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GLOBAL SAM MANAGEMENT UPDATE

Summary of Findings

NUTRITION SECTION, PROGRAM DIVISION
UNICEF NY

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Contents

Acknowledgements

A woman holds her malnourished child at a UNICEF-supported therapeutic feeding centre in Chagoua Dispensary, N'Djamena (Chad)

We would like to thank the UNICEF health and nutrition staff working at the country level, and UNICEF Regional Advisers for their input and patience throughout this exercise. Thanks to our colleagues at UNICEF HQ in New York and at UNICEF Supply Division in Copenhagen. Thanks also to Valid International for their support.

We wish to especially recognize the NGOs and staff at the state, regional and provincial Ministry of Health divisions who are working to improve nutrition programming and the treatment of acute malnutrition every day.

Finally, acknowledgement goes to the children and their families in need of SAM treatment – whom we seek every day to serve better.

Acronyms

CO	**Country Office**
CTC	**Community based Therapeutic Care**
CMAM	**Community-based Management of Acute Malnutrition**
EAPRO	**East Asia and Pacific Regional Office (UNICEF)**
ESARO	**East and Southern Africa Regional Office (UNICEF)**
HMIS	**Health Management Information System**
HQ	**Head Quarters**
MENA	**Middle East and North Africa (UNICEF)**
MoH	**Ministry of Health**
ROSA	**Regional Office for South Asia (UNICEF)**
RUTF	**Ready to Use Therapeutic Food**
SAM	**Severe Acute Malnutrition**
TACRO	**The Americas and the Caribbean Regional Office (UNICEF)**
WCARO	**Western and Central African Regional Office (UNICEF)**
WHO	**World Health Organisation**

1.0 Introduction

The management of severe acute malnutrition (SAM) is critical for child survival and is a key component of the scaling up nutrition framework for addressing undernutrition. UNICEF is a leading organization in the scaled-up implementation of community-based management of acute malnutrition and provides technical support and capacity-building for ministries of health and NGOs involved in treating children with SAM. Globally, UNICEF remains the main procurer of Ready to Use Therapeutic Food (RUTF), procuring approximately 80 per cent of global needs, besides therapeutic milk (F-75, F100) and ReSoMal, which are essential for SAM treatment.

A significant component of UNICEF's work is monitoring and evaluation to demonstrate coverage and quality. An initial mapping of countries supported by UNICEF in the area of community based management of severe acute malnutrition was conducted in 2010, using 2009 data. The review assessed Community-based Management of Acute Malnutrition[1] (CMAM) programming with a focus on SAM treatment. This was followed by the 2011 'Global SAM Treatment Update', an effort to capture and analyse key SAM treatment data to obtain a global snapshot of the status of SAM services in 2011 and gain a better understanding of the progress made by the programme during the year. In 2012, UNICEF worked with NGO partner Valid International to develop a web-based data collection and reporting system. The objective was to build on previous efforts to gather baseline data related to SAM management at the national level, to be synthesized and reported at regional and global levels.

This report summarizes the key findings from the 2012 Global SAM Management Update, including comparisons between the 2009 and 2011 data that help measure progress. In addition, this report outlines the way forward on global SAM management reporting and identifies areas around nutrition information that require strengthening.

A woman, her child behind her, uses a pickaxe to work a field in Sawa Khola Village, Mugu District (Nepal)

[1] *Also known as Integrated Management of Acute Malnutrition (IMAM) or Community-based Therapeutic Care (CTC).*

The emergency responses to the 2011 nutrition crisis in the Horn of Africa and the 2012 food security and nutrition emergency in the Sahel highlighted inconsistencies in the way the number of malnourished children was calculated and communicated by different countries. In an effort to improve UNICEF's accuracy and consistency, the Nutrition in Emergencies Unit undertook a standardization of the process. Different formulas were reviewed; external experts, senior nutrition advisers and managers in UNICEF, the World Food Programme (WFP) and the World Health Organization (WHO) were consulted; and UNICEF Country offices (COs) participated in webinars to understand the changes and implications for each country. The three main areas where discrepancies were identified were calculations for the incidence of SAM, the burden of malnutrition and the coverage of SAM treatment. The following standardizations for these three calculations were proposed:

INCIDENCE OF SAM

An estimate of the incidence of SAM may be calculated using the formula below. It is important to note, however, that there are two caveats to be considered, which urge caution in the calculation of potential caseloads using this estimate:

- The mean duration of a SAM episode is not easy to estimate and may vary from setting to setting.
- The method relies on an assumption of constant incidence. This assumption is unlikely to be true for a condition such as SAM, which is usually seasonal as it is strongly associated with infection and food availability.

Incidence = Prevalence/average duration of disease

A common estimate of the average duration of an untreated SAM episode is 7.5 months (Garenne et al. 2009).[2] Using this to estimate incidence over one year (i.e., 12 months) yields:[3]

Incidence = Prevalence × 12/7.5 = Prevalence × 1.6

1.6 is therefore the incidence correction factor for the calculation of incidence from a given prevalence.

BURDEN OF MALNUTRITION

The burden of SAM is defined as an estimation of the total number of SAM cases in a population over a specific period (i.e., prevalent cases + incident cases in the year). The burden is estimated through calculation of SAM prevalence within the 6 - 59 month population (either nationally or within a defined geographic area) with incidence correction factor as follows:

Burden = Population 6-59m x [Prevalence + (Prevalence x 1.6)][4]
Or simplified to: **Burden= Population 6-59m x Prevalence x 2.6**

To clarify further, the above is the total of the below:

- Prevalent cases = prevalence SAM x population 6-59m
- Incident cases = prevalence SAM x population 6-59m x 1.6 (where 1.6 is a correction factor which gives incidence as factor of prevalence)

COVERAGE OF SAM TREATMENT

The 2012 Global SAM Management Update offers guidance for calculating the treatment coverage as follows:

$$\frac{\textbf{Number of SAM children 6-59m admitted in 2012}}{\textbf{6 - 59m population x prevalence of SAM x incidence of SAM} \text{ (i.e., burden)}}$$

As outlined in the annex Report "The State of Global SAM Management Coverage 2012", an accurate calculation of the burden can be problematic, which has an impact on the calculation of treatment coverage.

[2] *This should be lower in countries with expanded programmes.*

[3] *If actual incidence multiplication factor is known, then this can be used in place of the 1.6 in all calculations, noting that it will impact the figures obtained.*

[4] *The incidence is the proportion of new cases of SAM out of the total population of children under five that occur over a specific time period –Incidence = Prevalence/average duration of disease. A common estimate of the average duration of an untreated SAM episode is 7.5 months. Using this to estimate incidence over one year (i.e., 12 months) yields: 12/7.5 = 1.6.*

DATA INPUT

Building on the Excel-based 2010 Global Mapping Review and the 2011 Global SAM Treatment Update, the methodology for 2012 was amended with the aim of improving the quality of responses. An online input data capture system was developed, modelled on the Excel questionnaire, with the following characteristics:

- An external site but linked to the UNICEF identity management system to ensure security and UNICEF-staff-only access
- Submission restrictions to ensure complete forms are submitted
- Restricted data input through usage of drop down menus and restriction of text inputs
- Pop-up guidance for each question

The original questionnaire,[5] based on the WHO health systems framework, was expanded to capture a wider range of information and modified to increase the specificity of both the qualitative information (general SAM service programme background/context, country objective, bottlenecks) and quantitative information (burden, target, cases admitted, prevalence, incidence, coverage and performance indicators) being requested.

Questions were divided into five sections:

1 **Country Profile:** situation at the national level (not UNICEF perspective alone) including scale-up objectives for management of SAM/country classification
2 **Quality & Impact:** report uptake (indicating reliability of data), outcome indicators, geographical & treatment coverage
3 **Integration:** Integration of SAM services into the health system apparatus
4 **Bottlenecks:** Impediments to maintaining and scaling up programmes
5 **IYCF & Micronutrient** data (new areas)

To ensure greater quality of data input, the data capture questionnaire was improved from previous years in 3 important ways:

- The questions were refined, based on an analysis of answers received from previous years' data collection.
- Data input was restricted through the wide use of drop-down menus etc.
- Guidance (developed in pop-up form) for each question in the system was strengthened and expanded. In conjunction, Headquarters (HQ) conducted five webinars, one for each region, to clarify terminology and definitions and strengthen the capacity of staff to fill the system.

A total of 74 countries received the online questionnaire via email for completion. The targeted countries were those on the Supply Division Supplies Forecast list (indicating the countries that were procuring therapeutic feeding supplies), as well as countries targeted for previous exercises and those known to have SAM services.

DATA COLLATION & REPORTING

For the 2012 data, all responses were collated in an online database (developed in MySQL) that was linked to the data capture system. On the front end, a reporting output system was developed to capture four key data output components:

- Data submission progress, demonstrating which countries had started filling in and completed the system
- Key indicators, pre-selected and outlined in graphs & tables (e.g., target and admissions data, performance indicators)
- Bottleneck analysis (qualitative text)
- Data table (in Excel), generated through the download function that allowed all data to be transmitted in Excel format (either global or country specific)

After data cleaning, specific outputs were selected for this report. In particular, those questions/indicators with reliable, comparable data were included for presentation in the final analysis. All individual level country data is available in the database which has an web-based interface managed by UNICEF.

[5] *For any additional documents pertaining to the review, please contact the office of UNICEF New York Nutrition in Emergencies.*

Sixty-two of the 74 countries that were sent the online link to the questionnaire submitted responses (compared to 57 countries in 2011). In addition, the SAM management status and admissions figures were entered by UNICEF HQ for three countries - Bolivia, Central African Republic and Lesotho - which had submitted 2012 admissions figures to the UNICEF Country Office Annual Report exercise, but had not filled in the 2012 Global SAM Management Update. Of the 62 responses received, 60 countries stated that SAM management services were available either though inpatient services, outpatient services or both. For the purpose of this report, we will use 60 countries as the total number of countries (unless otherwise indicated).

DATA LIMITATIONS

While significant efforts were made to standardize terminology and calculation methods across countries to enable cross-country comparisons, there were still 20 countries that did not follow the suggested guidance for calculating total SAM burden and treatment coverage. There were different reasons for countries not adopting the suggested guidance, including:

- In-depth knowledge about a more sensitive and seasonal SAM prevalence within the country
- A more context-specific or realistic estimation of SAM incidence (no need to use the 1.6 correction factor)
- Consensus with MOH and/or nutrition sector or cluster using a previous formula/calculation method
- Concern that applying the suggested guidance would result in the appearance of weaker performance in reaching SAM children

More work is required in many countries to encourage them to use the suggested calculation method and subscribe to the guidance so as to enhance the comparability of data, as well as the accuracy of their reporting.

For the 2012 exercise, a data quality check phase was completed in cooperation with the specific COs and the regions. A select number of indicators were identified (burden calculation, reporting rate and treatment coverage) and reviewed for obvious outliers (erroneous population figures or prevalence figures, or incidence correction factors). Over 30 COs were requested to clarify or correct responses or add missing data, to improve the reliability, comparability and completeness of the data set.

Three-year-old Porhi, who has gastroenteritis and is severely malnourished, lies on a bed as her mother gives her water in Badin Civil Hospital, in the city of Badin (Pakistan).

5.1 Summary of Findings

TABLE I **SUMMARY OF SITUATION & EVOLUTION IN 2012** compared with 2011 & 2009

The table also includes data from the 2009 mapping exercise and the 2011 SAM questionnaire, as well as the 2012 Global SAM Management Update.

	2009	2011	2012
# COUNTRIES IMPLEMENTING SERVICES FOR SAM	53[6]	61	60[7]
COUNTRY OBJECTIVE	No question on country objective asked		
Countrywide (or Expanded) **service provision** (current or phased)		34 countries (56%)	39 countries
Limited service provision 60[7]		16 countries (26%)	11 countries
Pilot		5 countries (8%)	5 countries
CASES ADMITTED TO TREATMENT	1,035,771	1,961,722	2,662,712[8]
REPORTING RATE % of reports received vs. expected in a given reporting period			
>75% reporting rate	8 countries (15%)[10]	29 countries (48%)[9]	25 countries
≤50% reporting rate	15 countries (28%)	7 countries (11%)	8 countries
[Incomplete/No data provided]	[20 countries (38%)]	[18 countries (30%)]	[20 countries (33%)]
PERFORMANCE INDICATORS			
Cure rates ≥75%	21 countries (40%)	21 countries (34%)	30 countries
Defaulter rates <15%	26 countries (49%)	20 countries (33%)	25 countries
[Incomplete/No data]			[23 countries (38%)]
TREATMENT COVERAGE[11] **# countries able to provide information on coverage**	No reliable data for intra-country comparison (as too much variation between methods of calculation)	No reliable data for intra-country comparison (as too much variation between methods of calculation)	53 countries
>50% treatment coverage			19 countries
GEOGRAPHICAL COVERAGE[12] **# countries able to provide information on health facilities**	No reliable data for intra-country comparison (as too much variation between methods of calculation)	28 countries (48%)	49 countries
Mean geographical coverage		33%	43%
PROCUREMENT OF RUTF[13]	6,231 MT	27,000 MT	32,000 MT

[6] Quoted as 55 in the mapping report (which also covered part of 2010) as Ghana and Honduras started in 2010.

[7] Three countries (Bolivia, Central African Republic and Lesotho) did not submit a response to the Global SAM Update 2012 but were added to this figure since they submitted SAM admissions data to the UNICEF Country Office Annual Report Data Annex; four other countries (Botswana, Guinea, Lao PDR, and Namibia) are believed to have SAM treatment programmes from data submitted to previous 2011 and/or 2009 mappings, but they also did not submit a response to the Global SAM Update 2012.

[8] This includes SAM admissions from Bolivia, Central African Republic and Lesotho submitted to the 2012 Country Office Annual Reporting, totalling 13,489.

[9] The question in the 2011 exercise was "% of reports received vs. expected annually" rather than "in a given reporting period."

[10] The question in the 2009 exercise was "% of reports received vs. expected annually" rather than "in a given reporting period."

[11] Treatment coverage is defined as admissions / burden.

[12] For 2012, geographical coverage is defined as number of Health Facilities with SAM services / total number of Health Facilities.

[13] UNICEF procurement of RUTF represents some 80 per cent of the global supply. UNICEF continues to support the local production of RUTFs and has diversified its own supplier base to include manufacturers in 15 countries: Dominican Republic, Ethiopia, France, Haiti, India, Kenya, Madagascar, Malawi, Mozambique, Niger, Norway, Sierra Leone, South Africa, Sudan, Tanzania and the United States.

5.2 Number of Countries Implementing Services

In 2012, 60 countries reported providing SAM treatment services in-country, whether inpatient, outpatient or both. This is consistent with 2011, when 61 countries were reporting provision of SAM treatment,[14] and represents an increase from 2009 when 53 UNICEF COs were reportedly implementing community-based services.[15] In 2012, there were three other countries (Bolivia, Central African Republic and Lesotho) that submitted SAM admissions data to the 2012 UNICEF Country Office Annual Report Data Annex, but did not submit a response to the 2012 Global SAM Management Update; four other countries (Botswana, Guinea, Lao PDR and Namibia) are believed to have SAM treatment programmes from data submitted to previous 2011 and/or 2009 mappings, but they also did not submit a response to the 2012 Global SAM Management Update, despite repeated follow up.

Qualifying the 'status' of the availability of SAM treatment services at the national level is important for planning, as well as improving quality. While past mapping exercises did not capture the differentiation between inpatient and outpatient/community-based service provision, the 2012 questionnaire emphasized that not every country is aiming for countrywide scale up and made an effort to distinguish between different categorizations of programming. Countries were asked about current status of SAM service provision (inpatient or outpatient) as well as the stage they were in and their objectives in scaling up services for the management of SAM.

Sixty-two countries filled the system and an additional three countries submitted data to the UNICEF Country Office Annual Report data annex, and may be categorized in the following manner:

TABLE II **STATUS OF SAM TREATMENT SERVICES**

STATUS	No SAM Services	Inpatient SAM Services	Inpatient & Outpatient SAM Services
No. of Countries	2[16]	7	56

[15] *There were 55 countries by mid-2010, with Ghana and Honduras starting services and included in the 2009 analysis.*
[16] *Two countries (State of Palestine and Sao Tome and Principe) entered data into the system despite not having management of SAM services.*

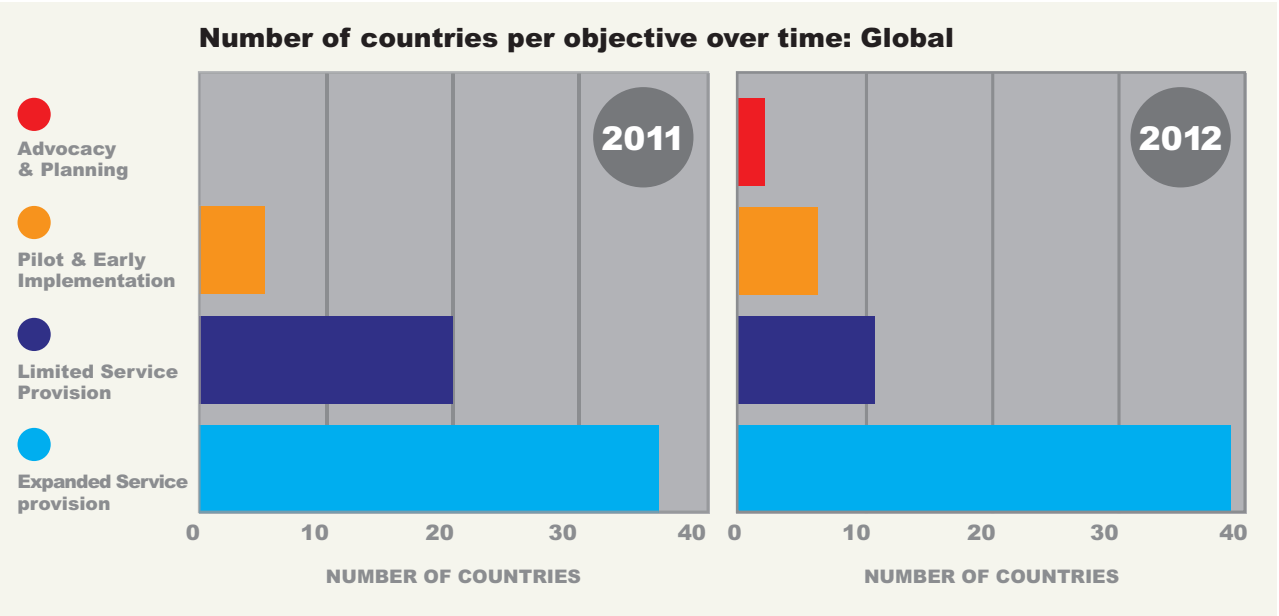
The definition used to classify country objectives requires strengthening, in particular the clarification of how these objectives relate to the programme in the immediate term rather than the long term, as well as the differentiation between the objective as it relates to the scale-up of existing SAM services, the scale-up of Community-based Management of Acute Malnutrition and so on. The 2012 questionnaire attempted to build on the 2011 exercise and outlined some self-classification categories. These start to illustrate whether country objectives are countrywide or more localized /seasonal programming. The 62 countries which filled the system may be categorized as follows:

TABLE III **REPORTED SAM SERVICE OBJECTIVE**

COUNTRY SAM SERVICE OBJECTIVE	No Plans	Advocacy & Planning	Pilot & Early Implementation	Limited Service Provision	Expanded Service Provision		
					<50%	50-75%	75-100%
No. of Countries	2	2	7	11	17	9	14

Figure 1 gives some indication of country objectives with regard to the scale-up of SAM management over time.

FIGURE 1 **GLOBAL BREAKDOWN OF COUNTRY STATUS: 2011 & 2012**

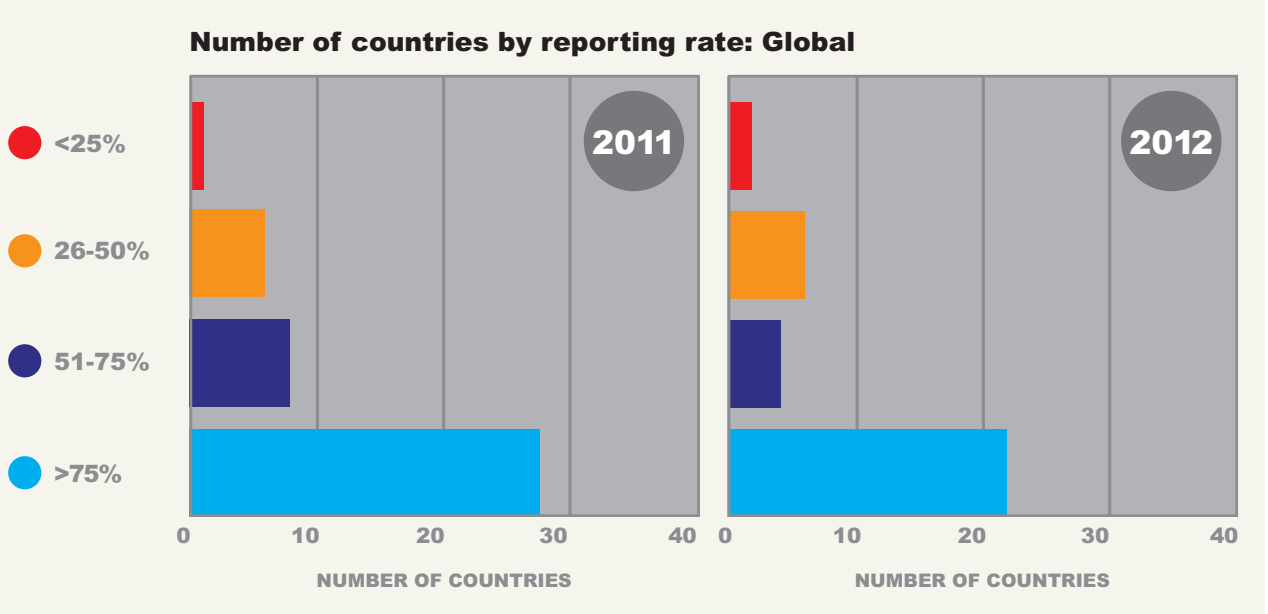


5.3 National Reporting Rates

A slight decline in reporting rates also reflects the attempts in the 2012 exercise to improve the specificity of questions. In total, 25 countries reported that they had >75 per cent reporting rate (i.e., they received >75 per cent of the required reports within a given reporting period, whether monthly, quarterly etc.) compared with 29 countries in 2011. For 2012, countries were asked to give raw numbers for reports expected within a reporting period and reports actually received within this period. Contrarily, in 2011, countries were asked only to give a reporting percentage rate. While the number of countries able to report, as well as countries reporting a >75 per cent reporting rate declined from last year, this may reflect the greater clarity in the wording of the questions. The increased specificity of the data requested for 2012 (asking for raw numbers of reports expected/received) is more difficult for countries to obtain, therefore the 2012 data can be more useful for indicating which countries need additional support in improving reporting.

As the reporting rate from 2011 to 2012 was largely similar (as opposed to a marked improvement from 2009 to 2011), what can be inferred is that the jump in admissions from 2011 to 2012 is not based as heavily as it was from 2009 to 2011 on better reporting, but more truly reflects the increased number of admissions. Nevertheless, a high proportion of countries (20) that provided incomplete or no data on country reporting indicates the need to improve national reporting systems over time.

FIGURE 2 **COMPARISON OF REPORTS FOR SAM SERVICES RECEIVED 2011 & 2012**



While the 2012 Global SAM Management Update provides a useful global standardized framework for reporting quality and much work has gone into harmonizing definitions and terminology, there is no global standardized system for national reporting; instead, each country is expected to have standards dictated ideally by their respective ministries of health. Therefore, intra-country comparisons should be done with caution. More work on improving the quality of reporting at the national level is needed.

5.4 Burden of Malnutrition

In 2012, 42 countries used the aforementioned guidance to calculate the burden. There are obvious challenges to the calculation of this burden figure: updated census data is often unavailable to accurately define the population under five in a country; and seasonal changes are not reflected using this calculation (i.e., the prevalence is considered stagnant). The utilization of the incidence correction factor of 1.6 is also problematic as it is not standard across countries, rather an average.

The table to the right provides an estimated overview of the annual different burdens of SAM per region across the 62 countries which filled the 2012 Global SAM Management Update system.

TABLE IV ESTIMATED 2012 SAM BURDEN BY REGION

REGION	SAM BURDEN for 2012
ROSA	21,999,552
WCARO	5,353,337
ESARO	2,987,674
EAPRO	2,231,020
MENA	1,865,121
TACRO	255,636
Total	**34,692,340**

5.5 SAM Admissions

TABLE V REPORT ANNUAL ADMISSIONS FOR SAM TREATMENT (2009-2012)

REGION	2009	2011	2012
ESARO	414,412	806,919	890,414
WCARO	488,366	784,660	1,235,302
ROSA	29,116	207,215	258,366
MENA	64,124	128,647	217,935
TACRO	0	21,660	28,882
EAPRO	5,600	12,671	31,813
Total	**1,001,618**	**1,961,772**	**2,662,712**

In total, 2,662,712 cases of children aged 6 - 59 months with SAM were reportedly admitted for treatment of SAM in 2012,[17] compared with an estimated 1.96 million reported in 2011 and just over 1 million in 2009. While this increase in reported admissions perhaps reflects overall improved reporting at national level, it is likely largely indicative of the ongoing expansion of SAM treatment services. In particular, the Sahel food and nutrition crisis of 2012 produced a huge response from governments, UNICEF and partners and accounts for most of this increase in admissions. Nevertheless, despite strong progress, the total reported admissions still represents only a little over 10 per cent of the ~20 million[18] expected SAM cases annually.

The majority of children admitted to community-based treatment of SAM continue to be in East/Southern and Central/Western Africa, which have the most countries managing large numbers of children with SAM, due to longer experience and strong government commitment using community-based approaches to managing acute malnutrition. It is anticipated that an increase in numbers treated in Asia will occur as countries within this region - known to have high levels of SAM - start to adopt this approach.

The number of SAM cases treated per country is not directly comparable given different contexts in terms of context, funding, and maturity of the SAM management in country. Country admission comparisons should be taken into consideration with country objective, geographical and treatment coverage and percentage reports received. Similarly, the number of SAM cases treated regionally is also not directly comparable, for the above reasons.

It is not surprising that the majority of children were treated in Africa - due to the maturity of their SAM management programmes. However, when a comparison is done between the admissions per region and the estimated SAM burden figures (above) it is clear that scaling up of management of SAM in South Asia region where the burden is highest could yield significant progress towards meeting the global burden of SAM cases.

[17] *This includes SAM admissions from Bolivia, Central African Republic and Lesotho submitted to the 2012 Country Office Annual Report, totalling 13,489.*
[18] *The Lancet, Volume 374, Issue 9684, pp. 94-96, 11 July 2009. Recent calculations by UNICEF Division of Policy and Strategy have estimated the global number of cases of SAM in the developing world to be 24.8 million; however, this figure requires further verification.*

5.6 Quality of SAM Treatment

Treatment of SAM has three globally agreed upon performance indicators - recovered, defaulted and died - that are routinely collected at a decentralized level, and the quality of the performance in relation to these indicators refers to Sphere standards, depending on the context. The 2012 Global SAM Management Update focused on two indicators: recovered and defaulted. In total, 37 countries were able to report on performance indicator rates:

- **RECOVERY RATE:** In 2012, 30 countries achieved a minimum recovered rate of ≥75 per cent (Sphere standard for recovered),[19] up from 21 countries in 2011.
- **DEFAULTER RATE:** In 2011, 25 countries achieved a defaulter rate of <15 per cent (Sphere standard for defaulter),[20] up from 20 countries in 2011.

For 2012, countries were asked to give raw numbers for numbers of children recovered, defaulted and discharged (with the percentage calculated from these numbers given), whereas in 2011, countries were asked only to give a percentage rate. While the number of countries able to report in 2012 declined from 2011, this may reflect the greater stringency of the question: the increased specificity (asking for raw numbers of children recovered/defaulted/discharged) is more difficult for countries to obtain rather than providing an estimated percentage, therefore the 2012 data should be valuable in providing a more accurate picture of the performance indicator rates. In previous years, the insertion of a percentage meant it was difficult to gauge whether a country was in a position to know accurately the performance indicators or was simply inserting estimated figures.

In terms of the performance indicators, challenges surround their reporting (many countries could not provide these data in terms of raw numbers). It is of concern to note that over 42 per cent of the countries (25 countries) that completed the questionnaire were either unable to report either a recovery or defaulter figures, or submitted recovered or defaulter rate data based on very national weak reporting (two countries).[21] Nevertheless, the results should be seen in the context of the above mentioned difficulties around obtaining these data at a national level.

There is a clear need to support countries in collecting and collating these performance data. A benefit would be that rates could be used to identify which countries might benefit in receiving more technical assistance or investigation, for example through community enquiries or specialized coverage surveys.

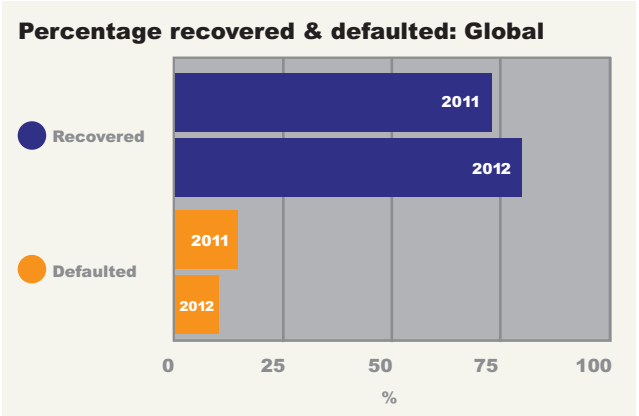
The findings presented in the table below provide a general overview of performance globally.

TABLE V1 GLOBAL COMPARISON OF PERFORMANCE INDICATORS (2011-2012)

PERFORMANCE INDICATORS	2012	2011
Cure rates ≥75% [No data]	30 countries [21 countries]	21 countries* [18 countries]
Defaulter rates <15% [No data]	25 countries [25 countries]	20 countries* [22 countries]

* Rates cited only for countries with a reporting rate of over 50%.

FIGURE III COMPARISON OF AVERAGE PERFORMANCE INDICATORS (2011-2012)



[19] *The countries achieving ≥75% were Afghanistan, Bangladesh, Burkina Faso, Burundi, Chad, Democratic Republic of the Congo, Djibouti, Democratic People's Republic of Korea, Eritrea, Ethiopia, Gambia, Ghana, Haiti, Iraq, Ivory Coast, Liberia, Mozambique, Nepal, Niger, Pakistan, the Philippines, Rwanda, Senegal, Sierra Leone, Somalia, South Sudan, Sri Lanka, Sudan, Swaziland and Uganda.*

[20] *The countries achieving < 15% were: Afghanistan, Angola, Burkina Faso , Burundi, Chad, Dem Rep of the Congo, Djibouti, Eritrea, Ethiopia, Haiti, India, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Nepal, Niger, Pakistan, Rwanda, Senegal, Sierra Leone, Somalia, South Sudan, Sri Lanka.*

[21] *Democratic People's Republic of Korea and Swaziland; all countries except these two had a performance indicator reporting rate of 45 per cent or over.*

5.7 Coverage - Geographical & Treatment

GEOGRAPHICAL COVERAGE (defined as the proportion of primary health care facilities in the programme area that deliver SAM services to the total number of primary health care facilities in the programme area)

Encouragingly, data gathered from 2012 showed a marked increase in the ability of countries to track geographic coverage: approximately 75 per cent of the 60 countries (49 countries) were able to respond to questions pertaining to geographic coverage based on the existence of services at the health facility level. This is a clear increase from 2011. For 2012, the mean geographical coverage is 43 per cent. One issue with this is that although geographic coverage was defined as the proportion of health facilities offering SAM services *in the programme area*, it seems that many countries provided national figures in terms of total health facilities and total number of health facilities offering SAM services. Indeed, the geographic coverage may in fact then be higher in some countries than reported for this year, as some countries were not aiming to scale up to countrywide service provision but yet gave a national geographic coverage rate, which included areas of the country where no health facilities were offering SAM services. A final issue is around how the criteria of 'delivery of SAM services' is being defined to produce the numerator figure. It is clear that stronger guidance on this question is needed: at the same time, it may be that there is limited knowledge within certain countries of the number of health facilities as well as the proportion of these offering SAM services within the specific programme area.

A major challenge in determining geographical coverage is that there is still no global consensus on how to measure this, or which methodologies to use in which setting. One way to strengthen this in future years may be to include another question on geographic coverage to provide another reference point for triangulation of data, such as 'proportion of districts (or other administrative level) offering SAM services', which would improve the measurement of the geographical availability of SAM services.

TREATMENT COVERAGE (defined as 'cases treated (admissions) / total burden')

As mentioned, countries were asked to use the indirect methodology to estimate treatment coverage of SAM at a national level. While admissions data improved from 2009 and 2011, further clarity on the denominator (total number of SAM cases in country) is needed to increase accuracy. The overall range of responses on treatment coverage was narrower than in previous years and of better quality, so some of this data has been included in this report.

While there is a continued need to train, support and guide further in this area and to inform UNICEF's global support moving forward, work is already being done at the global level to promote improvements in coverage assessments, by supporting direct coverage surveys (CSAS, SQUEAC, SLEAC, S3M[22]) in partnership with Action Contre le Faim-UK and members of the Coverage Monitoring Network. These surveys provide more precise figures on coverage and the efficacy of services and there is a push to move from localized surveys to getting an accurate picture of national coverage. Moving forward, the aim is to strengthen routine data to inform indirect coverage estimates, as well as incorporate coverage survey data into the system where it is available to provide a more accurate coverage picture.

Finally, countries with more mature SAM management programmes have a better grasp on admissions in previous years and an understanding of the expected number of children who need to be treated based on trend analysis. In improving indirect estimates of treatment coverage, UNICEF continues to advocate and support the routine, decentralized collection of SAM data to build these trend analyses.

[22] *CSAS: Centric Systematic Area Sampling; SQUEAC: Semi-quantitative Evaluation of Access and Coverage; SLEAC: Simplified LQAS Evaluation of Access and Coverage; S3M: Simple Spatial Survey Method.*

5.8 Bottlenecks to Scale Up

In 2011, COs were asked to record what the major bottlenecks were to scaling up in terms of supply, access, human resources capacity, integration, funding or other. However, for 2012, three different questions were asked:

- Describe the three main barriers/bottlenecks to providing quality management of SAM in your country.
- Describe the three main barriers/bottlenecks to scaling up quality management of SAM in your country.
- What (if any) support would you like to receive at the regional/global level to address these barriers/bottlenecks?

Whereas for 2011 data some analysis was done to categorize these into commonly cited bottlenecks (e.g., human resources, supplies, funding), for 2012 the approach was not to analyse this for trends but rather to use this data to inform country-specific support. The rationale for this approach is as follows:

- There is little quality control in the answers given: What is meant by input can be the partial view of a particular staff person rather than bottlenecks commonly identified by UNICEF/partners/government through a formal process (e.g., UNICEF's internal monitoring for equity results analysis, MoRES).
- By the time the bottlenecks are narrowed down into categories, they become too generic to be useful in informing specific actions to address them. Since many of the bottlenecks cannot be dissociated from the context, it seemed more appropriate to analyse them alongside country-specific data.

Oumou Sy feeds fortified milk (F100) to her severely malnourished7-month-old son, Kumbaba, at the UNICEF-supported nutritioncentre in Kaédi Hospital in the city of Kaédi in the southernGorgol Region (Mauritania)

5.9 Integration into Health Services

Integration of SAM management into national health systems has been expanding the coverage of SAM treatment as some ministries of health have adopted SAM management as part of the essential health package (not all countries are aiming for nationwide scale-up as SAM management is not always necessary).

Since a questionnaire regarding integration into health systems has not yet been tested and piloted, this analysis only provides a summary of countries stating 'yes' to the specific questions asked based on the WHO health systems building blocks, to illustrate if there has been evolution in this area. Questions for the 2011 Global SAM Treatment Update were posed differently in the 2009 mapping, so a direct comparison cannot be made, apart from a slight increase in the number of countries incorporating SAM indicators in the Health Management Information System (HMIS) - 16 countries in 2011 compared with 14 in 2009 - and a greater increase in the inclusion of community-based management of SAM in pre-service training (15 countries in 2011 compared with 9 in 2009).

As seen in the table below, integration of management of SAM into national systems seems weakest is in the following areas: (1) allocation of funds for SAM in the annual health sector plan; (2) national curricula for management of SAM; and (3) RUTF on the essential supplies list. However, there was no obvious correlation found between the levels of treatment or geographic coverage or number of admissions attained by countries and these particular integration indicators. Nevertheless, moving forward, what is clear is that more needs to be done to advocate for governments to enhance their commitment and leadership in the management of SAM.

TABLE VI **INTEGRATION INTO HEALTH SYSTEMS 2012** (62 countries responded)

	NUMBER OF COUNTRIES			
	YES	PARTIALLY	NO	UNAVAILABLE
Management of SAM incorporated in MCHN policy	50	9	3	0
Management of SAM incorporated MCHN service package	39	16	7	0
Allocated funds for SAM in annual health sector plan	24	0	35	3
Costed nutrition plan	39	0	23	0
National curricula for management of SAM	24	0	38	0
Management of SAM in CHW training	27	21	14	0
RUTF on essential supplies list	21	0	41	0
At least one SAM indicator in HMIS	41	0	21	0
Direct treatment included in MoH evaluations	19	0	43	0
SAM screening in basic health package	24	29	9	0
SAM treatment included in basic health package	19	31	12	0

The 2012 Global SAM Management Update illustrates some expansion of SAM treatment in both emergency and non-emergency settings. More ministries of health are continuing to integrate SAM treatment services into existing community health programmes. While there is still a long way to go, the nutrition community has a unique opportunity to raise the profile of acute malnutrition globally, as well as to link to existing frameworks, the Scaling Up Nutrition movement (SUN), and other initiatives (REACH).

The development of the web-based data collection and analysis mechanism to capture key information related to the management of SAM at the country level for synthesis at the global and regional level is the first time UNICEF has attempted to systematically gather nutrition intervention data in this manner. The utility of the system for streamlining the data collection process has been evident, and moving forward it is hoped that the open reporting output pages will be helpful for UNICEF staff in tracking progress and easily extracting data for programme improvement, external communication, advocacy and fundraising. Over time, it is envisaged that key data will be made publicly available annually, possibly through the ChildInfo.org site (where impact level indicators on child nutrition and health are published), for the general health and nutrition community, fulfilling a need at the global level for big picture information on the current situation of the scale-up of and management of SAM.

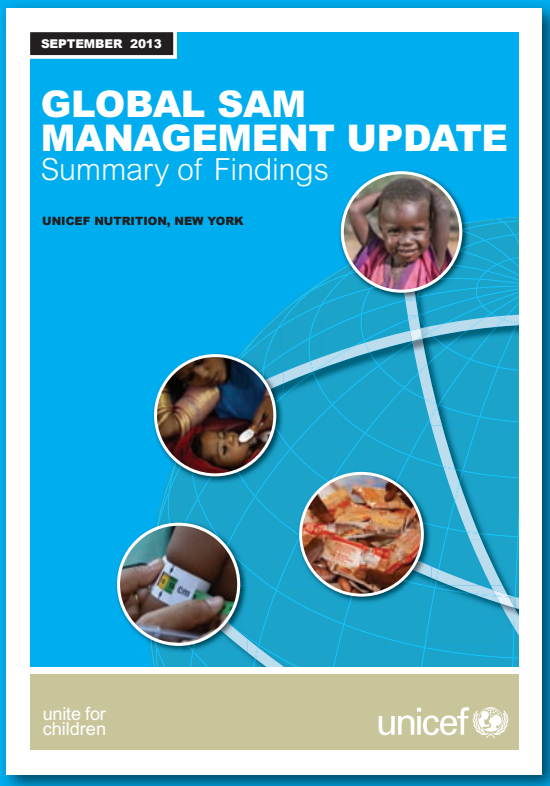
In terms of the immediate way forward on this initiative to strengthen SAM management-related information, and nutrition information more broadly, there are certain key actions being planned:

- **Integrating the UNICEF annual supply forecasting tool into the system: Currently, while harmonized in terms of timing, the supply forecasting exercise and the 2012 Global SAM Update exercise are two separate data collection processes. For 2013, it is planned that the supply forecast sheets will be integrated into the online pages so that this becomes one seamless exercise.**
- **Improving the quality of performance indicator reporting and trend analysis: UNICEF and partners are planning to continue working with countries to improve SAM reporting using a variety of techniques depending on the context and their appropriateness: national level web-based platforms, SMS systems, HMIS integrated reporting, etc. UNICEF will convene a meeting in the fourth quarter of 2013 on improving nutrition information with SAM reporting as one proposed outcome.**
- **Integrating coverage survey data: As discussed above, there are significant challenges with calculating treatment coverage indirectly using the predicted burden. Working with partners, UNICEF will strengthen the capacity of some countries to undertake coverage surveys in 2013 and will work to integrate this information into the system, thereby triangulating data for particular countries and giving a more accurate situation of the programme's success and coverage.**
- **Develop additional modules for micronutrients and infant and young child feeding: Given the success of the 2012 Global SAM Update in terms of capturing global data, there is particular interest in creating additional data modules for Micronutrients and Infant and Young Child Feeding Programmes, which is crucial to building UNICEF's global data management system from a harmonized perspective and lessening the burden of multiple information requests to countries at different times.**

It is important also to continue to standardize and improve information collection, collation, analysis and distribution at the country level in order to mobilize action to increase the quality and availability of SAM services in both emergency and non-emergency settings. UNICEF will continue to work on with partners in 2013 and beyond to support countries to strengthen SAM services as well as promote resource allocation to approaches that will reduce the burden of SAM. Additionally, to support disaster risk reduction and resilience building efforts, this system will inform improved trend analysis and better national snapshots related to the burden of SAM in order to better plan and respond. The strengthening of SAM services and greater resource allocation to this approach will lead to improved protection of the nutritional status of children.

On 11 July, women attend nutrition screenings for their children, at the health post in Belina Arba Village in drought-affected Fedis District, in East Hararghe Zone in Oromiya Region (Ethiopia). Health Extension Worker LemlemWorku (right) is conducting the screenings as part of a weekly community-based outpatient therapeutic feeding programme at the facility.

EAPRO	ESARO	MENA	TACRO	ROSA	WCAR
Cambodia	Angola	Djibouti	Guatemala	Afghanistan	Benin
DPR	Burundi	Iraq	Haiti	Bangladesh	Burkina Faso
Indonesia	Comoros	oPt	Honduras	Bhutan	Cameroon
Lao PRD	Eritrea	Sudan	3	India	Chad
Mongolia	Ethiopia	Syria		Nepal	Congo Brazza-ville
Myanmar	Kenya	Yemen		Pakistan	Cote d'Ivoire
Papua - New Guinea	Madagascar	6		Sri Lanka	DRC
Philippines	Malawi			7	Gambia
Timor Leste	Mozambique				Ghana
Vietnam	Rwanda				Guinea Bissau
10	Somalia				Liberia
	South Sudan				Mali
	Swaziland				Mauritania
	Tanzania Mainland				Niger
	Uganda				Nigeria
	Zambia				Senegal
	Zanzibar				Sierra Leone
	Zimbabwe				Sao Tome
	18				Togo
					19



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