

**REPORT OF A MEETING TO HARMONISE THE
CRITERIA FOR MONITORING AND EVALUATION
OF THE TREATMENT OF ACUTE MALNUTRITION
IN WEST AND CENTRAL AFRICA.**



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Introduction

Malnutrition is a major public health problem of the world; it dramatically increases the risk of early death, is responsible either directly or indirectly for more than one third of all childhood deaths and deprives children of the opportunity to develop to their potential. It is a cause as well as a result of poverty and underdevelopment. The nutritional state of children less than 5 years of age is a key indicator used to evaluate the progress to realisation of the Millennium Development Goals.

Six of 13 countries in West Africa have a prevalence of acute malnutrition in children less than 5 years in excess of 10%, a value that is often used as a threshold for emergency intervention.

Since 2006, there has been a progressive introduction and scaling up of effective nutritional interventions to manage severe and moderate acute malnutrition in West Africa. These programs have been organised and managed by National Governments with the assistance of many different International agencies and non-governmental organisations.

A major evaluation of the programs in 10 countries of West and Central Africa was carried out in 2010. An important finding of this evaluation was that the different actors and implementers within the region were using different criteria for admission and discharge, were collecting different types of information and had different names and definitions; furthermore their tools and reporting formats were different which did not allow data to be meaningfully collated to give an accurate overall picture of the numbers of children treated, their outcomes and the efficiency of the programs in either individual countries or the region as a whole.

A sub-group¹ of the regional nutrition working group based in Dakar convened a workshop from November 30 to December 1, 2010 to harmonize the definitions and reporting formats of acutely malnourished patients so that accurate information can be readily collated and analyzed throughout the region. The expected results were: 1) A list of core indicators and their definitions have been agreed upon by the main nutrition stakeholders; 2) A template of weekly/monthly reporting form is available; 3) A consensus reached on the main critical issues of contention; and 4) Next steps for implementing the resolutions of the consensus statement.

This meeting was convened to address, as far as possible, the divergences identified in the evaluation and reach harmonisation throughout the region on these points of divergence. The meeting included 56 senior participants from National Governments, agencies of the United Nations within the region and from their respective Headquarters, the major donors, the non-governmental humanitarian organisations and international experts on malnutrition (a list of participants are available in **Annex 1**). The workshop planning committee received financial and/or technical support from ACF, UNICEF WCARO, ECHO and DFID. The workshop facilitators were Professor Michael Golden and Dr Yvonne Grellety.

Format of the meeting and report

The workshop format included presentation from Professor Mike Golden on the main results of the evaluation of management of acute malnutrition programmes; the objectives and the expected results of the consensus meeting and the 8 areas that needed consensus. For each of the areas, a state-of-the art of the scientific knowledge was done and contentious issues were flagged out (a summary of the key issues is presented in **Annex 2**).

¹ ACF, ECHO, HKI, SC-UK, UNICEF, WFP & WHO

After introduction of each of the major issues that needed to be addressed the meeting reconvened into 8 working groups as follows:

1. Admission criteria
2. Discharge criteria
3. Registration information to be collected
4. Definitions
5. Nomenclature
6. Organisation
7. Reporting
8. Indicators and analysis

Each group addressed the main issues concerned with their topic and made recommendations for harmonisation which were then presented and discussed at plenary session.

This document reports:

- The items for which there was complete consensus amongst the working group without dissent when discussed in plenary session.
- The recommendations which complement the items of consensus. This section reports items where there is sufficient uncertainty to necessitate further research or other documentation.
- The topics for which there was no consensus within the group, unresolved disagreement at plenary session or conflict between the recommendations of different groups, are grouped in a separate section of the report. For each topic the majority and minority views are given with explanatory notes laying out, as far as possible, the nature of the issues involved, the reasons for divergence of opinion and a recommendation for harmonisation.
- Following the main meeting, there was a further small technical meeting which included a software programmer, with a view to designing generic software which would simplify the writing and submission of reports, registration of treatment facilities, document any divergence or changes of criteria used for admitting and discharging patients and facilitate collation of data at district, regional and national level. The main recommendations of this meeting are included in the report.

Section 1: Items on which there was complete consensus

It was agreed that:

Admission criteria

- 1. All programs should only use the WHO₂₀₀₆ growth standards for assessing the height, weight and derived indices (weight-for-height, height-for-age, weight-for-age) of children less than 5 years of age.**

For clarity, NCHS, CDC or other standards should not be used.

- 2. Tables of weight-for-height to assess the degree of wasting of children should be in half centimetre divisions for height.**

For clarity, tables should not be produced that are in full centimetre increments.

- 3. Both Mid-Upper-Arm-Circumference (MUAC) and weight-for-height should be used as independent criteria for admission to the program.**

For clarity, a child may be admitted with either criterion for severe acute malnutrition (SAM) or moderate acute malnutrition (MAM) even if they fail to reach the admission criteria when other indices are considered.

(See section on recommendations)

- 4. When a weight-for-height criterion is used for admission, this should be using a UNISEX table based upon the boy's WHO₂₀₀₆ data.**

For clarity, the use of different tables for male and female children is not recommended.

(see section on recommendations)

- 5. The MUAC criteria for admission should be based only upon the absolute MUAC reading (for SAM <115mm and MAM <125mm).**

For clarity, MUAC-for-age or MUAC-for-height should not be used as the criteria for admission even though there are WHO₂₀₀₆ standards for MUAC-for-age.

- 6. Patients over 5 years (or over 110cm), who are taller than the existing boy's WHO₂₀₀₆ weight-for-height tables, should be admitted on weight-for-height criteria using the NCHS derived tables already incorporated in several National protocols.**

For clarity, BMI-for-age should not be used as a primary criterion for admission of older children and adolescents to programs to manage severe or moderate malnutrition until the utility of this criterion is fully tested at field level.

- 7. Children should be admitted to OTP if they have oedema at + or ++ level and fulfil the other triage criteria for treatment as an outpatient.**

For clarity, there should usually not be a difference made in the recommendations between those countries with a high and a low prevalence of oedematous malnutrition, provided that there is National consensus within countries. Where there is no national consensus this recommendation should be changed to reflect the National consensus.

(see recommendations)

- 8. For the infant less than 6 months, weight-for-height was considered to be the primary basis for admission.**

For clarity the group explicitly excluded simple failure of breast feeding, without use of any anthropometric criteria, to be a criterion for admission. Despite the inaccuracies of weight-for-length in this age group, the meeting recommended continuing to rely on this index of malnutrition in the young infant.

- 9. Faltering in growth when longitudinal data are collected (growth-monitoring) can be used to identify children who should be admitted to the treatment program.**

*For clarity, where growth-monitoring (GM) programs exist, are well established and reasonably accurate longitudinal data are available for individual children, GM criteria can be used as an independent criterion for admission: this criterion cannot be used in an emergency where there are no **recent** records of the weight of the child or where there is no well founded GM program.*

- 10. MUAC-for-Age z-score tables are not to be used as criteria for admission in therapeutic feeding programs. Likewise other indices that have been suggested in the past, such as MUAC/head circumference ratio and MUAC/chest circumference ratios, should not be considered as criteria for admission.**

Discharge Criteria

- 11. Of the two categories of criteria used for assessing whether a child is cured or not (reaching a recognised threshold weight-for-height/MUAC value or achieving a relative gain in weight), only threshold values are recommended.**

For clarity, the meeting did not recommend that 15%, 20% or some other increment in weight should be used to determine whether a child was cured.

(see recommendations)

- 12. The usual threshold value for discharge should be -1.5 Z-score weight-for-height.**
- 13. Where children are admitted using MUAC criteria they should, in general, not be discharged without achieving a MUAC of at least >125mm. The situation of infants of over 6 months and less than 67cm is unclear and should be the subject of research.**

See recommendations

- 14. Where there is a well functioning supplementary feeding program for the management of moderately malnourished children the discharge criteria for severe malnutrition can be reduced to -2.0 Z-score and the child enrolled in the SFP program for at least 3 months. This alternative discharge criterion should be mentioned in the report of the centre and a special category of admissions to the SFP maintained.**
- 15. It is only necessary for the patient to achieve the discharge criteria on one visit provided that the measurements are checked (taken twice) and confirmed. However, retaining a patient for two visits above the threshold is also valid for the establishment of cure.**

16. A patient who fulfils more than one criterion for admission (i.e. Weight-for-height, MUAC or oedema) should reach the discharge criteria for each of these measures before discharge.
17. For children less than 6 months the discharge criteria should be gaining weight on exclusive breast milk for infants with female caretaker, or on a breast milk substitute for infants without the possibility of being breast fed.
18. Oedema should be absent for at least 2 weighings in OTP and at least 10 days when treated as an in-patient before discharge.
19. There should NOT be a category for cure, such as “premature discharge”, where a child is judged to be cured by the mother and/or staff but has failed to reach the established discharge criteria.
20. Patients who are transferred from IPF to OTP successfully must not be designated as “cured” or “discharged”: they should be designated as “successfully” treated.

For clarity, IPFs frequently term the children as “cured” when they have completed their in-patient phase of treatment successfully and have been transferred to OTP. This is inappropriate and the term should not be used. However, the IPF has completed its task successfully and thus the term “success rate” is appropriate in evaluation of an IPF.

Registration

21. There should be a registration book in each IPF and OTP and in the SFP.

For clarity, some programs do not use a registration book, but rely on the charts themselves to enable reporting, monitoring and evaluation. This is not considered a safe procedure because of the problem if missing charts and there should always be a registration book.

22. The meeting determined that the registration book for IPF and OTP should contain the following items:

- *Registration number of facility (IPF or OTP)*
- *SAM number (unique to the child)*
- *Date of admission*
- *First and family name*
- *Address*
- *Telephone number*
- *Type of admission (new, relapse, returning defaulter, transfer-in, etc)*
- *Sex*
- *Age (in months)*

- *Weight at admission*
- *Height at admission*
- *Weight-for-height on admission (Z-score)*
- *MUAC at admission*
- *Oedema at admission*
- *Date of exit*
- *Weight at exit*
- *MUAC at exit*
- *Type of exit (cured, abandoned, dead, unknown(otp only), referred (IPF only) transferred-out, admission error etc*
- *Final diagnosis*
- *Observations*

23. In supplementary feeding programs for moderate acute malnutrition, the attendance and treatment should be recorded in a registration book only.

For clarity, there should not be individual charts in Moderate Acute Malnutrition (MAM) programs

24. The variables that should be included in the register for MAM programs are as follows:

- *Registration number in SFP*
- *Date of admission*
- *First and family name*
- *Address*
- *Telephone number*
- *Type of admission (new, relapse, returning defaulter)*
- *If transferred from IPF or OTP for follow up*
- *Sex*
- *Age (in months)*
- *Weight at admission*
- *Height at admission*
- *Weight-for-height on admission (Z-score)*
- *Target weight for discharge*
- *MUAC at admission*

- *Date of each visit (Multiple columns)*
- *Weight at each visit (Multiple columns)*
- *Type and amount of ration distributed at each visit (Multiple columns)*
- *Date of exit*
- *Weight at exit*
- *MUAC at exit*
- *Type of exit (cured, abandoned, dead, transferred to OTP/IPF)*
- *Length of stay*

25. The registration book for severe and moderately malnourished children should be maintained separately from other registers (such as IMCI).

Definitions

26. A NEW ADMISSION is defined as a patient with SAM who has not been under treatment elsewhere for this episode of SAM and has not been assigned a SAM number.

27. The SAM number should be assigned to the child by the facility making the diagnosis of SAM.

For clarity, an OTP which diagnoses and transfers the child to an IPF without treatment should assign the SAM number upon diagnosis and before transfer.

28. A RELAPSE is where a child is admitted for SAM that has been previously treated for SAM and has been discharged from the program as cured, or where the child has abandoned the program and returns with SAM after a lapse of more than two months.

29. A relapse should be counted as a new admission and given a postfix to her/his SAM number thus: xxxx-2 to denote that this is the second episode of SAM for this child.

30. A READMISSION is defined as a defaulter who returns to either the OTP or IPF to resume treatment after an absence of 2 months or less.

31. An INTERNAL TRANSFER is defined as a patient who arrives because s/he has been transferred from another facility (from OTP to IPF, OTP to another OTP, or IPF to OTP) whilst under treatment for SAM

For clarity, an “internal transfer” is be recorded in both entry and exit sections of the register and report. If it is necessary to differentiate these two, then the terms transfer-in and transfer-out can be applied.

32. The term, RETURN, should not be used when considering transfers of patients

33. Internal transfers must not be counted as new admissions.

34. OTHER ADMISSION is defined as a patient that is admitted to the facility for whatever reason but does not fulfil any of the criteria for SAM

- 35. ERRORS OF ADMISSION should not be recorded in either admissions or discharges: their SAM number is reassigned to the next patient.**

For clarity, these patients are not part of the IMAM program and are not counted in the report. If they have used considerable amounts of resources this can be recorded. Also if errors of admission are frequent then the IMAM program should be reviewed. A separate box should be provided in the report to record the numbers of patients admitted in error.

- 36. A patient is defined as CURED when s/he achieves the criteria for discharge**

- 37. The LENGTH OF STAY is defined as the time from admission to the time of reaching “cured” status (OTP) or successful treatment (IPF) and not the time of physical exit from the program or facility.**

For clarity, patients may remain in the program after they have reached the criteria for “cure”, particularly in an IPF where transport or escort arrangements have to be made; this time is not counted in the length of stay or rate of weight gain calculations.

Note: it is not recommended that, for individual patients, the length of stay in the IPF be added to the length of stay in the OTP to obtain the total length of stay in the program for that individual. These data can, if desired, be obtained during evaluations, as well as the length of stay and rate of weight gain of children who were first treated in IPFs before transfer to the OTP separately from those who were treated wholly in the OTP.

- 38. A patient who DIED or is DEAD (both acceptable) is a patient who dies during their stay in the SAM program after they have been assigned a SAM number.**

For clarity, this includes patients who die in transit from one facility to another.

- 39. Where a patient with SAM dies during transit from an OTP to an IPF, the death should be recorded as death within the program and assigned to the OTP report.**

- 40. A DEFAULTER is defined as a patient who is absent, without making arrangements with the staff, for 2 consecutive weighings (14 days in OTP and 2 days in an IPF) and without being officially discharged.**

- 41. NON-RESPONSE (to standard treatment) is defined as a child in either the OTP or IPF who fulfils the criteria set out in the guidelines as failure-to-respond to treatment**

For clarity, this includes all children who do not respond for any reason (social, psychological and medical), and is not restricted only those who have suspected underlying medical conditions requiring transfer or referral.

- 42. The definition of a MEDICAL-REFERRAL is of a patient who has a serious underlying illness that requires treatment beyond the scope of the IPF for SAM (or is suspected of having such a condition that requires diagnostic tests beyond the capacity of the IPF) and is referred to another service which takes over the complete management of the child.**

- 43. REFUSAL-OF-TRANSFER is defined as a patient who fulfils the criteria for admission to an IPF (according to the triage criteria) but declines the invitation for transfer from the OTP.**

For clarity, this is not a reason for discharge from the OTP, where the patient remains for continued treatment. A note is made in the register and the chart to say that the patient

declined transfer. This can be an explanation for mortality in the OTP and, if frequent, should signal the need for investigation of the reasons (distance to the IPF, reputation of the IPF etc). The data will be examined for the annual report and evaluations.

44. **MISSING-PATIENTS** are defined as those patients that are transferred to another facility and fail to attend the receiving facility to which they have been transferred within a reasonable space of time (several days).
45. **THE SAM-NUMBER** is defined as a unique number assigned to each patient diagnosed with SAM and entering the IMAM program. It is in addition to any other numbers that may be given by a facility.
46. The SAM-Number must be used on all transfer forms and documents related to that patient.
47. The SAM number should normally take the following format: Health region (letter or number) / Health district (letter or number) / Number of centre / Child Number. But this can be changed at National level, and simplified wherever possible. Where there is an alternative unique national number for each individual, this can replace the SAM number.
48. Each facility must have a unique code. This code is used in the SAM number, transfer forms and all reports. The code must be assigned on opening of the facility by either the district, regional state or central Government officials as determined by the National Ministry of Health.

Nomenclature

49. The program as a whole should be termed “PCIMA” (Prise en Charge Intégrée de la Malnutrition Aiguë) in French and « IMAM » (Integrated Management of Acute Malnutrition) in English.
50. Systematic screening in the community should be termed “Dépistage Actif » (Dépistage dans la communauté) in French and “Active screening” in English
51. Screening in health centres and other facilities should be termed “Dépistage Passif” (Centre de santé et activités en stratégie avancée) in French and “Passive screening” in English.
52. The outpatient program should be termed CRENAS (Centre de Réhabilitation Nutritionnel Ambulatoire Sévère) in French and OTP (Out-Patient Therapeutic Program) in English. These terms should apply to both the physical sites themselves and to the out-patient component of the program.
53. The in-patient facilities should be termed CRENI (Centre de Récupération Nutritionnel en Interne) in French and IPF (In-Patient Facility) in English.

Organisation

54. There should be regular active screening in the community. The frequency and geographic areas to be screened are determined by the Officer responsible for Nutrition at district level (Chief Nurse of the District, Nutrition Officer, etc.) in consultation with the District Medical Officer (DMO).
55. The screening data should be collated at District level under the guidance of the Health Management Team to determine a. Degree and change in nutritional state at village level and in the district as a whole, b. the reliability of the data collected.
56. The reports from the OTPs and IPFs should be prepared monthly (calendar month) and submitted to the District Health Management Team through the Focal point for Nutrition.

For clarity, weekly reports of numbers of admissions (only) are used in emergency situations to determine the evolution of a crisis, but do not substitute for the monthly reports. It is not possible to collate weekly and monthly reports together as each month is not 4 weeks in duration.

57. The Supervisor of the OTP and IPF is personally responsible for ensuring that the reports are completed and their timely submission to the District.
58. The monthly reports can be compiled from either the Register or the individual charts; the data should be capable of being “cross-checked” during an evaluation to ensure its accuracy and completeness.
59. Copies of the monthly reports are kept at facility level and filed sequentially along with any completed charts and registers.
60. Hospital based IPFs should be integrated into the other paediatric services, but kept as a separate service and established in a physically different space from other patients (as far as possible) to avoid cross-infection and the appropriate management of the severely malnourished.
61. The Supervisor of the IPF should attend all meetings held to co-ordinate the IMAM program in the district.
62. The IPF should establish mechanisms whereby there is easy transfer of patients from the OTP into the IPF and from the IPF back to the OTP.

For clarity, patients arriving from an OTP with appropriate transfer documents should not be kept in casualty for prolonged periods or treated as a “new admissions” to the program by the IPF, but admitted to the IPF directly (where possible); patients should not be retained in the IPF after they have achieved the criteria for transfer to the OTP.

63. The District Medical officer should, by delegation of responsibility, ensure regular supervision of the quality of service provided by all the facilities (OTP and IPF) within the district.
64. There should not be “sentinel” facilities for the collection of additional data to assess the quality of the program.

65. There should be facilities, designated by the District Medical Officer on the basis of their quality and performance, which are used for training of newly appointed staff before they are deployed in the field. Newly appointed staff should be acquainted with both the IPF and OTP facilities and understand their function and procedures.
66. Supervisory visits should be held at monthly intervals for the community activities, OTPs and IPFs. Co-ordination meetings should be held at monthly intervals in the district (at which time reports can be delivered and supplies collected), at three monthly intervals at regional level and six monthly intervals at central level.
67. The codes for the facilities (used in the SAM number and reports) should normally be assigned at central level and a list of codes to be used supplied to the district. When a new centre is established the District assigns the next code and informs the central administration. The codes for mobile teams should be assigned at district level. All coding should follow the standard format.
68. The reports of the individual facilities (OTP and IPF) should be maintained and kept in all databases to assess the quality of services provided at facility level. The reports from each district should also be compiled together to give an overall picture of the quality of service and magnitude of the problem of SAM and MAM at the district level.
69. The reports should be first compiled at District level by the Health Management Team under the leadership of the District Medical Officer. The individual and compiled report should then be submitted to the regional and central levels.

For clarity, the reports should only cover those facilities within an administrative district and not the "catchment area" of an individual IPF with its satellite OTPs.

70. The compiled reports for the district should be shared (feed-back) with the facilities at the monthly meetings.
71. The District Medical Officer should appoint an individual to be responsible for the IMAM program within his/her district. Where funds are available this should be a full time post (District Nutrition Officer) having responsibility for all nutrition programs within the district. Where funds are not available oversight of the IMAM program should be delegated to a "focal point" for nutrition under the direction of the DMO.

For clarity, to ensure appropriate oversight of the whole IMAM program, with co-ordination meetings convened (for IPF and OTP co-operation and for integration of the activities of NGOs and Government services), surveillance and evaluation visits arranged and complete reports from the facilities received it is necessary to have an individual responsible as part of the District Health Management Team under the direction of the DMO. These tasks are likely to take considerable time and effort. Although highly desirable, funding of such posts is problematic and unlikely from the normal health budget, so as an alternative, the tasks can be delegated to a focal point within the district. Terms of reference and job descriptions need to be developed.

72. The data at district level should be submitted and incorporated into the National health Information system.
73. When an emergency is declared or anticipated, or where the nutritional status of the population is expected to change rapidly, weekly reports of numbers of patients admitted with SAM and MAM should be submitted to the National Emergency Surveillance System.

For clarity, these weekly reports only record admissions to detect a rapidly deteriorating situation. They do not substitute for the monthly reports.

Reports

74. In addition to the standard monthly report, there should be:

- a. an annual report where additional data is collected from the OTPs and IPFs
- b. a three yearly external evaluation of the IMAM program

75. The monthly report should include: the total at the start of the month: the total entry (in categories): Total exits (in categories): total at the end of the month and stock control data (A sample of monthly report based on the consensus is presented in Annex 3).

76. The Annual report, in addition to the totals for the whole year, should include: the average rate of weight gain; the average length of stay; disaggregation of the data by gender

For clarity, the meeting considered that because of the additional work involved in calculation of the rate of weight gain, length of stay and separation of the data by gender, although desirable, it is unrealistic to expect these data to be calculated monthly in most situations. In particular, separating by gender effectively doubles the categories and work involved in compiling the reports. However, these data are very important so that they should be collected at least annually (if necessary by taking a sample of the data in the registration book). Where there are computer facilities these data can usefully be generated more frequently and the report format should be sufficiently flexible to allow such information to be gathered and reported monthly.

77. The three yearly evaluation report should include: a) a review of each component of the program (community aspects, screening, SFP, OTP, IPFs, organisation etc) with an overview of the monthly and annual reports, b) review of the tools, modules and methods of training, c) the quality of supervision, d) the staffing and organisation, e) the logistics, f) the financing of the program, and g) recommendations for adjustment.

78. The formats for the reports, although similar (e.g. need of different headings and categories) need to be different for the IPF, OTP and SFP components of IMAM.

79. The report should generally report oedematous and non-oedematous cases separately.

For clarity, where oedematous malnutrition is exceptionally rare there is not a need to separate the data by oedema status (some Sahalian countries). Where it is more common the report should be separated by oedema status. Where a child is oedematous s/he should be recorded in the oedema column whether or not s/he fulfils other criteria for admission. The report and data base should be sufficiently flexible to accommodate both types of report.

80. For the IPF report the data should be broken down into 4 groups: children of <6months, 6-23 months, 24-59months and >59 months.

81. For the OTP report the data should be broken down into three groups: 6-23 months, 24-59 months and >59 months.

82. For the SFP report the data should be broken down into two groups 6-59 months and >59 months.
83. The types of entry to the facility should be: new admissions, relapses (both given new SAM-numbers), readmissions (after defaulting) and internal transfers (transfer-in) where new SAM numbers are not given.
84. The types of exit from the IPF should be: Successful treatment (i.e. transfer-out to OTP and < 6 month successfully breast feeding and gaining weight), cured (for the few that remain in IPF) , died, defaulter, non-respondent, medical-referral.
85. The types of exit from OTP should be: Cure, died, defaulter-confirmed, defaulter-unconfirmed, internal transfer (transfer-out) and non-respondent.
86. The register must contain all the information necessary to also calculate the length of stay, weight gain and permit all the data to be differentiated by gender, for compilation of the annual (or more frequent) report. *(see section on registration)*
87. The report from the OTP should contain a box to indicate the IPF to which patients are normally transferred.

For clarity, some OTPs close to administrative boundaries may properly transfer patients to IPFs within another district. If this is the case then it should be indicated on the report.

88. There should be a separate section of the report enabling correction of previously submitted reports. In particular, reclassification of children previously classified as “defaulters-unconfirmed” into those that have been confirmed as defaulters and those that have died.
89. The report should also contain stock details of the major consumables of the centre and those liable to pipeline rupture. In particular RUTF, but other essentials such as routine drugs can be included (e.g. antibiotics, antimalarials, etc.). The data should include stock at the beginning of the month, stock received and stock at the end of the month.

Calculation and analysis

90. All the calculations are based (denominator) on the number of children exiting the centre or program and not the number of admissions.
91. For children exiting an IPF the denominator is the sum of patients transferred to OPT (successful treatment/internal transfer/transfer out) + deaths + defaulters + medical referrals + non-responders leaving the service, within the age category under consideration.

Note: errors of admission, twins etc are not counted in either the numerator or denominator of any of the calculations for either the OTP or IPF

92. **SUCCESS RATE (IPF only) = total number of patients transferred to OTP (successful treatment/internal transfer/transfer out) + number of cured/ total exits from the IPF**

93. SUCCESS RATE (IPF) for infants < 6 months with female carer = number of infants <6 months discharged gaining weight on exclusive breast feeding / Total number of infants <6 months with a female carer exiting the IPF

94. DEATH RATE (IPF) = number of deaths in the IPF/ Total exits from the IPF

See item in section 3 “Death from SAM in the emergency department of IPFs” on unresolved decision regarding deaths in emergency departments. Note: this indicator is also referred to as “case fatality rate” or “case mortality rate”

95. MEDICAL-REFERRAL RATE (IPF)= Number of patients referred for further management outside IMAM (because of medical illness)/ total number of exits from the IPF

Note: the term “refer” is only used when the patient is leaving the program; “transfer” is used when internally moving from one component of IMAM to another.

96. DEFAUTER RATE (IPF) = total number of defaulters/ total number of exits from the IPF

97. NON-RESPONSE RATE (IPF) = total number of patients not responding to treatment/ total exits from the IPF.

Note this category should be very uncommon: most cases of non-response should be referred for further diagnosis and treatment outside the program and hence be classified as medical-referrals. Most countries in the region report that non-response in IPF is extremely rare.

98. LENGTH-OF-STAY (IPF) = the total sum of days spent in the centre for children classed as exiting with success/ number of children exiting with success.

Note this should not be reported monthly –but only for annual reports and evaluations

99. For the OTP there are two possible denominators.

- a. **Total exits from the Centre = cured + dead + defaulters-confirmed + defaulters-unconfirmed + non-respondents + internal transfers (transfer-out)**
- b. **Total exits from the Program = cured + dead + defaulters-confirmed + defaulters-unconfirmed + non-respondents**

100. CURE RATE (OTP) = number of patients discharged as cured/ total exits from the program

Note: this is different from the IPF “success rate”: in the IPF the internal transfers are included in the denominator, whereas in the OTP the internal transfers are excluded from the denominator.

101. DEATH RATE (OTP) = Number of patients dying in OTP program and during internal transfer to the IPF/ Total number of exits from the program

102. DEFAULT RATE-CONFIRMED (OTP) = number of defaulters confirmed to have abandoned the program/ total exits from the program

103. DEFAULT RATE-UNCONFIRMED (OTP) = number of defaulters whose reason for abandonment has not been confirmed/ total exits from the program

104. TRANSFER-RATE (OTP) = total number of children transferred within the program/total number of exits from the centre

105. NON-RESPONSE RATE (OTP) = number of patients who fail to respond to treatment / Total of exits from the centre

106. MISSING-PATIENT RATE (District IMAM program) = total of all internal transfers (transfer-out) to the IPF in the district – total of internal transfers (transfer-in) arriving at the IPF.

Note this index can only be calculated from the collated reports at district level when there is complete reporting from all the OTPs in the district (excluding any OTPs that transfer patients to IPFs in another district. Where an OTP transfers patients to an IPF in another district, the report should be copied to both the OTP's own district and the neighbouring district to which patients are transferred).

107. LENGTH OF STAY (OTP) = total number of weeks the children who are discharged as cured remained in the OTP x 7/ total number of children exiting the OTP classified as cured.

108. RATE OF WEIGHT GAIN (OTP) = for all children who are discharged as cured, the mean of: (weight when cured (kg) – minimum weight (kg)) * 1000/ ((number of weeks from minimum weight to first reaching the criteria of cure)*7) / Minimum Weight (kg)

For clarity, the rate of weight gain is not calculated for IPF because the patients are transferred to OTP for the “weight-gain” part of their treatment. During in-depth evaluations the weight-loss and rate of weight loss in the IPF (or OTP) can usefully be calculated for the different categories of patient (eg those with oedema, anorexia etc.). In OTP it is often not possible to efficiently obtain data on the minimum weight and week of minimum weight; in this case the weight-on-admission can be used, but the report must indicate that the rate of weight gain (RWG) is calculated in this way and designated as RWG_{adm} rather than RWG_{min} . RWG_{adm} will usually be less than RWG_{min} .

Note: Length of stay and rate-of weight gain are not calculated routinely for the monthly reports, but are calculated for annual reports/evaluations.

109. The stock at the beginning of the month + stock received – stock at the end of the month = stock consumption. This figure should be computed (or reported directly) and compared with the estimated stock consumption from the numbers of patients treated during the month.

Section 2: Recommendations from the meeting arising from items where there was consensus on harmonisation but further data is required to confirm the agreed position.

Admissions

110. MUAC measurements.

The meeting was concerned about the quality of measurement of MUAC and the ability of field workers to measure MUAC with reasonable accuracy and precision. An analysis of more than 200 trained enumerators conducting surveys in West Africa showed that average technical error of their measurement was 3mm (0 to 6 mm) and the largest mean different when measuring the same 10 children twice averaged 9 mm (confidence interval 0 to 19 mm). As the difference between diagnosing a SAM child (<115 mm) and a normal child (>125 mm) is only 10 mm – almost half of those tested would have diagnosed one of the 10 children as SAM in the morning and the same child as normal in the afternoon.

It was reported that it is not uncommon to have children screened in the community and referred for treatment to be rejected by the treatment facility when the MUAC is retaken, leading to loss of confidence by the community in the program and those doing the screening.

Although it is recognised that there is no satisfactory alternative to MUAC for use in the community and some centres, it is strongly recommended that there should be additional training and standardisation of all staff at all levels and community volunteers taking MUAC measurements and that alternative designs of the MUAC tape be developed and tested.

111. UNISEX table of weight-for-height

The recommendation to use a UNISEX table for weight-for-height was based largely on:

- pragmatic reasons of simplicity in the field,
- data presented to the meeting which showed no difference in the mortality rates of boys and girls admitted in the past using NCHS based UNISEX tables
- The single sex criteria used for MUAC would result in a potential difference in gender bias with the two independent anthropometric criteria for admission
- The desire to avoid any possibility of discrimination against girls when decisions about admission to programs are concerned

It is recommended that the use of the UNISEX table be carefully evaluated and that until it is established that there is not a difference in the risks to the child or of the outcome of treatment that research data should be collected, differentiated by gender, to establish the implications of this recommendation.

112. The level of oedema as a criterion for initial in- or out-patient management.

In the opinion of many paediatricians within countries, the risk of mortality for children with mild or moderate oedema is high where the prevalence of oedema is low (e.g. Chad), but low where the prevalence of oedema is high (e.g. DRC). This was not the general view of the meeting.

Nevertheless, it was considered important to collect data to compare and contrast the relative risk of death or adverse outcome with oedematous malnutrition in different geographical areas within the region.

113. Threshold or gain values criteria for discharge

There are some circumstances (mobile teams) where height cannot be taken, but weight is taken. There is also insufficient data on the precision of MUAC measurement by field workers to determine if “MUAC only” programs should be encouraged (this is still a research item). It is clear that a 15% weight gain, which has been used in some programs, is a minimum.

Therefore, it is recommended that a comparison be made between MUAC criteria for discharge and a weight gain criterion based upon the increment a child must achieve if that child increases weight from -3.5Z to -1.5Z score weight-for-height, before the criteria for discharge (where height has not been taken) is determined.

114. Non-response to treatment

Information on the reasons for failure to respond to treatment should be collected and periodically reported – in particular the differentiation of failure to respond for social, psychological or medical reasons in OTP and IPF should be collected

Section 3: Items upon which the meeting could not reach consensus.

Admission

115. The meeting considered whether there should be the same MUAC cut-off point used for all children of 6 months of age and older or whether there should be a different cut-off for stunted children who are 6 months and older, but shorter than a normal 6 month old child (67cm), from the MUAC cut-off point used for longer/taller children. No consensus was reached on this question.

In support of the proposition is the position that small children (less than **67cm**) may be over-diagnosed with the MUAC<115mm criteria. This could expand the caseload for IMAM programs considerably and unnecessarily. Also, as these children are small, they do not reach the discharge criteria during the allotted treatment period and may be labelled inappropriately as failures to respond. When they leave not having reached the discharge criteria, they can be immediately re-admitted after discharge – this is confusing for the caretaker, community and staff. The staff would need a stick of **67cm** in length – and if the children are over this length then 115 mm would be used as entry criteria and below this 110 mm would be used (height would not be measured precisely).

Against the proposition is the position that it would unnecessarily complicate screening and admission, require additional training and that the measurement with a simple stick would not be accurate. It is also unknown whether children over 6 months of age, less than **67cm** with a MUAC between 110mm and 115mm experience an increased mortality risk if not treated for severe acute malnutrition.

It is recommended that, for safety, convenience and simplicity all children aged 6 months or older with a MUAC below 115 mm should be admitted to the program for SAM management at this time. However data are urgently required to review this recommendation.

In particular, the meeting recommended that data are gathered on this particular group of children to determine:

a) from surveys in which both weight-for-height and MUAC have been taken to establish, in this region, the equivalent cut-off points for assessing how thin (by MUAC and weight-for-height) the children are within different height categories;

b) whether this group of children has a different risk of mortality, outcome, rate of weight gain and length of stay from both taller children and those admitted on weight-for-height criteria alone;

c) the difficulty these children experience in reaching discharge criteria;

d) the relative number of children fulfilling the criteria for SAM that fall into this category (i.e. is this a major problem in this region).

116. The meeting considered whether single weight-for-age criteria be used for the <6 month old child as a criterion for admission instead of, or in place of, weight-for-height.

For the proposition is the fact that length is very difficult to take accurately in young children –small errors giving large differences in estimated nutritional state; the rapid change of MUAC in this age group makes it unreliable, and weight for age is relatively easily taken.

Against the proposition was the possible confusion of introduction of another method of assessing nutritional status and the possible admission of large numbers of children who are thriving well, but have been born of low birth weight.

The meeting decided that data should be collected prospectively and analysed using weight-for-age in the less than 6 month old children to determine if this was a sensitive and specific measure of risk of death.

Discharge

117. Children who are admitted using weight-for-height criteria should be discharged on weight-for-height criteria, and children that are admitted on MUAC criteria should be discharged on MUAC criteria.

This was proposed by the group considering discharge criteria but was not agreed in the plenary session.

For the proposition is the argument of consistency of criteria, having only one criterion for admission and discharge in any one program greatly simplifies training and practice and ease of use for MUAC only programs.

Against the proposition is a) concern about the precision and accuracy of MUAC measurements taken by field workers and b) the need to make provision for older patients and adolescents for whom the absolute MUAC criterion of admission does not discriminate risk of death sufficiently (who may be admitted with “visible severe wasting” [WHO criterion]).

The meeting proposed that, although desirable to admit and discharge on the same criteria, for MUAC only programs more data and experience is required before this can be confidently recommended as the sole discharge criterion.

118. There should be a minimum length of stay in the out-patient treatment program of 2 months

This was proposed by the discharge group but not accepted in the plenary session.

For the proposition is the argument that a minimum stay ensures that the children are exposed to treatment for sufficient time to fully recover.

Against the proposal is the observation that in many simplified programs that use a two months stay as the main criterion for discharge treatment for those children that fail to recover during that time is simply abandoned and they are discharged as failure-to-respond, instead of being transferred for diagnosis etc. Further, many children recover well within a two month period (e.g. most oedematous cases, older children) and to maintain them for longer than necessary increases default rate and unnecessarily increases the cost and workload of the staff.

On balance, the meeting felt that this should NOT be a criterion for discharge until data is collected to show that it is necessary.

119. Should height on admission be used to calculate “target weight for discharge” or should height be re-taken and the weight-for-height recalculated at the time of discharge

The group did not reach consensus on this issue.

The simplest option is to calculate the target weight once, at admission, and discharge the child when s/he reaches that weight, thus, removing the requirement to measure height more than one time. Further if the child is gaining height rapidly then this is deemed to be a better criterion of nutritional health than weight gain.

Against this is the danger of discharging a child who is still malnourished in terms of weight for height if this is re-measured in the community.

It is recommended that the height be taken one time on admission and the target weight be calculated from that value for discharge. However, it is also necessary to collect data to ensure that this does not lead to children who are considered to be severely malnourished by weight-for-height criteria being discharged.

Definitions

120. TWINS

The definitions group suggested that a Twin of a SAM patient be admitted with the patient and should be given her/his own SAM number and recorded as other admissions. This was not agreed in plenary.

For the proposal is that the number of patients actually served by the centre is recorded – against is that the child is not actually severely malnourished and should not be designated as such.

It is recommended that an accompanying twin should be treated as “another occupant” of the centre, just as the caretaker, and can be given a facility registration number but should not be given a SAM number.

121. Death from SAM in the emergency department of IPFs

Neither the definitions nor the calculation groups reached consensus on assigning a SAM # in the emergency department. The majority of the definitions group suggested that a death in casualty should not be counted as a death in the IPF. The matter was not resolved in plenary session.

For the proposal - if the patient has not “entered the program” then it is not correct to count the death as being a death as part of the program for SAM. Further, this will be difficult to arrange from a practical point of view as most casualty departments have rapid turnover of many staff all of whom would require training on IMAM.

Against the proposal - is that the fact that treatment of SAM in most casualty departments is very poor and may result in a large proportion of deaths. These normally go unrecorded so that the overall burden of SAM mortality in a region may be grossly underestimated. Further children transferred from OTP to hospital IPFs are frequently seen and retained in the casualty department before transfer to the IPF itself; such patients, having arrived at the facility (albeit not formally admitted to the malnutrition section of the IPF) and are waiting for admission, should be recorded as deaths in the IPF and not as deaths in the OTP.

*It is strongly recommended that there should be a special survey of casualty departments to determine how many deaths are due to SAM or unrecognised SAM in this service. All IPF evaluations should include inspection of casualty records (where these are maintained). Where records of all admissions to casualty departments are not maintained, all **deaths** in the casualty department should be assessed to determine whether or not the child had SAM.*

122. UNKNOWN outcome

The definitions and calculations groups recommended that there should not be a category called “UNKNOWN” for exit in the records and report. However the definitions group also reported that “There should be a special place on the report for reclassification of children reported as defaulted but unknown outcome in the previous reports”; two statements that appear contradictory. The calculations group included this category in the other consensus calculations; their main objection was the name and that this category would be “overused” by centres that did not make home visits or inquire of the outcome of an absent patient.

There followed a lengthy debate in plenary with several pointing out that there was no other place to report such children and that recording them as defaulters falsified the records.

It is recommended that a separate category for children that fulfil the definition for defaulter, but that it is uncertain whether they are in fact alive or dead should be reported as “Defaulter-unconfirmed” and recorded separately from “Defaulter-confirmed”.

Calculations

123. Percentage who refused transfer (OTP)

There was no consensus in the groups. The main argument used was that the data would be very difficult to collect.

For some centres this may be an explanatory reason for mortality in OTP, particularly when the OTP is at a great distance from the IPF. It would also indicate the need to the planners of the IMAM program that there is a requirement for provision of additional IPFs closer to the OTP, or retraining of the staff in the IPF (if refusal is due to a poor reputation among the community). Also a record of refusal of transfer in the chart or register would record that this has been suggested to the caretaker, in case the staff are criticised for the death of a child at home.

Against – this would require additional recording in the chart and/or register (under other remarks)

It is recommended that this indicator be piloted in some centres to determine if refusal of transfer is a common occurrence, and whether it can account for deaths in the OTP program.

Section 4: Software technical meeting

Following the main meeting a technical “software” meeting was held to design software in order to simplify the filling of reports, sending electronic copies of reports, collation of reports and establishment of national and regional database. The software should also be designed in such a way that automatic reports can be generated broken down by centre, district, region and country.

Present: Robert Johnston (UNICEF), Juergen Erhardtj (consultant), Yvonne Grellety (consultant), Michael Golden (consultant) and Helene Schwartz (UNICEF).

There was a wide ranging discussion about the possibilities and a review of the “lessons learned” from East Africa (were the dedicated software is only suitable for use in one country as there is no harmonisation or agreement within the region) and difficulties other regions and countries have experienced in maintaining databases in Access or Excel.

The following was agreed subject to confirmation and comments from the prospective users of such software.

It was agreed that software would be commissioned for use within the region.

The software would have a user interface similar to ENA for SMART and ANTHRO (WHO).

There would be flexibility built into the system whereby there would be both “fixed” data entry fields for data that are used by all countries and actors, and “optional” data fields that are used by some countries and not others. Options would be able to be set so that any of the optional data fields could be suppressed and a template created for any particular country (in the options file). Nevertheless, the resulting database would be constructed so that there were defined places for storage all the fixed **and** all the optional variables. Where optional variables were not collected or required this would simply result in an absent variable in the database.

The database would be capable to receiving collating and analysing data from IPFs, OTPs and SFPs with SFP data being stored in a separate data-base.

Initial planning would be to have several Sheets in the software:

- 1) The ability to input individual patient data and calculate nutritional indices, length of stay, rates of weight gain etc against outcome and break all data down by gender or other “filter”.
- 2) The report with templates (depending on the options set) that can be country specific for IPFs OTPs and SFCs
- 3) A centre registration sheet – for registering centres and submitting details such as change of protocol, stock ruptures etc. Where there is a change in details for a centre, this would be reported along with the monthly report.
- 4) A result sheets where data are displayed graphically as well as numerically by centre (longitudinally), district, region or country. And the various indicators are automatically calculated and displayed.
- 5) An options sheet where individual countries can chose what data to collect and store.

The databases would be capable of being merged at district, regional, national and international level.

Conclusion

The workshop organisers, facilitators and sub-group of participants will follow up on: 1)-Software development; 2)- The generic protocol and monitoring tools of integrated management of acute malnutrition (IMAM) will be revised according to the conclusions of the consensus meeting; 3)- Technical support to countries during the revision of their national protocols on integrated management of acute malnutrition; 4)- Operational research on areas where consensus was not reached.

Appendix

Annex 1 - List of participants

	NAME	ORGANISATION	COUNTRY	Position
1	Jan Eijkenaar	ECHO	WCA	Regional Humanitarian Advisor
2	Jean-Louis Mosser	ECHO	WCA	Expert Regional Medical
3	Sigrid Kuhlke	ECHO	WCA	Regional Food Security Expert
4	Regina Davis	OFDA	WCA	Principal Regional Advisor
5	Ferima Coulibaly Zerbo	WHO	WCA	Inter Country Nutrition Technical Officer
6	Edith Heines	WFP	Italy	Nutrition program advisor
7	Kinday Samba	WFP	WCA	Senior Regional Nutrition Advisor
8	Anna Horner	WFP	WCA	Regional Nutrition Advisor
9	Markus Esbjornsson	WFP	Senegal	Nutrition Assistant
10	Hedwig Deconinck	FANTA-2	USA	Senior Emergency Nutrition Advisor Senior Advisor, Nutrition, Security and Emergencies
11	Ilka Esquivel	UNICEF	USA	Regional advisor
12	Felicite Tchibindat	UNICEF	WCA	Nutrition specialist
13	Roland Kupka	UNICEF	WCA	Nutrition specialist
14	Robert Johnston	UNICEF	WCA	Nutrition specialist
15	Helene Schwartz	UNICEF	WCA	Consultant
16	Michael Golden	UNICEF	Ireland	Consultant
17	Yvonne Grellety	UNICEF	France	Facilitator REACH
18	Sergio Teixeira	REACH	Senegal	Regional CMAM coordinator
19	Issakha Diop	HKI	WCA	Conseillé Régional Santé
20	Serge Breyse	SC-UK	WCA	Regional Emergency Manager
21	Malik Allaouna Anne-Dominique	SC-UK	WCA	Senior Nutrition Advisor
22	Israël	ACF	France	Program Coordinator - Bureau régional Responsable prgm Niger, Tchad, Mali, Yemen
23	Christophe Breyne	ACF	WCA	Nutrition advisor
24	Isabelle Defourny	MSF-F	France	Senior Desk Officer
25	Valerie Captier	MSF-S	Switzerland	Directeur Regional
26	Anne Walsh	Valid Internat.	UK	Nutrition manager
27	Douglas Steinberg	HKI	WCA	Nutrition Officer
28	Eric-Alain Ategbo	UNICEF	Niger	Assistant Nutritionniste
29	Hamidine Hassane Abdoulaziz	UNICEF	Niger	Nutrition and Medical Coordinator
30	Hassoumi Biga	CRF	Niger	Coordinatrice medicale
31	Karine Koudert Yvonne	ACF	Niger	Directeur de la Nutrition
32	Nzomukunda Aboubacar	MSF-B	Niger	SNIS
33	Mahamadou	MoH	Niger	Direction de la Nutrition
34	Maman Zaneidou	MoH	Niger	Spécialiste nutrition
35	Mamane Batoure	MoH	Niger	Division Nutrition, Ministère de la Santé
36	Médiatrice Kiburente	UNICEF	Mali	Pédiatre, Ministère de la Santé
37	Samake Raki Ba	MoH	Mali	Nutrition and Medical Coordinator
38	Mana Habiba Traore Chantal Autotte	MoH	Mali	Spécialiste nutrition
39	Bouchard	ACF	Mali	Spécialiste nutrition
40	Ines Lezama Mohamed Daouda	UNICEF	Mauritanie	Consultant
41	Baro Francis Buhendwa	UNICEF	Mauritanie	
42	Bitey	UNICEF	Mauritanie	

	Mohamed			
43	Moustapha Kane	MoH	Mauritanie	Chef du Service de Nutrition
44	Diane Ashley	CRF	Mauritanie	Chef de projet nutrition
45	Sylvestre Tapsoba	MoH	Burkina Faso	Directeur de la Nutrition
46	Sidi Coulibaly	MoH	Burkina Faso	Directeur des Statistiques de la Maladie
47	Béatrice Barumbanze	CRB	Burkina Faso	Assistante technique du projet nutrition
48	Noel Zonon	TdH	Burkina Faso	Chef de projet SMI
	Regina Khassanova		Burkina Faso	Coordinatrice "Lutte contre la malnutrition"
49	Traore	HKI	Faso	
50	David Rizzi	UNICEF	Tchad	Nutrition specialist
51	Amina Bangana	UNICEF	Togo	Nutrition specialist
52	Touglo Adavi Lonlon	MoH	Togo	Point focal nutrition
53	Gdandi Nadjombe	MoH	Togo	Point focal nutrition - Savanes
54	Adjangba Kobou Mensah	MoH	Togo	Charge des donnees - service nutrition
55	Mueni Mutunga	UNICEF	Sierra Leone	Nutrition Specialist
56	Isata Tu-Tu Conteh	MoH	Sierra Leone	Nutrition Specialist

Annex 2 – State of the art review of key issues on monitoring and evaluation of integrated management of acute malnutrition (presented by Professor Mike Golden)

1. Eight topics need to be harmonised: admission criteria, discharge criteria, registration book, definitions, nomenclature, organisation, report and calculation & analysis.
2. Contentious issues were analysed based on scientific evidence to help participants make informed decision.
3. *Should weight-for-height criteria be differentiated by sex or should there be a single UNISEX table?* The new WHO growth standards (2006), weight-for-height tables are differentiated by sex. This makes it difficult in the field with low capacity staff. In 23 therapeutic feeding centres (in 13 African countries); it was found that children 6-59 months were admitted using UNISEX tables; there was no significant difference in the number of boy and girls admitted and there was no significant difference in the mortality rate. This is because a girl of the same absolute weight had the same mortality risk as a boy of the same height. It should be safer to admit all children using the WHO boy standards – this would avoid the danger of discrimination against girls.
4. *Should the same MUAC cut-off point be used for all children of 6 months of age and older or should there be a different cut-off for small children from larger children?* Various graphs were presented: MUAC z-score at MUAC cut-off by age (girl); MUAC WHO standards (girl); MUAC cut-off points corresponding to WHZ by height category from survey; MUAC z-score at MUAC cut-off by height (girl). The difficulty of taking MUAC was stressed: 4 supervisors and 22 staff were asked to measure MUAC on 10 subjects twice. The mistakes done by supervisors ranged between 1 to 2 mm; but for the staff it ranged from 2 to 13 mm. This is important bearing in mind that the difference between SAM and normal is only 10 mm. It is crucial to improve the quality of the tape and invest in training and testing.
5. *Should children always be admitted to OTP if they have oedema at + or ++ level or should this be based upon country experience?* It depends on country – where oedema is common seems to be OK, where oedema is rare seems to be dangerous.
6. *Which admission criteria for children less than 6 months?* The weight-for-length is not always sufficiently accurate in this age group (there are errors in measuring small children – when weight to nearest 100g and height to 1cm). Other criteria could be failure of breastfeeding (but how to determine it objectively?) or use of weight-for-age instead of weight-for-height.
7. *Are threshold or gain criteria more appropriate in all settings or should we use either/both depending upon the setting for discharge criteria?* What should the standard threshold be: -1.0z, -1.5Z, -2.0Z or some other value? There is not enough data (including relapse data) to make a decision. If the weight gain of 15% is used; the result will be different according to the admission weight. For instance, for a child who was 70% of target weight; a 15% of gain weight will be him or her to 80.5% and if a child was 60% of target weight; a 15% of gain weight will bring him or her to 69% (the child will still be severely malnourished). To bring a child from 70% to 100% requires a 21.4% weight gain over the admission weight. It suggested to use -3.5Z of WHO standards as admission weight and the corresponding values at -1.5Z as the target value (assuming -1.5 is chosen as the threshold discharge value).

8. *What should be the threshold be for MUAC a discharge (115mm, 120mm, 130mm, 135mm, other) or should it be a gain of MUAC (eg 10mm or 15mm)?* Data unclear for small children and longer children.
9. *Should patients transferred from IPF to OTP successfully be designated as cured or “discharged” or “successfully treated”?* To be decided by the participants.
10. Definitions of terms used in various programmes were provided: new admission; relapse; readmission; wrong admission; cured; died or dead; transfer-in; return; defaulter; transfer-out; non-response; unknown and SAM number. The participants will decide which terms and definitions to use.
11. The nomenclature group was invited to harmonise names (whole programmes; the screening; in-patient facilities; out-patient; community mobilisation activities...) used both in French and English.
12. The format group was tasked to come with the different formats for ITP, OTP and MAM activities. The formats will have the minimum data to be collected (admissions and exits). The group was also asked to decide on additional information that can be used during an audit or an evaluation (average rate of weight gain, average length of stay, stocks received, consumed and held...).
13. The calculation group was tasked to explain how to calculate the statistics (success rate; cure rate; death rate, medical-referral rate; default rate, transfer-out, mean length of stay, non-response rate, RUTF consumption...).

Annex 3.1 Inpatient monthly report.

IPF - MONTHLY STATISTICS REPORT - MANAGEMENT OF SEVERE ACUTE MALNUTRITION - IPF														
Country National Logo	FACILITY CODE				Implementing agency									
	Name of the FACILITY				Report prepared by									
	Type of Facility				Report period from ddmmyy									
	REGION				Report period to ddmmyy									
	DISTRICT				Date of submission									
OPENING DATE				List any OTPs outside the district using this IPF										
Age Group	Total beginning of the month (Beg)	New admissions			RE-ADMISSION after defaulting (<2mo) (Trad)	INTERNAL TRANSFER (from OTP or another IPF) (Tin)	Total Entry to facility (Cin)	Transfer	other EXIT from Facility				Total Exit (Cout)	Total end of the month (End)
		W/H<-3 z-score or MUAC<115mm or MUAC<180mm (Amar)	OEDEMA (Aoed)	RELAPSE (Arel)				SUCCESSFULLY TREATED/ internal transfer to OTP (Tout)	DEAD (Dead)	DEFAULTER (DefN)	NON RESPONDER/ MEDICAL REFERRAL (Dmed)	CURED (Dcur)		
< 6 months														
6-23 months														
24-59 months														
>59 months														
Total														
								%	%	%	%	%		
Errors of admissions		No												
		Products		In stock	In	Out	Balance							
		F75 (sachet)*												
		F100 (sachet)*												
		RUTF (box)												
		* for 500ml or 2l												
		Drugs		In stock	In	Out	Balance							

New admission = Patient directly admitted to IPF (acute-Phase 1) with no SAM-Number assigned

Internal transfer (from OTP or another IPF) (Tin) = Patient that was in an OTP or another IPF and has been transferred to the IPF.

Dead (Dead) = Patient that has died in the IPF.

Defaulter (DefN) = Patient that is absent for 2 consecutive weighing (2days)

Successfully treated (Tout) = s/he has been successfully treated and s/he has been transferred to an OTP or is gaining weight on exclusive breast milk.

Non-response/Medical referral (Dmed) = Patient that has failed to respond to treatment and has been referred to another service/hospital who will take over management.

Internal transfer (to OTP or another IPF) (Tout) = Patient that was in the IPF and is transferred to an OTP to continue treatment.

Cured (Dcur) = Patient that has reached the discharge criteria.

Total end of the month (End) = Total beginning of the month (Beg) + Total admissions (Cin) - Total exit (Cout)

Annex 3.2 Outpatient monthly report.

OTP - MONTHLY STATISTICS REPORT - MANAGEMENT OF SEVERE ACUTE MALNUTRITION - OTP																
National MoH Logo here	OTP CODE															
	Name of the FACILITY															
	Type of Facility		otp		/mobile											
	REGION															
	DISTRICT															
OPENING DATE																
					Implementing agency											
					Report prepared by											
					Report period from ddmmyy											
					Report period to ddmmyy											
					Date of submission											
					Name/code of IPF used by this OTP											
Age Group	Total beginning of the month (Beg)	New admissions			RE-ADMISSION after defaulting (<2mo) (Trad)	INTERNAL TRANSFER (from IPF or another OTP) (Tin)	Total Entry to facility (Cin)	Transfer	Discharges					Total discharges (Dtot)	Total end of the month (End)	
		W/H<-3 z-score or MUAC<115mm or MUAC<180mm (Amar)	OEDEMA (Aoed)	RELAPSE (Arel)					INTERNAL TRANSFER (to IPF or OTP) (Tout)	DEAD (Dead)	CONFIRMED DEFAULTER (DefN)	UN-CONFIRMED DEFAULTER (DefU)	NON-RESPONDER (refused transfer to IPF) (Dmed)			CURED (Dcur)
6-23months																
24-59months																
> 59months																
TOTAL																
UPDATE of previous report								%	%	%	%	%	%	%		
Age Group	Previous balance from monthly report			New balance												
	Death	Defaulter confirmed	Defaulter unconfirmed	Death	Defaulter confirmed	Defaulter unconfirmed										
6-23 months																
24-59 months																
> 59 months																
Errors of admissions		No														

RUTF	In stock	In	Out	Balance
Box				
1 Box sachets				
Amoxicillin				
Malaria				
other				

New admission = Patient directly admitted to your programme to start the nutritional treatment. Marasmic (Amar), Kwashiorkor (Aoed) or Relapse (Arel) admissions are recorded in 3 different col
 Re-admission after defaulting (Trad) = Patient that has defaulted from a nutritional therapeutic treatment and he is re-admitted in your unit within a period of less than 2 months
 If the defaulter is coming back after 2 months, then he is recorded as a new admission.
 Internal transfer (from IPF or another OTP) (Tin) = Patient that was in the IPF or another OTP and then transferred to the OTP.
 Cured (Dcur) = Patient that has reached the discharge criteria
 Death (Dead) = Patient that has died while he was in the programme (or during transfer from your OTP to IPF). The death has to be confirmed by a home visit
 Defaulter confirmed (DefN) = Patient that is absent for 2 consecutive weighing (2 weeks), confirmed by a home visit, outreach worker, volunteer or neighbour
 Defaulter unconfirmed (DefU) = Patient that has left the programme but his outcome (true defaulting or death) is not confirmed/ verified by a home visit
 Non-responder (Dmed) = Patient that has failed to respond to treatment after investigation, was transferred to IPF but refused to go
 Internal Transfer (to IPF or another OTP) (Tout): when a patient was in your OTP and then transferred to IPF or to another OTP.
 Total end of the month (End) = Total beginning of the month (Beg) + Total admissions (Cin) - Total discharges (Dtot) - Internal transfer (Tout)