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## **A mapping exercise and online survey to investigate continuum of care for acute malnutrition in West and Central Africa**



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## Acronyms

|               |  |
|---------------|--|
| <b>ACF</b>    | Action Contre La Faim (Action Against Hunger)    |
| <b>BSFP</b>   | Blanket supplementary feeding programme          |
| <b>CAR</b>    | Central African Republic                         |
| <b>CMAM</b>   | Community-based management of acute malnutrition |
| <b>ENN</b>    | Emergency Nutrition Network                      |
| <b>FBF</b>    | Fortified blended foods                          |
| <b>GAM</b>    | Global acute malnutrition                        |
| <b>GNC</b>    | Global Nutrition Cluster                         |
| <b>IMAM</b>   | Integrated management of acute malnutrition      |
| <b>LNS</b>    | Lipid-based nutrient supplement                  |
| <b>MAM</b>    | Moderate acute malnutrition                      |
| <b>MUAC</b>   | Mid-upper arm circumference                      |
| <b>NGO</b>    | Non-governmental organisation                    |
| <b>OTP</b>    | Outpatient therapeutic programme                 |
| <b>RUSF</b>   | Ready-to-use supplementary food                  |
| <b>RUTF</b>   | Ready-to-use therapeutic food                    |
| <b>SAM</b>    | Severe acute malnutrition                        |
| <b>SC</b>     | Stabilisation centre                             |
| <b>SFP</b>    | Supplementary feeding programme                  |
| <b>TSF(P)</b> | Targeted supplementary feeding (programme)       |
| <b>UN</b>     | United Nations                                   |
| <b>UNHCR</b>  | United Nations High Commissioner for Refugees    |
| <b>UNICEF</b> | United Nations Children's Fund                   |
| <b>WCA</b>    | West and Central Africa                          |
| <b>WCARO</b>  | West and Central Africa Regional Office          |
| <b>WFP</b>    | World Food Programme                             |
| <b>WHO</b>    | World Health Organization                        |
| <b>WHZ</b>    | Weight-for-height z-score                        |
| <b>WLZ</b>    | Weight-for-length z-score                        |
| <b>WVI</b>    | World Vision International                       |

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# Summary

As part of an Emergency Nutrition Network (ENN) initiative to collate and appraise experience and evidence around the delivery of programmes in relation to continuum of care for acute malnutrition treatment, ENN undertook a basic mapping exercise and a review of current practice in severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) treatment in selected countries in East and West Africa between January and June 2019. This review considered 'continuum of care for acute malnutrition treatment' whereby a child receives appropriate and timely care to recovery along the acute malnutrition spectrum, including complicated cases. This constitutes part of a broader continuum of care that encompasses prevention.

Using existing data, the exercise aimed to gain insight into the extent to which United Nations (UN)-supported/led services for the treatment of children with SAM and MAM are aligned in these regions. Reflecting existing policy guidance and institutional arrangements, SAM treatment was examined as those services supported by the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), and MAM treatment in the form of targeted supplementary feeding programmes (TSFPs) delivered/supported by the World Food Programme (WFP). This report presents the findings of the review in West and Central Africa.

Discussions with key stakeholders (UNICEF, WFP, WHO, the Global Nutrition Cluster (GNC) and the United Nations High Commissioner for Refugees (UNHCR) headquarters and regional offices, the CMAM Report (managed by Save the Children), Action Against Hunger and World Vision) helped select target countries (Burkina Faso, Cameroon, Central African Republic, Chad, Mali, Mauritania, Niger, Nigeria and Senegal); define parameters and methods for the review; and facilitate access to country-level data. An online survey was administered to representatives from government, UN and non-governmental organisations in those countries selected. Existing UN-sourced programme data was collated on SAM and MAM admissions and geographical/treatment coverage 2017-2018.

SAM treatment coverage data was provided by UNICEF for all nine selected countries. MAM treatment coverage data was available from WFP for Burkina Faso, Chad, Mali, Mauritania and Niger. Geographical coverage data was provided for West Africa for four countries (Burkina Faso, Chad, Mali and Mauritania) by both UNICEF and WFP. National and sub-national data for both SAM and MAM admissions and geographical coverage 2017-2018 was provided for Burkina Faso, Chad, Mali and Mauritania. Data relating to the alignment of and referral between services to treat SAM and MAM at national or sub-national level was not available. A total of 46 staff in the region responded to the online survey; number and profile of respondents varied between countries.

Review constraints included varied data availability within the timeframe, multiple-sourced unharmonised data, varying definitions between and within agencies (especially regarding coverage), lack of contextual information for quantitative data (including seasonal service availability, service quality), and no direct consultation with government. Only TSFPs were directly examined as a treatment option for MAM (reflecting WFP's primary approach). The online survey is not representative of the region. Despite these limitations, the mapping exercise provides important insights into the appraisal and delivery of continuum of care for acute malnutrition.

The review identified huge effort and investment by government, agencies and individuals at regional, national and

sub-national levels to collect data on SAM and MAM treatment. While fully appreciating this commitment, the data obtained points to gaps in the nature, availability and consistency of data to determine the extent to which a continuum of care for children with acute malnutrition is being achieved.

Both the data and reported experiences indicate that SAM treatment without MAM treatment (in the form of TSFPs) is commonplace. This pattern reflects differences in global strategies for the implementation of these two services; TSFPs are configured for delivery in emergency contexts that prioritises areas/populations of highest vulnerability, may be seasonal, and there is no UN ambition for 100% treatment coverage. SAM treatment scale-up and 100% coverage targets are delivered through an established system (health service) with widespread reach. However, both regional and national/sub-national data reflect a considerable fall in geographical coverage and admissions for MAM treatment, despite no fall in global acute malnutrition (GAM) prevalence and in the context of stable or rising coverage for SAM. WFP contacts attribute this to reduced resourcing for MAM treatment as TSFPs in this region; this is consistent with surveys, where one fifth of respondents reported that neither TSFPs nor blanket supplementary feeding programmes (BSFPs) were available for children with MAM. Expanded BSFP is being implemented by WFP in both Cameroon (at scale) and Nigeria (pilot) as alternatives to TSFPs. Expanded (and varied) protocols for SAM/MAM treatment are being used in many countries in the region, which is likely fuelled by a lack of/declining MAM treatment options. Other options for MAM treatment where TSFPs are not available (such as nutrition counselling, growth monitoring) or no intervention were reported by country respondents.

Although there are crossovers in SAM and MAM service implementation areas, it appears that SAM and MAM services are often not practically aligned in a way that is conducive to a continuum of care. Many countries showed patterns of geographical and admissions coverage that are not as expected (e.g. much lower or absent MAM admissions relative to SAM) that imply inadequate coherent treatment access. Interpretation of service coherence is further limited by poor tracking of successful referrals, lack of transparent data on complicated acute malnutrition management, and variable approaches to gaps in support for at-risk infants under six months of age.

The greatest barriers to continuity of care for acute malnutrition identified by regional respondents were lack of financial resources, inadequate capacity at health centres, limited geographical coverage of health services, product pipeline issue differences in geographical targeting between MAM and SAM, deprioritisation of MAM in the region, and insecurity/access issues. The feasibility of treating large MAM caseloads using the current TSFP model was raised, with suggestions to prioritise at-risk groups and high-burden areas and develop additional strategies for MAM management.

Further information beyond what was identified in this review is likely available at national and sub-national level. Further investigation of the level and extent of gaps in information and potential ways to fill them will help provide a more secure basis for discussions on how best to identify shortfalls and track progress on continuity of care.

Findings provide evidence for the need to improve visibility and deliverability of our collective ways of working to improve continuum of care for acutely malnourished children.

# 1 Introduction

Between January and June 2019, Emergency Nutrition Network (ENN) undertook a mapping exercise and a review of current practice to gain an insight into the extent to which UN-supported treatment of children with severe acute malnutrition (SAM) is aligned with treatment of children with moderate acute malnutrition (MAM) in East and West Africa ('continuum of care for acute malnutrition treatment'). In this review, 'continuum of care for acute malnutrition treatment' considers that a child receives appropriate, timely care to recovery, whether they are moderately or severely acutely malnourished, including complicated cases. This constitutes part of a broader continuum of care that encompasses prevention.

This exercise was part of a wider ENN initiative to collate and appraise experience and evidence around the delivery of United Nations (UN)-supported/led acute malnutrition treatment programmes in relation to continuum of care for acute malnutrition treatment<sup>1</sup>. In the context of existing policy guidance and institutional arrangements<sup>2</sup> and using secondary UN-sourced data, SAM treatment was examined as those services supported by the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), and MAM treatment was examined in the form of targeted supplementary feeding programmes (TSFPs) delivered/supported by the World Food Programme (WFP).

This report presents the findings of the West and Central Africa review from both the online survey (regional/country results) and the collection of data on admissions (2017-2018) for SAM and MAM treatment for those countries where both sets of data were available for comparison. Specifically, data is presented on geographical and treatment coverage of SAM and MAM services; SAM and MAM admissions data by country; qualitative data from the online survey by country; and an insight into regional practice in the admission and referral of children with SAM and MAM. The report also presents and discusses data pertaining to admissions and referrals between SAM and MAM services, availability and coverage of services to treat acute malnutrition, and the continuum of care between the two. Recommendations are framed within existing operational arrangements with regard to improving the availability of data (including admissions, referrals, coverage); targeting criteria; coordination; mapping of SAM and MAM services and the linkages between them; addressing supplies pipeline issues; harmonising service provision; building capacity for referral; and review/adaptation of protocols.

<sup>1</sup> This is collated in a special edition of *Field Exchange* on the continuum of acute malnutrition treatment (issue 60, July 2019). [www.ennonline.net/fex](http://www.ennonline.net/fex)

<sup>2</sup> See Box 2, Marie McGrath and Jeremy Shoham (2019). Editorial perspective on the continuum of care for children with acute malnutrition. *Field Exchange* issue 60, July 2019. p2. [www.ennonline.net/fex/60/extendededitorial](http://www.ennonline.net/fex/60/extendededitorial)

## 2 Methods

The review comprised initial discussions with representatives from UNICEF, WFP, WHO and UNHCR headquarters and regional offices, the Global Nutrition Cluster (GNC), the CMAM Report (managed by Save the Children), Action Against Hunger (AAH) and World Vision International (WVI) to help define parameters and methods for the review; an online survey administered to representatives from government, UN and non-governmental organisations in selected countries in the region; and collection and collation of existing UN sourced programmatic data on SAM and MAM admissions and geographical/treatment coverage 2017-2018.

Initial discussions were held between ENN, UNICEF and WFP's West and Central Africa Regional Office (WCARO) to help ENN identify countries of focus and to inform the review parameters, data sources and most appropriate methods to use, based on the availability of data on SAM and MAM treatment at regional and country level and in the time available; and to facilitate access to country offices. Discussions were also held with headquarters staff from WFP, WHO, UNHCR, UNICEF and the GNC to present the review, gather inputs, further inform methods and facilitate contact with country offices.

Countries of focus for the review were proposed by the regional UNICEF and WFP offices as those which fall within the same regional zones for both agencies. For West and Central Africa,

selected countries were Burkina Faso, Cameroon, Central African Republic, Chad, Mali, Mauritania, Niger, Nigeria and Senegal.

It was established during discussions that data on SAM and MAM admissions, performance and geographical and treatment coverage was available at country level and, in some cases, at sub-national level. However, it was noted that data relating to the alignment of and referral between services to treat SAM and MAM at national and sub-national level was not collected/collated in standard SAM and MAM reporting formats. This type of information would need to be derived from records kept at district/facility level, or by individual agencies at country level, which was not possible within the review timeframe and capacity available.

Given the parameters above, the review aimed to collect and compare SAM and MAM admissions data at sub-national level for each country selected, identify geographical cross-over or lack thereof and compare admissions data, caseload and geographical coverage for both services. Although it is not possible to tell the degree of convergence and pinpoint the co-location of MAM and SAM services from this type of data, this exercise provides insights and helps to highlight areas for more in-depth investigation and analysis. Data was collected from WFP and UNICEF separately, from the respective regional Nutrition Data Managers, and collated by country by ENN. National Nutrition Clusters were approached for co-location data, but none was provided, with the exception of South Sudan. No data was available from WHO on inpatient treatment.

Results are presented in Section 3. Geographical coverage data was provided for West Africa for Burkina Faso, Chad, Mali and Mauritania by both UNICEF and WFP. Treatment coverage data for SAM was available for all selected countries. Treatment coverage data for MAM was available for Burkina Faso, Chad, Mali, Mauritania and Niger. National and sub-national data for both SAM and MAM admissions and coverage 2017-2018 was provided for Burkina Faso, Chad, Mali and Mauritania.

ENN reviewers also contacted CMAM Report, ACF and WVI with the aim of consulting their SAM/MAM treatment databases to capture more detailed information about alignment of services in selected countries and referrals between them, in addition to the admissions figures provided by the Ministry of Health (MoH), WFP and UNICEF at national level. CMAM Report was not able to provide access to its country databases as legal permission is required from each contributing agency. While data is collected by ACF, the additional resources and time necessary to collate it was beyond its capacity within the review timeframe. WVI provided databases from some of the countries selected; however information on referrals was not sufficiently detailed to include in the review.

To complement the quantitative data available and to gain an insight into field experiences and practices, an online survey (in English and French) was administered through UNICEF, WFP, WHO and Cluster country offices to government, UN and NGO actors working in the management of acute malnutrition in the seven selected countries. Information was gathered on:

- Respondent profile (region and country of operation, type of agency, role, administrative level);
- Approach to treatment of acute malnutrition and types of services provided;
- SAM treatment – protocols, stand-alone or integrated services, admission and discharge criteria, referrals between services for acute malnutrition (outpatient facilities, inpatient facilities, targeted supplementary feeding and other services), monitoring of referrals;

- MAM treatment – protocols, admission and discharge criteria, stand-alone or integrated services, referrals between services for acute malnutrition, monitoring of referrals, types of products;
- Barriers to ensuring continuum of care for acute malnutrition;
- Good models of continuum of care/how continuum of care for acute malnutrition can be improved.

The full survey questionnaire can be found in Annex 1.

## Limitations

This review was conducted over a short period of time (five months), with a limited number of days, allowing only for data collection at regional/national level, limited consultation with agencies and no direct consultation with government staff. Not all countries in the region were selected. The data collected was secondary and from multiple sources, with consequently varying definitions, particularly in relation to coverage. High geographical coverage does not necessarily mean services are available all year round or are of adequate quality. The data is presented in most instances without contextual information, which limits analysis and interpretation. In terms of the qualitative feedback in the online survey, the number of respondents varied greatly by country, the number of responses is low and not all respondents answered all questions; thus the survey is not representative and results should be interpreted cautiously. More data may have been available or collated at a country level, but the pressure and priorities of busy staff may have limited making this available to the review.

Note that the SAM-related data presented in this report is from a UNICEF regionally-held database, which is regularly updated and not always complete; hence data is subject to change.

<sup>3</sup> A comprehensive monitoring and reporting package for community-based management of acute malnutrition hosted by Save the Children, [www.cmamreport.com](http://www.cmamreport.com)

# 3 Results

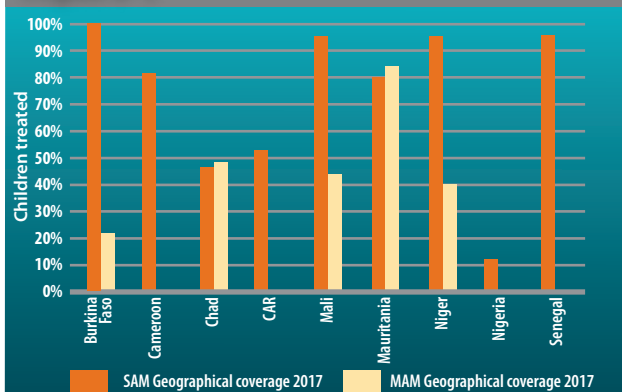
This section presents and considers the data provided on SAM and MAM admissions and coverage, collected where available from the selected countries, and the results of the online survey, for the West and Central Africa region. Overall results for the region and by country are provided. Regarding the survey, regional results can be found in section 3.3 and a summary of key findings by country are reported in the country section.

## Definitions of coverage

Burden is calculated from estimates of prevalence, population and incidence. SAM geographical coverage is calculated as the number of health facilities treating SAM out of the total number of health facilities in a country. MAM geographical coverage is calculated in the same way, although treatment coverage is calculated according

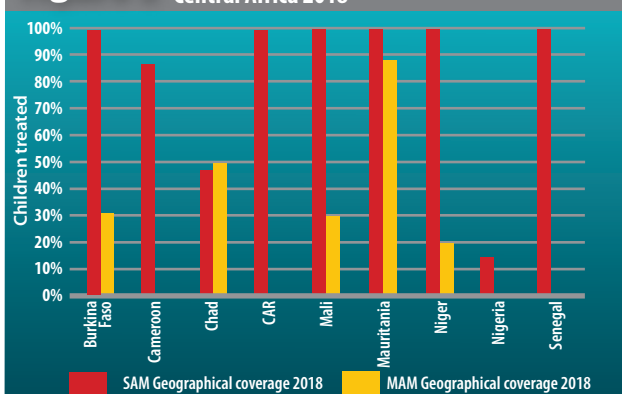
to targets in zones of intervention. SAM treatment coverage is calculated based on the number of children admitted over the estimated SAM burden (calculated from prevalence and corrected for incidence). MAM burden is calculated based on MAM prevalence from SMART surveys in most countries with an incidence factor of 1.5. WFP reported that MAM treatment coverage is calculated by WFP WCARO in two ways: 1) MAM admissions as a proportion of programme targets; or 2) MAM admissions as a proportion of total estimated MAM burden. Geographical coverage does not give information as to whether health centres are delivering integrated management of acute malnutrition (IMAM) services throughout the year, nor on the quality of care or the availability of supplies, particularly in contexts where the health system is very weak.

**Figure 1** SAM and MAM Geographical Coverage West and Central Africa 2017



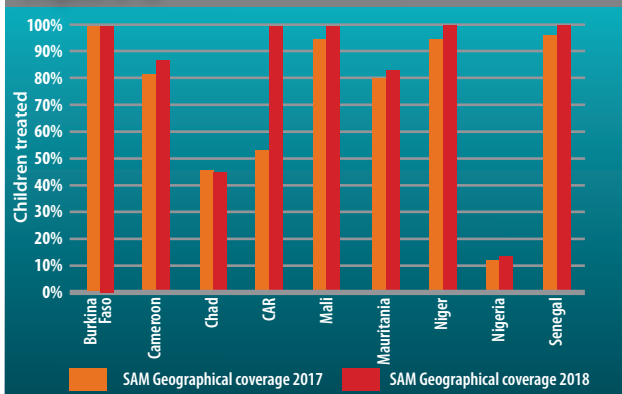
Source: UNICEF WCARO; WFP WCARO

**Figure 2** SAM and MAM Geographical Coverage West and Central Africa 2018



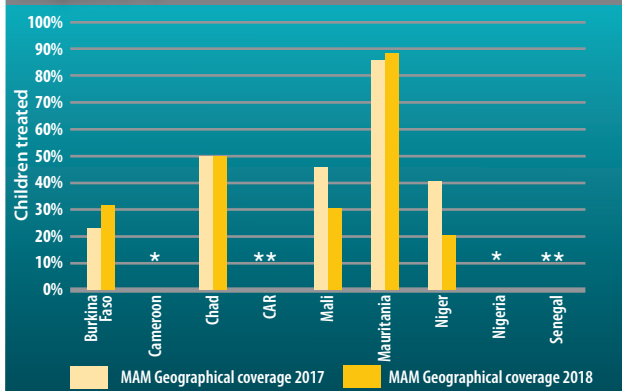
Source: UNICEF WCARO/WFP WCARO

**Figure 3** SAM Geographical Coverage, West and Central Africa 2017 and 2018



Source: UNICEF WCARO

**Figure 4** MAM Geographical Coverage West and Central Africa 2017 and 2018



Source: WFP WCARO. Note: coverage is based on the areas targeted by WFP  
\*no TSFP; \*\* no comparable data

## 3.1 Regional SAM and MAM Geographical and Treatment Coverage data

SAM admissions and geographical coverage data was provided by UNICEF WCARO for 2017 and 2018 for all nine countries selected. Data on MAM admissions and geographical coverage was provided by WFP WCARO for Burkina Faso, Chad, Niger, Mali and Mauritania. While WFP has also targeted supplementary feeding programmes (TSFPs) in Central African Republic (CAR) and Senegal, data could not be included in the review; different methodology meant data was not comparable with the other countries and data for CAR for 2017-2018 was not complete. WFP does not have TSFPs in Nigeria or Cameroon, but implements 'expanded' blanket supplementary feeding programmes (BSFPs) that include MAM cases; this data was not comparable with other countries and so was not included in collated data analysis (Section 3.3.1) but presented separately (Section 3.3.8).

### 3.1.1 SAM and MAM Geographical Coverage

Figures 1 and 2 compare SAM and MAM geographical coverage 2017 and 2018. They suggest that geographical coverage of SAM treatment services was considerably higher in both 2017 and 2018 than geographical coverage of MAM treatment services in three of the five countries where data was available (Burkina Faso, Mali and Niger). The data below should be interpreted with caution as high geographical coverage does not necessarily mean services are available all year round or are of adequate quality. For example, MAM treatment is implemented only four to five months per year in Mauritania during the lean season.

It should be noted that UNICEF and WFP employ a different targeting approach. Despite comparatively high rates of GAM (10.3% – WFP MAM dashboard) and a large MAM and SAM burden (SAM estimated at 2,414,998 – UNICEF 2018; no MAM burden estimate provided) in Nigeria, geographical coverage of SAM services is very low and MAM treatment services are not provided, although a TSFP pilot programme is ongoing in two states of north-east Nigeria, Borno and Yobe. Although Chad and Mauritania appear to have comparable geographical coverage of both SAM and MAM services, this should not be interpreted as convergence of these services.

Figure 3 shows an increase in geographical coverage of SAM treatment services between 2017 and 2018 in the majority of countries presented and is in line with UNICEF's reported objective of aiming for 100% geographical coverage of services in the WCARO region (i.e. 100% of health centres delivering SAM treatment services). As previously noted, this data does not give any information about the quality or effectiveness of services. Geographical coverage is lower in Chad as the Sahelian regions have been previously prioritised, although UNICEF reported that it is now extending coverage to other regions of the country.

Figure 4 shows MAM geographical coverage in the WCARO selected countries. The data suggests that geographical coverage of MAM treatment decreased in Mali and Niger, in contrast to SAM treatment coverage increasing in these same countries (Figure 5). WFP WCARO stated that TSFPs take account of the prevalence of MAM and SAM as well as aggravating factors such as food insecurity, population density, morbidity and emergency context, and areas are prioritised and targeted on this basis. For the countries presented in Figure 4, based on these criteria/objectives, WFP aimed to target the most vulnerable households with TSFP, BSFP and food assistance. Co-location with SAM services is not a targeting consideration.

<sup>4</sup> UNICEF SAM burden figure was provided in its database. WFP did not provide an equivalent figure for burden: the WFP MAM dashboard only includes the prevalence of MAM (10.3%) and the number of children treated.

As GAM and MAM prevalence figures do not change significantly between these years (see country profiles in Section 3.3), a decrease in financial resources for MAM treatment may explain the drop in coverage and admissions in some countries, as the GAM and MAM national prevalence figures do not change (provided by WFP; see country sections). WFP WCARO reported that this decrease in funding for MAM treatment in the region has been a trend since 2012. WFP urged caution when drawing conclusions or making comparisons of MAM admissions and coverage versus SAM admissions and coverage as programme objectives are different and quality of the programme can vary (dependent on factors such as presence or absence of food assistance, implementation of screening activities, etc., capacity of health systems to expand to take on TSFP and large caseloads of MAM). Mauritania appears to have the best geographical coverage of MAM services for both years, although WFP reported that these are only provided for up to five months per year.

Cameroon and Nigeria receive no coverage from TSFP, although BSFP is implemented in both countries (no data for Senegal and CAR was available). WFP WCARO explained that the current national community-based management of acute malnutrition (CMAM) guideline in Nigeria does not include TSFP, although revision is ongoing to include MAM treatment and other related actions. Results of an ongoing pilot in Yobe state will help to inform possible national scale-up of MAM treatment in Nigeria. In the absence of 'classic' TSFP, WFP implemented an alternative model for accessing children with MAM through the BSFP, linked to mass screening in emergency-affected areas of the country. Expanded BSFP is ongoing in three states of the north-east and has assisted 2.5 million beneficiaries since 2015 (see section 3.3.8 for admissions figures 2017-2018).

In Cameroon, WFP has taken the decision to implement expanded BSFP as an adaptive way of treating children with MAM, given the low capacity of health centres to take on TSFP and anticipated numbers of children with MAM (see section 3.3.6 for admissions figures 2018). This approach has reportedly been very successful<sup>5</sup>.

### 3.1.2 SAM Treatment Coverage

While Figure 3 shows an increase in geographical coverage of SAM treatment services, Figure 5 shows a decrease in SAM treatment coverage in most countries (apart from Burkina Faso and Niger). In most cases, this does not represent a significant drop in SAM admissions but reflects a change in treatment coverage targets and an upwards revision of the estimated SAM burden between 2017 and 2018. As reported by UNICEF WCARO, the estimated SAM burden in

these countries was revised upwards for 2018 due to various factors and may also be linked to geographical expansion and increased geographical coverage (i.e. the number of possible cases to treat increases before there is extra capacity to treat them). With the focus on scale-up of geographical coverage, regional staff report that less focus on community mobilisation, screening and programme quality may also be affecting treatment coverage in some countries, particularly where there has been considerable phase-out of donor/NGO-supported treatment programmes. WFP reported that availability of funding has been the main driving factor in the reduction of both SAM and MAM treatment coverage. For example, in Mali, donor-funded NGO support for SAM treatment has been phasing out across the southern regions, with programmes due to continue only in the northern areas affected by insecurity.

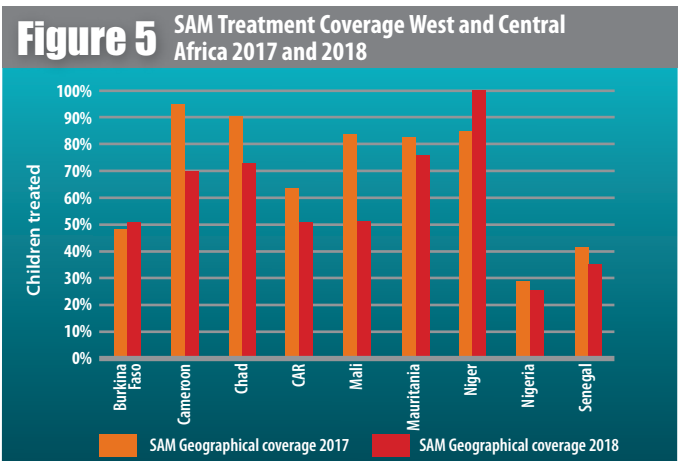
### 3.1.3 MAM Treatment Coverage

Figure 6 reflects treatment coverage figures for those countries where WFP has provided comparable data (no TSFPs in Nigeria and Cameroon and data not available for CAR and Senegal). This is calculated as number of admissions against the overall burden. With the exception of Burkina Faso, where treatment coverage has increased slightly, there is a downward trend in treatment coverage for all the other countries. This is particularly stark in Niger, where treatment coverage has dropped from 41% in 2017 to 18% in 2018, despite no change in GAM prevalence. WFP WCARO reports that this drop in coverage is due to decreasing funding for TSFPs, a decline ongoing since 2012.

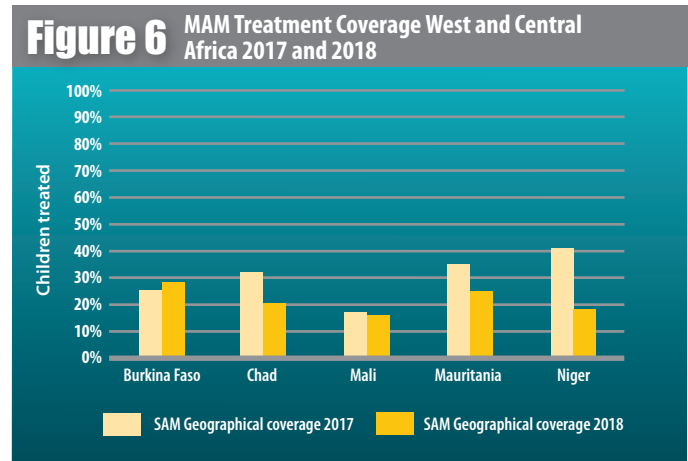
## 3.2 An overview of regional practice in the admission and referral of children with SAM and MAM

A comprehensive set of data at regional level, which presents comparative geographical and treatment coverage for both SAM and MAM services and the coherence between the two services in terms of successful referral and continuum of care for acute malnutrition, was not available to the reviewers. Preliminary discussions with agency staff identified that the review would need to collect data for MAM and SAM separately. However, an online survey administered through UNICEF and WFP regional offices allowed

<sup>5</sup> Eveline Ngwenyi, Mica Jenkins, Nicolas Joannic and Cécile Patricia (2019). Addressing acute malnutrition in Cameroon during an emergency: Results and benefits of an integrated prevention programme. *Field Exchange* issue 60, July 2019. p96. [www.enonline.net/fex/60/acute-malnutrition-cameroon](http://www.enonline.net/fex/60/acute-malnutrition-cameroon)



Source: UNICEF WCARO



Source: UNICEF WCARO



some insights around the provision of a continuum of care from a qualitative perspective, noting that this reflects respondent knowledge and experience and not the status of SAM/MAM programming more generally.

West and Central Africa region was represented by a total of 46 respondents from Burkina Faso (n=6), Cameroon (n=3), Central African Republic (n=2), Chad (n=3), Mali (n=4), Mauritania (n=1), Niger (n=7), Nigeria (n=17), and Senegal (n=4); across government (n=4); NGOs (n=15); UN organisation (n=26); and a research centre (n=1). As can be seen, participation by country varied (with very strong representation from Nigeria) and there was very limited government representation.

Results should be interpreted with caution as they represent personal opinions, the country contexts are very different, the number of responses is low and representation across countries is not comparable. For this reason, numbers rather than percentages are provided for results from this region. This section provides an overview of responses, with some reflections on differences between countries and contexts. A summary of main findings from the online survey relating to referrals between MAM and SAM services by country is presented in the country-specific section (3.3).

### 3.2.1 Provision of SAM and MAM services

Services for SAM and MAM were reported to be delivered within a single CMAM/IMAM programme by a majority of respondents (n=46) from the region. However, this does not necessarily reflect effective referrals between SAM and MAM services. Over a quarter of respondents reported independent provision of SAM and MAM services, while a few reported working towards integration.

A large proportion of survey respondents were involved in the treatment of SAM through provision of both outpatient and inpatient services. A quarter of respondents were involved in MAM treatment through TSFPs and over a third were involved in BSFPs. Over half the respondents reported use of either expanded or simplified protocols for SAM and/or MAM treatment, but definitions of these vary between agency (for example, in Nigeria, 'expanded protocols' referred to the inclusion of children with MAM within a BSFP and receiving a special ration).

The majority of survey respondents reported that over 80% of their work in the treatment of acute malnutrition consists of capacity development and support to government service delivery. Support is also provided to monitoring and evaluation and to government policy development for acute malnutrition by most of the respondents. Almost three quarters of respondents reported both SAM and MAM treatment services as integrated within national health systems in the region, with the remainder provided through stand-alone, non-governmental programmes.

### 3.2.2 Treatment of SAM

All respondents who were involved in treatment of SAM (n=30) reported that agencies working in the region follow national protocols for SAM treatment. Only one fifth of these respondents reported their agency as having an agency-specific SAM protocol but even where this did exist most prioritised national guidelines.

Three admission criteria for SAM (children aged 6-59 months) are widely used in the region: 1) Mid-upper arm circumference (MUAC) <115mm; 2) weight-for-height z-scores (WHZ) <-3; and 3) bilateral pitting oedema. The three most widely used discharge

criteria for SAM reported by respondents are: no oedema, MUAC  $\geq$  125mm, and no complications. WHZ  $\geq$  2 is used by almost two thirds of respondents and lower MUAC and WHZ discharge criteria (i.e. once a child meets MAM criteria) are used by just under a quarter. Discharge criteria appear not to be entirely consistent with admission criteria (i.e. a child is discharged using same criterion used for admission), as recommended by WHO 2013 guidance.

Around one fifth of respondents reported that infants less than six months (0-5 months) old are not admitted for SAM treatment. For those who admit infants, bilateral oedema or WLZ (weight-for-length z-scores) <-3 are the two main criteria used for admission. Half of respondents reported that they admitted infants for SAM treatment using various (non-standardised) agency or facility-specific criteria, such as visible wasting, difficulty breastfeeding and lack of weight gain.

Reported SAM discharge criteria for infants less than six months also varied: around two thirds reported using adequate weight gain and effective feeding (with breastmilk or with breastmilk substitute (BMS)); half included no oedema as a criterion and a third included a WLZ target.

### 3.2.3 Treatment of MAM

Most survey respondents who are involved in the treatment of MAM (n=27) reported the existence of a national protocol for MAM and plans to develop and/or add MAM to national SAM protocols are ongoing in some countries. A quarter of these respondents reported having agency-specific protocols on MAM, with some agencies referring to a national protocol where it is in place.

Responses suggest that MAM protocols at both national and agency level are not standardised in West and Central Africa. Most respondents reported admission criteria for MAM treatment as MUAC  $\geq$  115mm and <125mm and over two thirds reported admission with WHZ/WLZ  $\geq$  -3 and <-2.

#### Referral of children identified as MAM by SAM treatment centres

Around half of respondents reported that children arriving with MAM at SAM treatment centres are referred to TSFPs and a small number reported referral to BSFPs. Almost one fifth of respondents reported that neither TSFPs nor BSFPs were available for children with MAM. In these areas where MAM treatment is unavailable, children are mainly referred to a health centre for nutrition counselling or to prevention programmes.

The results of the survey suggest that there may be wide geographic disparity in the West and Central Africa region with regard to whether SAM treatment centres have the possibility to refer children with MAM for MAM treatment. Less than two fifths (39%) of respondents reported that SAM treatment centres could successfully refer children for MAM treatment in 70-100% of cases, while one quarter reported successful referral <30% of the time. A small number of respondents reported no possibility of referring from SAM to MAM.

#### Referral of children identified as SAM by MAM treatment centres

The story is better for children with SAM identified in SFPs, where almost three quarters (70%) of respondents reported that cases can be successfully referred to treatment centres by 70-100% of MAM treatment programmes.

### Additional referrals for children with MAM

Three quarters of survey respondents reported that children recovering or recovered from MAM are referred to additional services such as nutrition counselling. Referrals to prevention programmes and growth monitoring was reported by just under half of respondents. A small number of respondents reported that no further referrals were made for children with MAM, although the reasons for no further referral were not specified.

### 3.2.4 Barriers to the provision of a continuum of care

The main barrier to providing a continuum of care for acute malnutrition identified by survey respondents (n=46) was a lack of financial resources. More than half of respondents reported a lack of capacity at health centres and limited geographical coverage of services implemented at health-facility level as significant obstacles to ensuring adequate continuum of care for children suffering from SAM or MAM. While lack of implementing agencies was not reported to be a major problem in the region, half the respondents reported product pipeline issues and one third reported differences in geographical targeting between MAM and SAM. Limited infrastructure, insecurity/access issues, and deprioritisation of the financing of MAM treatment are also identified as critical issues.

## 3.3 Results by country: Sub-national MAM and SAM admissions and online survey results

This section presents a comparison by country and their regions (where possible) of SAM/MAM admissions in 2017 and 2018. MAM and SAM prevalence estimates for these years are presented for those countries for which WFP WCARO has provided this information. For countries where WFP has not provided this information (CAR, Cameroon, Nigeria and Senegal), UN Joint Malnutrition Estimates data on GAM and SAM prevalence are provided. To restate, where co-existence of services in regions is reflected in country data, continuum of care for acute malnutrition in terms of access to and delivery of services cannot be assumed as this requires more detailed information around referrals and alignment of stabilisation centres, outpatient therapeutic programmes (OTPs) and TSFPs. To provide some context, qualitative data from the online survey is also included by country. Figure 7 provides a summary of SAM and MAM admissions 2017-2018 in the countries selected<sup>6</sup>.

### 3.3.1 Burkina Faso

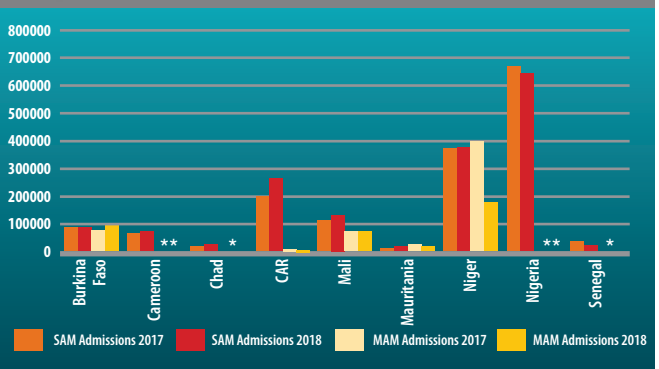
SAM prevalence = 2%, MAM prevalence 2017 = 6.6%, MAM prevalence 2018 = 6.8% (Source: WFP WCARO)

Figures 8 and 9 suggest that SAM and MAM treatment services are both available in only four out of 13 regions of the country in 2018, as WFP does not implement TSFP in all contexts, especially those where GAM is <5%. SAM treatment is available in all regions. Numbers of children treated remained relatively stable from 2017 to 2018 (with the addition of Centre Nord for MAM treatment in 2018). Those areas targeted for MAM treatment appear to be those where SAM treatment caseloads are also greater. There was a considerably higher caseload of MAM than SAM children in the four regions covered by WFP in 2018 (three in 2017), but co-location and referrals between services was not possible to verify from the data provided.

Figures 10 and 11 indicate that SAM admissions in 2018 increased slightly from 2017, and where there are also MAM treatment services (Nord, Sahel, Est and Centre Nord), MAM admissions also increased.

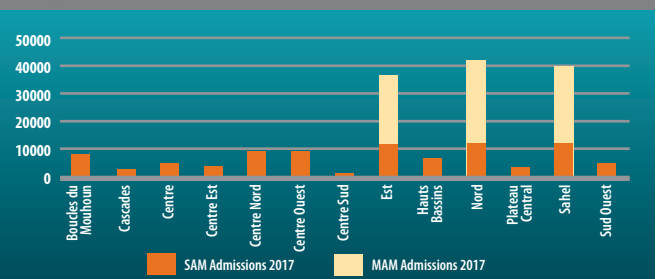
<sup>6</sup> NB: There is no TSFP in Cameroon or Nigeria. MAM admissions data was not provided for CAR and Senegal.

**Figure 7** SAM and MAM admissions selected countries West and Central Africa, 2017 and 2018



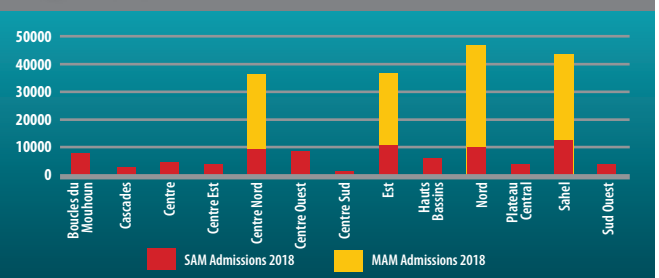
Source: UNICEF and WFP WCARO  
\*no MAM data; \*\* no TSFP

**Figure 8** SAM and MAM admissions by region Burkina Faso 2017



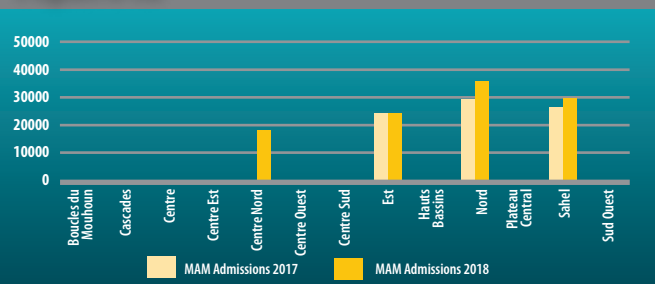
Source: UNICEF and WFP WCARO

**Figure 9** SAM and MAM admissions by region Burkina Faso 2018



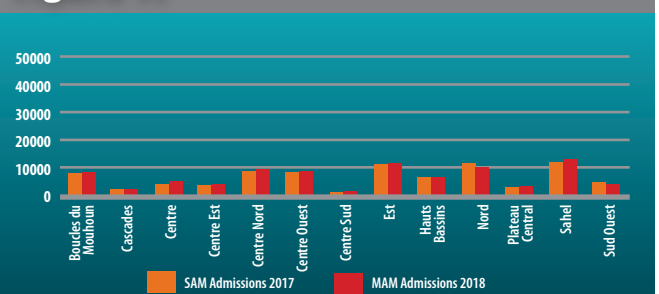
Source: UNICEF and WFP WCARO

**Figure 10** MAM admissions Burkina Faso 2017 and 2018



Source: WFP WCARO

**Figure 11** SAM admissions Burkina Faso 2017 and 2018



### Qualitative feedback from online survey

Respondents to the online survey based in Burkina Faso (n=6) report that outpatient facilities have access to inpatient facilities where they can refer complicated cases of SAM, and inpatient facilities are able to refer stabilised SAM cases to outpatient care. Monitoring of referrals is undertaken but is sometimes incomplete. Where services for MAM treatment are available, children with SAM are discharged according to various criteria to either TSFPs or BSFPs, depending on geographical location and service availability. BSFP is available only during the lean season. Where no MAM treatment is available, children are mainly referred to health centres for nutrition counselling. Lower geographical coverage of MAM services implemented at health-facility level, lack of capacity at health centres and lack of financial resources were reported by survey respondents as the main barriers to a continuum of care between SAM and MAM services.

## 3.3.2 Chad

SAM prevalence = 3.9%, MAM prevalence 2017 = 10%, MAM prevalence 2018 = 9.5% (Source: WFP WCARO)

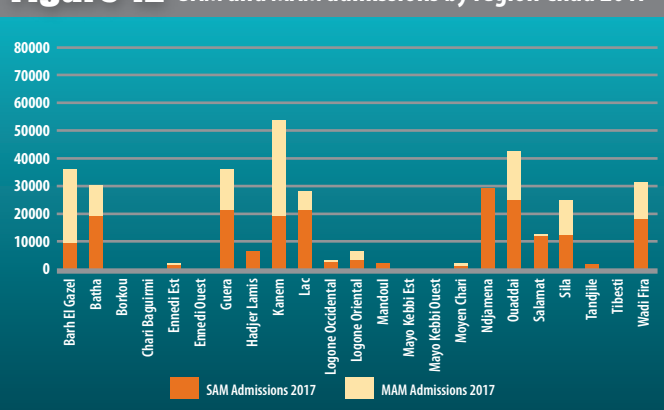
Figures 12 and 13 suggest that there is some co-location of both SAM and MAM services at a sub-national (region) level, and MAM services are available where SAM caseloads are highest, with the exception of Ndjamaena, where MAM treatment was added in 2018. In some places, such as Kanem and Ouaddai, there are both high MAM and SAM admissions; however, in most cases the numbers of children treated for MAM are lower than numbers treated for SAM or absent. In some regions, such as Borkou and Chari Baguirmi, neither service is available. In 2018, in most regions targeted, SAM admissions are significantly greater than MAM admissions, except for Barh el Gazel, where MAM admissions exceed those of SAM.

Figure 14 clearly demonstrates that MAM admissions decreased between 2017 and 2018, although GAM prevalence has not changed significantly. The same pattern has not been observed for SAM admissions (Figure 15), which have increased in almost all cases between 2017 and 2018. This change in MAM admissions is most likely driven by funding cuts for TSFP to WFP in Chad and other parts of West and Central Africa, as reported by WFP regional office headquarters and by UNHCR, who has started to programme lipid-based nutrient supplements (LNS) to compensate.

### Qualitative feedback from online survey

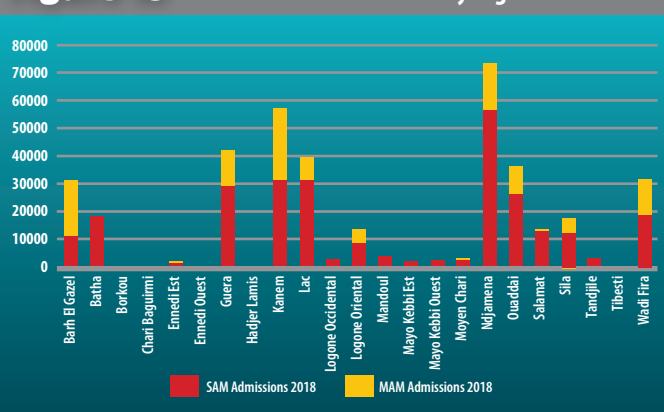
Online survey respondents based in Chad (n=3) reported that they were involved in the provision of services for the treatment of SAM and MAM primarily combined within one CMAM/IMAM programme. All modalities of treatment of SAM and MAM exist in the country and include expanded or simplified management protocols. Where services for MAM treatment are not available, referrals may be made to nutrition counselling and medical check-ups. Lack of financial resources and limited geographical coverage of services implemented at health-facility level were reported as two of the main barriers to the successful continuum of care for acute malnutrition. One respondent commented that some zones in Chad are difficult to access and referrals can be difficult, although some partners try to overcome this by assisting with transportation (vehicles and canoes).

Figure 12 SAM and MAM admissions by region Chad 2017



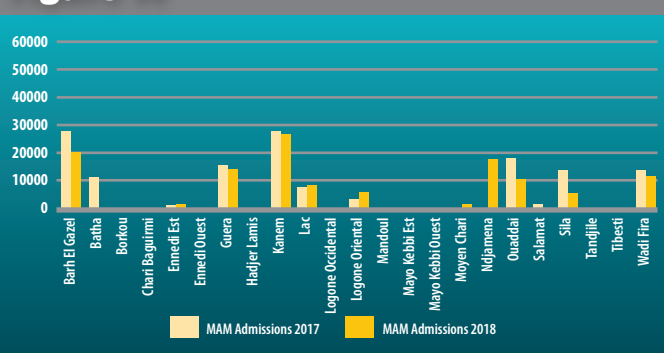
Source: WFP and UNICEF WCARO

Figure 13 SAM and MAM admissions by region Chad 2018



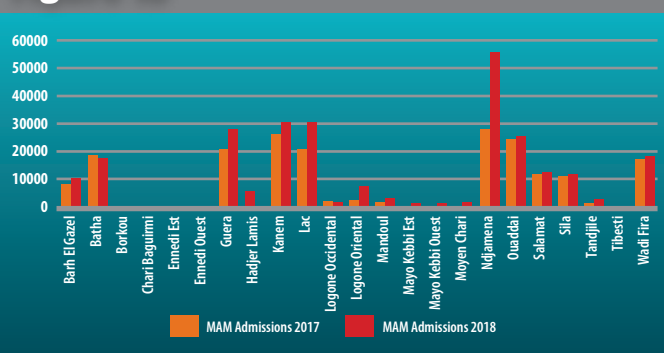
Source: WFP and UNICEF WCARO

Figure 14 MAM admissions Chad 2017 and 2018



Source: WFP WCARO

Figure 15 SAM admissions Chad 2017 and 2018



Source: UNICEF WCARO

### 3.3.3 Mali

SAM prevalence = 2.6%, MAM prevalence 2017 = 8.1%, MAM prevalence 2018 = 8% Source: WFP WCARO

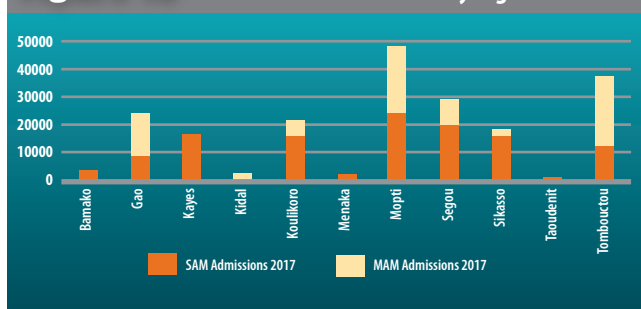
Although MAM services are distributed across the same region as SAM services (in 2017 more than 2018), caseloads are not always comparable where levels of SAM are high. This suggests a divergence in targeting criteria for SAM and MAM services in the regions. As observed in Chad, the numbers of children treated for MAM in Mali are often equal to or lower than numbers treated for SAM (particularly in 2018). It should be noted, however, that the two locations of Taoudenit and Kidal have MAM treatment services but an absence of SAM treatment, or just a handful of SAM cases (too few to show up on the graph).

Figure 19 shows that high SAM admissions in some regions do not always correlate with the areas where there are higher MAM admissions. In some regions, number of MAM admissions have dropped or stopped completely, despite no change in national MAM prevalence. Again, these observations can be due to a WFP-reported fall in funding resources for MAM treatment, as well as a divergence in targeting criteria for MAM and SAM services. SAM admissions by region increased between 2017 and 2018, although estimated SAM treatment coverage decreased from 90.2% to 73% (due to a revision of overall targets).

#### Qualitative feedback from online survey

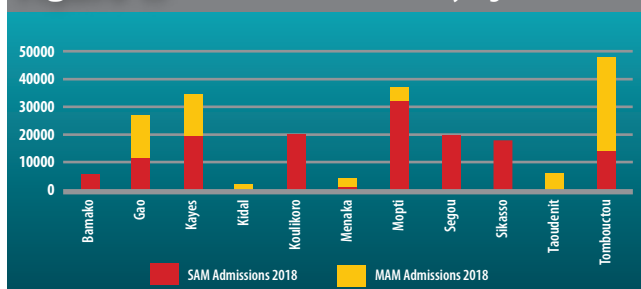
Online survey respondents based in Mali (n=4) reported that MAM treatment availability varies geographically. Lack of capacity at health centres was reported as the main barrier to successful continuum of care between SAM and MAM. Respondents commented that continuum of care could be improved through ensuring a reliable supply of inputs for the treatment of acute malnutrition, training staff involved in treating acute malnutrition, and making referrals and providing equipment for health structures that implement MAM and SAM treatment programmes in the same place.

Figure 16 SAM and MAM admissions by region Mali 2017



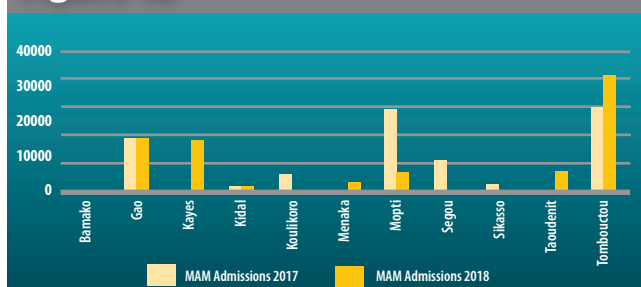
Source UNICEF and WFP WCARO

Figure 17 SAM and MAM admissions by region Mali 2018



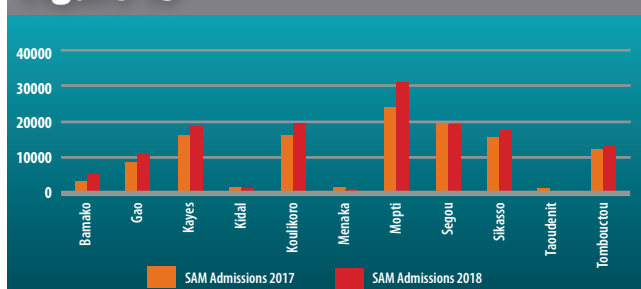
Source: UNICEF and WFP WCARO

Figure 18 MAM admissions Mali 2017 and 2018



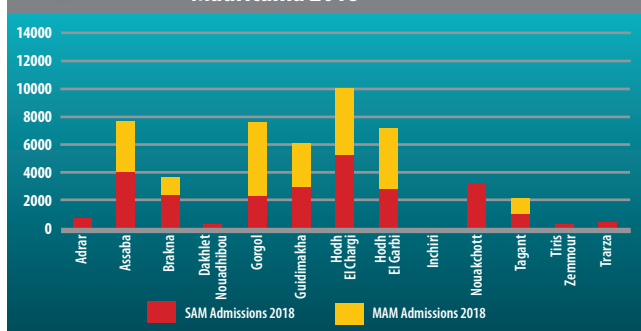
Source: WFP WCARO

Figure 19 SAM admissions Mali 2017 and 2018



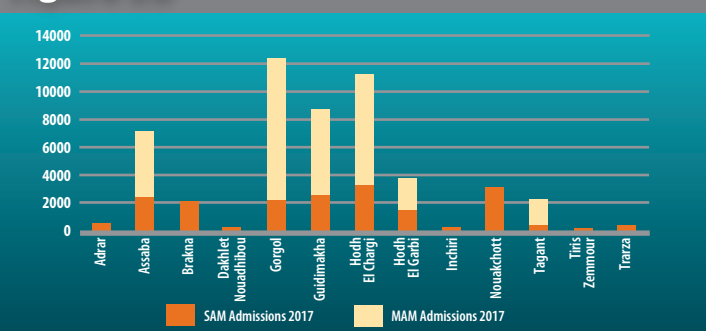
Source: WFP WCARO

Figure 21 SAM and MAM admissions by region Mauritania 2018



Source: UNICEF and WFP WCARO

Figure 20 SAM and MAM admissions Mauritania 2017



Source: UNICEF and WFP WCARO

exception of Adrar, Trarza, Nouakchott and Brakna; the latter two regions have comparable SAM caseloads to other regions. WFP clarified that government responsibility for MAM treatment falls under the Ministry of Agriculture, while SAM treatment falls under the Ministry of Health in Mauritania, meaning that a continuum of care is constrained by poor levels of communication between health staff (responsible for SAM) and community volunteers (responsible for MAM), and because the duration of MAM service provision is shorter than that for SAM.

A sharp drop in MAM treatment admissions in 2018 is clearly reflected in Figure 22, despite a small increase in MAM prevalence reported by WFP. This is more likely due to a reduction in funding resources than any change in the food security or health situation. Conversely, SAM admissions in the regions are either increasing or remaining stable.

### Qualitative feedback from online survey

The one online survey respondent based in Mauritania reported that services for the treatment of SAM and MAM operate primarily independently of one another and that TFSPs are available seasonally when populations are most vulnerable. Lack of financial resources is seen as the main barrier to a successful continuum of care between SAM and MAM treatment.

## 3.3.5 Niger

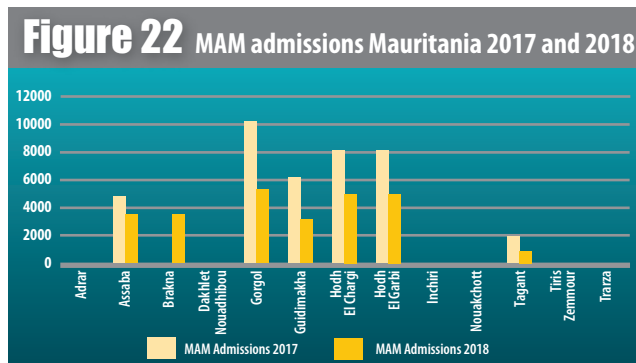
SAM prevalence = 1.9%, MAM prevalence 2017 = 8.4%, MAM prevalence 2018 = 11.3% Source: WFP WCARO

Figures 24 and 25 reflect that MAM treatment services are distributed across the same geographical areas as SAM services, although alignment and referrals between services cannot be assumed. The MAM caseload either matches or is less than SAM caseload in each region in 2017 and in 2018, with significant reductions in MAM admissions (but not SAM) observed in all regions between 2017 and 2018.

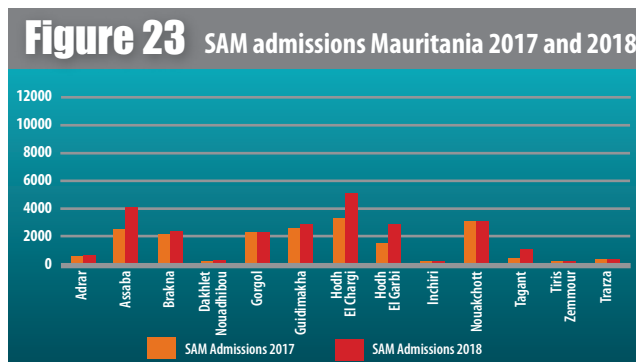
Figure 26 also shows a clear reduction in MAM admissions between 2017 and 2018 in all but one region, despite an increase in GAM prevalence in 2018 reported by WFP. SAM admissions have remained consistent, although a fall in admissions in Dosso and Tahoua can be observed.

### Qualitative feedback from online survey

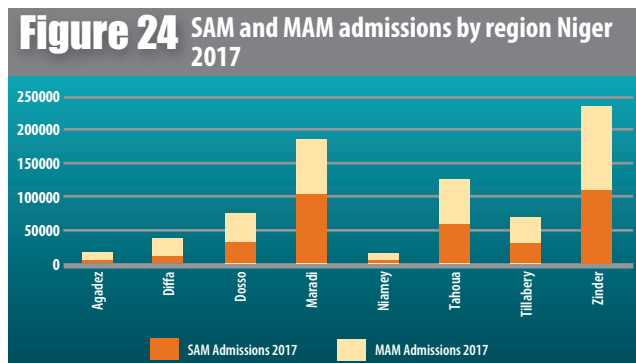
Online survey respondents based in Niger (n=7) reported that referral mechanisms for children with SAM are stronger from inpatient to outpatient than the converse. These referrals are not always successfully captured in monitoring data; for example, some are noted as new cases. The presence of an SFP does not affect SAM discharge criteria. Respondents also reported that there are few linkages for children discharged from SAM treatment to transit to MAM treatment facilities. Most often, children will exit SAM treatment when they are fully cured/recovered from acute malnutrition. Few, if, any referrals are made for children with MAM, although some are referred to nutrition counselling where MAM services are not available. Limited geographical coverage of services implemented at health-facility level and lack of financial resources were reported as the main barriers to successful continuum of care between SAM and MAM. Respondents suggested that continuum of care in Niger could be improved through decentralising treatment to the level of health huts (community-based health facilities) in order to bring care closer to the community. The integration of the rapid-response mechanism with the programme to treat acute malnutrition was cited as a good model of intervention, where synergy between the two projects ensures continuity of treatment and prevention services for newly displaced populations.



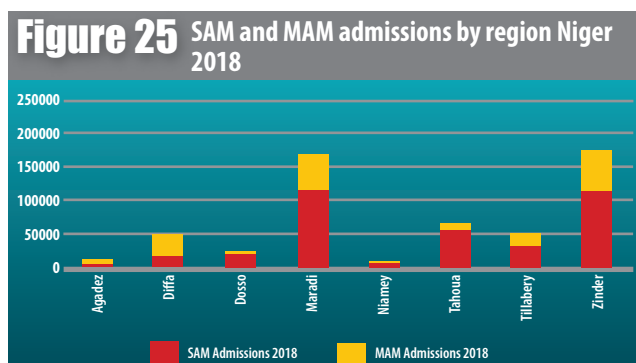
Source: WFP WCARO



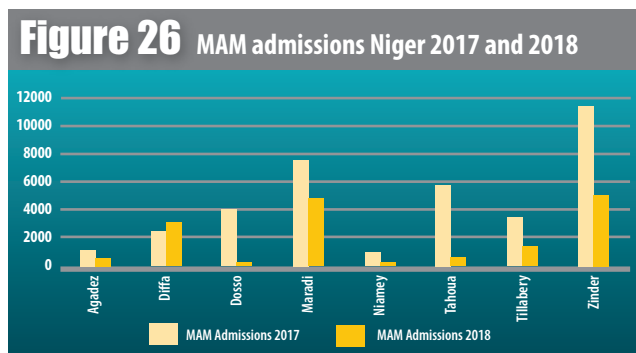
Source: WFP WCARO



Source: UNICEF and WFP WCARO



Source: UNICEF and WFP WCARO



Source: WFP WCARO

### 3.3.6 Cameroon

GAM prevalence = 5.2%, SAM prevalence = 1.3%. Source: UN Joint Malnutrition Estimates 2018

SAM admissions for 2017 and 2018 are presented in Figure 28, which shows a slight increase in 2018.

WFP does not provide targeted supplementary feeding for treatment of MAM in Cameroon and has taken the decision to implement expanded BSFP as a platform for treatment of MAM, given the limited capacity of health centres to take on TSFP and anticipated high numbers of children with MAM. Admissions data was not provided for BSFP, although the online survey respondents indicated that there is some continuum of care where BSFP and SAM treatment services are co-located. A detailed documentation of the adapted BSFP approach to accommodate MAM children and to support a continuum of care with other services is available that reports high demand and uptake and good linkages to SAM services<sup>7</sup>. Figure 29 presents the expanded BSFP data for both MAM admissions and cured SAM admissions (this data was not included in combined analyses presented earlier).

#### Qualitative feedback from online survey

Online survey respondents based in Cameroon (n=3) suggest that the approach to treatment of acute malnutrition in Cameroon is varied depending on geographic location (SAM and MAM combined together under one CMAM/IMAM programme in some areas, working towards integration in others, or remain independent). MAM services (BSFP) are available depending on geographic location. Where no MAM services are provided, children are referred to health centres for nutrition counselling or to prevention programmes. Lack of capacity at health centres is noted as the main barrier to the continuum of treatment between SAM and MAM.

### 3.3.7 Central African Republic (CAR)

GAM prevalence = 7.4%, SAM prevalence = 1.9%. Source: UN Joint Malnutrition Estimates 2018

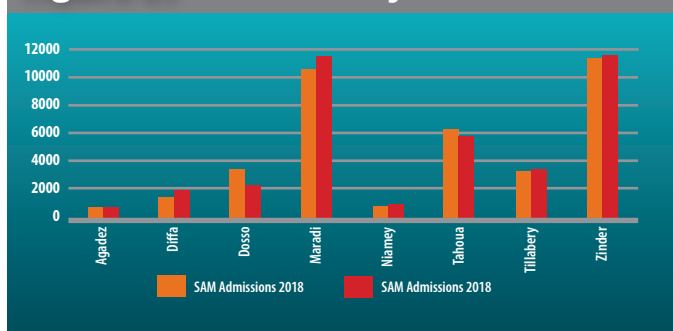
Although WFP provides targeted supplementary feeding for MAM treatment in CAR, admissions and coverage data was not available for 2017-2018. Therefore, only SAM admissions 2017-2018 are reported here. In some regions an increase in admissions can be observed, whereas in others admissions have decreased.

#### Qualitative feedback from online survey

Less than one third of SAM treatment centres can make successful referrals from SAM to MAM treatment (n=2 respondents). Respondents reported several barriers to the successful continuum of care between SAM and MAM, including insecurity/access issues, lack of capacity at health centres, lack of implementing agencies, deprioritisation of treatment of MAM, pipeline issues and a lack of financial resources.

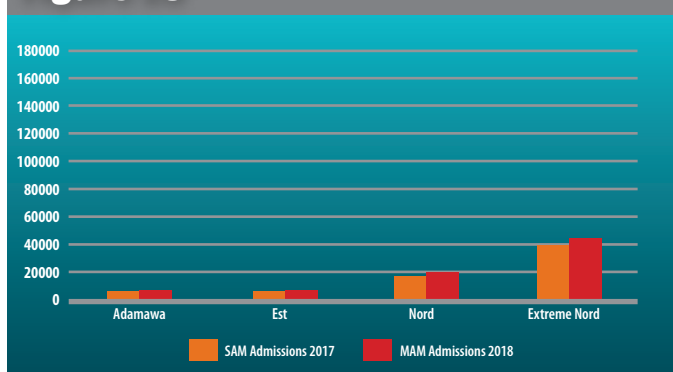
<sup>7</sup> Eveline Ngwenyi, Mica Jenkins, Nicolas Joannic and Cécile Patricia (2019). Addressing acute malnutrition in Cameroon during an emergency: Results and benefits of an integrated prevention programme. *Field Exchange* issue 60, June 2019. [www.ennonline.net/fex/60/acute-malnutrition-cameroon](http://www.ennonline.net/fex/60/acute-malnutrition-cameroon)

Figure 27 SAM admissions Niger 2017 and 2018



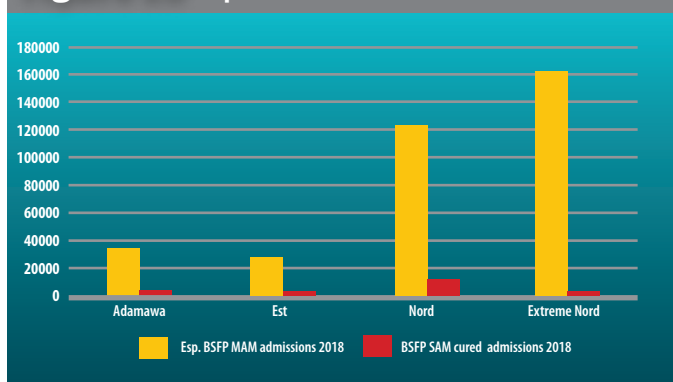
Source: WFP WCARO

Figure 28 SAM admissions Cameroon 2017 and 2018



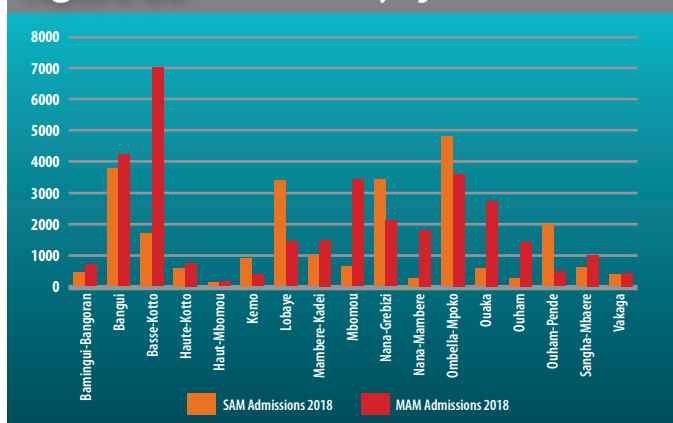
Source: WFP and UNICEF WCARO

Figure 29 Expanded BSFP admissions Cameroon 2018



Source: WFP and UNICEF WCARO

Figure 30 SAM admissions by region CAR 2017 and 2018



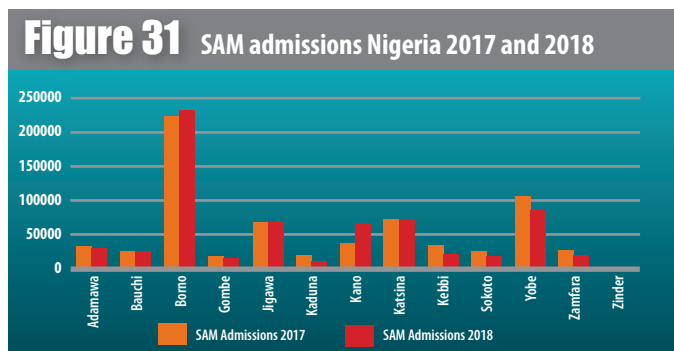
Source: WFP and UNICEF WCARO

### 3.3.8 Nigeria

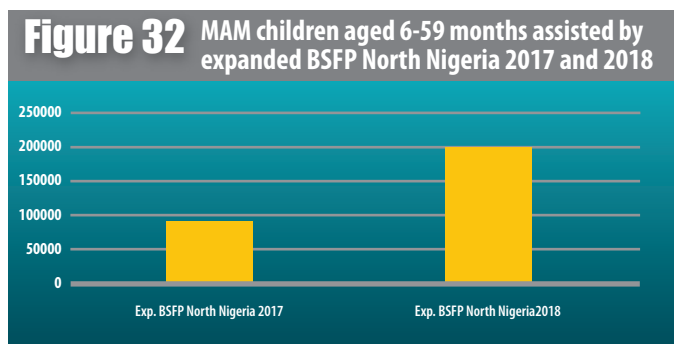
GAM = 10.8%, SAM = 1.8%. Source: UN Joint Malnutrition Estimates 2018

Figure 31 shows that SAM admissions in 2017 and 2018 are similar. However, it can be observed in Figure 3, section 3.1.1 and Figure 5, section 3.1.2 that geographical and treatment coverage of SAM in Nigeria is much lower than that of the other countries presented in this report.

WFP WCARO does not provide targeted supplementary feeding for MAM treatment in Nigeria, despite a relatively high GAM prevalence and very high burden of acute malnutrition. This reflects the current national CMAM guideline in Nigeria, which does not include TSFP, although revision is ongoing to include MAM treatment and other related actions. Results of an ongoing pilot in Yobe state will help to inform possible national scale-up of MAM treatment in Nigeria. In the absence of 'classic' TSFP, WFP has been implementing an alternative model for accessing children with MAM through BSFPs, linked to mass screening in emergency-affected areas of the country. Expanded BSFP is ongoing in three states of the north-east and WFP has assisted 2.5 million beneficiaries since 2015. Figure 32 presents BSFP admissions data for 2017-2018 (this data was not included in combined analyses presented earlier).



Source: WFP WCARO



Source: WFP WCARO

#### Qualitative feedback from online survey

Over three quarters of online survey respondents based in Nigeria (n=17) reported that outpatient facilities have an inpatient facility to which they can successfully refer complicated cases of SAM, while all respondents reported that inpatient facilities have outpatient treatment centres to which they can successfully refer stabilised SAM cases. However, in both cases, security and access issues are barriers to successful referrals. Almost all respondents reported that successful referrals are captured by monitoring systems.

Around one quarter of respondents reported that a child is referred to TSFP once fully recovered from SAM, while another quarter reported discharging SAM children to a BSFP once recovered. Given the information provided by WFP above, it is likely that many reported TSFP referrals are actually referrals to BSFP. One respondent reported discharging children treated for SAM once they reach MAM criteria, while around a third of respondents reported no supplementary feeding services for MAM.

Where no MAM services are available, many respondents reported that children with MAM are referred to prevention programmes or other services, such as IYCF counselling, mother-to-mother support groups, or to health services such as deworming.

Five out of 12 respondents reported that they could refer from SAM services to MAM services 50%-90% of the time; none could refer 90-100% of the time. The estimated proportion of MAM services able to successfully refer children to SAM treatment centres is higher: six out of 10 respondents reported being able to refer from MAM to SAM services 50-90% of the time and two reported being able to refer 90-100% of the time.

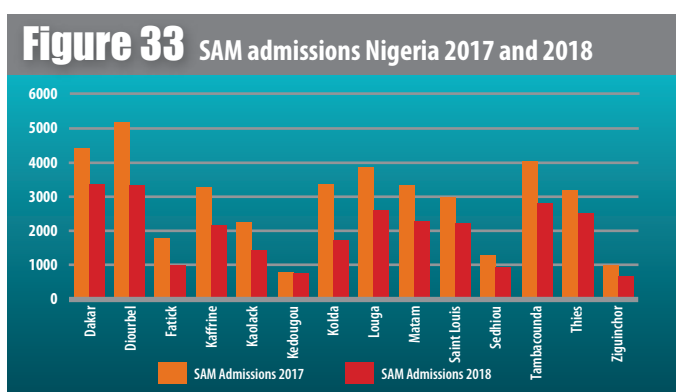
The main barriers to continuum of care between SAM and MAM were reported by survey respondents as lack of financial resources and deprioritisation of treatment of MAM. Pipeline issues and limited geographical targeting between SAM and MAM services were also identified as key issues. Feedback suggested continuum of care for acute malnutrition could be further enhanced through:

- Advocacy to the Federal Government of Nigeria for revision of the National Nutrition Policy, development/dissemination of the national protocol for MAM treatment to provide clear guidance on the management of MAM cases, and a line of reporting for the data generated;
- Increasing focus on MAM services (current focus mainly on SAM);
- Strengthening monitoring and evaluation components, especially data generation, compilation and analysis;
- Improved coordination between government, UN agencies and partner organisations;
- Integrated programmes and multi-sector collaboration to tackle acute malnutrition;
- Ensuring continuum of care across nutrition, IYCF and health services, given the linkages between infections and acute malnutrition;
- Mobile OTPs to increase access;
- Improving capacity of Ministry of Health in management of acute malnutrition;
- Examine ways in which the large burden of MAM can be handled (not only health-centre level);
- Putting in place a combined MAM/SAM treatment protocol to boost coverage and improve service delivery; and
- Improvements to distribution of food assistance and BSFP.

### 3.3.9 Senegal

GAM prevalence = 7.2%, SAM prevalence = 1.2%. Source: UN Joint Malnutrition Estimates 2018

Although WFP provides targeted supplementary feeding for MAM treatment in Senegal, admissions and coverage data were not available for 2017-2018. Therefore, only SAM admissions 2017-2018 are reported here. A significant decrease in SAM admission figures can be observed in most regions. UNICEF WCARO report that this is directly linked to the national strike in the health sector that affected the country from April to December 2018. As a consequence, a significant proportion of nutrition data was not shared by health workers to health districts, or to regional and national levels. However, geographical coverage remained the same as previous years (100%) and SAM prevalence was stable compared with previous years.



Source: WFP WCARO

#### Qualitative feedback from online survey

Online survey respondents based in Senegal (n=4) reported a variety of approaches to the treatment of acute malnutrition, from combined CMAM/IMAM services to independently operating SAM and MAM programmes. All respondents were involved in the treatment of acute malnutrition through all modalities (outpatient, inpatient, TSFP, and BSFP) and expanded or simplified protocols for treatment are used in some cases. Agencies provide support to government policy and government service delivery, as well as capacity development and monitoring and evaluation of acute malnutrition.

Children recovering or recovered from MAM may also be referred to nutrition counselling, growth monitoring, or prevention programmes. Lack of financial resources and lack of capacity at health centres are identified as the main barriers to a successful continuum of care for acute malnutrition.

## 4 Discussion

### Availability of data

There is an apparent absence of macro-level data on referrals between SAM and MAM services, both in global level databases such as Nutridash (UNICEF) and at regional/country level. The reviewers could only collect national and sub-national SAM and MAM admissions data from WFP and UNICEF in the time available.

Data on MAM and SAM admissions 2017-2018 had to be collected separately from WFP and UNICEF regional and country offices as data collected and collated for the whole continuum of acute malnutrition care at either country or regional level was not made available to the reviewers. While country clusters are a potential source of collated SAM/MAM data, none was made available to this review.

That this information may be available at national level is recognised and further investigation at that level is therefore required in order to be able to draw conclusions on continuum of care. Additional time and resources would allow for further analysis of MAM/SAM referral systems operating at sub-national and treatment-centre level and the nature/success of the linkages between these.

Format and data availability varied greatly within agencies. Methods to calculate treatment coverage for SAM and MAM were inconsistent, limiting data comparisons. UNICEF and WFP regional staff reported using the same method to calculate SAM and MAM

geographical coverage based on health-centre coverage. However, treatment coverage differed: whereas SAM is based on actuals versus burden, MAM is based on actuals versus WFP targets. While MAM burden data is available at regional level, this was not provided to this review. If data was standardised both within and between agencies and appraised and reported jointly, it could be used for joint strategic planning purposes, evaluation of continuum of care and coherence of services at both regional and country levels. This highlights the potential role of government, the Cluster or another entity at national level in collecting and combining data on MAM and SAM admissions and related indicators in a coordinated fashion.

No data was available from WHO regarding complicated cases. Inpatient new admissions as a proportion of total new admissions is reported, but co-existence of services and successful referral rates is not. Medically complicated MAM cases are not reported in any datasets. This greatly limits interpretation of coverage and treatment continuum for complicated case management.

### Availability and coverage of treatment services for SAM and MAM

Co-existence of both SAM and MAM services in an area does not necessarily represent co-location of services. This signifies a major gap in understanding of the capacity to provide a continuum of care in treating acute malnutrition and increases the risk of MAM children becoming severely malnourished before they can access treatment.



Of the five countries where both MAM and SAM treatment data was provided for 2017-2018, four had availability of both services across most regions (Burkina Faso is the exception). However, due to a lack of data, it is not possible to form conclusions on the extent to which services are aligned or the success of referrals between them. Further collation and analysis of data at referral centre level would help provide a clearer picture in this respect.

In those five countries with SAM and MAM treatment data, treatment coverage (proxied by number of admissions) of SAM appears to be better than for MAM, with the exception of Mauritania (2017), where the MAM treatment caseload (during lean season surge response) was much greater than that for SAM. An equal or higher number of SAM than MAM admissions in many areas does imply a significant shortfall in MAM treatment provision.

While geographical coverage of SAM treatment services is increasing, treatment coverage at population level is decreasing in many countries. This may be linked to a number of factors, including a revision to the estimated SAM burden (revised upwards for 2018), or less attention to community case-finding. This is particularly relevant where there has been considerable phase-out of donor/NGO support for SAM treatment. An increase in geographical coverage does not necessarily mean an increase in treatment coverage or capacity to effectively implement SAM treatment. Conflict/imposed access to services by the population may also be a factor (e.g. in Mali).

In some cases, location of MAM services does not coincide with areas where SAM admissions are high. This likely reflects divergence in targeting criteria between UN agencies; e.g. TSFP targeted to areas of food insecurity and meeting GAM 'trigger' criteria for time-limited (e.g. seasonal) periods, while the aim is for universal coverage of SAM treatment. This contributes to a mismatch at sub-national level between availability of MAM and SAM treatment when the former is configured around TSFP provision. It may also mean that MAM treatment is not programmed where factors other than food insecurity, such as disease, are contributing to the MAM burden. Reduced resourcing for TSFPs is also a likely significant factor in declining geographical and treatment coverage for MAM (see below). It is important to note that there are examples of joint prioritisation between the agencies (e.g. 2018 Sahel lean season response) that are not captured in this review (WFP key informant).

SAM admissions in 2017-2018 appear to be stable in most countries, with the exception of CAR, Niger and Senegal, where they have reduced, despite stable GAM rates. Further contextual information is needed to provide an explanation for this.

There were significant drops in MAM admissions in 2018 in Niger, Mauritania and Chad, where there has been no change or increase in GAM rates between 2017 and 2018 (as reported by WFP). This suggests prioritisation of SAM over MAM treatment by governments, funders and international agencies and discontent among bilateral funders with TSFPs as a model for MAM treatment in the region.

While this exercise focused on mapping availability of TSFPs as a treatment option for MAM (reflecting WFP's operational experience and primary approach), TSFPs are not the only intervention option for MAM. Approaches to care for MAM children reported in the regions included nutrition counselling, referral to health centres, referral to 'preventive' services, and management in BSFPs. WFP does not operate targeted supplementary feeding for MAM in Nigeria (a reflection of national protocol) but is innovating through pilots of expanded BSFP as an alternative treatment approach for

children with MAM in two high-burden states. Expanded BSFP has also been implemented at scale in Cameroon for MAM treatment. It was not possible to determine from this mapping the extent to which TSFPs are not present in settings where they should be according to criteria set out in the MAM decision tree or due to resource shortfalls.

One quarter of survey respondents reported that infants less than six months are not included in SAM treatment protocols. Further investigation into the quality of care for this age group and reasons why some centres are not including infants in their protocol is merited; this may reflect recognised gaps in nationally evidenced guidance on community case management for this age group<sup>8</sup>.

## Continuum of acute malnutrition care

Both the data and reported experiences indicate that SAM treatment without MAM treatment (in the form of TSFPs) is commonplace. This pattern reflects differences in global strategies for the implementation of these two services; TSFPs are configured for delivery in emergency contexts that prioritises areas/populations of highest vulnerability according to several criteria, including GAM rate of greater than 10% , and may be seasonal. SAM treatment scale-up and 100% coverage targets are potentially realisable through an established system (health service) with widespread reach and governed by global WHO SAM guidance.

SAM data in West and Central Africa is presented separately on a monthly basis for inpatient and outpatient admissions. However, it is not possible to tell from this data the extent to which these inpatient and outpatient services co-exist and have the ability to successfully refer from one to another.

All countries have a national protocol for the management of SAM which refers to the need for continuity of treatment/follow-up after discharge, and the majority have a protocol for MAM management (Nigeria being the exception).

Co-existence of SAM and MAM services in the majority of regions does not mean that a good continuum of care for acute malnutrition exists between SAM and MAM treatment. There are several factors that will impact this, including effectiveness of referral systems and boosters and barriers to accessing treatment at community level. This project was not able to collect data on these issues.

While agencies operating at sub-national level may have systems in place for monitoring referrals between SAM and MAM services, online survey responses suggested that, although referrals may be captured in monitoring records in the originating facility, follow-up at the receiving facility was weak. Systems do not appear to be well set up to follow a child for the duration of their treatment, which can also have implications for calculations of treatment success rates.

While the majority of SAM treatment programmes discharge children when they are fully recovered from SAM as per WHO

<sup>8</sup> Sonja Read and Marie McGrath (2018). Community management of uncomplicated malnourished infants under six months old: barriers to national policy change. Field Exchange 57, March 2018. p27. [www.enonline.net/fex/57/malnourishedinfantschange](http://www.enonline.net/fex/57/malnourishedinfantschange)

<sup>9</sup> Moderate acute malnutrition: a decision tool for emergencies. MAM Task Force. Global Nutrition Cluster. Updated March 2017.

<sup>10</sup> WHO. Guideline: Updates on the management of severe acute malnutrition in infants and children. Geneva: World Health Organization; 2013. [https://apps.who.int/iris/bitstream/handle/10665/95584/9789241506328\\_eng.pdf?ua=1](https://apps.who.int/iris/bitstream/handle/10665/95584/9789241506328_eng.pdf?ua=1)

guidance, some online survey respondents reported discharging children from SAM treatment early (on meeting MAM criteria) to complete treatment in TSFPs. Given potentially weak tracking of referrals and a lack of TSFP services, this is a concern. Discharge criteria appear not to be entirely consistent with admission criteria, as recommended by WHO 2013 guidance. According to the survey responses, availability of SFPs for a protection period for recovered SAM children is not commonly available.

Survey results suggested wide disparity across the region in terms of referring from SAM treatment facilities to MAM treatment (i.e. when a MAM case presents at a SAM facility); half the respondents reported that they could make successful referrals. Much greater success was reported in terms of referring a SAM case from MAM treatment facilities to SAM treatment facilities.

The main barriers to a continuum of care for acute malnutrition reported by survey respondents in the region were: lack of financial resources for MAM treatment services, lack of capacity at health centres in management of acute malnutrition and to refer/record referrals, limited geographical coverage of MAM services, frequent

disruptions to the supply of TSFP products, limited capacity of health structures to cope with large numbers of children with MAM, and perceived deprioritisation (in terms of support and resources) of MAM treatment.

When one agency has oversight of the range of services available for acute malnutrition in different areas, a clearer picture of their coherence can be presented and can help to ensure better alignment and highlight gaps where some services may be absent. Government health information systems and/or National Nutrition Clusters have a key role to play in pulling together and making available this type of information. Good examples of this were identified in the East Africa mapping (see recommendations below).

The feasibility of treating large MAM caseloads was raised as a key issue in the online survey and some respondents highlighted the need to prioritise at-risk groups/individuals according to defined criteria in areas where GAM rates are high, while linking those with MAM at lower risk of deterioration to social protection/safety net services, maternal and child health and nutrition (MCHN) services, and BSFP.

## 5 Recommendations

### Availability of data

Mechanisms are needed to ensure that governments, UN agencies and respective implementing partners routinely look at and discuss data on coherence of service provision for MAM and SAM at national and sub-national level, specific to different country/regional contexts. UNICEF and WFP, as key sources of data, have key roles to play in this regard. Examples of where this is happening could be used to inform contexts where it is not. At a global level, information systems on acute malnutrition, such as Nutridash, could be adapted to include both SAM and MAM data.

There are considerable shortfalls in available coverage and treatment data and contextual information regarding complicated case management. Clarity is needed regarding WHO's role in this regard.

The systematic collation and review of standardised monthly and annual SAM and MAM data, including data on admissions and coverage (treatment and geographical) and duration of programming by region at national and regional level, would be valuable in better understanding convergence of services and where there are gaps in provision.

Donors have a valuable role to play in strengthening the quality and availability of data in the provision of a continuum of care. At country and regional levels, donors should support and require the development of mechanisms proposed above to better collect and map data on provision of services across the continuum and between agencies.

Collection and collation of data on referrals from OTP/stabilisation centre (SC) to TSFP and from TSFP to OTP/SC at sub-national, national and regional level as part of monthly and annual reporting systems would highlight the availability of a continuum of care for acute malnutrition and where the gaps are. Examples from the East Africa region (Kenya) could be used as a working example.

The findings highlight the need for harmonised minimum reporting; systems and software such as the CMAM Report,

UNICEF's Nutridash and the new WFP SCOPE CODA<sup>11</sup> may provide an opportunity for this. Recent developments to UNHCR's health information system may also provide important learning for integrated information continuity between services for acute malnutrition and with allied services, such as health and child protection.

### Coverage

Methods for calculating MAM and SAM treatment coverage by and between WFP and UNICEF should be reviewed with a view to standardisation and harmonisation to ensure comparability.

The considerable decline in support for MAM treatment in the form of TSFPs needs to be examined in terms of consequences and reinstated and/or alternative provision made for treatment of MAM children in the context of continuum of care.

### Targeting criteria

Governments, UN agencies and implementing partners should consider aligning criteria in targeting at-risk groups and priority areas (e.g. TSFP and BSFP to areas with high SAM caseload and MAM caseload) across the region. Regular liaison between UN agencies, government, donors and respective implementing partners is needed to enable coherence of service provision for MAM and SAM at sub-national level and ensure such complementarity. Irrespective of aligned targets, current significant financial constraints regarding MAM treatment in the form of TSFPs will require resolution for ambitions to be realised.

### Coordination

Greater coordination within government departments in relevant countries and between supporting agencies on geographical targeting is needed; where possible through existing mechanisms. UNICEF and WFP should consider aligning criteria in targeting at-risk

<sup>11</sup> SCOPE CODA: World Food Programme innovation to improve data management in malnutrition treatment. Field Exchange issue 60, July 2019. p86. [www.ennonline.net/scopecodawfp](http://www.ennonline.net/scopecodawfp)

groups and priority areas (e.g. TSFP and BSFP to areas with high SAM and MAM caseload). Regular liaison on the part of government, UN agencies and respective implementing partners should examine coherence of service provision for MAM and SAM at sub-national level and the complementarity of criteria in targeting at-risk groups and priority areas (e.g. TSFP and BSFP to areas with high SAM caseload).

## Mapping

A system which maps the provision of MAM and SAM services at sub-national level (beyond comparing SAM and MAM admissions) could support planning for SAM/MAM programming, harmonise provision of treatment and ensure protection for children discharged cured from SAM services. Such a system exists in Somalia and could be used as a model for the region to build on<sup>12</sup>. The Nutrition Cluster 4W approach for basic mapping information on MAM/SAM services provides minimum information on co-location of MAM and SAM services and could also inform approaches.

## Addressing pipeline issues/funding shortages

The data presented in this report points to a sharp reduction in MAM treatment in some countries of the region in 2018, where prevalence has not changed; progressive funding shortfalls have been implicated. Governments, donors and UN agencies need to assess and reflect in more depth on the reasons why and the consequences this has for care. More specifically, a detailed global review of bottlenecks to predictable supply of ready-to-use therapeutic food and ready-to-use supplementary food should be prioritised to further identify the extent and the patterns of pipeline breaks and major barriers to resolution, given the major impact these will obviously have on continuum of care.

Donors should play an active role in ensuring that SAM and MAM treatment services coexist and can function to the level needed; e.g. resourcing capacity-strengthening of national supply chain management systems and seeking accountability on how government and partners will make the provision of a full package of continuum of care more available and effective.

## Harmonising service provision

It is necessary to further define benchmarks for what a continuum of care for acute malnutrition should look like and to develop and build on examples of mechanisms/systems where SAM and MAM programming are closely aligned or integrated; e.g. treatment of both SAM and MAM within one government health service, use of community health workers or mobile units to enable health service outreach, and a single implementing agency providing both MAM and SAM treatment provision in one area. Good examples from the East Africa region (Kenya, South Sudan and refugee settings overseen by UNHCR) could be drawn upon.

The provision of healthcare and other nutrition services (e.g. IYCF promotion and support, micronutrient supplementation), as well as linkages to prevention services, should be considered as a critical part of improving the continuum of acute malnutrition care. Such provision should be made in programme and policy documents at country/regional level and by governments and donors financing nutrition services (for example, see the No Wasted Lives conference report Dakar 2017<sup>13</sup>, which refers to the integration of prevention and treatment of acute malnutrition into routine healthcare services, alongside ongoing and critical strengthening of health systems).

## Building capacity for successful referral

It is necessary to develop referral guidance and policy for SC-OTP-TSFP-BSFP referrals that highlight when to refer from one service to

another and the maximum distance between one service and another, track successful referral, promote the provision of different services within a single facility, and minimise the number of treatment facilities a child needs to attend during recovery from acute malnutrition.

It is critical to improve referral systems so that children are properly followed through their treatment from admission through referral to discharge, ensuring that both originating and receiving facilities recognise and follow up referrals (successful referral).

Referral systems can be strengthened by building the capacity of health workers and community health workers in detection and referral of acute malnutrition – from community to health facility, but also between SC/OTP and TSFP/BSFP. Approaches such as ‘family MUAC’ that use mothers and community groups to support the screening and referral process is gaining ground in many countries and has potential to improve community-based referral. There are other country-specific examples (e.g. in Mali) of community-level associations and administration providing transport support to referrals between services for acute malnutrition and costs for these services being integrated into district-level budgets<sup>14</sup>. These examples should be disseminated and used elsewhere.

## Protocols

This review highlights some gaps in provision of treatment for infants less than six months of age; WHO recommendations to include this age group in community-based management (2013) are not being operationalised. Delayed treatment carries risk of excess morbidity and mortality for infants and likely contributes to subsequent child malnutrition caseload. The findings emphasise the value of and need for increased investment in ongoing initiatives to build evidence on community-based identification and management for this age group, particularly in outpatient care.

A review of SAM treatment protocols and practice should be undertaken at country level regarding consistency with WHO guidance and rationales for adaptation/departure from recommendations, and on referral of children recovered from SAM to SFP for a protection ration.

Given the gap in WHO guidance on MAM treatment, a review of country-level MAM protocols should be undertaken to understand current management strategies being adopted.

## Research

It is critical to examine the means by which the MAM burden can be feasibly addressed and resourced, with particular consideration for how to identify and manage higher-risk children (e.g. those with infections; socially vulnerable) and how to cater for those less at risk who may warrant less intensive interventions, e.g. referral to MCHN, BSFP, safety nets/social protection. This is particularly urgent in this region, given the sharp decline in the traditional approach to MAM treatment (TSFP) without evidence of clear, consistent and accessible alternatives.

The findings support the current drive in this region for research and learning-capture around simplified/combined/expanded protocols that aim to integrate the treatment of SAM and MAM, support the continuum of care and improve treatment coverage and effectiveness. Research into the management of at-risk infants less than six months old in outpatient settings is also a priority.

<sup>13</sup> No Wasted Lives Coalition. Innovations in CMAM Treatment Protocols. A Workshop Report: Dakar, October 19th 2017. No Wasted Lives; 2018.

<sup>14</sup> Integration of SAM treatment into health systems in Mali. Lessons learned brief. ENN, 2019. Due out October 2019.

# 6 Conclusions

Considerable data is currently collected and collated on SAM and MAM treatment and involves huge effort and investment by government, agencies and individuals at regional, national and sub-national levels. While fully appreciating this commitment, and the short timeframe that was available for this exercise, the data obtained and experiences shared point to gaps in the nature, availability and consistency of data at national, regional and global level for understanding the extent to which a continuum of care for children with acute malnutrition is being achieved. Further information may be available at national and sub-national level and further investigation is required in order to draw firmer conclusions and further inform recommendations on continuum of care. Clarity on what constitutes continuity of care across different contexts and under different operational models is needed. The insights from this review suggest a more comprehensive global review is

needed on current programming and the status of support across the continuum of care for acute malnutrition to inform subsequent strategy development and potential new ways of working.

An equivalent review was undertaken for selected countries in East Africa and a full report is available. The findings and reflections from both reports feature in an ENN-authored article in Field Exchange 60 .

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<sup>13</sup> No Wasted Lives Coalition. Innovations in CMAM Treatment Protocols. A Workshop Report: Dakar, October 19th 2017. No Wasted Lives; 2018.

<sup>14</sup> Integration of SAM treatment into health systems in Mali. Lessons learned brief. ENN, 2019. Due out October 2019.

# Annex 1 Online Survey outline

## ENN SAM/MAM Continuum of Care Online Survey

Emergency Nutrition Network (ENN) is currently undertaking a basic mapping exercise in West and East Africa, looking at the continuum of care for children with acute malnutrition, i.e. the extent to which treatment programmes for children with moderate acute malnutrition (MAM) and for those with severe acute malnutrition (SAM) are aligned and successfully making referrals between the two services. This is to help inform a planned special edition of ENN publication Field Exchange on the continuum of acute malnutrition care.

This survey forms a part of this project and aims to collect country-specific information about SAM and MAM admission/discharge criteria and referrals and linkages between the two types of treatment programmes.

The survey should not take more than 15 minutes to complete and will be open until Monday 4th March 2019. Thank you very much for your participation.

### Basic information

#### 1. Name

#### 2. E-mail address

#### 3. Are you happy to be contacted by the ENN team for clarifications or further information?

- Yes
- No

#### 4. In which region are you based?

- East Africa (includes Burundi, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Uganda)
- West Africa (includes Burkina Faso, Cameroon, Chad, Central Africa, Mali, Mauritania, Niger, Nigeria, Senegal)

#### 5. Country

#### 6. Type of agency

- Government
- Non-governmental organisation
- UNICEF
- WFP
- UNHCR
- WHO

#### 7. Your role covers: (Multiple answers possible)

- Project management
- Technical support to projects
- Data analysis / Monitoring and Evaluation
- Other (please specify)

#### 8. Please indicate the administrative level at which you work

- National
- Sub-national (regional / district)
- Sub-national (village / community)
- Other (please specify)

#### 9. In your area of operation, please indicate the main approach to treatment of acute malnutrition

- Services for the treatment of SAM and MAM are combined within one CMAM (Community-based Management of Acute Malnutrition)/IMAM (Integrated Management of Acute Malnutrition) programme
- Services for the treatment of SAM and MAM operate independently from each other
- Working towards integration of SAM and MAM services
- Other (please specify)

#### 10. Please indicate how the agency is involved with the treatment of acute malnutrition

- Treatment of severe acute malnutrition (outpatient)
- Treatment of severe acute malnutrition (inpatient)
- Treatment of moderate acute malnutrition (through Targeted Supplementary Feeding Programme)
- Treatment of moderate acute malnutrition (through Blanket Supplementary Feeding Programme)
- Expanded protocol for treatment of both moderate and severe acute malnutrition
- Not involved in treatment of acute malnutrition
- Other (please specify)

**11. The agency provides services in the area(s) of: (Multiple answers possible)**

- Direct service delivery
- Support to government policy
- Support to government service delivery
- Capacity development
- Monitoring and evaluation
- Please provide any relevant additional information

**Treatment of Severe Acute Malnutrition (SAM)**

The following questions aim to collect information about admission / discharge criteria used for children with SAM and about referrals to services to treat MAM. If your agency is not involved in SAM Treatment, you will be taken to Page 6 (Treatment of Moderate Acute Malnutrition).

**12. Does your agency work in treatment of SAM in the country in which you are based?**

- Yes
- No

**13. Is there a national protocol for SAM treatment?**

- Yes
- No

Please provide any relevant additional information

**14. If you are a non-government agency, do you have an agency protocol for SAM treatment?**

- Yes
- No

Please provide any relevant additional information

**15. Is the SAM treatment programme 'stand-alone' or integrated within the national health system?**

- Stand-alone programme (non-government)
- Stand-alone programme (government)
- Integrated within national health system
- Other (please specify)

**16. What admission criteria are used for SAM treatment for children 6-59 months? (Multiple answers possible)**

- MUAC <115 mm
- Weight-for-height < -3 z-scores
- Presence of bilateral pitting oedema
- Other (please specify)

**17. What discharge criteria are used from SAM treatment for children 6-59 months? (Multiple answers possible)**

- MUAC  $\geq$  125mm
- MUAC  $\geq$  115 mm
- WFH  $\geq$  - 2 z-scores
- WFH  $\geq$  -3 z-scores
- No oedema
- Complications resolved
- Other (please specify)

**18. What admission criteria are used from SAM treatment for infants 0-6 months? (Multiple answers possible)**

- Weight-for-length <-3 z-scores
- Presence of bilateral pitting oedema
- Infants 0-6 months are not admitted for SAM treatment
- Other (please specify)

**19. What discharge criteria are used from SAM treatment for infants 0-6 months? (Multiple answers possible)**

- Weight-for-length  $\geq$  -3 z-scores
- Weight-for-length  $\geq$  -2 z-scores
- No oedema
- Infant is breastfeeding effectively or feeding well with an appropriate breastmilk substitute
- Adequate weight gain
- Infants 0-6 months are not admitted for SAM treatment
- Other (please specify)

**20. Do all Outpatient Facilities for SAM treatment have an Inpatient Facility to which they can successfully refer complicated cases of SAM (i.e. referrals are consistently admitted?)**

- An inpatient facility is available where children are consistently admitted
  - An inpatient facility is available, but children are not consistently admitted
  - An inpatient facility is not available
- Please provide any relevant additional information

**21. Do all Inpatient Facilities for SAM treatment have Outpatient Facilities to which they can successfully refer non-complicated / stabilised cases of SAM?**

- Yes
- No

Please provide any additional relevant information

**22. Are successful referrals captured in monitoring data?**

- Yes
- No

Please provide any relevant additional information

**23. Does the presence of a Supplementary Feeding Programme for MAM children affect the discharge criteria for SAM treatment?**

- Yes
- No

If yes, in what way?

**24. Where services for MAM treatment are available, at what point are children with SAM discharged to a Supplementary Feeding Programme?**

- Children admitted for SAM are discharged to Targeted Supplementary Feeding once cured / recovered
  - Children admitted for SAM are discharged to Blanket Supplementary Feeding once cured / recovered
  - Children admitted for SAM are discharged to Targeted Supplementary Feeding once they reach MAM admission criteria
  - No Supplementary Feeding Programme available
- Please provide any relevant additional information

**Referrals from SAM to MAM Programmes**

The following questions aim to collect information about the availability of MAM services to which SAM treatment facilities make referrals

**25. If a child presents with MAM at a SAM treatment centre, where are they referred to?**

- Targeted Supplementary Feeding Programme
- Blanket Supplementary Feeding Programme
- No treatment service available for children with Moderate Acute Malnutrition

Please provide any relevant additional information

**26. Where no treatment services for a child with MAM are available, to where is a child referred? (Multiple answers possible)**

- To a Health Centre for medical check-up
- To a Health Centre for nutrition counselling
- To Growth Monitoring
- To prevention programmes (e.g. cash transfers, general food ration, livelihoods programmes)
- No referrals are made for children with MAM

Please provide any relevant additional information

**27. Roughly what percentage of SAM treatment facilities in your zone of operation are able to successfully make referrals to MAM treatment services?**

- 90-100%
- 70-90%
- 50-70%
- <50%
- <30%
- <10%
- 0

**Treatment of moderate acute malnutrition**

The following questions aim to collect information about admission / discharge criteria used for children with MAM and about referrals to services to treat SAM.

**28. Is your agency involved in the treatment of MAM in the country in which you are based?**

- Yes
- No

**29. Is there a national protocol for the management of MAM?**

- Yes
- No

Please provide any relevant additional information

**30. If you are a non-government agency, do you have an agency protocol for management of MAM?**

- Yes
- No

Please provide any relevant additional information

**31. What admission criteria are used for MAM treatment? (Multiple answers possible)**

- MUAC  $\geq$  115 mm and  $<$  125 mm
- WFH  $\geq$  -3 z-scores and  $<$  -2 z-scores

Other (please specify)

**32. What discharge criteria are used for MAM treatment? (Multiple answers possible)**

- MUAC  $\geq$  125mm
- WFH  $\geq$  -2 z-scores

Other (please specify)

**33. Is this a 'stand-alone' programme or integrated within the national health system?**

- Stand-alone (non-government)
- Stand-alone (government)
- Integrated within national health system

Other (please specify)

**34. Which is the main type of supplementary product for treatment of MAM in children 6-59 months in your area of operation? (Multiple answers possible)**

- Oil-based Ready to Use Supplementary Foods (RUSFs)
- Fortified Blended Foods (FBFs) containing milk powder
- Fortified blended foods (FBFs) without milk powder
- Biscuits
- Locally produced supplementary foods

Other (please specify)

**35. Roughly what percentage of MAM treatment facilities are able to successfully make referrals to SAM treatment services if a child is identified with SAM (i.e. children are consistently admitted)?**

- 90-100%
- 70-90%
- 50-70%
- $<$ 50%
- $<$ 30%
- $<$ 10%
- 0

Please add any other relevant information

**36. Are children recovering / recovered from MAM referred to any additional services? (Multiple answers possible)**

- To health centre for medical follow-up
- To nutrition counselling
- To growth monitoring
- To prevention programmes (e.g. food assistance, livelihoods programmes)
- No further referrals are made

Other (please specify)

**37. What are the main barriers to ensuring a continuum of care for children with acute malnutrition?**

Continuum of Care is defined here as the extent to which treatment programmes for children with Moderate Acute Malnutrition (MAM) and for those with Severe Acute Malnutrition (SAM) are aligned and successfully making referrals between the two services.

- Lack of financial resources
- Pipeline issues
- De-prioritisation of treatment of MAM
- Lack of implementing agencies
- Difference in the geographical targeting between MAM and SAM services
- Limited geographical coverage of services implemented at health facility level
- Lack of capacity at health centres
- Limited infrastructure
- High defaulting rates

Insecurity / access issues

Please provide any relevant additional information

**38. Please use the box below to give any further comments; e.g. good models of continuum of care for acute malnutrition in your area of operation, how continuum of care can be improved, etc.**