MODULE EIGHT

Monitoring and Reporting on CMAM

MODULE OVERVIEW

This module introduces participants to the basic principles of monitoring, reporting on and supervising community-based management of acute malnutrition (CMAM) services, with a focus on outpatient care.

The module describes how individual children are tracked and monitored in CMAM and how monitoring information and data are collected and reported for the service/programme as a whole. The purpose and function of support and supervisory visits are discussed.

The importance of tracking children between outpatient care and inpatient care, using referral slips, filling in the outpatient care treatment cards and using a simple numbering system has been previously covered. This module focuses on bringing it together through a simple monitoring system.

This module includes practical exercises that will provide participants with the opportunity to practice compiling data and information. It also includes a half day field practice at an outpatient care site to observe registration, tracking, monitoring, reporting and supervision procedures.

Monitoring and reporting on CMAM combines outpatient care and inpatient care information, and performance indicators are based on these combined statistics. The monitoring system from each outpatient care and inpatient care site must be well standardized and coordinated to avoid double counting.

Note: This module does not cover monitoring and reporting on the supply system (e.g., management and transportation of equipment, materials, drugs, therapeutic food) or on human resources.

MONITORING AND REPORTING ON CMAM: CLASSROOM

LEARNING OBJECTIVES	HANDOUTS AND EXERCISES
1. Describe the Principles of a Monitoring System for CMAM	
2. Describe How the Individual Child Is Tracked and Monitored in CMAM	Handout 8.1: Monitoring the Individual Child in Outpatient Care Handout 8.2: Registration Numbering System Proposed for CMAM Handout 8.3 Monitoring and Reporting on CMAM Handout 8.4 Filing Outpatient Care Treatment Cards
3. Complete Site Tally Sheets and Site and District Report; Interpret the Findings	Handout 8.3 Monitoring and Reporting on CMAM Handout 8.5 Site Tally Sheet for the Management of SAM Handout 8.6 Site Reporting Sheet for the Management of SAM Handout 8.7 District or National Reporting Sheet for the Management of SAM Exercise 8.1 (a) Outpatient Care Site Tally Sheet and Site Reporting Sheet Exercise 8.2 Completing Site Tally Sheet
4. Calculate and Discuss Service/Programme Performance and Coverage	Handout 1.2 Terminology for CMAM Handout 8.8 CMAM Indicators Handout 8.9 Principles of Coverage Exercise 8.1 (b) Outpatient Care Site Reporting Sheet
5. Monitor and Respond to Barriers to Access	Handout 8.10 Monitoring Barriers to Access Exercise 8.3 Community Meeting Role-Play
6. Explain the Purpose of Support and Supervision Visits and the Role of a Supervisor/Mentor	Handout 8.11 Support and Supervision for CMAM Handout 8.12 Support and Supervision Checklist for Outpatient Care Handout 8.13 Support and Supervision Checklist for Community Outreach Exercise 8.4 Analysis of Site Reports of Three Outpatient Care Sites and One Inpatient Care Site OPTIONAL: Supplemental Reference 8.1 Setting Up a CMAM Monitoring System Using an Electronic Database in Excel
7. Prepare an Outline for CMAM Reporting	Handout 8.14 Guidance on CMAM Reporting
Wrap-Up and Module Evaluation	

MATERIALS

- Handouts
- Calculators
- Flip charts
- Markers, masking tape
- Copies of outpatient care treatment cards
- *Community-Based Therapeutic Care (CTC): A Field Manual*
- Report on *the International Workshop on the Integration of Community-Based Management of Acute Malnutrition* (Washington, D.C., April 28-30, 2008)
- Copies of **Handout 1.2 Terminology for CMAM**, **Handout 4.1 Admission Criteria and Entry Categories** and **Handout 4.17 Discharge Criteria and Exit Categories**

ADVANCE PREPARATION

- Room setup
- Create individual role-play cards for Group Exercise B: Community Meeting Role-Play

MODULE DURATION: FOUR HOURS IN CLASSROOM, HALF-DAY FIELD PRACTICE

Note: Depending on the needs of their audience(s), trainers may skip or spend more or less time on certain learning objectives and activities. The module duration is an estimate of the time it takes to complete all the learning objectives and activities.

LEARNING OBJECTIVE 1:

DESCRIBE THE PRINCIPLES OF A MONITORING AND REPORTING SYSTEM FOR CMAM

Review **Handout 4.1 Admission Criteria and Entry Categories** and **Handout 4.17 Discharge Criteria and Exit Categories.** Note these handouts are to be used for reference throughout the module. Refer Modules 4-6 for additional review of admission and discharge criteria if necessary.

GROUP DISCUSSION: RATIONALE AND PRINCIPLES FOR CMAM MONITORING AND REPORTING SYSTEMS.

Ask participants to brainstorm the following questions:

1. **What are the key aspects of monitoring and reporting on CMAM?**

   Fill in the gaps in the discussion with the following information: To monitor a CMAM service effectively, you will need to:
   - Monitor the individual child
   - Monitor and report on the effectiveness of the service as a whole
   - Supervise and support the health care providers

2. **Why do we monitor CMAM services?**

   Fill in the gaps in the discussion with the following information: Monitoring helps to identify what is working well (strengths), what is not working and where there might be gaps (weaknesses). With this information, weaknesses and gaps can be addressed.

   - In CMAM, the individual child is monitored to ensure that children are treated appropriately and effectively, which helps to continually improve the services the children receive.
   - Health care providers are supervised and supported to maintain their skills and ensure a successful service that treats all children with severe acute malnutrition (SAM) effectively.

3. **What are some characteristics of an effective health management information system (HMIS)?**

   Fill in the gaps in the discussion with the following information: An HMIS must be simple to minimize the demands on health care providers but provide sufficient useful information to ensure service/programme effectiveness and to allow health managers to make decisions and adjustments. An HMIS should complement--not duplicate--existing systems. An HMIS that includes reporting on cases of SAM might already exist, and/or the Ministry of Health (MOH) or UNICEF might have reporting requirements for reporting on acute malnutrition.

4. **Who should be responsible for monitoring and reporting on CMAM? Who should supervise the CMAM service/programme in your districts?**

   Fill in the gaps in the discussion with the following information: This will differ for each district. But for each aspect of monitoring, it is important to determine in advance who specifically is responsible for collecting and documenting the data and who specifically is responsible for reporting.

LEARNING OBJECTIVE 2:

DESCRIBE HOW THE INDIVIDUAL CHILD IS TRACKED AND MONITORED IN CMAM

Become familiar with **Handout 8.1 Monitoring the Individual Child in Outpatient Care, 8.2 Registration Numbering System Proposed for CMAM, Handout 8.3 Monitoring and Reporting on CMAM** and **Handout 8.4 Filing System for Outpatient Care Treatment Cards**.

ELICITATION: INFORMATION AND TOOLS FOR INDIVIDUAL MONITORING.

Ask participants what tools they have encountered in their training that could help track children in CMAM. How do each of these tools help? Fill in the gaps with the tools described below:

- A child's unique registration number
- Outpatient care treatment card: Each child's medical history, physical examination, anthropometry, appetite, medical treatment and nutrition rehabilitation are monitored on an outpatient care treatment card. Progress of individual treatment is recorded through clinical signs, the mother/caregiver's report of illness and anthropometry (mid-upper arm circumference [MUAC] and weight).
- Ready-to-use therapeutic food (RUTF) ration card: The provision of RUTF per session is calculated based on the child's weight of the child and is recorded on an RUTF ration card, along with the session frequency
- Referral slips: These forms, which use the child's unique registration number, are used to refer children from outpatient care to inpatient care and vice versa.

Refer participants to **Handout 8.1 Monitoring the Individual Child in Outpatient Care**. Ask participants what other information is necessary to monitor a child admitted to CMAM. Ask who is responsible for monitoring. Ask them to find the answers in **Handout 8.1**

PARTICIPATORY LECTURE: REGISTRATION NUMBERS.

Note to participants that individual children enrolled in CMAM are tracked within outpatient care and when referred to other services. This ensures that admission, discharge and treatment procedures are followed and documented correctly, which allows health care providers to follow cases of children as necessary.

Children with SAM are registered upon admission to CMAM at the site where they first present and are assigned a unique registration number. This number is noted on their treatment card or health card (or in the registration book if one is used) and is used to track the child while she/he is enrolled in CMAM.

GROUP DISCUSSION: REGISTRATION NUMBERS.

Draw the numbering system in **Handout 8.2 Registration Numbering System Proposed for CMAM, Table 1** on a flip chart. Explain that a standard numbering system for CMAM (**Example 1**) has three parts: the health facility's name or code, the child's individual number and a code representing the service where the child first received treatment. Compare this with the HMIS numbering system for Malawi (**Example 2**). Ask participants if their country uses an HMIS numbering system or another numbering system for other interventions. Discuss how these might differ from the standard numbering system for CMAM. Discuss the bullet points on **Handout 8.2** and answer any questions. Emphasize that numbering systems can vary per country, therefore consultation with the national guideline is essential. Also note that when establishing CMAM, its numbering system should be compatible with the registration numbering system already in place.

LO.2

PARTICIPATORY LECTURE: CLASSIFYING CHILDREN INTO ENTRY AND EXIT CATEGORIEs.

Explain to participants that children in CMAM are tracked among services and are not double-counted. Refer participants to **Handout 8.3 Monitoring and Reporting on CMAM, Part A** for more information. This information and the remainder of **Handout 8.3** will be covered further in **Learning Objective 3: Complete Site Tally Sheets and Site and District Reports; Interpret the Findings**.

- **Classifying Entries:** At entry, the child with SAM is classified as a new admission age 6 to 59 months (optional: admission criteria recorded), as a new "other" admission (adults, adolescents, children >5 years, infants < 6 months) or as an old case (when referred from inpatient or outpatient care or when returning after defaulting). A relapse is classified as a new admission, which will be indicated on the outpatient care treatment card.

  Ask participants what tools they have encountered in their training that can help determine which category each child falls into and how to track him/her (e.g., CMAM admission criteria, CMAM entry categories, outpatient care treatment cards). Tell participants that they will shortly learn about other tools to help them with classification and tracking: filing treatment cards in binders and completing site tally sheets and site reporting sheets.

- **Classifying Exits:** On exit from outpatient care, each child is categorized as discharged as cured, died, defaulted or non-recovered; this is also indicated on the outpatient care treatment card and tallied. Ask participants again what tools they have encountered in their training that can help determine which category each child falls into and how to track him/her (e.g., CMAM discharge criteria, CMAM exit categories, outpatient care treatment cards, binders, site tally sheets). Referrals to inpatient care or outpatient care are a separate exit category.

  Note: Children who are referred between outpatient care and inpatient care are considered discharged from the site but NOT from the service/programme. They are registered at the new site using their unique registration number and may return to their original site; their status is "referred." Children who are not recovering are referred for further medical investigation as soon as the condition is diagnosed and exit from CMAM as non-recovered only if they do not reach the discharge criteria after four months of treatment. Children referred to outpatient care from supplementary feeding because their condition has deteriorated are considered new admissions.

REVIEW: OUTPATIENT CARE TREATMENT CARDS.

Distribute copies of outpatient care treatment cards to participants. Review where anthropometry, medical history, physical examination, appetite test, medical treatment and nutrition rehabilitation information for each child are entered. Review the back of the card where information on referrals and discharges (children who were cured, died, defaulted or did not recover) should be entered. Remind participants that health care providers and supervisors should review the outpatient care treatment cards regularly to ensure that current protocols are followed.

PARTICIPATORY LECTURE: FILING OUTPATIENT CARE TREATMENT CARDS.

Explain to participants the importance of having a clear and accessible filing system for outpatient care treatment cards that makes tracking active and exited cases simple and allows for quick reference. Outpatient care treatment cards should be organized in binders or files that remain in the health facility and should be accessible at all times. Active and exited cases should be separated into two binders or sets of files with dividers. The active cases binder or files include cards for all children currently enrolled in CMAM services at that site. Cards in the exited cases binder or files are organized according to exit category. Staff should review the binders or files weekly.

PRACTICE: FILING OUTPATIENT CARE TREATMENT CARDS. Draw a table with two columns on the flip chart. Mark the first column heading as "Active Cases" and the second column as "Exits." In plenary, ask participants which column each of the following classifications belongs in:

- Children currently in outpatient care (Active Cases)
- Cured (Exits)
- Died (Exits)
- Non-recovered – those who have not reached discharge criteria after four months of treatment (after medical investigation) (Exits)
- Absentees – those who have missed one or two outpatient care follow-on visits (Active Cases)
- Defaulted – those who have missed three outpatient care follow-on visits (Exited)
- Referrals awaiting return – those who have been referred from outpatient care to inpatient care (Exited temporarily the site, not the service/programme) or for medical investigation (Active Cases)
  (Note to participants that when the child returns after defaulting or referral, the same outpatient care treatment card is used.)

Distribute copies of **Handout 4.1 Admission Criteria and Entry Categories, Handout 4.17 Discharge Criteria and Exit Categories** and refer participants to **Handout 8.4 Filing Outpatient Care Treatment Cards** for reference. Discuss the active cases or exits categories if questions arise.

LEARNING OBJECTIVE 3:

COMPLETE SITE TALLY SHEETS AND SITE AND DISTRICT REPORTS; INTERPRET THE FINDINGS

Review **Handout 8.3 Monitoring and Reporting on CMAM** and become familiar with **Handout 8.5 Site Tally Sheet for the Management of SAM**, **Handout 8.6 Site Reporting Sheet for the Management of SAM**, **Handout 8.7 District or National Reporting Sheet for the Management of SAM**, **Exercise 8.1 Outpatient Care Site Tally Sheet and Site Reporting Sheet** and **Exercise 8.2 Completing Outpatient Care Site Tally Sheet**.

PARTICIPATORY LECTURE: ROUTINE DATA COLLECTION. Routine service data are recorded on **site tally sheets** at each site, based on quantitative data recorded after each session. The site tally sheets are compiled in **site and district reporting sheets**. **District reports** combine the information from the different health facilities in the district that provided CMAM services. District reports inform the **national reporting sheets and report system**. The CMAM reporting systems can be a compilation of reporting sheets (hard copies) or entered in an electronic database (excel spreadsheet). . Emphasize to participants the importance of inpatient and outpatient care sites using standardized reporting sheets so that the service's overall effectiveness can be precisely monitored.

Note: At the end of every outpatient care session outpatient care treatment cards for new admissions and new exits are used to fill the site tally sheet for that session. **New admissions** are tallied based on their entry category (per admission criterion and age group or per age group only). **New exits** are tallied based on their exit category (cured, died, defaulted, non-recovered). Depending on the site tally sheet used, referrals from inpatient care to outpatient care could be tallied as an admission (under referral from inpatient care) or separately from new admissions as "moved in."

GROUP DISCUSSION: QUANTITATIVE DATA FROM SITE TALLY SHEETS. Ask participants if they have ever used tally sheets in their work and, if so, what they were using the tally sheets to track. Refer participants to **Handout 8.5 Site Tally Sheet for the Management of SAM** and ask them to examine how the outpatient care site tally sheet considers the quantitative data they record. While referencing the sheet, ask participants where the following categories of children would belong:

- Children under 5 who are referred from supplementary feeding and sent to outpatient care because their condition has deteriorated (**Answer:** classified as "new case' admission 6-59 months)
- Defaulters who exited from the service but returned to outpatient care and had not yet met the discharge criteria
  (**Answer:** classified as 'old case' admission: from outpatient/inpatient care or returned defaulters)
- Children who return to outpatient care from inpatient care or vice versa
  (**Answer:** classified as 'old case' admission; from outpatient/inpatient care or returned defaulters)

- Children who are moved from one outpatient care site to another to continue their treatment (**Answer:** classified as 'Old case' admission from outpatient/inpatient care or returned defaulters on the outpatient care site tally sheet of new site, and classified as exit as 'referral to outpatient care/inpatient care' on the tally sheet of the old site)
- All children who are admitted to inpatient care after spending some time in outpatient care
  (**Answer:** classified as "old case" admission, "to outpatient/inpatient care" on the inpatient care site tally sheet)
- Children with SAM and medical complications who present directly at inpatient care (**Answer:** classified as "new admission 6-59 months" on the inpatient care site tally sheet)
- Children with SAM and medical complications who first present at the outpatient care site, are admitted and classified after registration and start of treatment and then referred to inpatient care
  (**Answer:** classified as 'old case' admission from outpatient/inpatient care or returned defaulters" on the inpatient care site tally sheet since they were admitted and exited at the outpatient care site, thus classified twice, once as 'New case' admission and once as 'Referral' exit on the outpatient care site tally sheet), which avoids double-counting)

Ask participants if they can think of additional quantitative data that that might be helpful to capture on these sheets. Ask where they could find the information (e.g., outpatient care treatment cards). Answers could include:

- Gender of new admissions and discharges
- Admission criteria of new admissions
- Average daily weight gain of cured exits
- Average length of stay of cured exits
- Readmission after discharge or relapse

PRACTICE: COMPLETING SITE TALLY SHEET. Refer participants to **Exercise 8.1(a) Outpatient Care Site Tally Sheet**. Ask them to fill in the total number of admissions and exits per week, as well as the number registered in the service/programme at the end of each week and beginning of each subsequent week. As they work, check their responses against the answer key. At the end check answers by asking participants to call out some of the totals. Answer any questions.

EXERCISE 8.1 (A) OUTPATIENT CARE SITE TALLY SHEET (WITH ANSWERS)

SITE

	WK 32	WK 33	WK 34	WK 35	TOTAL
DATE					
TOTAL START OF WEEK (A)					
New Cases 6-59 m bilateral pitting edema **(B1a)**					
New Cases 6-59 m MUAC/WFH **(B1b)**					
Other New Cases (adults, adolescents, children above 5 y, infants <6 months) **(B2)**					
Old cases: Referred from inpatient care; or Returned defaulters **(C)**					
TOTAL ADMISSIONS (D) [D=B+C]					
Cured **(E1)**					
Died **(E2)**					
Defaulted **(E3)**					
Non-recovered **(E4)**					
REFERRALS TO INPATIENT OR OUTPATIENT CARE (F)					
TOTAL DISCHARGES (E)					
TOTAL EXITS (G) [G=E + F]					
TOTAL END OF WEEK (H) [H=A+D-G]					

PARTICIPATORY LECTURE: MONTHLY SITE REPORTS PER HEALTH FACILITY.

Explain to participants that the site reporting sheet is completed monthly using the site tally sheets. It provides performance indicators for the proportion of children discharged as cured, died, defaulted or non-recovered, in addition to the compiled numbers of total admissions, total exits and total number under treatment.

Note: Explain to participants that the monthly reporting system is based on epidemiological weeks that are agreed on at the national level. Every month has a predefined number of weeks (e.g., January has weeks 1-5, February has weeks 6-9, March has weeks 10-13). This is important because the number of weeks vary per month or can be interpreted differently, which can create reporting errors.

Refer participants to **Handout 8.3 Monitoring and Reporting on CMAM** and ask them to read the information in preparation for the following exercise. Briefly answer any questions.

PRACTICE: COMPLETING SITE REPORTING SHEET. Explain to participants that they will now enter the information from the site tally sheet onto the site reporting sheet **Exercise 8.1 (b) Outpatient Care Site Reporting Sheet**. Ask them to form pairs. Answer any questions. While they are working, circulate among them and check on their progress using the answers below.

EXERCISE 8.1 (B) OUTPATIENT CARE SITE REPORTING SHEET (WITH ANSWERS)

LO.3

MONTHLY SITE REPORT FOR MANAGEMENT OF SAM

SITE		**IMPLEMENTED BY**	
TALUKA		**MONTH / YEAR**	
		TYPE OF MANAGEMENT (CIRCLE)	Inpatient Outpatient
DISTRICT		**ESTIMATED MAXIMUM CAPACITY**	
		ESTIMATED TARGET malnourished <5s (based on latest survey data and admission criteria)	
		RUTF CONSUMPTION	**Packets/pots** / **kg equivalent**

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		OLD CASES (C) Referral from outpatient or inpatient care, or Returned defaulters	TOTAL ADMISSION (D) (B+C=D)	DISCHARGES (E)				REFERRAL (F) to inpatient or outpatient care	TOTAL EXITS (G) (E+F=G)	TOTAL END OF THE MONTH (H) (A+D-G=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)			CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)			
50	42	1	4	47	30	1	4	3	7	45	52
				TARGET (Sphere Standards)	78.9%	2.6%	10.5%	7.9%			
					>75%	**<10%**	**<15%**				

E1: Cured = reaches discharge criteria
E3: Defaulted = absent for 3 consecutive sessions
E4: Non-recovered = does not reach the discharge criteria after investigation)

PRACTICE: COMPLETING SITE TALLY SHEET STARTING FROM OUTPATIENT CARE TREATMENT CARDS. Explain to participants that they are going to practice compiling information for site tally sheets from outpatient care treatment cards, and for a site report from the site tally sheet. Refer participants to **Exercise 8.2 Completing Site Tally Sheet**. Ask them to form pairs and read the instructions. Answer any questions and, while they are completing the site tally sheet and site report, circulate among the groups to check on their progress.

Check answers against the answer key below, and answer any questions. Emphasize to participants that these reports can take many forms and that it is essential to determine and coordinate with reporting systems used in the country and district they are working in.

EXERCISE 8.2 COMPLETING OUTPATIENT CARE SITE TALLY SHEET (ANSWER KEY)

WEEK 1
Ensure that the "total start of week" section is 0 for Week 1. The participants should add the three cases (information on outpatient care treatment cards) to the RHC row. In the admission section, outpatient care cases 1, 2 and 3 should be added to the "New 6-59 months SAM" box.

The tally sheet for Week 1 should read: three MUAC admissions, three total new admissions. There are no exits for Week 1.

WEEK 2
In Week 2, the "total in outpatient care at the start of the week" box is updated with the information from Week 1 (three cases). In the admissions section, outpatient care case 4 should be added to the bilateral pitting edema box and to the "referred to inpatient care" section under exits because the child has bilateral pitting edema +++ and requires inpatient care. The child has been entered and exited from the RHC and is now being treated in inpatient care. Outpatient care case 5 should be added to the "weight-for-height [WFH] < 70% of the median" new admission box.

The tally for Week 2 should read: three in outpatient care at start of week, one bilateral pitting edema admission, one WFH admission, one exit as referral to inpatient care, two total admissions, one exit as a referral and four totals in outpatient care at end of week.

WEEK 3
In the Week 3 tally sheet, the total in outpatient care at the start of the week should be four. In the admission section, outpatient care case 6 should be added to the bilateral pitting edema box. This case does not require inpatient care because the child has bilateral pitting edema ++, which can be treated in outpatient care. There is also one MUAC admission (no card available).

The tally for Week 3 should read: Four total in outpatient care at start of week, one bilateral pitting edema admission, one MUAC admission, two total admissions, no discharges, no total discharges, six totals in outpatient care at end of week.

WEEK 4
In the Week 4 tally sheet, the total in outpatient care at the start of the week should be six. The bilateral pitting edema +++ case that was referred to inpatient care returns to outpatient care this week and should be added to the admission as an old case "from outpatient/inpatient care" box.

The tally for Week 4 should read: Four new admissions: three MUAC cases and one WFH as a percentage of the median case. The total in outpatient care should be 11.

EXERCISE 8.2 NASIRABAD OUTPATIENT CARE SITE TALLY SHEET (WITH ANSWERS)

HEALTH FACILITY NAME	Rural Health Centre
DISTRICT	Qambar/Shehdadkot
SITE	Nasirabad

WEEK	**WK 1**	**WK 2**	**WK 3**	**WK 4**	**TOTAL**
DATE					
TOTAL START OF WEEK (A)	0	3	4	6	
New Cases 6-59 m Bilateral Pitting Edema **(B1a)**		1	1		
New Cases 6-59 m MUAC/WFH **(B1b)**	3		1	3	
Other New Cases (adults, adolescents, children > 5 y, infants <6 months) **(B2)**		1		1	
Old cases: Referred from inpatient care; or Returned defaulters **(C)**				1	
TOTAL ADMISSIONS (D) [D=B+C]	3	2	2	5	12
Cured **(E1)**					
Died **(E2)**					
Defaulted **(E3)** Non-recovered **(E4)**					
REFERRALS TO OUTPATIENT OR INPATIENT CARE (F)		1			1
TOTAL DISCHARGES (E)	0	0	0	0	0
TOTAL EXITS (G) [G=E + F]	0	1	0	0	1
TOTAL END OF WEEK (H) [H=A+D-G]	3	4	6	11	11

LEARNING OBJECTIVE 4:

CALCULATE AND DISCUSS SERVICE/PROGRAMME PERFORMANCE AND COVERAGE

LO.4

Refer back to **Handout 1.2 Terminology for CMAM** and to **Exercise 8.1 (b) Outpatient Care Site Reporting Sheet**. Become familiar with **Handout 8.8 CMAM Indicators** and **Handout 8.9 Principles of Coverage**. **PAIR WORK AND GROUP DISCUSSION: MONITORING SERVICE PERFORMANCE OF CMAM.** Explain to participants that site tally sheets and site reports with summarized performance indicators per site are important tools to monitor trends in that particular site. They provide a look at admissions and performance to see if particular areas need investigation or support.

Divide participants into pairs and ask them to refer back to **Exercise 8.1(b) Outpatient Care Site Reporting Sheet.** Have the pairs calculate the percentages that each exit category (**Discharges [E]**) comprises of the total exits (**Total Exits [G]**). Explain that analysis of the site reports provides information about the performance of the CMAM service for the individual health facility and the district as a whole. The admission and summarized performance indicators can point to areas that need investigation and support. For example, they might find that the service has very high default rates. Once known, ways can be found to address the problems and strengthen the service.

Ask the pairs to draw any conclusions they can from the data. Discuss in plenary.

Note to participants that Sphere minimum standards might not apply to (or be realistic for) CMAM services operated by the MOH as part of routine health services. However, in the absence of other comparisons, Sphere minimum standards can be used as benchmarks to determine performance and service quality.

BRAINSTORM: INDICATORS FOR OUTPATIENT CARE. Ask participants, still working in pairs, to take five minutes to list performance and output indicators for outpatient care. Remind participants of the work they did in developing logical frameworks in **Module Seven**. Ask one pair to share some indicators and ask other groups to share only additional information. Write responses on the flip chart.

READING AND REVIEW: CMAM INDICATORS. Refer participants to **Handout 8.8 CMAM Indicators** and ask them to read quietly. When they have finished, ask them if they have any modifications for the indicators identified in the exercise above.

GROUP DISCUSSION: PROGRAMME EFFECTIVENESS. Ask participants how the CMAM service/programme is effective. Follow up by asking participants whether the CMAM service/programme can be considered effective if only half the children who require treatment actually access it. (Service performance plus coverage determines programme effectiveness).

PARTICIPATORY LECTURE: COVERAGE. Explain to participants that it is important to determine coverage levels to see whether the service/programme is reaching children who need treatment. Coverage is one of the most important indicators of how well a service is meeting needs. A service might be of very good quality, with very few deaths, low default rates and high recovery rates. But, if the service is reaching only 30 percent of the children who need treatment, then it cannot be considered successful. The aim is to achieve both good quality and good coverage.

LO.4

Ask participants to read **Handout 8.9 Principles of Coverage**. Pay particular attention to the graph in **Figure 1**, noting the direct correlation between coverage rate, recovery rate and met need. Remind participants that they can use **Handout 8.9** as a reference in their own work.
Coverage is expressed as a percentage. If there are 100 children with acute malnutrition living in a service area and 70 of them are in the service, then coverage is 70 percent.

Ask participants to refer to **Handout 1.2 Terminology for CMAM** and read the definition of "coverage ratio." Ask if there are any questions.

PARTICIPATORY LECTURE: COVERAGE SURVEYS. Explain that coverage is usually determined by conducting a coverage survey. A coverage survey methodology called **centric systematic area sampling** (CSAS) has been used in CMAM services. For more information on CSAS, refer participants to *Community-Based Therapeutic Care (CTC): A Field Manual*. Other sampling methods are under development and are discussed in the report on the 2008 *International Workshop on the Integration of Community-Based Management of Acute Malnutrition*; refer participants to that document for further information.

Coverage surveys can provide a lot of information about why children do not attend the service, why some might be excluded and what the possible barriers to access are. However, coverage surveys are costly and require specially trained staff. The need to find simple mechanisms to gauge coverage levels in situations where coverage surveys are not practical or feasible is recognized. Simplified coverage survey methods are being developed and tested.

In the absence of coverage surveys, some services have used simple, somewhat crude, methods to monitor coverage based on targets calculated for the total number of children expected to enroll. Others have used the number of children screened, referred or admitted as proxies. These are not ideal indicators, but they might provide some useful information when a coverage survey is not feasible.

Ask participants to refer to **Handout 1.2** and to read the definition for "coverage," Ask if there are any questions.

LEARNING OBJECTIVE 5:
MONITOR AND RESPOND TO BARRIERS TO ACCESS

Become familiar with **Handout 8.10 Monitoring Barriers to Access** and **Exercise 8.3 Community Meeting Role-Play.**

GROUP DISCUSSION: BARRIERS TO ACCESS. Ask participants to speculate on possible reasons for poor coverage. Discuss how views and perceptions of the service can play a part in poor service uptake. Discuss barriers to access and remind participants of the work they did in the community assessment in Module Three. Review if necessary.

Ask participants to read **Handout 8.10 Monitoring Barriers to Access**; answer any questions.

ROLE-PLAY. INVOLVING THE COMMUNITY. Introduce the exercise to the participants by reading aloud the following introduction:

> The site report from the outpatient care at Health Facility 22 (Badin district) shows a high default rate (20 percent) and a high death rate (12 percent). The health care providers at the outpatient care site are concerned about this. They also know that the mothers/caregivers of many of the children that they referred to inpatient care at the district hospital refuse to go; the health care providers suspect that the high default and mortality rates are linked to this. The nurse asks the community health worker (CHW) to organize a community discussion to get to the bottom of these issues and try to find ways to address them.

Ask for nine volunteers and assign these roles: an outpatient care nurse, a CHW and a community volunteer involved in community outreach for CMAM, two mothers, a father, a grandmother of children under treatment in CMAM, a community elder and a traditional healer. **Exercise 8.3 Community Meeting Role-Play** (on the next page) describes the roles. Give each volunteer a card describing her/his role (prepared in advance) and ask them to start the "community meeting." Tell them that roles can be adapted and they should feel free to improvise.

After 20 minutes, ask participants how they would use what they learned from the community meeting to make changes to the services. Refer to **Exercise 8.3 Answer key** at the end of this learning objective to guide the discussion.

EXERCISE 8.3 COMMUNITY MEETING ROLE-PLAY

Outpatient Care Nurse: You are a nurse at the health facility in charge of outpatient care and ask the LHWs to explore the issues that lead to high default and death rates. You also take an active role in reviewing outpatient care treatment cards and monitoring reports to identify possible causes for poor performance.

CHW: You note that the people in your community refuse to go to the hospital for inpatient care for several reasons: They do not like the hospital; they are afraid they will have to pay for the services; they have no transportation or cannot cover the costs; or they do not want to leave their other children. Refusal to go to the hospital is why several children have died.

Community Volunteer: You are a very active volunteer. There are many defaulters in your area because it is in a part of the district that is farthest from the outpatient care site. You think that either an outpatient care site closer to your community is needed or that people from your area should be able to come to the existing site every two weeks instead of every week. Because there is no other health facility in your area, you wonder if a nurse can use the health facility motorbike and bring the RUTF directly to your area. There also are some issues with referrals using bilateral pitting edema and the MUAC tape. Sometimes you send a child because she/he has bilateral pitting edema or the MUAC reading is red, but the nurse makes a different decision and sends the child home. You think that volunteers need more training to prevent these discrepancies and feel that if a volunteer refers a mother/caregiver and child to CMAM services, the child should be admitted.

Mother 1: You like the CMAM services and know that other people's children got better in the service. Your son had swelling on his feet and legs. You took him to the clinic and got the peanut paste and medicine. You shared the peanut paste with your six other children because it is the hungry season and there is not much food in the house. Your sick son ate maize as well as some of the peanut paste, but the maize was not so good because it had been stored for a long time. After three weeks, your son became very swollen all over his body, and when you went for the outpatient care follow-on session, the nurse wanted to send you to the hospital. It is very far away, and everyone you know who goes there dies. The hospital costs a lot of money, and you have no transportation. You want your son to get better in outpatient care, not in the hospital, and you do not understand why the nurse said your son needs to go there. Last week, you did not take your son to the outpatient care site because you didn't want to be told to go to the hospital again.

Mother 2: You were referred to CMAM services by community volunteers. They took a measurement of your daughter using a tape and then put their thumbs on her feet. They said that she had swelling on her feet and that you should take her to the outpatient care site. When you got there, the nurse measured your daughter and looked at her feet again. The nurse said she was fine and did not need to be in the service. You were angry and told everyone not to bother with this service. You know nearly every mother in your village.

Father: Your baby twins are in outpatient care. One twin was sick and the other was not, but they both received the special food. The sick one took the medicine given to her in outpatient care and recovered well. You live far from the outpatient care site, and your wife has to carry both children on her back to get them to the site. She had to miss three weeks at the outpatient care site because of the distance. A community volunteer visited you and your wife and told you how important it was to take the children back to the clinic. So, your wife went back the next week, and the children continued to recover. You know other people from your area who are attending the service but do not go every week because it is too far away. One child from your area died because he got suddenly very sick and the family could not get him to the clinic in time. You wonder if it is possible to go to the clinic every two weeks instead of every week. You are very happy with the services and have told the men in your village to send their wives and children to the outpatient care site.

Grandmother: Your daughter died and you were left with four of her children, including the youngest—a four-month-old baby. The baby got very sick and thin. You tried feeding the baby cow's milk mixed with water, but the baby got worse. You took the baby to the health facility and they referred you to outpatient care. The nurse told you that the baby was dehydrated and very malnourished (thin) and needed attention at the hospital. You cannot get to the hospital or stay there because of the other children at home and because you are old and cannot walk far. Two days later, the baby died.

Community Elder: You like the CMAM services. You remember the bad time three years ago when people came and set up tents, and all the swollen and thin children were supposed to go there. Many of them did not go, and many of them died. Now mothers/caregivers can take their children to the outpatient care site at the nearby health facility and get the treatment; everything is good. You have listened to what the others have said about the problems with getting to the hospital. You suggest that the village health committee set up a fund to help provide transportation to the hospital for mothers/caregivers and children who need it.

Traditional Healer: At first, you were very resistant to the idea of the CMAM services and wondered what this strange peanut paste was. Usually mothers and fathers would bring their children to you first and go to the health facility as a last resort. You have your own traditional treatment for thin and swollen children. However, you have seen the children getting better when they go to the health facility. The CHW has taken time to explain to you how CMAM services work, and the community volunteers have shown you a lot of respect. They asked for your help in sending thin or swollen children to CMAM services. You agree with the community elder. You think the village health committee (in which you have a key role) should meet to discuss setting up a transportation fund. You also think that people coming from faraway areas should only have to go to outpatient care sites every two weeks and that the volunteers should send them to the health facility if there is any problem between sessions.

EXERCISE 8.3 ANSWER KEY

Possible service adjustments based on group discussion with community members:

Communications

- Make a better effort to explain that enrolment in outpatient care does not always involve referring the mother/caregiver and child to the hospital (because the fear of outcomes there and of the cost is apparently very strong in the community). Be sure to explain that outpatient care is free.
- Make sure that volunteer case-finders are taking care to explain that after the child's medical condition is evaluated at the outpatient care site, the child might need referral to inpatient care if her/his condition is serious. Most children will be treated as outpatients.
- Reiterate that RUTF is not to be shared. A child who eats all the RUTF gains weight and is less likely to get sick and be referred to the hospital.

Procedures

- To reduce bounced referrals, align both referral and admission around the MUAC entry criterion, if this is not already the case.
- In the short term, allow people from distant villages to return for outpatient care follow-on sessions twice a month and give them two weeks' worth of RUTF.
- In the intermediate term, consider opening more sites to provide weekly outpatient care follow-on sessions within everyone's reach.
- Give volunteers refresher training in bilateral pitting edema and MUAC checks to improve the accuracy of referrals. Consider introducing a referral slip that identifies the referring volunteer to pinpoint the source of inaccurate referrals.
- Institute procedures for case follow-up to ensure that children who miss an outpatient care follow-on session are visited at their homes (follow-up home visit) and that the families are urged to return to the service.
- Give the outpatient care nurse the discretion to keep children with medical complications in outpatient care if, after making the risks clear to the mother/ caregiver, she/he still refuses referral to inpatient care.
- Use the village health committees to establish wider contact with traditional healers to discuss the CMAM service with them, listen to any concerns they have and encourage them to be trained in referring cases of SAM.
- Encourage the village health committees to follow up on the suggestion of establishing a fund to cover costs related to referral between inpatient care and outpatient care (e.g., transportation). Use **Exercise 8.3** as an example of local problem-solving in discussions with other sites and villages.

LEARNING OBJECTIVE 6:
EXPLAIN THE PURPOSE OF SUPPORT AND SUPERVISION VISITS AND THE ROLE OF A SUPERVISOR/MENTOR

Become familiar with **Handout 8.11 Support and Supervision for CMAM**, **Handout 8.12 Support and Supervision Checklist for Outpatient Care**, **Handout 8.13 Support and Supervision Checklist for Community Outreach** and **Exercise 8.4 Analysis of the Site Reports of Three Outpatient Care Sites and One Inpatient Care Site**.

WORKING GROUPS: DEFINING SUPERVISION AND SUPERVISOR RESPONSIBILITIES. Form working groups of five participants. Ask the groups to:

1. To define the term "supervision"
2. List the responsibilities of a supervisor (or supervisory team)
3. Determine who should be responsible for supervision of CMAM in their districts
4. Describe how supervisory visits are usually conducted in their districts and how supervision for CMAM fits into the existing supervision system

Ask one group to share their answers in plenary and other groups to share only additional information. Refer participants to **Handout 8.11 Support and Supervision for CMAM** and ask them to read it quietly and to discuss in their groups any additional information they would add to the previous discussion. Discuss this information in plenary. Note that supervision is not limited to evaluating performance but is a great opportunity to mentor and provide technical support to the staff.

GROUP DISCUSSION: SUPPORT AND SUPERVISION CHECKLISTS. In plenary, ask participants what kind of information they would expect to see on a support and supervision checklist for outpatient care. Remind them, one topic at a time, to think through staffing, admission procedures, medical and nutrition therapeutic care, follow-up for absentees and defaulters, inventory control and discharge procedures. Refer participants to **Handout 8.12 Support and Supervision Checklist for Outpatient Care** and review. Refer them to **Handout 8.13 Support and Supervision Checklist for Community Outreach** for future reference.

WORKING GROUPS: ANALYSIS OF CONSOLIDATED SITE REPORTS. With participants in the same working groups, distribute **Exercise 8.4 Analysis of the Site Reports of Three Outpatient Care Sites and One Inpatient Care Site** and have participants discuss the reports within their groups. Using the site and consolidated reports, ask participants to think through any conclusions that can be drawn about the sites, performance and coverage issues, and what kind of follow-up information they would need to make appropriate decisions in response. You could suggest that they compare caseloads, common admission criteria, admission and referral patterns, and reasons for and rates of discharge among sites. If appropriate, give an example or two from **Exercise 8.4 Discussion key**, below. Check in with each working group and, if their conversation is lagging, provide them with additional conclusions to determine the key questions to address. When groups have had time to discuss, ask one group to report a conclusion and what additional information is needed, in plenary. Ask another group to provide an additional conclusion, etc.

Note to participants that specific discharge rates from the inpatient care site are not calculated. Children who improve are referred to outpatient care to continue treatment. The specific discharge rates would not reflect poor quality as they include ONLY those children with SAM who had medical complications. This is one reason why the service/ programme must be evaluated as a whole, combining information from both inpatient care and outpatient care as presented in the combined reporting sheet.

EXERCISE 8.4 ANALYSIS OF THE SITE REPORTS OF THREE OUTPATIENT CARE SITES AND ONE INPATIENT CARE SITE (DISCUSSION KEY)

LO.6

CONCLUSIONS DRAWN FROM REPORTS	QUESTIONS OR POSSIBLE EXPLANATION TO VERIFY
1. Health center B has more patients than the other centers.	1. Is this normal? Does it cover a highly populated area or a very wide area? What are the walking distances to the center? Is this center manageable? Could a second center be opened with existing resources?
2. At health center C, more than half the admissions are from bilateral pitting edema.	2. Is this normal? Are the other health centers neglecting this diagnosis? Or, the opposite—is there an over-diagnosis of bilateral pitting edema here? Is this health center in a different food economy area? Was the same observation made in previous months and in surveys?
3. Out of the overall 246 new admissions, 227 were admitted directly to outpatient care (92.3%) and 19 to inpatient care (7.7%).	3. This could be an indicator of the efficacy of "early detection" and therefore of the quality of community mobilization. It also could indicate that children with serious conditions are hidden at households and are not reached.
4. Health center A is not referring any patients to inpatient care.	4. This could mean that no patients required transfer, but it should be checked through supervision.
5. The death and non-recovered rates in health center A are quite high for outpatient care.	5. This raises questions about the quality of the assessment of patients in this center and the application of and adherence to treatment and action protocols.
6. Health center B's default rate is quite high and warrants follow-up to determine the reasons.	6. Perhaps mothers/caregivers decide not to return because waiting times or walking distances are too long. It will be necessary to visit the center to determine the reasons.

CONCLUSIONS DRAWN FROM REPORTS	QUESTIONS OR POSSIBLE EXPLANATION TO VERIFY
7. Health center C's cured rate is good although there are questions about the non-recovered rate.	7. Is this related to the number of cases with bilateral pitting edema, noted above? Could this be investigated?
8. Overall, 211 children left outpatient care during the month; 200 of these children were discharged. However, 11 were referred back to inpatient care, meaning that the conditions of 5.5% of the children under treatment in outpatient care deteriorated.	8. Why is the condition of children deteriorating when under treatment in outpatient care? Is there compliance to medicine and RUTF protocols? What health and nutrition messages are mothers/caregivers receiving? Are there other underlying health conditions that must be addressed?
9. While 17 children were referred from inpatient care to outpatient care, the outpatient care sites admitted only 14 children referred from inpatient care. Note that 11 patients were referred from outpatient care to inpatient care and 11 admissions are registered in the inpatient care site report as referred from outpatient care.	9. The difference between referrals from inpatient care and admissions to outpatient care could be due to a weak registration system or because some referred children did not go to the outpatient care sites. This observation should trigger closer assessment and supervision of the registration and referral system (e.g., the use of referral slips, the provision of transportation, the messages and explanations given to the mother/caregiver at the time of referral). Note that children who were referred left the site where they were being treated but did not leave the service/programme. The compiled number of cases under treatment in the district is 209, which counts 9 cases less than the sum of the individual report. This difference is due to the 3 missed referrals. Other missed cases may have been in transit while referred across months (Note: this could be a shortcoming in the exercise and if this is repeated at the district level in the field, it should be reported for review of the compilation system).

Note: The specific discharge rates from the inpatient care site are not calculated. Children that improve are referred to outpatient care to continue treatment. The specific discharge rates would not reflect poor quality as they include ONLY those children with SAM that had medical complications. This is one of the reasons why the programme needs to be evaluated as a whole, combining information from both inpatient and outpatient care as presented in the combined reporting sheet, where the performance indicators provide information of the CMAM service in the district for the management of SAM.

LEARNING OBJECTIVE 7:
PREPARE AN OUTLINE FOR CMAM REPORTING

Become familiar with **Handout 8.14 Guidance for CMAM Reporting**

WORKING GROUPS: DISCUSS CMAM REPORTING NEEDS AND DRAFT AN OUTLINE. Form working groups of five participants. Ask the groups to:

1. Discuss needs and use of CMAM reports:
   -Who needs and who uses the report for what purposes
   -Who prepares the report
2. Draft an outline for minimum reporting on CMAM and discuss the existing monitoring tools and how they feed information into the report

Ask one group to share in plenary and other groups to share only additional information. Refer participants to **Handout 8.14 Guidance for CMAM Reporting**, ask them to read it quietly and to discuss in their groups any information they would add to their outline.

OPTIONAL ACTIVITY

EXTERNAL TRAINING: USING AN ELECTRONIC DATABASE. At the district level, coordinate a special training session on how to set up a CMAM monitoring system using an electronic database in Excel. If possible, ensure that there are sufficient computers available for participants to work in pairs. Become familiar with **Supplemental Reference 8.1 Setting up a CMAM Monitoring System using an Electronic Database in Excel** and have participants review this reference before the activity. Bring copies of completed site tally sheets, site reporting sheets and lists of outpatient and inpatient care sites (with names and locations of health facilities); pass them out to participants. Using **Supplemental Reference 8.1**, go through the setup step by step, making sure that participants understand the content and management of the software.

WRAP-UP AND MODULE EVALUATION

REVIEW LEARNING OBJECTIVES AND COMPLETE EVALUATION FORM.

- Review the module's learning objectives.

In this module you have:

1. Described the principles of monitoring and reporting on CMAM
2. Described how the individual child is tracked and monitored in CMAM
3. Completed site tally sheets and site and district reports, and interpreted the findings
4. Calculated and discussed service/programme performance and coverage
5. Monitored and responded to barriers to access
6. Explained the purpose of support and supervision visits and the role of a supervisor/mentor
7. Prepared an outline for CMAM reporting▪ Ask for any questions and feedback on the module.

- Ask the following review questions:
  1. How are individual children tracked in a CMAM service?
  2. What information is collected on site tally sheets and site and district reports?
  3. What indicators are used to determine service performance?
  4. What are the roles and responsibilities of supervisors in outpatient care?
- Discuss and clarify.
- Let participants know that they will have an opportunity to observe procedures and discuss them with staff during the field visit.
- Ask participants to complete the module evaluation form.

COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION

MONITORING AND REPORTING ON CMAM: OUTPATIENT CARE FIELD PRACTICE FOR HEALTH CARE PROVIDERS

OVERVIEW

- A maximum of five participants should be at each outpatient care site on a given day. Coordinate with as many outpatient care sites as necessary to keep the number of participants at five or fewer.
- This site visit is best conducted on one of the final days of the training, after observing and practicing outpatient care activities at a health facility. Participants must be knowledgeable in all aspects of outpatient care.
- The supervision checklist is long so it can be broken into several sections, allowing different participants to "supervise" different activities during outpatient care.
- Pair participants with someone who speaks the local language.

FIELD PRACTICE LEARNING OBJECTIVES	HANDOUTS TO BRING TO THE OUTPATIENT CARE FIELD PRACTICE
1. Observe and Help the Outpatient Care Site Team Complete Site Tally Sheets from the Individual Outpatient Care Treatment Cards 2. Review a Site Tally Sheet and the Previous Month's Site Report and Discuss with Staff How to Use and Interpret Data 3. Review the System for Recording RUTF Distribution and Stock Levels	Handout 8.3 Monitoring and Reporting on CMAM Handout 8.8 CMAM Indicators Handout 8.12 Support and Supervision Checklist for Outpatient Care

PREPARATION FOR THE OUTPATIENT CARE FIELD PRACTICE

- Discuss and review the procedures and steps that participants will undertake at the outpatient care sites:
  - Observe and help the outpatient site team complete site tally sheets from the individual outpatient care treatment cards
  - Calculate the number of clients enrolled in CMAM and double-check it against the number of cards
  - Review a completed site tally sheet and the previous month's site report and discuss what they reveal about the service/programme (e.g., recoveries, defaults, deaths, anything surprising)
- Bring copies of **Handout 8.12 Support and Supervision Checklist for Outpatient Care** in case the outpatient care site does not have any for the participants to complete.

FIELD PRACTICE LEARNING OBJECTIVE 1: OBSERVE AND HELP THE OUTPATIENT CARE SITE TEAM COMPLETE SITE TALLY SHEETS FROM THE INDIVIDUAL OUTPATIENT CARE TREATMENT CARDS

HANDS-ON ACTIVITY AT SITE: Help Outpatient Care site staff Complete site Tally sheets.

OPTIONAL ACTIVITY, IF TIME PERMITS: Review a Sample of Outpatient Care Treatment Cards

- Review samples of outpatient care treatment cards and note the general profiles of the children in the service:

- Are most cases admitted on bilateral pitting edema or low MUAC?
- What are the main ages of children in the service/programme?
- Are there many returned defaulters or relapse cases?
- Do many children come from inpatient care?
- Are many children referred to inpatient care?
- Do many children require follow-up home visits?
- How are follow-up home visits noted on the outpatient care treatment card?

FIELD PRACTICE LEARNING OBJECTIVE 2: REVIEW SITE TALLY SHEET AND LAST MONTH'S SITE REPORT AND DISCUSS WITH STAFF HOW TO USE AND INTERPRET DATA

HANDS-ON REVIEW AT SITE: review SITE tally sheet and discuss recovery and default with staff

- With the outpatient care site staff, review site tally sheet and last month's site report.
- Discuss together recovery and default.
- Discuss with health facility staff:
  - What is the service/program's response to poor recovery, death, and default rates?
  - What is the process for reporting on follow-up home visits in problem cases?
  - What is the system/process for reviewing the cases of children who died that month?
  - What are the challenges with referrals and monitoring of individuals between sites and services?

FIELD PRACTICE LEARNING OBJECTIVE 3: REVIEW SYSTEM FOR RECORDING RUTF DISTRIBUTED AND IN STOCK (AND WHEN/HOW TO PROCURE MORE)

HANDS-ON REVIEW AT SITE: Review with Staff System for Recording RUTF Distributed, In Stock and Procurement

- With staff, review RUTF: distribution, in-stock and procurement.
- Go over a supervision checklist within small groups.
- Fill out (parts of) a supervision checklist based on observed activities linked to supplies at outpatient care.

FEEDBACK ON FIELD PRACTICE SESSIONS

After each field practice, conduct a feedback session in which participants will:

- Provide feedback on strengths observed at each health facility
- Raise issues for clarification by facilitators
- Identify key gaps that need more practice/observation time. Additional classroom time for practice with forms, calculations, etc.
- Discuss how you would mentor the staff to improve performance

COMMUNITY-BASED MANAGEMENT OF ACUTE MALNUTRITION

MODULE EIGHT

Monitoring and Reporting on CMAM

LEARNING OBJECTIVES	HANDOUTS AND EXERCISES
1. Describe the Principles of a Monitoring System for CMAM	
2. Describe How the Individual Child Is Tracked and Monitored in CMAM	Handout 8.1: Monitoring the Individual Child in Outpatient Care Handout 8.2: Registration Numbering System Proposed for CMAM Handout 8.3 Monitoring and Reporting on CMAM Handout 8.4 Filing Outpatient Care Treatment Cards
3. Complete Site Tally Sheets and Site and District Report; Interpret the Findings	Handout 8.3 Monitoring and Reporting on CMAM Handout 8.5 Site Tally Sheet for the Management of SAM Handout 8.6 Site Reporting Sheet for the Management of SAM Handout 8.7 District or National Reporting Sheet for the Management of SAM Exercise 8.1 (a) Outpatient Care Site Tally Sheet and Site Reporting Sheet Exercise 8.2 Completing Site Tally Sheet
4. Calculate and Discuss Service/Programme Performance and Coverage	Handout 1.2 Terminology for CMAM Handout 8.8 CMAM Indicators Handout 8.9 Principles of Coverage Exercise 8.1 (b) Outpatient Care Site Reporting Sheet
5. Monitor and Respond to Barriers to Access	Handout 8.10 Monitoring Barriers to Access Exercise 8.3 Community Meeting Role-Play
6. Explain the Purpose of Support and Supervision Visits and the Role of a Supervisor/Mentor	Handout 8.11 Support and Supervision for CMAM Handout 8.12 Support and Supervision Checklist for Outpatient Care Handout 8.13 Support and Supervision Checklist for Community Outreach Exercise 8.4 Analysis of Site Reports of Three Outpatient Care Sites and One Inpatient Care Site OPTIONAL: Supplemental Reference 8.1 Setting Up a CMAM Monitoring System Using an Electronic Database in Excel
7. Prepare an Outline for CMAM Reporting	Handout 8.14 Guidance on CMAM Reporting
Wrap-Up and Module Evaluation	

HANDOUT 8.1
MONITORING THE INDIVIDUAL CHILD IN OUTPATIENT CARE

- **Individual treatment of children with severe acute malnutrition (SAM) is monitored on an outpatient care treatment card**. Each child with SAM who is admitted to CMAM at an outpatient care site will have an outpatient care treatment card, even if she/he is referred to inpatient care.

- **The child's unique registration number is recorded on treatment cards, referral slips, ration cards and any other records.** This will be the child's identifying number throughout his/her care in CMAM.

- **The outpatient care treatment card is kept on file at the outpatient care site.** Registration in a registration book is usually not necessary.

- **The mother/caregiver receives a ready-to-use therapeutic food (RUTF) ration card that provides a record of the child's progress and the RUTF received at each outpatient care follow-on session.** The card includes key information about the child and basic information on his/her progress: name, age, caregiver (e.g., mother, father, grandmother), place of origin, outreach worker name, date of admission, dates of outpatient care follow-on sessions. At admission, discharge and each outpatient care follow-on visit, mid-upper arm circumference [MUAC], weight, height and ration received are also recorded. Upon discharge, the RUTF ration card is returned to the health facility to be attached to outpatient care treatment card.

- **Individual children are tracked as they are referred to different CMAM services (inpatient care, outpatient care or supplementary feeding) to ensure that admission, discharge and treatment procedures are followed and documented correctly.** This is done by ensuring that outpatient and inpatient care treatment cards and referral slips are filled out properly and always include the child's unique registration number.

- **The referral slip keeps track of children who have moved between outpatient care and inpatient care.** The referral slip should describe which treatment(s) and medicine(s) were given and why, to avoid giving children the same medicine twice.

HANDOUT 8.2

REGISTRATION NUMBERING SYSTEM PROPOSED FOR CMAM

- Each child receives a registration number when she/he is first admitted to outpatient care, inpatient care or supplementary feeding. Each registration number has three parts: the health facility's name or code, the child's individual number and the service code indicating where the child started treatment (inpatient care, outpatient care or supplementary feeding). Most children will be admitted to outpatient care, as it is the most decentralized service and, therefore, the most common and accessible entry point for treatment.

- The code for each site must be established before services at that site start, must be unique for that site and must be used consistently by all staff to avoid confusion as to which site a child is receiving services. The site code should be three or four letters and should be easily understood.

- In some countries, there is a standard numbering system as part of the health management information system (HMIS). The numbering system for CMAM can be adapted to take this into account. In adapting the HMIS numbering system, ensure that the site where each child entered CMAM and his/her initial CMAM service are included. If national guidelines for CMAM exist, they should be followed.

TABLE 1 REGISTRATION NUMBERING SYSTEM

EXAMPLE 1 **Standard 3-part numbering system NYL/ OO1/Out**	**EXAMPLE 2** **HMIS numbering system from Malawi 77/88/999/MMYY/OTP**
NYL: The code of the site or health facility	**77**: The 2-digit code for the district
001: Child's individual allocated number (the numbers run sequentially)	**88**: The 2-digit code for the health facility
Out: Outpatient care, the service where the child started treatment	**999**: Child's individual allocated number
	MMYY: Month and year of admission
	OTP: Outpatient Therapeutic Programme, the service where the child started treatment

- To ensure effective tracking and follow-up in the community, ALL records concerning the child should follow the same numbering system. This includes registration books (if used), treatment cards, ration cards and referral slips. Other relevant registration numbers—such as those given at other clinics or hospitals, HIV testing and counselling sites or antiretroviral therapy (ART) sites—should also be recorded on the outpatient care treatment cards.
- The registration number must appear on referral slips. The child retains the number upon return.
- Returning defaulters use the same number they had as they are still suffering from the same episode of undernutrition. Their treatment continues using the same treatment card.
- Readmissions (children who meet admission criteria again after being discharged cured, i.e., they relapsed) receive a new number and a new card as they are now suffering from a different episode of undernutrition and need full treatment again.

HANDOUT 8.3
MONITORING AND REPORTING ON CMAM

Routine quantitative service data are collected on site tally sheets that are filled out at the end of the service session and summarized on monthly site reporting sheets.

This information is used to monitor the outputs and performance of the service/programme. Health managers and health care providers at the district or health facility level use the information to determine whether the target population is reached, to learn whether there are areas requiring investigation or strengthening or to monitor the effect of any changes made (e.g., new sites are opened, more community volunteers are added, more supplies are accessible).

SITE TALLY SHEET INFORMATION

(See also **Handout 8.6 Site Tally Sheet for the Management of SAM.**)

Routine service data that are tallied each service/programme session include:

- The **total** number of children under treatment at the **Start of Week [A]**.
- The number of **Total Admissions** by entry category are either:
  - **New cases 6-59 months**
  - **New cases Other**: Adults, adolescents, children > 5 years, and infants < 6 months
  - **Old cases:** Referrals who returned from inpatient care or outpatient care and are readmitted to the site; or Returned defaulters (who did not recover and returned after discharge to continue treatment)
  - **Optional:** New admissions can be categorized by gender or by admission criteria (bilateral pitting edema, mid-upper arm circumference [MUAC)] weight-for-height [WFH]), which can help identify differences in the type of undernutrition in different areas (e.g., cases of bilateral pitting edema might be much higher in some areas than others or higher in certain seasons)
- The number of **Total Discharges** by exit category:
  - **Cured**: Children who reached the discharge criteria after treatment
  - **Died**: Children who died while in treatment
  - **Defaulted**: Children who left the service/programme before reaching the discharge criteria, children were absent for 3 consecutive sessions
  - **Non-recovered**: Children who do not meet the discharge criteria after four months in treatment (after medical investigation done)
- Other exit category:
  - **Referrals:** Children who left the site temporarily because they were referred to inpatient or outpatient care or for medical investigation
    Note: Because services must track children and not double-count them, children who are referred between outpatient care and inpatient care are not considered full discharges; they are on referral status. They remain in the service/programme. In contrast, non-recovered children—who have been referred earlier for medical investigation—leave the service/programme if they are still not responding to treatment after four months.

- Optional quantitative data to collect to monitor effectiveness of treatment include **average daily weight gain (AWG)**, **average length of stay (LOS) of cured discharges** and the **readmission rate.** These can be calculated for all children that are discharged cured or on a random sample. AWG and LOS for cured cases of kwashiorkor or marasmus should be calculated separately.

  - **AWG of cured discharges** in outpatient care is expected to be **above 4 g/kg/day**
  - **LOS of cured discharges** in outpatient care is expected to be **below 60 days**
  - **Readmissions after discharge (or relapse)**: Interventions might be needed at the household level to avoid high readmission rates (number of readmissions per total new admissions); high rates might also mean children have been discharged too soon.

SITE REPORTING SHEET INFORMATION

(See also **Handout 8.6 Site Reporting Sheet for the Management of SAM.)**

The site tally sheet information is compiled in the site reporting sheet, and rates of children discharged as cured, died, defaulted and non-recovered are listed as proportions of the total discharges. Site reporting sheets are sent to the district health office monthly.

- Epidemiological weeks can be used to define calendar months for reporting (e.g., weeks 1-4 = January; weeks 5-8 = February).
- Site reporting sheets feed information into district, sub-national or national reporting sheets.

DISTRICT REPORTING SHEET INFORMATION

(See also **Handout 8.7 District Reporting Sheet for the Management of SAM.)**

- The reporting sheets from all health facilities with inpatient care and outpatient care are compiled in the district reporting sheet, and rates of children discharged as cured, died, defaulted and nonrecovered are listed as proportions of the total discharges. The categories 'old cases' and 'referrals' are omitted as these children have not exited the service/programme.

- The compiled reporting sheets can be used at sub-national and national levels, and the reporting period can be adjusted as convenient or appropriate (e.g., month, year).

OTHER INFORMATION

- **Qualitative information is also collected from the communities and beneficiaries of CMAM** to understand the perceptions of the service/programme and to help managers better understand possible problems such as high default rates or low coverage.

- Other information to collect from the mothers/caregivers and/or community:

  - **Reported cause and place of death**: Recording this information on the child's outpatient care treatment card can help identify problems with treatment and use of action protocols and determine where additional training and supervision might be needed.
  - **Reasons for default and non-recovery**: These could include a high prevalence of tuberculosis (TB) and/or HIV, sharing of food in the household or poor water and sanitation, which might indicate a need for stronger service linkages with other sectors.

- **Supervisory and Community Outreach**: See **Handout 8.10 Monitoring Barriers to Access** and **Module 3: Community Outreach.**

- **Coverage**: See **Handout 8.9 Principles of Coverage.**

USING SITE REPORTS TO DETERMINE SERVICE PERFORMANCE

- **The health facility site report is developed monthly** (using full four or five epidemiological weeks for the month, determined beforehand at the national level) and should be reviewed by the health facility or district management team during monthly or quarterly meetings.

- **The supervisor or supervisory team from the District Ministry of Health (MOH) will be responsible for reviewing health facility site reports**.

- **Service/programme performance (the proportions of children who were cured, died, defaulted and non-recovered) can be compared with Sphere key indicators (the minimum standards).** The Sphere standards might not be applicable to development services/programmes. However, there are currently no internationally accepted standards for CMAM in non-emergency contexts. Therefore, the Sphere standards can be used as a benchmark.

- **The monthly site reports can be used to address any issues that have emerged**. The information can be useful to hold meetings with the community to find out more about the reasons for specific problems, such as high defaulter rates, or issues such as why mothers/caregivers do not bring their children to outpatient care. This can be done through focus group discussions.

- **The data can be tracked using an electronic spreadsheet**. **Supplementary Reference 8.1 Setting Up a CMAM Monitoring System Using an Electronic Database in Excel** describes how to use Excel spreadsheets for program monitoring.

COMPILING AND ANALYSING SITE REPORTS FOR NATIONAL REPORTING (WHOLE SERVICE/PROGRAMME)

- **The site reports from the different CMAM sites for the management of SAM (outpatient care and inpatient care) are compiled into overall district, sub-national or national reports.** See **Handout 8.7 District or National Reporting Sheet for the Management of SAM** for an example.

- **Individual CMAM sites send their site tally sheets and/or site reporting sheets to the District MOH.** The district health officer-in-charge is responsible for compiling the individual site reports into a combined report for the district CMAM service as a whole.

- **The district sends its compiled monthly district reports to the MOH at the national level.**

- **Systems should be set up from the beginning to build the reporting capacity of health facilities and the District MOH** to ensure, for example, that it follows national guidelines or a standardized reporting format and that this reporting is done regularly and accurately. Reporting and feedback should be integrated with the existing health management information system (HMIS) where possible. The HMIS might need to be adapted to include SAM indicators.

- **The reports will help to identify issues and gaps and determine whether progress has been made toward accomplishing objectives.**

HANDOUT 8.4

FILING OUTPATIENT CARE TREATMENT CARDS

- All active and past outpatient care treatment cards are kept in files that should be accessible at the health facility at all times. This ensures the ability to monitor children, cross-check readmissions and verify reports.
- There should be two files: one for active cases, with a separate section for referrals, and the other for discharges, with separate sections for cured, died, defaulted and non-recovered.

TABLE 1. FILING SYSTEM

FILE 1: ACTIVE CASES **Sections:**	**FILE 2: EXITS** **Sections:**
Children with SAM currently in treatment Note: Mark the outpatient care treatment cards of children who are not responding well and need follow-up home visits and of absentees (children who have missed one or two outpatient cares follow-on visits). **Separate section:** Referrals awaiting return: children who have been referred to inpatient care or for medical investigation	**Cured:** children who reached the discharge criteria and exited the service/prorgam Note: Check this file for any readmissions after default as the same outpatient care treatment card should be used. **Died:** children who died while in treatment **Defaulted:** children who have been absent consecutive sessions **Non-recovered:** children who did not respond after four months in treatment despite referral for medical investigation

- **Referrals to inpatient care:** The "referrals awaiting return" file should be checked regularly. The child should receive a follow-up home visit by outreach workers (e.g., community health workers [LHWs], volunteers) if she/he does not return to outpatient care from inpatient care within two weeks. If the child dies in inpatient care, the outpatient care treatment card is filed under "died."
- **Defaulted (absent for three consecutive sessions):** Children who defaulted should receive a follow-up home visit, and their mothers/caregivers should be encouraged to return to CMAM services. The reason for default should be investigated by the outreach worker, reported to the health care provider and recorded on the child's outpatient care treatment card. Steps should be taken to address the cause of the default.
- **Died:** A record of the child's symptoms and diagnosis should be recorded on the outpatient care treatment card and used to identify any problems with the treatment or the action protocol.
- Children who are not responding well and need a follow-up home visit: When children are not responding well in the service/programme and the action protocol indicates that follow-up at home is needed (e.g., if the child has lost weight), the outreach worker should identify and report to the health care provider all possible reasons the child is not recovering. The health care provider records this information on the child's outpatient care treatment card and uses the information to decide whether to refer the child to inpatient care or for further medical investigation. Smooth communication channels between outpatient care health care providers and outreach workers are essential for requesting follow-up home visits and monitoring children, especially when outreach workers cannot attend the outpatient care session.

HANDOUT 8.5

SITE TALLY SHEET FOR THE MANAGEMENT OF SAM

HEALTH FACILITY NAME					
DISTRICT					
SITE	Outpatient care		Inpatient Care		
WEEK					**TOTAL**
DATE					
TOTAL START OF WEEK (A)					
New Cases 6-59 m Bilateral Pitting Oedema **(B1a)**					
New Cases 6-59 m MUAC/WFH **(B1b)**					
Other New Cases (adults, adolescents, children > 5 y, infants <6 months) **(B2)**					
Old cases: Referred from Outpatient or Inpatient care; or Returned defaulters **(C)**					
TOTAL ADMISSIONS (D) [D=B+C]					
Cured **(E1)**					
Died **(E2)**					
Defaulted **(E3)**					
Non-recovered **(E4)**					
REFERRALS TO OUTPATIENT OR INPATIENT CARE (F)					
TOTAL DISCHARGES (E)					
TOTAL EXITS (G) [G=E + F]					
TOTAL END OF WEEK (H) [H=A+D-G]					

HANDOUT 8.6

SITE REPORTING SHEET FOR THE MANAGEMENT OF SAM

SITE REPORTING SHEET

MONTHLY SITE REPORT FOR MANAGEMENT OF SAM

SITE		**IMPLEMENTED BY**	
REGION		**MONTH / YEAR**	
		TYPE OF MANAGEMENT (CIRCLE)	Inpatient Outpatient
DISTRICT		**ESTIMATED MAXIMUM CAPACITY**	
		ESTIMATED TARGET malnourished <5s (based on latest survey data and admission criteria)	
			Packets/pots / **kg equivalent**
		RUTF CONSUMPTION	

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		OLD CASES (C) Referral from outpatient or inpatient care, or Returned defaulters	TOTAL ADMISSION (D) (B+C=D)	DISCHARGES (E)				REFERRAL (F) to inpatient or outpatient care	TOTAL EXITS (G) (E+F=G)	TOTAL END OF THE MONTH (H) (A+D-G=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)			CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)			
					%	%	%	%			
				TARGET (Sphere Standards)	>75%	<10%	<15%				

E1: Cured = reaches discharge criteria
E3: Defaulted = absent for 3 consecutive sessions
E4: Non-recovered = does not reach the discharge criteria after 4 months in treatment (after medical investigation)

HANDOUT 8.7

DISTRICT REPORTING SHEET FOR THE MANAGEMENT OF SAM

DISTRICT (STATE OR NATIONAL) REPORTING SHEET (COMBINING INPATIENT CARE WITH OUTPATIENT CARE)

(PERIOD/YEARLY) REPORT FOR MANAGEMENT OF SAM IN CMAM (COMBINING INPATIENT CARE WITH OUTPATIENT CARE)

COUNTRY/STATE/DISTRICT		**IMPLEMENTING PARTNERS**	
NUMBER OF TREATMENT SITES			
NUMBER OF OUTPATIENT CARE SERVICES		**REPORTING PERIOD**	
NUMBER OF INPATIENT CARE SITES			
ESTIMATED MAXIMUM CAPACITY			
ESTIMATED TARGET; Children with SAM < 5 years of age in a given period			
ESTIMATED COVERAGE			
RUTF CONSUMPTION			

TOTAL BEGINNING OF THE MONTH (A)	**NEW CASES (B)**		**TOTAL ADMISSION (B)**	**DISCHARGES (E)**				**TOTAL DISCHARGES (E)**	**TOTAL END OF THE MONTH (H)** (A+B-E=H)
	6-59 m (according to admission criteria) **(B1)**	Other (adults, adolescents, children > 5 y, infants < 6 m) **(B2)**		CURED **(E1)**	DIED **(E2)**	DEFAULTED **(E3)**	NON-RECOVERED **(E4)**		
				%	%	%	%		
			TARGET (Sphere Standards)	**>75%**	**<10%**	**<15%**			

E1: Cured = reaches discharge criteria
E3: Defaulter = absent for 3 consecutive sessions
E4: Non-recovered = does not reach the discharge criteria after 4 months in treatment (after medical investigation)

HANDOUT 8.8
CMAM INDICATORS

There are two basic sets of indicators: **performance indicators** and **output indicators**.

Performance indicators (or outcome indicators) measure whether a CMAM service/programme has achieved its objectives and planned outcomes, which are measured in percentages.

- These indicators tell how many children with SAM (and proportion in percentage) who are enrolled in the service/programme are discharged as cured, died, defaulted or non-recovered. Indicators for outpatient care and inpatient care per district or at the national level will be merged to evaluate the overall performance of therapeutic care for SAM. Results can be compared with international minimum standards for therapeutic feeding programmes in emergency settings, established by the Sphere Project. These Sphere minimum standards might not be applicable in non-emergency contexts, but this has not yet been tested.

% cured (or recovered)	Sphere minimum standard: > 75%
% died	Sphere minimum standard: < 10%
% defaulted	Sphere minimum standard: < 15%
% non-recovered	No Sphere indication

- In addition, it is important to determine whether the service/programme is achieving its aims, in terms of **access and utilization (coverage)**. The best way to do this is through a population-based coverage survey. In rural contexts, the programme should achieve at least 50 percent coverage of the total eligible population— malnourished children under 5— according to Sphere minimum standards.

  Simple methods to determine coverage without conducting an expensive coverage survey are being investigated. Cruder methods, such as comparing actual admissions to the expected caseload (based on estimated prevalence and incidence), can be used to estimate coverage for monitoring purposes, in between population surveys. Exhaustive screening in purposively selected communities can also provide useful information on coverage.

- The optional indicators of **average daily weight gain (AWG)** and **average length of stay (LOS) of cured children** could be calculated for all children or a random sample of children (new cases only) who are discharged cured. The indicators are calculated for marasmus and kwashiorkor cases separately.

  Note: AWG and LOS for outpatient care are not essential information but can provide information on the effectiveness of treatment.

- The **AWG of cured children** in outpatient care is expected to exceed 4 g/kg/day (the Sphere minimum standard for AWG based on traditional center-based inpatient care is at least 8 g/kg/day). A low AWG could indicate factors such as a high absence rate, high default rate, ineffective treatment, sharing of ready-to-use therapeutic food (RUTF) and/or non-compliance to the treatment protocol.

  To calculate AWG, first determine weight gain of each cured child in the sample: Weight gain (g/kg/day) is [discharge weight in g – minimum weight in g] divided by [minimum weight in kg x

number of days between minimum weight and discharge day]. AWG is the sum of the weight gains (g/kg/day) in the sample divided by the number of cured children/treatment cards per category (marasmus or kwashiorkor) in the sample.

- The **LOS of cured children** in outpatient care is expected to be less than 60 days. A long LOS might be the result of factors such as a high proportion of children who do not recover, frequent absences, defaulting, sharing of the RUTF and/or unresolved illness. A short LOS might indicate that children are discharged too soon, a finding that could be supported by a high relapse rate. The minimum LOS in CMAM if admission criteria are based on low mid-upper arm circumference (MUAC) is two months.

  LOS is calculated by adding the length of stay for all cured children in the sample and dividing the sum by the number of cured children/treatment cards per group of cured children in the sample.

2. Output indicators measure whether a service/programme has completed the planned activities/ outputs needed to achieve the established goals and objectives. They are measured in numbers or percentages and should be specific to the activities/outputs established.

Examples of output indicators are:

- Number of health facilities with established inpatient care and/or outpatient care
- Number of children with SAM admitted to inpatient care or outpatient care per time period
- Number of children with SAM under treatment per time period
- Number of children discharged per time period
- Number or percentage of health care providers trained and active in SAM case management in outpatient care
- Number or percentage of health care providers trained and active in SAM case management in inpatient care
- Number or percentage of community health workers (LHWs) trained and active in community outreach
- Number or percentage of volunteers trained and active in community outreach

Additional indicators will depend on the service/program's aim and monitoring needs. For example:

- Number of children referred by volunteers and admitted to outpatient care
- Percentage of communities in the target area within one day's return walk to CMAM services
- Percentage of health facilities in the district or target area that provide CMAM services
- To assess barriers to access the service/programme, possible indicators include:
  - Number of children under 5 with SAM identified in the community and referred for treatment
  - Number of children under 5 with SAM referred from the community for treatment and admitted
  - Number of meetings between the community outreach coordinator and/or workers and community members (e.g., community leaders, traditional healers and religious leaders, caregivers of beneficiaries and non-beneficiaries) per time period

TABLE 1. SUMMARY OF PERFORMANCE INDICATORS

- Total number of new admissions
- Total number of discharges*
- Total number of children with SAM in treatment
- Information on new admissions 6-59 months:
  a. Proportion of children with SAM admitted on bilateral pitting edema, low mid-upper arm circumference (MUAC), low weight-for-height (WFH)
  b. Proportion of children with SAM admitted by gender

BENCHMARKS	SPHERE STANDARDS (EMERGENCIES)	CMAM (ADAPTED)
% Cured Proportion of children discharged cured, out of total discharges*	> 75%	> 75%
% Died Proportion of children who died while in treatment, out of total discharges*	< 10%	< 10%
% Defaulted Proportion of children recorded as absent for three consecutive sessions, out of total discharges*	< 15%	< 15%
% Non-recovered Proportion of children who had been referred for further medical investigation and are discharged non-cured after four months in treatment, out of total discharges*	< 10%	< 10%
% Coverage Proportion of children with SAM who are in treatment out of total number of children with SAM in the community	50% (rural) 70% (urban)	> 70%
Average daily weight gain (AWG) (calculated from a sample of children cured per category [kwashiorkor or marasmus]) = sum of weight gains in a sample divided by number of children cured or treatment cards in the sample		
Average length of stay (LOS) (calculated from a sample of children discharged cured of kwashiorkor and marasmus) = sum of length of stay in a sample divided by number of children cured or treatment cards in the sample		

* Total discharges comprise the cured, died, defaulted and non-recovered categories.

TABLE 2. SUMMARY OF OUTPUT INDICATORS

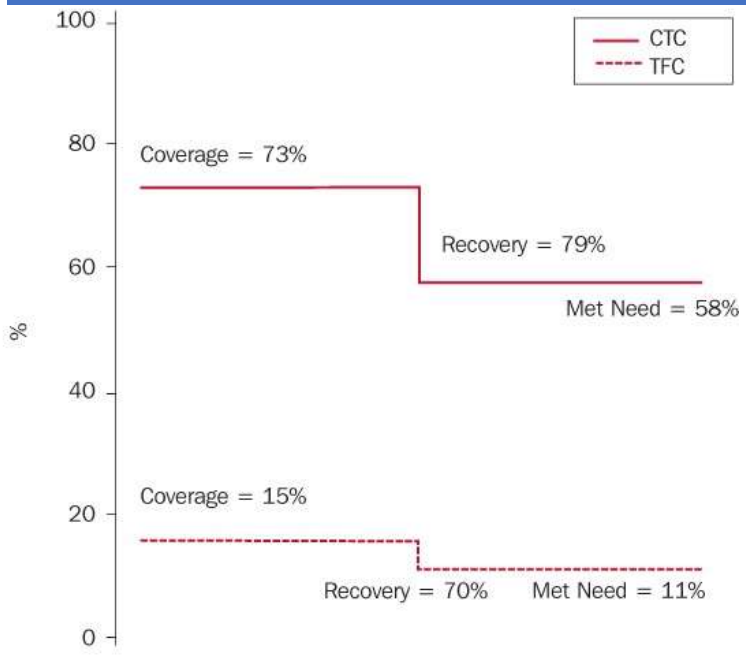
▪ Number of functioning outpatient care sites
▪ Number of functioning inpatient care sites
▪ Number of functioning supplementary feeding sites
▪ Number of health care providers trained in outpatient care and referral based on action protocol (plus gender distribution of trainees)
▪ Number of health care providers trained in inpatient care and case management of SAM with medical complications (plus gender distribution of trainees)
▪ Number of LHWs trained in community outreach (plus gender distribution) ▪ Number of volunteers trained in community outreach (plus gender distribution)
▪ Number of communities mobilized

HANDOUT 8.9
PRINCIPLES OF COVERAGE

- The priority in CMAM is to make treatment available to the greatest number of children with SAM possible in an affected population. Therefore, it is important to assess coverage, the proportion of children who need assistance who actually receive care in the service/programme.
- Coverage is usually expressed as a percentage. For example, if there are 100 children with SAM in a service/programme area and 70 of them are in the service/programme, then coverage is 70 percent.
- Coverage is one of the most important indicators of how well a service/programme is **meeting the need**. A service/programme with a high coverage rate and a low cure rate might be better at meeting the need than one with a low coverage rate and a high cure rate (see **Figure 1** for a hypothetical illustration).

  "Met need" is the product of the coverage rate and the cure rate. If, for example, a service/programme has a coverage rate of 70 percent and a cure rate of 90 percent then "met need" expressed as a percentage can be calculated as: **70 x 90/100= 63%, indicating** that the service/programme is meeting 63% of the need.
- High-quality services/programmes have both high coverage and high cure rates.
- The coverage of a CMAM service/programme is mapped and estimated using a population-based coverage survey. One sampling method that is commonly used is centric systematic area sampling (CSAS), which refers to the way communities are selected for sampling. New techniques for assessing access and coverage that are less resource-intensive are under development.

FIGURE 1: COVERAGE, CURE RATE AND IMPACT



Source: Community-based Therapeutic Care: A Field Manual, p.116

HANDOUT 8.10
MONITORING BARRIERS TO ACCESS

Since coverage surveys are infrequent and resource-intensive, it is important to monitor barriers to access regularly by keeping an eye on routine data collected by the service/programme.

- **Barriers of special concern:** The starting point for routine monitoring should be the information collected during the community assessment (see **Module 3: Community Outreach**), which can reveal context-specific barriers that must be addressed. For example, if the community assessment showed that certain communities, ethnic groups or locations are marginalized, then enrolment data from these areas should be watched closely. If the assessment indicated that adherence to traditional treatments and healers was particularly strong in a specific area or that tension exists between community leaders and service providers, then the routine monthly and quarterly reporting from these communities should be scrutinized carefully.

- **Common barriers:** In addition to issues highlighted by the community assessment, routine monitoring can reveal additional information on barriers to access, e.g.,
  - Comparing admission numbers across outpatient care sites, which would show whether the numbers reflect the size of known populations or catchment areas
  - Watching for health facilities or communities where admissions drop abruptly, which could indicate that a supervisory visit is needed to help staff clarify confusing admissions procedures, to correct misconceptions about eligibility in the community or to address other reasons for the decline
  - Monitoring the number of absentees and defaults at the outpatient care sites; for example, an increase could signal a variety of local problems such as interruptions to the supply chain, seasonal barriers to access or poor quality of service or instruction from the outpatient care providers
  - Scrutinizing reports to ensure that community outreach is being performed

- **Corrective actions:** Monitoring should be tied to actions designed to address the problem. Corrective actions can usually take place in the context of routine supervisory visits, where service/ programme managers meet and mentor local facility-based staff (see **Learning Objective 6**). In devising corrective measures, it is useful for managers to seek non-staff perspectives, including the views of community leaders, people who use the service/programme and those who do not.

- **Local monitoring**: Health care providers should conduct their own routine monitoring. For example, they could divide their catchment area into segments and use registration data to check whether outreach is taking place and whether admissions are coming from the parts of the community they were expected to. Finding solutions to issues flagged by routine monitoring requires health care providers to meet occasionally with community members and outreach workers.

HANDOUT 8.11

- **Support and supervision/mentorship**, meaning continuous support and motivation with the purpose of improving performance, should be the overarching objective of the supervisor or supervisory team.

- Responsibility for supervising all CMAM services/programmes should be established during the planning stages. Supervisors are responsible for ensuring that the service/programme is running smoothly and for overall service quality.

- Supervision visits may be conducted by the district health management team or equivalent and may be part of an integrated supervisory visit, where supervisors check as well on other services.

- Supervisors should ensure that treatment cards are completed and filed correctly. Supervisory visits should include review of the treatment cards, particularly the cards of children who have died, defaulted or not recovered. The supervisor should ensure that admissions and discharges are made according to established criteria and that treatment protocols are performed correctly. The supervisor also should check whether the action protocol is properly followed so that cases are referred and/or followed up where appropriate.

- Supervisors should work closely with the health care providers and outreach workers (e.g., community health workers [LHWs], volunteers) at the outpatient care site to ensure that any issues regarding service delivery, follow-up home visits or the management of individual cases can be identified and followed up.

- Supervisors can use a **supervisor checklist**. This can be adapted to the context and should follow national protocols and the national health management information system (HMIS).

- Supervisors, health care providers and outreach workers (e.g., LHWs, volunteers) should have scheduled meetings to discuss any service/programme issues. The meetings should cover:

  - Issues in service/programme management, including a review of the caseload to determine whether it is manageable for the number of staff available, any expected increases/decreases in the caseload because of the season or a sudden population influx and a contingency plan to handle unexpected changes in caseload or other management challenges

  - Other staff issues

  - Factors that might affect attendance or require adjusting the outpatient care schedule (e.g., when the harvest season approaches)

  - Supply issues and planning

  - A review of deaths in outpatient care and inpatient care to identify any problems with using the action protocol or treatment protocol and to determine whether actions and treatments could have been conducted differently

  - A review of defaults

SUPPORT AND SUPERVISION FOR CMAM

- A review of children who do not respond to treatment, such as children who do not gain weight or who lose weight
- A review of non-recovered children (those who do not meet discharge criteria after four months of treatment [after medical investigation is done])
- A review of referrals to ensure effective tracking within the CMAM service/programme
- Any issues in the community that might affect service/programme access and uptake (coverage)
- A review of monitoring and reporting systems
- A review of site tally sheets and site reports

- It is good practice to keep supervision reports on file to track the progress of individual sites over time.

TABLE 1. SUPERVISOR RESPONSIBILITIES (EXAMPLE FOR OUTPATIENT CARE AT THE HEALTH FACILITY LEVEL)

Observation of Treatment and Completion of Treatment Cards	Tracking and Reporting
▪ Outpatient care treatment cards, ready-to-use therapeutic food (RUTF) ration cards (and health passports/health cards, where used) are completed ▪ Child's progress is closely monitored and recorded on his/her treatment card throughout treatment. ▪ Admissions and discharges are made according to protocols and noted on the treatment cards. ▪ Medical assessments (medical history and physical examination) are conducted and noted on the treatment cards. ▪ Routine and supplemental medicines are given and noted on the treatment cards. ▪ Appetite tests are conducted and noted on the treatment cards. ▪ Illnesses reported by the mothers/caregivers are noted on the treatment cards. ▪ Any deterioration in child's condition is identified, addressed according to the action protocol and noted on his/her treatment card. ▪ Absences and defaults are noted on the treatment cards and followed up. ▪ Referrals are noted on the treatment cards and followed up. ▪ Deaths are noted, and symptoms and the reported cause of death are investigated and recorded on the treatment cards.	▪ Unique number system is being used. ▪ Referral slips are completed. ▪ Tally sheets are completed, compiled and filed. ▪ Site reports are developed from the tally sheets and sent on time to the appropriate agency (e.g., Ministry of Health [MOH], a specific nongovernmental organization [NGO], the United Nations Children's Fund [UNICEF]). **Supplies and Planning** ▪ RUTF supplies are adequate and stored appropriately. ▪ Request for RUTF supplies is made to the appropriate agency or the MOH. ▪ Supply of essential drugs (routine medicines) is adequate. ▪ Request for medicine supplies is made to the appropriate agency or the MOH. ▪ Stock records for medicines and RUTF are completed.

TIPS FOR SUPERVISORS/MENTORS

- Supervisory visits are conducted to help health care providers improve their performance. The visits should be seen as an ongoing part of the capacity development strategy and the motivation of health care providers.
- The best way to determine whether a health care provider is performing well is to watch him/her perform on the job. This observation should be followed by a discussion of what was observed and of the data the supervisor collected and recorded on monitoring forms (supervision checklist).
- Supervisory visits are the best time to identify any important areas in which particular health care providers can improve before the next supervisory visit.
- People who are praised for what they are doing well are motivated to continue to do a good job.
- If a health care provider needs to improve on a certain action, the supervisor first should show him/ her how to perform the action more accurately. Then the supervisor should ask him/her to repeat the improved action on his/her own while the supervisor observes.
- If a health care provider has several areas to improve on for the next supervisory visit, the supervisor should have the person work on the area that will make the biggest difference if improved. The supervisor should address less important issues after the health care provider has mastered the priority area.

GUIDANCE CHECKLIST FOR A SUPERVISORY VISIT

During the pre-arranged supervisory visit, the supervisor/mentor:

- Courteously asks to accompany individual health care providers during their regular activities
- Observes the job performance of health care providers
- Stays in the background during the activities and does not interfere or give feedback until all the health care provider's activities are finished
- Discusses job performance with health care provider in private
- Provides feedback to the health care provider
- Praises the health care provider for what she/he is doing well to motivate her/him to continue this performance
- Works with the health care provider to identify important areas for improvement
- Shows the health care provider what has worked well in her/his experience and then gives him/her a chance to try it while observing
- Plays the role of mentor
- Schedules a follow-up supervisory visit

HANDOUT 8.12

SUPPORT AND SUPERVISION CHECKLIST FOR OUTPATIENT CARE (EXAMPLE)

Health Facility:_____ **Date:**_____

	TOTAL OBSERVED	**TOTAL CORRECT**	**DIRECT OBSERVATION AT SITE**	**QUALITY** 1 – Done correctly 2 – Done but needs improvement 3 – Not done/ done incorrectly			**COMMENT**
Number of health care providers (staff) and volunteers present							Staff: Volunteers:
Staff greet mothers/ caregivers and are friendly and helpful							
Registration numbers assigned correctly	Total new admissions in past month						
Registration numbers written on all documents							
Grade of bilateral pitting edema measured accurately	Total bilateral pitting edema checks observed						
Mid-upper arm circumference (MUAC) measured accurately	Total MUAC checks observed						
Weight measured accurately	Total weighings observed						
Height measured accurately	Total measurements observed						
Weight-for-height (WFH) classification done correctly	Total WFH checked						
Admission is according to correct criteria	Total treatment cards checked						(Spot check cards)
Medical history recorded accurately	Total medical histories observed						

Physical examination performed and recorded accurately	Total treatment cards checked	Total w/ full exam					(Check card)
Child's appetite tested using ready-to-use therapeutic food (RUTF), upon admission and during outpatient care follow-on sessions							How tested and by whom?
Routine medication given according to protocol and recorded accurately	Total treatment cards checked	Total with correct medicines					
Amount of RUTF needed is correctly calculated	Total treatment and ration cards checked						
Appropriate education given to mothers/ caregivers							Note topic and form:
Follow-up medicines given according to protocol and recorded accurately	Total treatment cards checked						
RUTF ration cards completed correctly	Total treatment cards checked						(Spot check)
Slow responders are identified according to the definition for follow-up and communicated to outreach workers	Total problem cases needing follow-up home visit during past month	Total					
Priorities for follow-up home visits discussed with outreach worker; list of names recorded/ cards marked			List/ clear discussion?				
Beneficiaries discharged according to protocol	Total ctreatment ards checked						
Correct number of absentees/defaults identified for follow-up home visits	Total number of absentees/ defaults according to treatment cards	Total w/ outcome recorded					
Tally sheets, reporting sheets and stock cards completed correctly	Total weeks reviewed						(Spot check)

HANDOUT 8.13

SUPPORT AND SUPERVISION CHECKLIST FOR COMMUNITY OUTREACH (EXAMPLE)

Question/Issue	Why?
COORDINATION OF OUTREACH	
Has someone at the facility level been designated as responsible for managing/ coordinating community outreach efforts?	Outreach is less clear-cut and less glamorous than clinical work, and health managers and health care providers might need reminding that outreach is also part of CMAM.
Has the job of the outreach worker (case-finder) been clearly defined, including his/her range of responsibilities and level of effort?	Case-finders are sometimes recruited before the amount of work required is specified.
Do outreach workers meet periodically (e.g., monthly, quarterly) with the designated outreach coordinator?	Supervisory meetings might help to motivate case finders, especially when they are unpaid.
In general, do outreach workers feel they receive adequate information and support from the outreach coordinator?	Supervisory meetings should be an opportunity for two-way communication, not just for giving instructions.
Does the outreach coordinator appear familiar with basic service/programme data (e.g. admissions, absentees, defaults)?	The outreach coordinator should be interpreting this data and using it to adjust outreach methods and priorities.
Does the outreach coordinator have a means of discussing outreach problems or issues with community leaders? Is this being used?	Not all issues can be addressed by discussion between the outreach coordinator and the outreach workers alone. Problems such as defaulting and barriers to access might require the inclusion of community leaders, mothers/caregivers and other stakeholders.
CASE-FINDING	
What form of case-finding is being used locally? Is it still the most appropriate form?	The service/programme might need to alter case-finding methods as levels of severe acute malnutrition (SAM) and community awareness change.
How active are case-finders? Is this level of activity appropriate, given SAM prevalence?	Active case-finding should not be so frequent as to be intrusive, but neither should it be left alone for too long. During periods of high SAM prevalence and while awareness of CMAM is still low, monthly screenings might be appropriate.
FOLLOW-UP HOME VISITS	
Has responsibility for follow-up home visits been clearly designated and accepted in all parts of the health facility catchment area?	Follow-up might break down unless it is worked out in advance who is responsible for following up cases in a given location.
Are absentees and children who defaulted being followed up reliably with follow-up home visits?	Even with clear lines of responsibility, follow-up might not occur. The reasons for this must be understood and addressed.
What do outreach workers and community members say about the value of these visits?	Outreach workers who perform follow-up home visits sometimes need further training on advising and negotiating effectively with families.

HANDOUT 8.14
GUIDANCE ON CMAM REPORTING

MONTHLY SITE OR DISTRICT REPORTS

The monthly report (per site, district or overall at the national level) presents quantitative information on service/programme performance (key performance indicators). It provides basic information to monitor the effectiveness of the CMAM service/programme.

REPORTING ON SERVICE/PROGRAMME PERFORMANCE

The monthly, quarterly or yearly report presents key quantitative and qualitative information and analysis and interprets the information in a comprehensive manner. The report should include the following essential information:

General
- Author of report
- Date and period of reporting
- Geographical catchment area and population
- Name of health facilities with outpatient care and/or inpatient care ▪ Starting date of services/programmes

Performance and output indicators for the management of severe acute malnutrition (SAM) in inpatient care and outpatient care combined, per time period:
- Number of new admissions
- Number of discharges
- Number of beneficiaries in treatment
- Number and percentage cured
- Number and percentage died
- Number and percentage defaulted
- Number and percentage non-recovered
- Number of referrals to inpatient care or hospital
- Number admitted from community outreach referral
- Number of sites
- Number of new sites added
- Number of staff (e.g., health managers, health care providers, community health workers [LHWs], volunteers) trained

Figures
- Figure (graph) with trends of key performance and output indicators (see example figure below):
  - Bars with new admissions, discharges, beneficiaries in treatment
  - Lines for cured, died, defaulted and non-recovered rates
- Figure (graph) for monthly average length of stay (LOS) and average weight gain (AWG) per category of admission criteria
- Figure (pie chart) with distribution of admission criteria
- Figure (pie chart) with distribution of discharge categories (see example figure on the next page)

Death records: Date, sex, age, reported cause of death, LOS in service/programme

Default records: Date, sex, age, reported/presumed reason for defaulting, LOS in service/programme

Interpretation of overall progress

- Interpret findings on performance and coverage and any qualitative information that was obtained through community meetings, focus group discussions, etc.; then, triangulate the information.
- Discuss challenges, opportunities, lessons learned and success stories.

EXAMPLE GRAPH FIGURES

Figure 1. Number of Admissions, Discharged and in Treatment in CMAM Per Area and Time Period

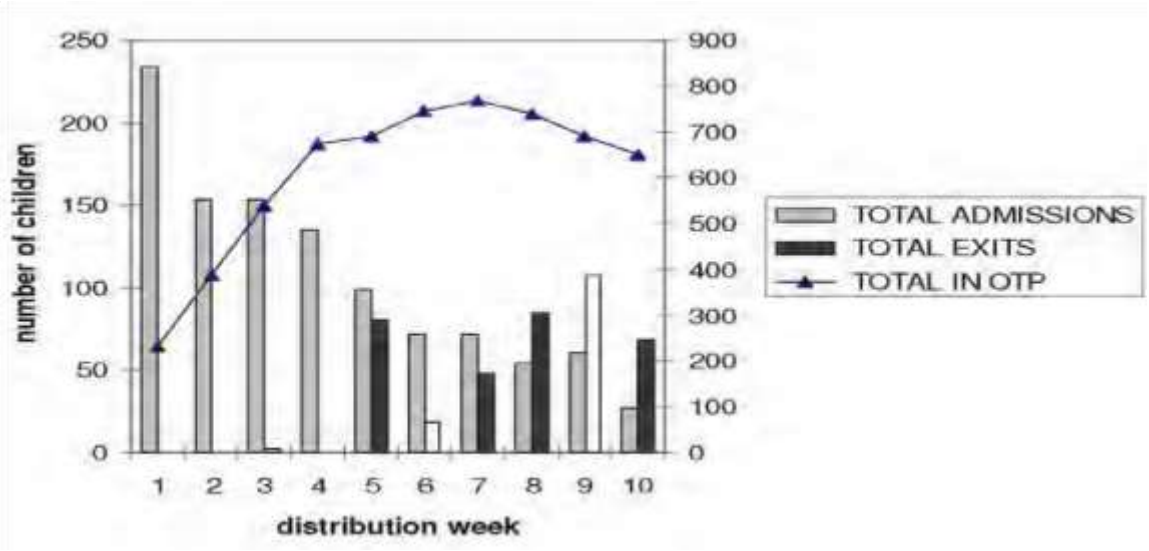
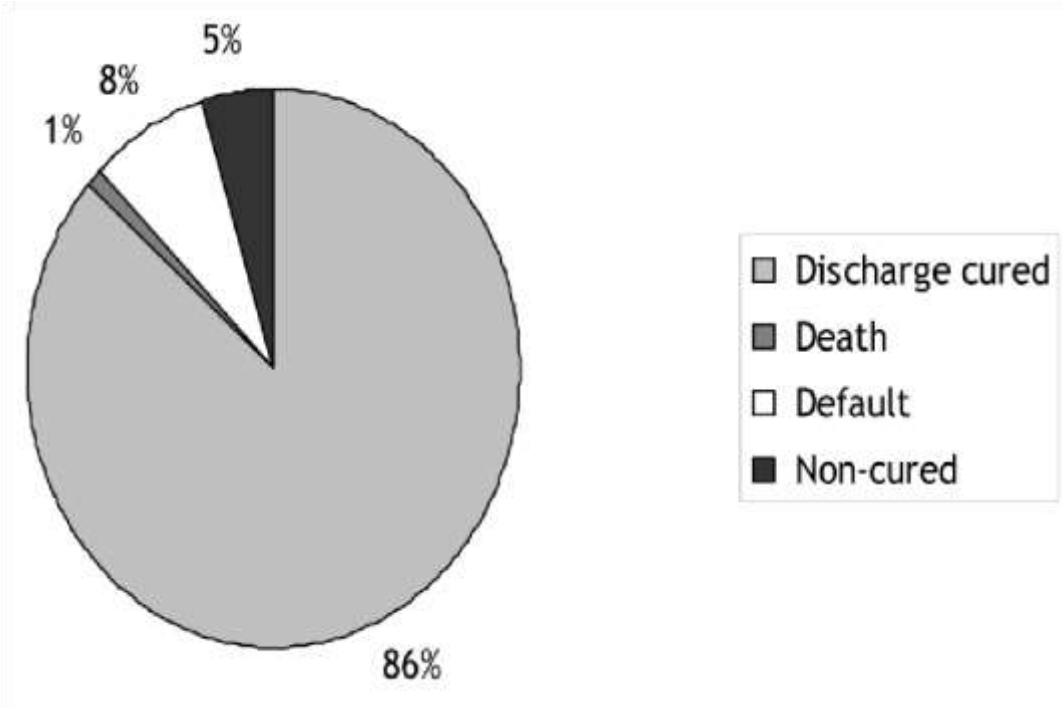


Figure 2. Discharge Categories in CMAM Per Area and Time Period



EXERCISE 8.1

OUTPATIENT CARE SITE TALLY SHEET AND SITE REPORTING SHEET

SITE Outpatient care Inpatient Care

HEALTH FACILITY NAME Rural Health Centre, Islamkot

DISTRICT *Tharparkar*

WEEK	**WK 32**	**WK 33**	**WK 34**	**WK 35**	**TOTAL**
DATE					
TOTAL START OF WEEK (A)					
New Cases 6-59 m Bilateral Pitting Edema **(B1a)**					
New Cases 6-59 m MUAC/WFH **(B1b)**					
Other New Cases (adults, adolescents, children > 5 y, infants <6 months) **(B2)** Old cases: Referred from Outpatient or Inpatient care; or Returned defaulters **(C)**					
TOTAL ADMISSIONS (D) [D=B+C]					
Cured **(E1)**					
Died **(E2)**					
Defaulted **(E3)** Non-recovered **(E4)** **REFERRALS TO OUTPATIENT OR INPATIENT CARE (F)**					
TOTAL DISCHARGES (E)					
TOTAL EXITS (G) [G=E + F]					
TOTAL END OF WEEK (H) [H=A+D-G]					

EXERCISE 8.1(A) OUTPATIENT CARE SITE TALLY SHEET
EXERCISE 8.1(B) OUTPATIENT CARE SITE REPORTING SHEET

MONTHLY SITE REPORT FOR MANAGEMENT OF SAM

SITE	
IMPLEMENTED BY	
REGION	
MONTH / YEAR	February / 2008
TYPE OF MANAGEMENT (CIRCLE)	Inpatient / Outpatient
DISTRICT	
ESTIMATED MAXIMUM CAPACITY	
ESTIMATED TARGET malnourished <5s (based on latest survey data and admission criteria)	

RUTF CONSUMPTION	**Packets/pots**	**kg equivalent**

TOTAL BEGINNING OF THE MONTH (A)	**NEW CASES (B)**		**OLD CASES (C)** Referral from outpatient or inpatient care, or Returned defaulters	**TOTAL ADMISSION (D)** (B+C=D)	**DISCHARGES (E)**				**REFERRAL (F)** to inpatient or outpatient care	**TOTAL EXITS (G)** (E+F=G)	**TOTAL END OF THE MONTH (H)** (A+D-G=H)
	6-59 m (according to admission criteria) **(B1)**	Other (adults, adolescents, children > 5 y, infants < 6 m) **(B2)**			CURED **(E1)**	DIED **(E2)**	DEFAULTED **(E3)**	NON-RECOVERED **(E4)**			
					%	%	%	%			
				TARGET (SPHERE Standards)	**>75%**	**<10%**	**<15%**				

E1: Cured = reaches discharge criteria
E3: Defaulted = absent for 3 consecutive sessions
E4: Non-recovered = does not reach the discharge criteria after
investigation)

EXERCISE 8.2

COMPLETING SITE TALLY SHEET AND SITE REPORT

The organization is assumed to be an outpatient care site at the Rural health center _____in the _____ district of _____province. Six outpatient care treatment cards are filled in for the first two weeks of admission to the Rural outpatient care site.

HANDOUTS

- Outpatient care treatment cards for six children in the Rural outpatient care site
- Site tally sheets for RHC's outpatient care site
- Site report for Rural

INSTRUCTIONS

Go through the outpatient care treatment cards and the text below and complete the site tally sheet for each week.

Rural outpatient care admission pattern:

- Week 1: Three children with mid-upper arm circumference (MUAC) < 110 mm were admitted to the service. Outpatient care treatment cards for all three are attached.
- Week 2: Two children were admitted, one with bilateral pitting edema +++ and the other with weight-for-height (WFH) < 70% of the median. Outpatient care treatment cards for both are attached.
- Week 3: Two children were admitted, one with bilateral pitting edema ++ and the other with MUAC < 110 mm. The outpatient care treatment card for the child with bilateral pitting edema is attached. The other card is not available.
- Week 4: Five children who do not have outpatient care treatment cards are admitted: three with MUAC < 110mm, one with WFH < 70% of the median and one moved in from inpatient care.

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD

NAME	Neway Mefin			Reg. N°	YRB / 001 / OUTP		
AGE (months)	13	SEX	M (F)	DATE OF ADMISSION	04/10/2007		
ADMINISTRATIVE UNIT	Boricha			TIME TO TRAVEL TO SITE	1 hour		
COMMUNITY	Yirba			FATHER ALIVE			
HOUSE DETAILS/LANDMARKS				MOTHER ALIVE			
NAME OF CAREGIVER				TOTAL NUMBER IN HOUSEHOLD	5		
ADMISSION (CIRCLE)	(self referral)	outreach referral	inpatient care referral	health facility referral	TWIN	yes	(no)
RE-ADMISSION (relapse)	no yes	ADDITIONAL INFORMATION					

ADMISSION ANTHROPOMETRY

BILATERAL PITTING OEDEMA	+ ++ +++						
MUAC (mm)	107	WEIGHT (kg)	6.2	HEIGHT (cm)	62	WEIGHT FOR HEIGHT	95
ADMISSION CRITERIA	Bilateral pitting oedema	(MUAC)		Weight for Height		OTHER:	

HISTORY

DIARRHOEA	yes	(no)		# STOOLS/DAY	(1-3)	4-5	>5
VOMITING	yes	(no)		PASSING URINE	(yes)	no	
COUGH	yes	(no)	IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?				
APPETITE	good	(poor)	none	BREASTFEEDING	yes	(no)	
ADDITIONAL INFORMATION							

PHYSICAL EXAMINATION

RESPIR. RATE (# min)	<30	30 - 39	(40 - 49)	50+	CHEST INDRAWING	yes	(no)
TEMPERATURE °C	38.2				CONJUNCTIVA	(normal)	pale
EYES	(normal)	sunken	discharge		DEHYDRATION	(none)	moderate	severe
EARS	(normal)	discharge			MOUTH	(normal)	sores	candida
ENLARGED LYMPH NODES	(none)	neck	axilla	groin	HANDS & FEET	(normal)	cold	
SKIN CHANGES	(none)	scabies	peeling	ulcers / abscesses	DISABILITY	yes	(no)	
ADDITIONAL INFORMATION							

ROUTINE MEDICATION: ADMISSION

ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE
	Amoxicillin	4/10/2007	200,000 IU			
	Vitamin A (if not in last 6 months)	4/10/2007	125 mg (5 ml) 3x per day	Measles immunisation	no yes	date:
	Malaria treatment			Fully immunised	no yes	
2nd VISIT:						
	Mebendazole					

OTHER MEDICATION

DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD

NAME	Yohannes Solomon			Reg. N°	YRB / 002 / OUTP		
AGE (months)	16	SEX	M F	DATE OF ADMISSION	04/10/2007		
ADMINISTRATIVE UNIT	Boricha			TIME TO TRAVEL TO SITE	2.5 hours		
COMMUNITY	Yirba			FATHER ALIVE			
HOUSE DETAILS/LANDMARKS				MOTHER ALIVE			
NAME OF CAREGIVER				TOTAL NUMBER IN HOUSEHOLD	6		
ADMISSION (CIRCLE)	self referral	outreach referral	inpatient care referral	health facility referral	TWIN	yes	no
RE-ADMISSION (relapse)	no yes	ADDITIONAL INFORMATION					

ADMISSION ANTHROPOMETRY

BILATERAL PITTING OEDEMA	+	++	+++				
MUAC (mm)	102	WEIGHT (kg)	7.5	HEIGHT (cm)	68	WEIGHT FOR HEIGHT	95
ADMISSION CRITERIA	Bilateral pitting oedema	MUAC		Weight for Height		OTHER:	

HISTORY

DIARRHOEA	yes	no		# STOOLS/DAY	1-3	4-5	>5
VOMITING	yes	no		PASSING URINE	yes	no	
COUGH	yes	no		IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?			
APPETITE	good	poor	none	BREASTFEEDING	yes	no	
ADDITIONAL INFORMATION							

PHYSICAL EXAMINATION

RESPIR. RATE (# min)	<30	30 - 39	40 - 49	50+	CHEST INDRAWING	yes	no
TEMPERATURE °C	37.6				CONJUNCTIVA	normal	pale
EYES	normal	sunken	discharge		DEHYDRATION	none	moderate	severe
EARS	normal	discharge			MOUTH	normal	sores	candida
ENLARGED LYMPH NODES	none	neck	axilla	groin	HANDS & FEET	normal	cold
SKIN CHANGES	none	scabies	peeling	ulcers / abscesses	DISABILITY	yes	no
ADDITIONAL INFORMATION							

ROUTINE MEDICATION: ADMISSION

ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE
	Amoxicillin	4/10/2007	200,000 IU			
	Vitamin A (if not in last 6 months)	4/10/2007	125 mg (5 ml) 3x per day	Measles immunisation	no yes	date:
	Malaria treatment			Fully immunised	no yes	
2nd VISIT:						
	Mebendazole					

OTHER MEDICATION

DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD

NAME	Abaynesh Mengistu			Reg. N°	YRB / 003 / OUTP		
AGE (months)	18	SEX	M (F)	DATE OF ADMISSION	04/10/2007		
ADMINISTRATIVE UNIT	Boricha			TIME TO TRAVEL TO SITE	3 hours		
COMMUNITY	Yirba			FATHER ALIVE			
HOUSE DETAILS/LANDMARKS				MOTHER ALIVE			
NAME OF CAREGIVER				TOTAL NUMBER IN HOUSEHOLD	5		
ADMISSION (CIRCLE)	(self referral)	outreach referral	inpatient care referral	health facility referral	TWIN	yes	(no)
RE-ADMISSION (relapse)	no yes	ADDITIONAL INFORMATION					

ADMISSION ANTHROPOMETRY

BILATERAL PITTING OEDEMA	+ ++ +++						
MUAC (mm)	98	WEIGHT (kg)	7.5	HEIGHT (cm)	72	WEIGHT FOR HEIGHT	83
ADMISSION CRITERIA	Bilateral pitting oedema	(MUAC)		Weight for Height		OTHER:	

HISTORY

DIARRHOEA	yes	(no)	# STOOLS/DAY	(1-3)	4-5	>5
VOMITING	yes	(no)	PASSING URINE	(yes)	no	
COUGH	yes	(no)	IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?			
APPETITE	good	(poor)	none	BREASTFEEDING	yes	(no)
ADDITIONAL INFORMATION						

PHYSICAL EXAMINATION

RESPIR. RATE (# min)	<30	(30 - 39)	40 - 49	50+	CHEST INDRAWING	yes	(no)
TEMPERATURE °C	37.2				CONJUNCTIVA	(normal)	pale
EYES	(normal)	sunken	discharge		DEHYDRATION	(none)	moderate	severe
EARS	(normal)	discharge			MOUTH	(normal)	sores	candida
ENLARGED LYMPH NODES	(none)	neck	axilla	groin	HANDS & FEET	(normal)	cold
SKIN CHANGES	(none)	scabies	peeling	ulcers / abscesses	DISABILITY	yes	(no)
ADDITIONAL INFORMATION							

ROUTINE MEDICATION: ADMISSION

ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE
	Amoxicillin	4/10/2007	200,000 IU			
	Vitamin A (if not in last 6 months)	4/10/2007	125 mg (5 ml) 3x per day	Measles immunisation	no yes	date:
	Malaria treatment			Fully immunised	no yes	
2nd VISIT:						
	Mebendazole					

OTHER MEDICATION

DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE

WEEK 2: OUTPATIENT CARE TREATMENT CARD DETAILS

CASE 4 ADMISSION

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD

NAME	Meskerem Tena			Reg. N°	YRB / 004 / OUTP		
AGE (months)	23	SEX	M (F)	DATE OF ADMISSION	04/17/2007		
ADMINISTRATIVE UNIT	Boricha			TIME TO TRAVEL TO SITE	3.5 hours		
COMMUNITY	Yirba			FATHER ALIVE			
HOUSE DETAILS/LANDMARKS				MOTHER ALIVE			
NAME OF CAREGIVER				TOTAL NUMBER IN HOUSEHOLD	6		
ADMISSION (CIRCLE)	self referral	outreach referral	inpatient care referral	health facility referral	TWIN	yes	no
RE-ADMISSION (relapse)	no yes	ADDITIONAL INFORMATION					

ADMISSION ANTHROPOMETRY

BILATERAL PITTING OEDEMA	+	++	(+++)				
MUAC (mm)	114	WEIGHT (kg)	8.4	HEIGHT (cm)	78.2	WEIGHT FOR HEIGHT	80.7
ADMISSION CRITERIA	(Bilateral pitting oedema)	MUAC		Weight for Height		OTHER:	

HISTORY

DIARRHOEA	yes	(no)	# STOOLS/DAY	(1-3)	4-5	>5
VOMITING	yes	(no)	PASSING URINE	(yes)	no	
COUGH	yes	(no)	IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?			
APPETITE	good	(poor) none	BREASTFEEDING	yes	(no)	
ADDITIONAL INFORMATION						

PHYSICAL EXAMINATION

RESPIR. RATE (# min)	<30	(30 - 39)	40 - 49	50+	CHEST INDRAWING	yes	(no)
TEMPERATURE °C	37.8				CONJUNCTIVA	(normal)	pale
EYES	(normal)	sunken	discharge		DEHYDRATION	(none)	moderate	severe
EARS	(normal)	discharge			MOUTH	(normal)	sores	candida
ENLARGED LYMPH NODES	(none)	neck	axilla	groin	HANDS & FEET	(normal)	cold
SKIN CHANGES	(none)	scabies	peeling	ulcers / abscesses	DISABILITY	yes	(no)
ADDITIONAL INFORMATION							

ROUTINE MEDICATION: ADMISSION

ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE
	Amoxicillin	4/10/2007	200,000 IU			
	Vitamin A (if not in last 6 months)	4/10/2007	125 mg (5 ml) 3x per day	Measles immunisation	no yes	date:
	Malaria treatment			Fully immunised	no yes	
2nd VISIT:						
	Mebendazole					

OTHER MEDICATION

DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE

WEEK 2: OUTPATIENT CARE TREATMENT CARD DETAILS — CASE 5 ADMISSION

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD

NAME	Taye Menberu			Reg. N°	YRB / 005 / OUTP		
AGE (months)	14	SEX	(M) F	DATE OF ADMISSION	04/17/2007		
ADMINISTRATIVE UNIT	Boricha			TIME TO TRAVEL TO SITE	1.5 hours		
COMMUNITY	Yirba			FATHER ALIVE			
HOUSE DETAILS/LANDMARKS				MOTHER ALIVE			
NAME OF CAREGIVER				TOTAL NUMBER IN HOUSEHOLD	3		
ADMISSION (CIRCLE)	(self referral)	outreach referral	inpatient care referral	health facility referral	TWIN	yes	(no)
RE-ADMISSION (relapse)	no yes	ADDITIONAL INFORMATION					

ADMISSION ANTHROPOMETRY

BILATERAL PITTING OEDEMA	+ ++ +++						
MUAC (mm)	110	WEIGHT (kg)	5.2	HEIGHT (cm)	37.3	WEIGHT FOR HEIGHT	66.6
ADMISSION CRITERIA	Bilateral pitting oedema	MUAC		(Weight for Height)		OTHER:	

HISTORY

DIARRHOEA	yes	(no)		# STOOLS/DAY	(1-3)	4-5	>5
VOMITING	yes	(no)		PASSING URINE	(yes)	no	
COUGH	yes	(no)		IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?			
APPETITE	(good)	poor	none	BREASTFEEDING	yes	(no)	
ADDITIONAL INFORMATION							

PHYSICAL EXAMINATION

RESPIR. RATE (# min)	<30	(30 - 39)	40 - 49	50+	CHEST INDRAWING	yes	(no)
TEMPERATURE °C	37.8				CONJUNCTIVA	(normal)	pale
EYES	(normal)	sunken	discharge		DEHYDRATION	(none)	moderate	severe
EARS	(normal)	discharge			MOUTH	(normal)	sores	candida
ENLARGED LYMPH NODES	(none)	neck	axilla	groin	HANDS & FEET	(normal)	cold
SKIN CHANGES	(none)	scabies	peeling	ulcers / abscesses	DISABILITY	yes	(no)
ADDITIONAL INFORMATION							

ROUTINE MEDICATION: ADMISSION

ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE
	Amoxicillin	4/17/2007	125 mg (5 ml) 3x per day			
	Vitamin A (if not in last 6 months)	4/17/2007	125 mg (5 ml) 3x per day	Measles immunisation	no yes	date:
	Malaria treatment			Fully immunised	no yes	
2nd VISIT:						
	Mebendazole					

OTHER MEDICATION

DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE

WEEK 3: OUTPATIENT CARE TREATMENT CARD DETAIL

CASE 6 ADMISSION

ADMISSION DETAILS: OUTPATIENT CARE TREATMENT CARD

NAME	Lemlem Bezabih			Reg. N°	YRB / 006 / OUTP		
AGE (months)	18	SEX	M (F)	DATE OF ADMISSION	04/21/2007		
ADMINISTRATIVE UNIT	Boricha			TIME TO TRAVEL TO SITE	3 hours		
COMMUNITY	Yirba			FATHER ALIVE			
HOUSE DETAILS/LANDMARKS				MOTHER ALIVE			
NAME OF CAREGIVER				TOTAL NUMBER IN HOUSEHOLD	4		
ADMISSION (CIRCLE)	self referral	outreach referral	inpatient care referral	health facility referral	TWIN	yes	no
RE-ADMISSION (relapse)	no yes	ADDITIONAL INFORMATION					

ADMISSION ANTHROPOMETRY

BILATERAL PITTING OEDEMA	+	++	+++				
MUAC (mm)	113	WEIGHT (kg)	7.5	HEIGHT (cm)	72	WEIGHT FOR HEIGHT	83
ADMISSION CRITERIA	Bilateral pitting oedema	MUAC		Weight for Height		OTHER:	

HISTORY

DIARRHOEA	yes	no		# STOOLS/DAY	1-3	4-5	>5
VOMITING	yes	no		PASSING URINE		yes	no
COUGH	yes	no		IF BILATERAL PITTING OEDEMA, HOW LONG SWOLLEN?			
APPETITE	good	poor	none	BREASTFEEDING		yes	no
ADDITIONAL INFORMATION							

PHYSICAL EXAMINATION

RESPIR. RATE (# min)	<30	30 - 39	40 - 49	50+	CHEST INDRAWING	yes	no
TEMPERATURE °C	38				CONJUNCTIVA	normal	pale
EYES	normal	sunken	discharge		DEHYDRATION	none	moderate	severe
EARS	normal	discharge			MOUTH	normal	sores	candida
ENLARGED LYMPH NODES	none	neck	axilla	groin	HANDS & FEET	normal	cold
SKIN CHANGES	none	scabies	peeling	ulcers / abscesses	DISABILITY	yes	no
ADDITIONAL INFORMATION							

ROUTINE MEDICATION: ADMISSION

ADMISSION:	DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE
	Amoxicillin					
	Vitamin A (if not in last 6 months)	4/21/2007	125 mg (5 ml) 3x per day	Measles immunisation	no yes	date:
	Malaria treatment			Fully immunised	no yes	
2nd VISIT:						
	Mebendazole					

OTHER MEDICATION

DRUG	DATE	DOSAGE	DRUG	DATE	DOSAGE

OUTPATIENT CARE SITE TALLY SHEET

HEALTH FACILITY NAME					
DISTRICT					
SITE	Outpatient care		Inpatient Care		
WEEK					**TOTAL**
DATE					
TOTAL START OF WEEK (A)					
New Cases 6-59 m Bilateral Pitting Oedema **(B1a)**					
New Cases 6-59 m MUAC/WFH **(B1b)**					
Other New Cases (adults, adolescents, children > 5 y, infants <6 months) **(B2)**					
Old cases: Referred from Outpatient or Inpatient care; or Returned defaulters **(C)**					
TOTAL ADMISSIONS (D) [D=B+C]					
Cured **(E1)**					
Died **(E2)**					
Defaulted **(E3)**					
Non-recovered **(E4)**					
REFERRALS TO OUTPATIENT OR INPATIENT CARE (F)					
TOTAL DISCHARGES (E)					
TOTAL EXITS (G) [G=E + F]					
TOTAL END OF WEEK (H) [H=A+D-G]					

EXERCISE 8.4

ANALYSIS OF THE SITE REPORTS OF THREE OUTPATIENT CARE SITES AND ONE INPATIENT CARE SITE

OUTPATIENT CARE SITE A

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		OLD CASES (C) Referral from outpatient or inpatient care, or Returned defaulters	TOTAL ADMISSIONS (D) (B+C=D)	DISCHARGES (E)				Referral (F) to Inpatient or Outpatient Care	TOTAL EXITS (G) (E+F=G)	TOTAL END OF THE MONTH (H) (A+D-G=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)			CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)			
50	**48**	**0**	**4+1**	**49**	**30**	**3**	**6**	**9**	**0**	**48**	**55**
					62.5%	**6.3%**	**12.5%**	**18.8%**			
				TARGET (Sphere Standards)	**>75%**	**<10%**	**<15%**				

Additional information:
Wasted: 41
Bilateral pitting edema: 7

OUTPATIENT CARE SITE B

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		OLD CASES (C) Referral from outpatient or inpatient care, or Returned defaulters	TOTAL ADMISSIONS (D) (B+C=D)	DISCHARGES (E)				Referral (F) to Inpatient or Outpatient Care	TOTAL EXITS (G) (E+F=G)	TOTAL END OF THE MONTH (H) (A+D-G=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)			CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)			
140	**120**	**0**	**7+7**	**134**	**79**	**1**	**15**	**7**	**7**	**109**	**165**
					77.5%	**0.9%**	**14.7%**	**6.8%**			
				TARGET (Sphere Standards)	**>75%**	**<10%**	**<15%**				

Additional information:
Wasted: 90
Bilateral pitting edema: 30

OUTPATIENT CARE SITE C

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		OLD CASES (C) Referral from outpatient or inpatient care, or Returned defaulters	TOTAL ADMISSIONS (D) (B+C=D)	DISCHARGES (E)				Referral (F) to Inpatient or Outpatient Care	TOTAL EXITS (G) (E+F=G)	TOTAL END OF THE MONTH (H) (A+D-G=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)			CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)			
40	**59**	**0**	**3+4**	**66**	**40**	**0**	**4**	**6**	**4**	**54**	**52**
					80.0%	**0%**	**8.0%**	**12.0%**			
				TARGET (Sphere Standards)	**>75%**	**<10%**	**<15%**				

Additional information:
Wasted: 27
Bilateral pitting edema: 32

INPATIENT CARE SITE

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		OLD CASES (C) Referral from outpatient or inpatient care, or Returned defaulters	TOTAL ADMISSIONS (D) (B+C=D)	DISCHARGES (E)				Referral (F) to Inpatient or Outpatient Care	TOTAL EXITS (G) (E+F=G)	TOTAL END OF THE MONTH (H) (A+D-G=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)			CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)			
18	**19**	**0**	**11+0**	**30**	**0**	**1**	**2**	1	**17**	**21**	**27**
					NA%	**NA%**	**NA%**	**NA%**			
				TARGET (Sphere Standards)	**>75%**	**<10%**	**<15%**				

Additional information:
Wasted: 14
Bilateral pitting edema: 5

MONTHLY CMAM DISTRICT REPORT (CONSOLIDATED FOR INPATIENT CARE AND OUTPATIENT CARE)

TOTAL BEGINNING OF THE MONTH (A)	NEW CASES (B)		TOTAL NEW ADMISSIONS (B)	DISCHARGES (E)				TOTAL DISCHARGES (E)	TOTAL END OF THE MONTH (H) (A+B-E=H)
	6-59 m (according to admission criteria) (B1)	Other (adults, adolescents, children > 5 y, infants < 6 m) (B2)		CURED (E1)	DIED (E2)	DEFAULTED (E3)	NON-RECOVERED (E4)		
248	**246**	**0**	**246**	**149**	**5**	**27**	**23**	**204**	**290**
				73.0%	**2.5%**	**13.2%**	**11.3%**		
			TARGET (Sphere Standards)	**>75%**	**<10%**	**<15%**			

Conclusions Drawn from the Reports	Questions to ask or Possible Explanations
1. Health center B has more patients than the other centers.	1. Is this normal? Does it cover a highly populated area or a very wide area? What are the walking distances to the center? Is this center manageable? Could a second center be opened with existing resources?
2. At health center C, more than half the admissions are from bilateral pitting edema.	2. Is this normal? Are the other health centers neglecting this diagnosis? Or, the opposite—is there an over-diagnosis of bilateral pitting edema here? Is this health center in a different food economy area? Was the same observation made in previous months and in surveys?
3. Out of the overall 246 new admissions, 227 were admitted directly to outpatient care (92.3%) and 19 to inpatient care (7.7%).	3. This could be an indicator of the efficacy of "early detection" and therefore of the quality of community mobilization. It also could indicate that children with serious conditions are hidden at households and are not reached.
4. Health center A is not referring any patients to inpatient care.	4. This could mean that no patients required transfer, but it should be checked through supervision.

5. The death and non-recovered rates in health center A are quite high for outpatient care.	5. This raises questions about the quality of the assessment of patients in this center and the application of and adherence to treatment and action protocols.
6. Health center B's default rate is quite high and warrants follow-up to determine the reasons.	6. Perhaps mothers/caregivers decide not to return because waiting times or walking distances are too long. It will be necessary to visit the center to determine the reasons.
7. Health center C's cured rate is good although there are questions about the non-recovered rate.	7. Is this related to the number of cases with bilateral pitting edema, noted above? Could this be investigated?
8. Overall, 211 children left outpatient care during the month; 200 of these children were discharged. However, 11 were referred back to inpatient care, meaning that the conditions of 5.5% of the children under treatment in outpatient care deteriorated.	8. Why is the condition of children deteriorating when under treatment in outpatient care? Is there compliance to medicine and RUTF protocols? What health and nutrition messages are mothers/caregivers receiving? Are there other underlying health conditions that must be addressed?
9. While 17 children were referred from inpatient care to outpatient care, the outpatient care sites admitted only 14 children referred from inpatient care. Note that 11 patients were referred from outpatient care to inpatient care and 11 admissions are registered in the inpatient care site report as referred from outpatient care.	9. The difference between referrals from inpatient care and admissions to outpatient care could be due to a weak registration system or because some referred children did not go to the outpatient care sites. This observation should trigger closer assessment and supervision of the registration and referral system (e.g., the use of referral slips, the provision of transportation, the messages and explanations given to the mother/caregiver at the time of referral). Note that children who were referred left the site where they were being treated but did not leave the service/programme. The compiled number of cases under treatment in the district is 209, which counts 9 cases less than the sum of the individual report. This difference is due to the 3 missed referrals. Other missed cases may have been in transit while referred across months. (Note: this could be a shortcoming of the exercise and if this is repeated at the district level in the field, it should be reported for review of the compilation system).

Note: The specific discharge rates from the inpatient care site are not calculated. Children that improve are referred to outpatient care to continue treatment. The specific discharge rates would not reflect poor quality as they include ONLY those children with SAM that had medical complications. This is one of the reasons why the programme needs also to be evaluated as a whole, combining information from both inpatient and outpatient care as presented in the combined reporting sheet, where the performance indicators provide information of the CMAM service in the district for the management of SAM.

SUPPLEMENTAL REFERENCE 8.1

SETTING UP A CMAM MONITORING SYSTEM USING AN ELECTRONIC DATABASE IN EXCEL

Adapted from *Community-based Therapeutic Care (CTC): A Field Manual*, pages 207-211

The following instructions can be used to construct a database for outpatient care and inpatient care sites per district in Excel.

STEP 1. CREATING THE DATA INPUT SHEET (SEE SITE TALLY AND REPORTING SHEETS)

1.1. Create Columns

- Create a spreadsheet in Excel with four columns titled: 'Session Week', 'Site' and 'Month'.
- Create columns corresponding to the admission and exit criteria on your site tally and reporting sheet
- Ensure each column title is written in its own cell.
- Create columns titled:

Total End Last Session (or Total end of the week/month)
New Cases 6-59 months
New Cases Other
Old Cases
Total Admissions
Cured
Death
Defaulter
Non-recovered
Total Discharged
Referral
Total Exits
Total Under Treatment (or Total beginning of week/month)

1.2. Create Rows

- Write site names (e.g., names of health facilities with outpatient care or inpatient care sites) of the district in rows moving down the spreadsheet for cycle 1. (Leave some space to add extra sites as the service/programme progresses.)
- Write **1** in each cycle number box.
- For the first row corresponding to cycle 2, write in a formula of the first box **+1**.
- Do not write site names for cycle 2. Write a formula of the appropriate cell in cycle 1.
- Make a bold line under the first cycle

1.3. Enter Formulas

- Add in formulas for:
  - Total end of last session (For cycle 1, there is no formula. Put 0 in the cells. For subsequent cycles, use Total under Treatment from the previous cycle).
  - Total Admissions = New cases 6-59 months + New cases other + Old cases
  - Total Discharged = Cured + Deaths + Defaulters + Non-recovered
  - Total Exits = Cured + Deaths + Defaulters + Non-recovered + Referral
  - Total Under Treatment = Total End Last Session + Total Admissions – Total Exits
- For all formulas, click and copy formulas down the sheet to fill as many weekly cycles as required. (We recommend no more than one year's data in one database.)
- Data can now be entered by cycle from the weekly tally sheets (Optional database at national level can use monthly cycles using the monthly district reporting sheets)

STEP 2. CREATING THE DATA REPORT

- From the input sheet under 'Data' on the top menu, select 'Pivot Table Report'.
- Click 'Microsoft Excel List or database'.
- Highlight all of the spreadsheet
- Click 'Next' to get to the Pivot Table construction.
- Into 'Page', drag Site and Month.
- Into 'Column', drag Week.
- Into 'Data', drag the following variables in the following order: New cases 6-59 months, New cases other, Old cases, Total Admissions, Cured, Death, Defaulters, Non-recovered, Total Discharges, Referral, Total Exits, Total under treatment.
- Double click on all variables in data sheet in the Pivot Table construction. Perform the following on each one:
    - Change title by removing Count of. Do not shift the title too much to the left or Pivot Table alarm will be set off.
    - Change from Count to Sum.
    - Click Number
    - Click Number again
    - Tick Use 1000 separator.
    - Change decimal place to 0.
    - Click Next
    - Click new work sheet
    - Rename it 'Report'.
- Blank out number in grand total column for 'Total under Treatment' (the number is meaningless for CMAM data).
- Once data is added to the input sheet, the report can be updated. Place the cursor inside the report, right click and select 'refresh data'.
- Data can be viewed by cycle for the whole service/programme or, if required, for individual sites or months.

For additional guidance and use of pivot tables see:
http://office.microsoft.com/enus/assistance/HA010346321033.aspx

STEP 3. CREATING THE GRAPHS

Create Chart of Admission and Discharge Trends

- To make the bar chart, first click on the chart icon.
- In Custom Type, select 'Line – Column'.
- In Series, click 'Add'.
- Click 'Name' bar and write in 'Total Admission'.
- Click 'Values' and highlight 'Total Admission' row in report (leave out grand total).
- Click 'category x labels' and highlight distribution cycles row.
- Click 'Add' again
- Click 'Name' bar and write in 'Total Discharged'.
- Click 'Values' and highlight 'Total Discharged' row in report (leave out grand total).
- Click 'Add' again.
- Click 'Name' bar and highlight 'Total under treatment' row in report.
- Click 'Next', click 'Chart Title' and add in overall title and titles for axes.
- Put in new sheet – rename Graphs.

CREATE PIE CHART SHOWING BREAKDOWN OF DISCHARGE CATEGORIES

- Click on the chart icon.
- Click on pie chart.
- In 'Series', click 'Add'.
- Click 'Values' and highlight the data in 'Grand Total' for discharge variables (i.e. Cured, Death, Defaulter, Non-recovered). Do not include Referral or Total Exits.
- Click 'Category labels' and highlight the exit titles (i.e. Cured, Death, Defaulter, Non-recovered).
- Click Next, click Chart Title and write in title.
- Click Data label and tick percent.

See Figures in **Handout 8.14 Guidance on CMAM Reporting** an example of how the graph and pie should look.

Note: When you start to input data into the database, columns corresponding to cycles where no data has yet been entered can be hidden. This makes it easier to view the report and graphs.