not looking to start a discussion on the en-net forum (e.g., answering a survey).
- **Research:** The question is related to ongoing or planned research.

## Results

### *General en-net platform usage*

The platform is relatively well used, between January 2019 and the 13<sup>th</sup> of July 2021 there were 716 posts, 1,012,311 views and 950 responses. Overall, 76% of questions (excluding announcements and posts seeking inputs) were answered, with 24% receiving advice from technical experts. En-net was most utilised at the beginning of each year, aligning with the start of the financial year and project cycles for many organisations (**Figure 1**). There was a spike in use in 2020, which coincides with the establishment of the "COVID-19 and Nutrition Programming" forum area. Overall, there were more posts (305 vs 251 posts) but less views (405,346 vs. 522,268 views) in 2020 than 2019. From January to June, there were less posts in 2021 (154 posts) compared to 2020 (173 posts) and 2019 (160 posts). Between January 2019 and July 2021, one en-net user shared a resource for coverage assessments on a question posted pre-2019, no other responses were provided for posts pre-2019.

**Figure 1: Number of posts per month between 2019 and 2021.**

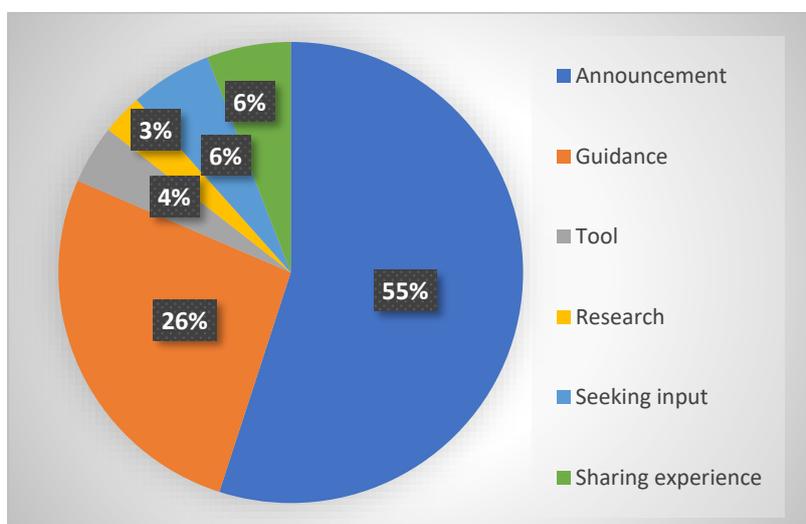


\*July 2021 was excluded as the analysis only captured posts up to the 13<sup>th</sup> of July 2021.

### Types of posts

For this analysis, the "COVID-19 and Nutrition Programming" forum area was excluded. The majority of posts from the remaining forum areas were announcements (55%) and guidance requests (26%), the latter of which related to either requesting technical guidance or a specific guidance document (**Figure 2**). Following this, questions tended to relate to seeking inputs from en-net users, e.g., answering a survey, requests for users to share their experience of particular programming issues or requests for specific tools. Overall, 21% of requests for tools related to training materials on a broad range of topics (such as wasting treatment, nutrition in emergencies, management of preterm babies, healthy eating and simplified approaches for the management of wasting).

**Figure 2: Percentage of each type of post between 2019 and 2021.**



\*"COVID-19 and Nutrition Programming" forum area was excluded from this analysis as there were different post categories for this forum area.

### Thematic forum areas

**Table 1** presents overall activity by thematic forum area between 2019 and 2021.

"Announcements" and "Upcoming Trainings" forum areas were excluded from this analysis as en-net users only post announcements in these forum areas. The "COVID-19 and Nutrition Programming" forum area was also excluded as current COVID-19 related questions are now integrated across the other thematic forum areas. "Management of Wasting/Acute Malnutrition" was the most commonly used forum area, followed by "Infant and Young Child Feeding Interventions" and "Assessment and Surveillance" (**Figure 3**). However, in the "Infant and Young Child Feeding Interventions" forum area 63% of posts were seeking inputs or were announcements, while 11% of post were seeking inputs or were announcements in both the "Management of Wasting/Acute Malnutrition" and "Assessment and Surveillance" forum areas, respectively. Thus, there were more requests for guidance and sharing of experiences relating to the management of wasting and assessment and surveillance. The high number of announcements and posts seeking inputs in the "Infant and Young Child Feeding Interventions" forum area may be related to the work of the Infant Feeding in Emergencies (IFE) Core Group, which uses the en-net platform to share information and gather feedback and insights from practitioners. The "Management of Wasting/Acute Malnutrition" forum area had the highest number of views (26%), followed by "Assessment and Surveillance" (24%) and "Infant and Young Child Feeding Interventions" (17%). However, "Assessment and Surveillance" had the highest number of replies and percentage of questions answered compared to "Infant and Young Child Feeding Interventions" and "Management of Wasting/Acute Malnutrition" forum areas.

**Table. 1: Number (%) of questions, views and replies posted by forum area between 2019 and 2021.**

Thematic area	Number (%) of total post	Number (%) of total questions *	Number (%) of posts that were announcement and seeking inputs **	Number (%) of total views	Number of total replies***	Number (%) of questions answered****
Management of Wasting/Acute Malnutrition	88 (26.8)	78 (30.1)	10 (11.4)	126,985 (26.4)	217	65 (83.3)
Infant and Young Child Feeding Interventions	67 (20.4)	25 (9.7)	42 (62.7)	80,555 (16.7)	143	20 (80)
Assessment and Surveillance	66 (20.1)	59 (22.8)	7 (10.6)	117,228 (24.4)	284	52 (88.1)
Management of small and nutritionally At-risk Infants under six	18 (5.5)	7 (2.7)	11 (61.1)	12,310 (2.6)	17	4 (57.1)

months and their Mothers (MAMI)						
<b>Adolescent Nutrition</b>	17 (5.1)	16 (6.2)	1 (5.9)	11,828 (2.5)	20	13 (81.3)
<b>Simplified Approaches for the Management of Acute Malnutrition</b>	15 (4.6)	12 (4.6)	3 (20.0)	18,231 (3.8)	33	11 (91.6)
<b>Other Thematic Areas</b>	12 (3.7)	11 (4.2)	1 (8.3)	12,710 (2.6)	11	9 (81.8)
<b>Food Assistance</b>	8 (2.4)	8 (3.1)	0 (0)	28,250 (5.9)	14	4 (50)
<b>Coverage Assessment</b>	8 (2.4)	8 (3.1)	0 (0)	34,272 (6.9)	26	8 (100)
<b>Scaling Up Nutrition (SUN)</b>	8 (2.4)	5 (1.9)	3 (37.5)	9,432 (7.1)	3	3 (60)
<b>Micronutrient</b>	6 (1.8)	4 (1.5)	2 (33.3)	7,521 (1.6)	7	4 (100)
<b>Cross-cutting Issues</b>	6 (1.8)	5 (1.9)	1 (16.7)	10,620 (2.2)	13	2 (40)
<b>Prevention and Management of Stunting</b>	4 (1.2)	4 (1.5)	0 (0)	5,296 (1.1)	3	0 (0)
<b>Partnership for Research</b>	4 (1.2)	3 (1.2)	1 (25)	3,901 (0.8)	1	1 (33.3)
<b>Multi-sectoral Programming</b>	1 (0.3)	1 (0.4)	0 (0)	2,278 (0.5)	6	1 (100)
<b>Total</b>	<b>328 (100)</b>	<b>246 (100)</b>	<b>82 (25)</b>	<b>481,417 (100)</b>	<b>798</b>	<b>197 (76.1)</b>

\*The number of questions is the total number of posts in each forum area minus posts seeking participation and announcements.

Dominator is the total number of questions across forum areas.

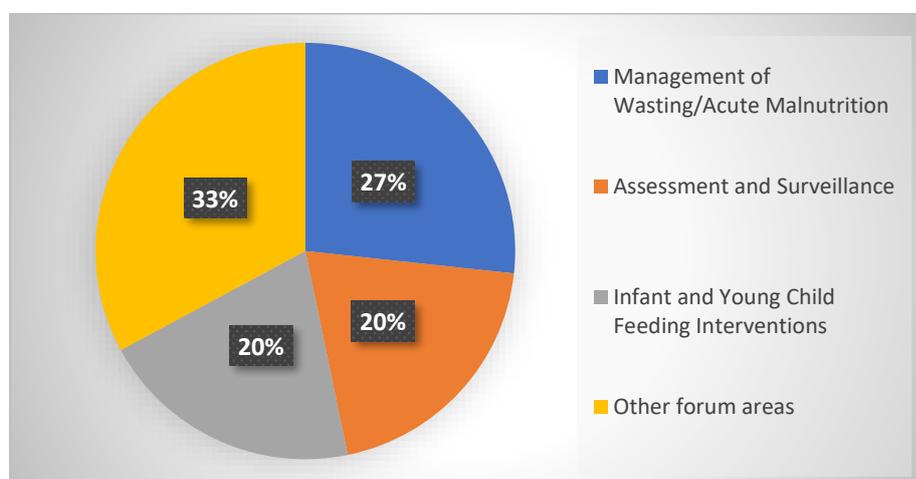
\*\*Dominator is the total number of posts for each forum area.

\*\*\*The number of replies includes the total number of replies posted on the forum area, even if the replies are answering the same question.

\*\*\*\*Dominator is the number of questions (excluding announcements and requests) for each forum area.

\*\*\*\*\*The "COVID-19 and Nutrition Programming", "Announcements" and "Upcoming Trainings" forum areas were excluded from this analysis.

**Figure 3: Percentage of questions posted by forum area between 2019 and 2021.**



\* The "COVID-19 and Nutrition Programming", "Announcements" and "Upcoming Trainings" forum areas were excluded from this analysis.

### *Emerging topics cutting across different thematic forum areas on en-net*

Topics and sub-topics that cut across thematic forum areas were identified. "Announcements" and "Upcoming Trainings" forum areas were excluded from this analysis as en-net users only post announcements in these forum areas. The "COVID-19 and Nutrition Programming" forum area was also analysed separately (see **Box 2**) as questions are now integrated across the other thematic forum areas. Main topics cutting across forum areas included: survey challenges; nutritional products; anthropometric considerations; simplified approaches; CMAM; and Therapeutic Supplementary Feeding Programmes (TSFP).

### Survey challenges

Survey challenges was the most prominent topic that arose across thematic forum areas, with 47 questions related to this topic overall. Questions regarding software packages for the analysis of anthropometric data were most common (21% of questions asked) and can generally be categorised into two groups. First, en-net users were asking for support in using and interpreting Emergency Nutrition Assessment (ENA) calculations, for example, interpreting high weight-for-height z scores. En-net users were also looking for alternative software to ENA or software recommendations for a particular data set. For example, recommendations for software to analyse data for children 0-59 months of age, for analysing mid-upper-arm-circumference (MUAC) in older children and Excel functions for calculating weight-for-height z scores.

Our analysis found that mortality surveys (17% of questions asked) was the next most common sub-topic, with most questions looking for technical guidance. There were discussions on the conversion of mortality indicators such as mortality per 1000 live births to mortality per 10,000 population and the calculation of age-specific mortality rates versus cumulative risk of death before the fifth birthday.

In total, 15% of questions under the topic "survey challenges" were looking for technical guidance on SMART sampling procedures, while 11% of questions were looking for technical guidance on sampling procedures for SLEAC or SQUEAC surveys or on which methodology/coverage estimate to use in a particular setting. Subsequently, more questions related to prevalence rather than coverage surveys. Overall, 9% of questions were related to conducting surveys in the context of the COVID-19 pandemic. These questions primarily focused on how to implement surveys given the access and logistical issues faced by COVID-19 restrictions, whether nutrition data conducted the previous year could be used where primary data collection was not possible and on how to measure the impact of COVID-19 on nutrition. Additional questions were related to different survey designs for different contexts, guidance on conducting dietary assessments, how to calculate caseloads using survey data, and weighting survey results.

### *Needs identified*

Our analysis found that there was a lack of clarity on available guidance or discord among en-net users for approximately 18% of questions relating to survey challenges. The findings suggest there is a need for greater contextualisation of survey guidance, with a majority of questions relating to the implementation of already existing survey guidance in a specific context. Our analysis found a gap in knowledge among en-net users on conducting mortality surveys. There also appears to be a need for global guidance on conducting mortality audits in stabilisation centres, with practitioners having to rely on experiences of other practitioners to understand what steps are needed to successfully complete a mortality audit. Similarly, in response to a request for guidance on what questions to include in household surveys to measure the effect of COVID-19 on nutritional outcomes, a number of organisations provided examples, but there was no apparent standard set of questions available. Furthermore, a need for guidance on how to include, or whether to exclude children who have consumed ready-to-use therapeutic food (RUTF) from Minimum Meal Frequency, Minimum Acceptable Diet and Minimum Dietary Diversity assessments was also identified.

**Box 2: “COVID-19 and Nutrition Programming” forum area:** This forum area was created to facilitate the surge in COVID-19 related questions and support the sharing of information and guidance on nutrition programming in the context of COVID-19. The forum area was later adapted due to a decrease in activity alongside the recognition that COVID-19 adaptations were becoming mainstreamed and important technical discussions might be missed by those not signed up to this specific forum area. From the 21<sup>st</sup> of September onwards, the "COVID-19 and Nutrition Programming" forum area has only been used for general questions around COVID-19 and nutrition, while any that are specific to the existing technical forum area are posted in those along with a "COVID-19 flag" so that they can be easily located.

Between March 2020 and March 2021, there were 87 posts, 119,323 views and 136 replies. Nearly one third of questions were regarding programmatic adaptations. Remote training, counselling and screening and simplified approaches were the adaptations most commonly inquired about. Other themes arising from this forum area were questions related to IYCF (14%); maintaining dietary diversity or healthy diets (6%); the nutritional management of COVID-19 patients (6%); infection prevention control measures (5%), therapeutic foods including managing stock outs (3%); and the management of wasting in children with COVID-19 (2%). All questions were answered on the forum or in newly available guidelines or stop gap guidance since developed.

### Nutritional products

Between 2019 and 2021, 32 en-net posts were related to the use of nutritional products. Overall, 16% of questions related to therapeutic product stock shortages and were looking for technical guidance on what to do in the absence of therapeutic foods. Due to the lack of global guidance, suggestions varied among respondents. Practitioners were also looking to others to share experiences in using therapeutic foods for older children (six to 18 years of age), infants under six months of age, pregnant and lactating women (PLW) and HIV and drug-resistant tuberculosis (TB) patients. No experience was shared in response to these questions for older children and infants under six months of age.

Several questions on products received over 2500 views, this is a particularly high number of views for en-net posts. These questions included whether RUTF and ready-to-use supplementary foods (RUSF) can be used to treat malnourished PLW; whether the International Code of Breastmilk Substitutes applies to ready-to-use commercially produced complementary foods and if they can be used by health workers in food demonstrations; and whether a child that is transferred from an outpatient therapeutic programme (OTP) to an inpatient facility due to infection could continue with RUTF or needed to be switched to F75. However, the question that received the most views (3,441 views) was whether bottled water is appropriate to use in the preparation of infant formula and if this water (or water more generally) needs to be boiled in contexts where boiling is challenging. International guidance was provided but different countries appeared to have different national guidelines.

Other programmatic questions related to products focussed on food safety (how to identify therapeutic foods that are no longer safe to consume); supply forecasting; experiences of using small quantity lipid based nutrient supplements; use of weight loss (including protein) supplements while breastfeeding; preparation of therapeutic milk; manufacturing RUTF or complementary foods; intolerances; Breastmilk substitute dosage for mixed feeding infants at hospital discharge; modifying RUTF e.g. adding water; and whether iron supplements should be provided in addition to RUTF.

### *Needs identified*

Between 2019 and 2021, there was a lack of clarity or discord among en-net users for approximately 21% of questions asked relating to nutritional products. Procedures in the absence of therapeutic products and advice on the utilisation of therapeutic foods in other age groups emerged as key needs for en-net users. Formal food safety guidance that defines how to identify therapeutic products that are unsafe to consume and what steps should be taken when food safety concerns arise e.g., RUTF left in hot containers for extensive periods, appears to be lacking. Similarly, no one provided advice on what to tell mothers who want to use weight loss (including protein) supplements while breastfeeding. Although this may be because this type of question slightly falls outside the focus of undernutrition and in general, the expertise of en-net users. However, we felt it important to include given the risk of obesity in pregnancy, its negative impact on birth outcomes and subsequent wasting and stunting risk. Questions relating to infant formula preparation received a lot of attention from en-net users due to different countries having different guidelines, highlighting the importance of contextual factors and potential difficulties with aligning national guidelines with international guidance.

### Anthropometric considerations

A total of 20 questions regarding anthropometry were posted between 2019 and 2021. There were several questions related to taking MUAC measurements, whether the left or right arm should be used and if the midpoint needs to be taken for MUAC measurements. En-net users also sought guidance and experiences on using MUAC in PLW, infants under six months of age and adolescents.

For adolescents, questions focussed on the lack of guidance on adolescent anthropometry (more generally) with uncertainty surrounding what reference category should be used to measure body mass index (BMI) in adolescents, especially women 19 years of age, as BMI-for-age only includes girls under 19 years of age. For PLW, guidance was sought on the level of prevalence that defines malnutrition as a public health emergency for this group.

In addition to programmatic questions, several research-based questions arose. These included the implications of using MUAC only admission due to age and gender biases, the relationship between MUAC and weight gain, and the association between IYCF indicators and anthropometric outcomes. The question related to MUAC only admission into treatment generated the most discussion and subsequently the highest number of views of all the research-based questions.

### *Needs identified*

Overall, there was a lack of clarity or discord among en-net users for one-third of the questions asked relating to anthropometry. Our analysis identified knowledge gaps among en-net users on the implementation of MUAC and different MUAC cut-offs for PLW, infants under six months of age and adolescents in different contexts. While questions around appropriate MUAC cut-offs for these different groups highlights a guidance gap, guidance on how to measure MUAC exists but requires continued dissemination efforts. Technical guidance on nutritional assessment in adolescents and PLWs emerged as key needs for en-net users, including on how measures of prevalence of malnutrition in PLW should be interpreted and translated into actions. The implications of MUAC only admission also remains a key question.

### Community-based Management of Acute Malnutrition (CMAM)

Between 2019 and 2021, 28 questions were posted regarding CMAM programmes. More questions were related to outpatient (29%) rather than inpatient (18%) management. Questions were primarily looking for technical guidance, most commonly related to admission and discharge criteria. For example, en-net users were looking for a definition of 'clinically well' for OTP, experiences of implementing the WHO 2013 updated discharge criteria, and what to do if a child is not responding to treatment provided in OTP but does not meet admission criteria for inpatient management. For OTP programmes, other questions related to sex disparities in admissions across different contexts, applications and tools to track weight gain, how to deal with non-responders (e.g., can they be readmitted, how long till they can be readmitted, should they be assigned a new identification number?) and whether ensuring a high coverage for OTP is sufficient to reduce severe wasting prevalence. Monitoring (29% of questions asked) of CMAM programmes was another common sub-topic, with questions being asked about estimating lives saved, evaluation tools and when to cease programme implementation.

The question that received the most views regarded the definition of 'clinically well' for OTP. Questions related to the reasons behind sex disparities in admission to OTP programmes, using apps/tools to calculate weight gain in OTP and how to estimate lives saved by CMAM

programmes generated a large number of replies. For the weight gain application, there was a discussion around possible implementation limitations. For estimating lives saved/death averted by CMAM programmes, a variety of different methods were proposed in response, while for sex disparities in OTP admissions respondents shared experiences, research and had a discussion around possible reasons.

### *Needs identified*

Our analysis found a lack of clarity or discord among en-net users for approximately 23% of questions asked relating to CMAM programmes. Further technical guidance on OTP protocols, particularly on discharge criteria, and on definition, protocols and standards for relapse (not currently included in Sphere), emerged as key needs for en-net users. For inpatient management, a question related to the use of routine antibiotics in infants 0-5 months with growth faltering received no replies. Guidance on the monitoring of CMAM programmes was also identified as a need.

### Simplified approaches

Simplified approaches are a range of modifications to the standard CMAM model that aim to increase ease of implementation and therefore coverage. These include a simplified model that treats severe and moderate wasting with one streamlined protocol and product, reduced dosages of RUTF, community health worker treatment of uncomplicated wasting, MUAC only admissions and Family MUAC<sup>4</sup>. This analysis found 16 posts regarding simplified approaches, with most questions looking for guidance. Most questions related to the use of Family MUAC, looking for the sharing of resources and experiences of implementing Family MUAC, technical guidance on when Family MUAC is not recommended, the use of Family MUAC for PLW and seeking clarification on the use of different terminologies (Mother versus Family MUAC). Two questions were regarding the implementation of simplified approaches in the context of COVID-19. One question was looking for guidance specifically on implementing Family MUAC, while the other was looking for guidance on simplified approaches more generally.

### *Needs identified*

Overall, there was a consensus on the majority of questions asked (83% of questions) relating to simplified approaches. More sharing of experiences from those implementing simplified approaches, particularly in emergency contexts, emerged as a key need for en-net users. Furthermore, from the responses given, guidance on the use of Family MUAC to identify nutritionally at-risk PLWs appears to be lacking.

### Therapeutic Supplementary Feeding Programmes (TSFP)

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<sup>4</sup> <https://www.acutemalnutrition.org/en/Simplified-Approaches-Introduction>

In total, only eight questions were related to TSFP. Questions related to the value of appetite testing in moderate wasting protocols, factors associated with non-compliance to treatment in supplementary feeding, and the clinical presentation of infection in moderately wasted children were left unanswered. Other questions related to treatment protocols and particularly to discharge criteria and discharge procedures. For example, should beneficiaries receive food rations on their day of discharge, with en-net users sharing the different criteria and procedures they have used in different settings in response but highlighting a lack of guidance on these topics. The question that received the largest number of views was whether iron-folic acid supplementation is recommended for moderately wasted children, given that national guidelines vary in this regard.

### *Needs identified*

Our analysis found a lack of clarity or discord among en-net users for 50% of questions asked relating to TSFP, reflecting the lack of adequate guidance on some aspects of the treatment of moderate wasting. There is a need especially for guidance on discharge criteria and procedures for TSFP. Guidance on whether iron-folic acid supplementation is recommended for moderately wasted children also emerged as a key need for en-net users. Responses recognised that this question is complicated due to the varying micronutrient profiles of supplementary foods used to treat moderate wasting and insufficient guidance on their administration alongside other vitamin and mineral supplements. This analysis also found a lack of available data on the geographical coverage of TSFP programmes and the percentage of moderately wasted children treated in Sub-Saharan Africa.

### **Potential areas of need**

This review highlights several potential areas of need (**Figure 4**) in the below three areas:

- *Experience sharing needs:* areas where experience sharing and knowledge is needed to disseminate, contextualise and operationalise available guidance.
- *Guidance needs:* areas where there is a lack of technical guidance or a lack of global consensus or clarity on available guidelines.
- *Research needs:* areas where more research is needed to support guideline development.

Several identified needs cut across these three areas. Identified needs are described in more detail and by GTWG in **Appendix 1**.

**Figure 4: Experience, guidance, and research needs.**

Experience need	Guidance need	Research need
Identification and management of nutritionally at-risk PLW	Identification and management of nutritionally at-risk PLW	Identification and management of nutritionally at-risk PLW
Therapeutic Supplementary Feeding Programme	Therapeutic Supplementary Feeding Programme	Therapeutic Supplementary Feeding Programme
Use of routine antibiotics in infants under 6 months of age with growth faltering	Accessible guidance on assessing the impact of COVID-19 on nutrition outcomes in household surveys	Use of routine antibiotics in infants under 6 months of age with growth faltering
Standardisation of the implementation of MUAC	Different MUAC cut-offs for PLW, infants under 6 months and adolescents in different contexts	Different MUAC cut-offs for PLW, infants under 6 months and adolescents in different contexts
Anthropometric assessment in adolescents	Global consensus on how to assess anthropometry in adolescents	
Protocols and standards for relapse in CMAM programmes in different contexts	Contextual guidance on using MUAC only admission in CMAM programmes	
Implementation of mortality surveys	Alignment of national guidelines on the preparation of infant formula with global guidance	
Contextualisation of guidance on OTP discharge criteria for CMAM programmes	Procedures for the assessment and identification of therapeutic foods that are unsafe to consume	
The utilisation of therapeutic foods in other age group		
Procedures in the absence of therapeutic foods		
Contextualisation of survey guidance		
Implementation of simplified protocols, particularly in emergency contexts		
Use of weight loss supplements by breastfeeding women		
Dietary assessment for children consuming RUTF		

\*Dark grey indicates the need identified falls under all three areas; medium grey indicates the need identified falls under two areas; light grey indicates the need identified falls under one area.

\*\*Pregnant and lactating women (PLW); mid-upper-arm circumference (MUAC); community-based management of acute malnutrition (CMAM); ready-to-use therapeutic food (RUTF); outpatient therapeutic programme (OTP).

## Discussion

This review provides an important snapshot of the discussions on en-net between 2019 and 2021. Key topics emerging from across en-nets thematic forum areas include survey challenges, nutritional products, anthropometric considerations, simplified approaches, CMAM and TSFP. Furthermore, this review identified several potential areas of need within each of these topic areas, which may be due to difficulties with adapting guidelines to a specific context and the need for more sharing of implementation experiences, gaps in technical guidance or consensus, a lack of awareness of available guidance, or the need for further research.

This review was conducted to support the Alliance in identifying and responding to changing practitioner needs. The Alliance has already demonstrated its ability to adapt, as observed by the number of COVID-19 related questions that were successfully answered on en-net due to the rapid development of guidelines and stop-gap guidance. However, despite the increase in COVID-19 related questions, the thematic forum areas most used on en-net remain almost unchanged from the baseline report, highlighting the continued relevance of the GTWGs and the need for technical support on wasting management, IYCF and assessment and surveillance. As the baseline report only analysed the four most used thematic forum areas on en-net, this review cannot comment on the change in the use of the other thematic areas. However, thematic forums with a medium amount of traffic appear to represent areas that are gaining traction in the nutrition community, for example, adolescent nutrition and simplified approaches. Thus, these forum areas may have an increasingly important role in the future and may need to be considered for future GTWGs if significant gaps emerge.

The baseline report identified several technical priority gaps for the Alliance. While progress has been made, many of these gaps were reflected in the potential areas of need identified by this review (**Appendix 1**). Contextualisation of already existing survey guidance was identified as a gap in the baseline report and continues to be a key challenge for en-net users. More experience sharing among practitioners needs to be facilitated along with continued technical support. MUAC continues to stimulate debate, particularly MUAC-only programming. Knowledge gaps identified in the baseline report such as whether a midpoint should be taken when measuring MUAC were also identified by this review. For the treatment of moderate wasting, there continues to be a lack of global consensus and guidance as seen by the high number of unanswered questions regarding TSFP. Similarly, assessment of nutritional status in PLW and adolescents remains a technical gap, with a lack of global consensus and experience among en-net users, as nutrition programmes often overlook these population groups or only target them with the objective of improving infant outcomes.

The Alliance has successfully produced guidance for several priority technical areas, however in some areas specific questions remain and further dissemination of guidance is required. For example, guidance on programming in the absence of therapeutic foods was developed as part of the COVID-19 response. However, stock-outs of therapeutic foods continue to be a reoccurring question on en-net. This review also identified several areas where practitioners needs appear to have shifted compared to the baseline report. For example, there continues to be programmatic questions related to CMAM programmes, though some needs identified in this review (for example, relapse) differ from those identified in the baseline report. However, it is outside the scope of this review to determine whether these are true evidence and guidance gaps. Other needs identified by this review but not specified in the baseline report include:

- Procedures for the assessment and identification of therapeutic foods that are unsafe to consume, for example, RUTF left in hot containers for extensive periods.
- The utilisation of therapeutic foods in other age groups.
- How to, or where to, find support for the implementation of mortality surveys.
- The use of weight loss (including protein) supplements by breastfeeding women.
- Accessible guidelines for assessing the impact of COVID-19 on nutritional outcomes in household surveys.
- A need to align national guidelines on the preparation of infant formula with global guidance.
- How to include, or whether to, exclude children who have consumed RUTF from dietary assessments.
- The use of routine antibiotics in infants 0-5 months of age with growth faltering.

## Conclusion

En-net is a well-used resource and continues to be an important platform for those working at field level and beyond to share information and seek rapid technical support. The Alliance has successfully evolved with changing practitioner needs during the COVID-19 pandemic. However, several key technical gaps identified in the baseline report remain. Furthermore, this report identified new areas requiring technical support, additional guidance, experience or guideline sharing, which can be used to inform work across the GTWGs as well as knowledge management activities within the wider Alliance. The Alliance must continue to adapt to practitioners' needs, with the continuous monitoring and engagement in en-net being one important mechanism to inform this process.

## Appendix

### Appendix 1: Identified needs related to GTWG's and compared to the needs identified in the baseline report.

Identified need	Specific needs identified in this review	Needs identified by the baseline report
<b>Wasting GTWG</b>		
Identification and management of nutritional at-risk pregnant and lactating women	<ul style="list-style-type: none"> <li>• Appropriate MUAC cut-offs for identifying nutritionally at-risk PLW.</li> <li>• Public health emergency thresholds for malnutrition in PLW.</li> <li>• Treatment of malnutrition in PLW, questions around what therapeutic foods can be used.</li> </ul>	<ul style="list-style-type: none"> <li>• Review available research regarding measurements currently used to determine the nutrition status of women and PLW's such as MUAC, BMI, body shape, sitting height to standing height ratio etc and outline the pro's and cons of each method. Also, develop a gold standard for measuring women and PLW's.</li> <li>• No global MUAC threshold to identify nutritional risk in PLW's. It could be interesting to map what each country uses for cut-offs.</li> <li>• Clearly define why MAM PLW's should or should not be admitted into programmes during the first trimester.</li> </ul>
Therapeutic Supplementary Feeding Programmes (TSFP)	<ul style="list-style-type: none"> <li>• Data on the geographical coverage of TSFP programmes and the percentage of moderately wasted children treated in Sub-Saharan Africa.</li> <li>• Guidance on the treatment of moderately wasted children, particularly on discharge criteria and procedures for TSFP.</li> <li>• Whether iron-folic acid supplementation is recommended for moderately wasted children.</li> <li>• Research based questions such as the correlation between moderate wasting and the appetite test, what factors are associated with non-compliance to treatment, what percentage of moderately wasted children with infections show signs of infection?</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative MAM management and calculating MAM caseloads were identified as priority technical gaps by the baseline report.</li> <li>• Lack of international guidelines and consensus on the treatment of moderate wasting.</li> <li>• TSFP discharge criteria and procedures.</li> <li>• Need for guidance/tools on how to estimate expected caseload taking into account factors such as change in population, coverage and prevalence.</li> <li>• Conduct research on the efficacy of treating diarrhea with ORS/zinc in children with MAM entering into a TSFP that is providing RUSF.</li> </ul>
Mid-upper-arm circumference (MUAC)	<ul style="list-style-type: none"> <li>• Contextual guidance on using MUAC only admission in CMAM programmes.</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance on appropriate MUAC thresholds for identifying nutritionally at-risk PLW.</li> </ul>

	<ul style="list-style-type: none"> <li>• Appropriate MUAC cut-offs to identify nutritional risk in adolescents, PLW and infants under six months of age.</li> <li>• Programmatic questions around the implementation of MUAC e.g., what arm should be used for MUAC measurements and if a midpoint should be taken?</li> </ul>	<ul style="list-style-type: none"> <li>• A clear summary of the pros and cons of using MUAC and weight-for-height measurements.</li> <li>• Research on the number of children admitted at various MUAC cut-off points.</li> <li>• Programmatic questions relating to whether a midpoint should be taken when measuring MUAC.</li> <li>• Clear guidelines and outcomes of using MUAC only admission criteria.</li> <li>• There appears to be a lack of consensus of extreme values (flags) to be used for analysis of MUAC data.</li> <li>• Conduct research on the expected increase of MUAC per day when provided appropriate supplementary feeding based on bodyweight.</li> </ul>
Anthropometric assessment in adolescents	<ul style="list-style-type: none"> <li>• Global consensus on how to assess anthropometry in adolescents.</li> <li>• What reference category should be used to measure body mass index (BMI) in adolescents, especially women 19 years of age.</li> <li>• Use of MUAC to identify nutritional risk in adolescents.</li> </ul>	<ul style="list-style-type: none"> <li>• A need to consolidate information and conduct research to determine the most effective way to take anthropometry measurements in adolescents to determine nutritional status.</li> </ul>
Community-based Management of Acute Malnutrition (CMAM) programmes	<ul style="list-style-type: none"> <li>• Contextualisation of guidance on OTP, particularly on discharge criteria.</li> <li>• Monitoring of CMAM programmes.</li> <li>• Protocols and standards for relapse in CMAM programmes in different contexts.</li> <li>• Routine use of antibiotics in infants under six months of age with growth faltering.</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance on the treatment of SAM and Cholera, calculating SAM caseload and CMAM national protocol revision were identified as priority technical gaps by the baseline report.</li> <li>• Clear guidance on discharge rations and how to categorise defaulters.</li> <li>• Referral systems and programme overlap between inpatient, OTP and TSFP need to be stronger globally.</li> <li>• Management of acute malnutrition among adults and older persons.</li> <li>• Implement a pilot project that looks at the expansion of admission criteria for SAM treatment up to MUAC&lt;120 mm.</li> </ul>

		<ul style="list-style-type: none"> <li>• Best way to target pastoral/nomadic communities for CMAM.</li> <li>• Clear guidance on CMAM exit strategy.</li> <li>• Clear guidance is needed on CMAM programme set up as it varies from country to country.</li> <li>• Better integration of screening for SAM among under six months of age for community volunteers.</li> </ul>
Therapeutic foods	<ul style="list-style-type: none"> <li>• Procedures in the absence of therapeutic foods.</li> <li>• The utilisation of therapeutic foods in other age groups for example infants under six months of age, PLW, drug-resistant TB and HIV patients, and older children (5 to 18 years of age).</li> <li>• Procedures for the assessment and identification of therapeutic food that is no longer safe to consume.</li> </ul>	<ul style="list-style-type: none"> <li>• Clear guidance on what to do in the absence of therapeutic foods was identified as a priority technical gap by the baseline report.</li> <li>• Research if goat milk can be used as a part of a therapeutic substitute in areas where therapeutic milk is not available.</li> <li>• Question around food safety: Plumpy nut is very firm in the package. Is this okay to eat even though it is well before the expiry date?</li> <li>• Guidelines for countries wanting to locally produce therapeutic products.</li> <li>• Discussions around adding therapeutic foods to the essential medicines list.</li> <li>• Determine whether or not the impact of the size of packaging has an impact of sharing practices within a household.</li> <li>• A need for a lessons learnt or proper recipes for cooking demonstrations for food in a blanket supplementary feeding programmes along with preparing homemade therapeutic food.</li> </ul>
Simplified approaches	<ul style="list-style-type: none"> <li>• Experience sharing in the implementation of simplified approaches, especially in emergency contexts.</li> <li>• Using Family MUAC to identify nutritionally at-risk PLW.</li> </ul>	<ul style="list-style-type: none"> <li>• Technical priority areas in the baseline report include: <ul style="list-style-type: none"> <li>○ Evidence on the implementation of simplified protocols.</li> <li>○ Clarity/guidance on simplified protocols/ combined protocols /</li> </ul> </li> </ul>

		<p>expanded criteria with RUTF/ RUSF for SAM and MAM.</p> <ul style="list-style-type: none"> <li>• Clear global guidance on the use of expanded criteria for SAM/MAM in emergencies.</li> </ul>
<b>Infant and Young Child Feeding (IYCF) GTWG</b>		
Dietary assessment in children consuming ready-to-use therapeutic foods (RUTF)	<ul style="list-style-type: none"> <li>• How to include, or whether to exclude children who have consumed RUTF from Minimum Meal Frequency, Minimum Acceptable Diet and Minimum Dietary Diversity assessments.</li> </ul>	<ul style="list-style-type: none"> <li>• Clear guidance on M&amp;E tools for IYCF, measuring IYCF intervention outcomes and also M&amp;E guidance on training and follow-up.</li> </ul>
Weight loss supplements in breastfeeding women	<ul style="list-style-type: none"> <li>• What advice should be given to breastfeeding women who want to use weight loss (including protein) supplements?</li> </ul>	NA
Infant formula preparation	<ul style="list-style-type: none"> <li>• Alignment of national guidelines on the preparation of infant formula with international guidance.</li> <li>• Whether bottled water is appropriate to use in the preparation of infant formula.</li> </ul>	NA
<b>Nutrition Information Systems (NIS) GTWG</b>		
Mortality surveys	<ul style="list-style-type: none"> <li>• How to, or where to find support for the implementation of mortality surveys.</li> <li>• Guidelines for conducting mortality audits in stabilisation centres.</li> <li>• Conversion of mortality estimates for example, mortality per 1000 live births to mortality per 10,000 population.</li> <li>• Age-specific mortality rates versus cumulative risk of death before the fifth birthday.</li> </ul>	NA
Contextualisation of survey guidance	<ul style="list-style-type: none"> <li>• A vast number of questions related to the implementation of already existing survey guidance in a specific context.</li> </ul>	<ul style="list-style-type: none"> <li>• Half of the questions in the "Assessment" forum area were related to translating existing guidance into a more practical form or adapting it for a particular context.</li> </ul>
COVID-19 and household surveys	<ul style="list-style-type: none"> <li>• Accessible guidance on assessing the impact of COVID-19 on nutritional outcomes in household surveys.</li> </ul>	NA

\*Global thematic working group (GTWG); mid-upper-arm circumference (MUAC); pregnant lactating women (PLW); tuberculosis (TB); human immunodeficiency virus (HIV); therapeutic supplementary feeding programme (TSFP); ready-to-use therapeutic food (RUTF); infant and young child feeding (IYCF); moderate acute malnutrition (MAM); ready-to-use supplementary food (RUSF); community-based management of acute malnutrition (CMAM); outpatient therapeutic programme (OTP); severe acute malnutrition (SAM); nutrition information systems (NIS); monitoring and evaluation (M&E); not applicable (NA); body mass index (BMI); oral rehydration solutions (ORS).